

EXHIBIT A

DECLARATION OF CHRISTOPHER J. REALE

Under penalty of perjury I, Christopher J. Reale, hereby declare that:

1. I am currently an XM subscriber and the Executive Director of the Consumer Coalition for Competition in Satellite Radio ("C3SR").
2. I have read the foregoing Petition to Deny, and, except where specifically noted, I have personal knowledge of the specific allegations of fact therein sufficient to show that C3SR is a party in interest and that grant of the applications would be prima facie inconsistent with the public interest, convenience, and necessity.
3. I declare under penalty of perjury that those factual allegations are true and correct to the best of my knowledge and belief.



Christopher J. Reale

Executed on July 9, 2007.

EXHIBIT B

**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.)	

**SUPPLEMENTAL DECLARATION
OF J. GREGORY SIDAK**

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I. INTRODUCTION

1. I have been asked by counsel for the Consumer Coalition for Competition in Satellite Radio (C3SR) to review the application for authority to transfer control filed on March 20, 2007 by XM Radio, Inc., and Sirius Satellite Radio, Inc. ("Merger Application").¹ I have also been asked to review two reports submitted on behalf of XM and Sirius in support of their proposed merger: one by Professor Thomas W. Hazlett² and another by Dr. Harold Furchtgott-Roth.³ I have previously written a declaration, using information in the public domain as of March 16, 2007, that analyzed the proposed merger from an antitrust perspective. The declaration can be downloaded from the Social Science Research Network.⁴ In that declaration, I concluded that:

- (1) satellite digital audio radio services (SDARS) is a distinct antitrust product market, in large part because SDARS subscribers have strong preferences for

1. 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 [hereinafter *Merger Application*]. C3SR is a consumer group consisting of Sirius and XM subscribers. It is supported by the National Association of Broadcasters.

2. Thomas W. Hazlett, *The Economics of the Satellite Radio Merger*, June 14, 2007 [hereinafter *Hazlett Report*]. Evidently, counsel for XM and Sirius have chosen not to present Professor Hazlett's testimony as a formal affidavit or declaration.

3. Harold Furchtgott-Roth, *An Economic Review of the Proposed Merger of XM and Sirius*, June 27, 2007 [hereinafter *Furchtgott-Roth Report*].

4. 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), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=977318.

- commercial-free radio and for content that would be deemed “indecent” on broadcast radio;⁵
- (2) under the most reasonable product market definition, the proposed merger of XM and Sirius would be judged to be a merger to monopoly in violation of U.S. antitrust law;
 - (3) even under a more expansive (but less defensible) market definition that included terrestrial analog and HD signals, the proposed merger would increase the Hirschman-Herfindahl Index (HHI) by more than 3,000 points in all but thirteen of the 299 local radio markets in the United States;
 - (4) the failing-firm defense is inapplicable and should be rejected because SDARS penetration rates are expected to increase significantly—which will decrease average variable cost further, generate even larger margins for XM and Sirius, and ensure their viability as independent competitors;
 - (5) the majority of the merger-specific efficiencies claimed by Sirius and XM would, in point of fact, not redound to the benefit of consumers because they do not amount to reductions in variable costs; and
 - (6) the consent-decree conditions that XM and Sirius have proposed to secure approval of their proposed merger would create a *de facto* regime of price-cap

5. Despite the fact that I devoted a significant amount of my original declaration to explaining how indecency regulation of broadcast radio significantly limits substitution possibilities for SDARS subscribers, neither Professor Hazlett nor Dr. Furchtgott-Roth responds to this important argument. Evidently, XM and Sirius concede the point. The closest that Dr. Furchtgott-Roth comes to mentioning the relevance of legally indecent content is his statement: “With the *exception* of programming featuring Howard Stern and other personalities, most programming on XM and Sirius has identical or comparable alternatives easily available on the internet.” *Furchtgott-Roth Report, supra* note 3, at 14 (emphasis added). It bears emphasis that he does *not* say that programming falling into this exceptional category is available on terrestrial radio broadcasts.

regulation that is antithetical to the deregulatory orientation of federal telecommunications law and policy over the past decade.

After reviewing the Merger Application and the Hazlett Report, my perception of the proposed merger has changed slightly, but not in a way that is favorable to XM and Sirius or to the interest groups that have publicly endorsed the merger. XM and Sirius failed to offer antitrust analysis in support of their Merger Application, and despite having commissioned two economic reports, they have still failed to carry the burden of proof required to establish that their proposed merger would advance the public interest.

2. The Merger Application is aptly described as an invitation by XM and Sirius for the federal government and various third parties to partake in “rent extraction.” That invitation is predicated on XM’s and Sirius’s creation of an entirely new price-regulated monopoly. Pure “rent”—also known as “economic rent” or “monopoly rent”—is the income from an input to a business, such as spectrum or labor, beyond the level of remuneration necessary to bring that input into a particular use and keep it there.⁶ Rent is a return to a factor that exceeds the factor’s “opportunity cost.”⁷ This concept of returns exceeding an asset’s opportunity cost highlights the role of political and regulatory barriers to competition in creating rents and encouraging “rent seeking” behavior.⁸ Monopoly rent is the supracompetitive profit resulting from the government’s artificial suppression of competition. In contrast to rent creation, “rent extraction”

6. See, e.g., PAUL A. SAMUELSON & WILLIAM D. NORDHAUS, *ECONOMICS* 243 (15th ed. 1995); MARK BLAUG, *ECONOMIC THEORY IN RETROSPECT* 308 (Cambridge University Press 1985). See also THE NEW PALGRAVE, *A DICTIONARY OF ECONOMICS* 141 (John Eatwell, Murray Milgate, & Peter Newman, eds., MacMillan Press, 1991) (explaining the relationship between economic rent and quasi-rent).

7. *Id.*

8. See Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies, and Theft*, 5 *ECON. INQUIRY* 224 (1967). See also Gary S. Becker, *A Theory of Competition Among Pressure Groups for Political Influence*, 98 *Q.J. ECON.* 371 (1983); Sam Peltzman, *Toward a More General Theory of Regulation*, 19 *J.L. & ECON.* 211 (1976); Richard A. Posner, *Theories of Economic Regulation*, 5 *BELL J. ECON. & MGMT. SCI.* 335 (1974); George J. Stigler, *The Theory of Economic Regulation*, 2 *BELL J. ECON. & MGMT. SCI.* 3 (1971).

connotes the dissipation through government policy of either publicly created monopoly rents or privately created quasi-rents (which, unlike monopoly rent, are merely the risk-adjusted returns to sunk investments made by entrepreneurs).⁹ Regulation can function as a process by which economic rents are created, perpetuated, and threatened with dissipation (and thus extracted by third parties).

3. The proposed merger of XM and Sirius would generate monopoly rent. It would create a monopoly provider of SDARS, which would operate completely free from the threat of entry by virtue of the fact that the FCC has no more spectrum to allocate for SDARS entrants. Simply put, the FCC and the Department of Justice are being asked to confer upon XM and Sirius the power to charge monopoly prices for SDARS, and to excuse the two companies from the anticompetitive consequences of that merger on SDARS consumers because the merged company is willing to share a portion of its newly created monopoly rent with select political constituencies in the form of (incorrectly characterized) “merger-related benefits”—such as à-la-carte pricing. It bears emphasis that the price-cap regulation being proposed by XM and Sirius would *not* necessarily be an element of (supposedly redeeming) rent extraction if the price cap would never be a binding constraint—because, in that situation, prices would actually *decline* in the counterfactual state of the world in which no merger occurred.

4. Given the certainty that the proposed merger would create monopoly rent, politically sophisticated interest groups are, predictably, coming out of the woodwork to dissipate that rent. They do so by conditioning their endorsement or approval of the proposed merger on the receipt of a share of the expected monopoly rent. For example, the progressive

9. See FRED S. MCCHESENEY, MONEY FOR NOTHING: POLITICIANS, RENT EXTRACTION, AND EXTORTION (1997); Fred S. McChesney, *Rent Extraction and Rent Creation in the Economic Theory of Regulation*, 16 J. LEGAL STUD. 101 (1987).

advocacy organization Public Knowledge would tolerate this merger to monopoly as long as it is conditioned on setting aside a specified amount of SDARS spectrum for “noncommercial educational and informational programming.”¹⁰ Being astute about how the game of rent creation and rent extraction is played, XM and Sirius have begun to award claims on their future monopoly rent, beginning with several concessions that they erroneously portray in their Merger Application as “merger-specific benefits.” Because XM and Sirius are the residual claimant to the monopoly rent that the merger would create, they stand to profit handsomely from consenting to these commitments to rent extraction up until the point at which the value of the concessions exceeds the value of the expected monopoly rent.

5. Once one scrutinizes this proposed merger with a modicum of skepticism informed by public choice theory, the Merger Application is most revealing for what XM and Sirius do *not* say: Why have XM, Sirius, and their economic experts failed to put forward credible economic evidence that local broadcast radio, iPods, or any other source of audio entertainment significantly constrain the price of SDARS? Consistent with this theory of rent extraction, the Merger Application and the two economic reports are conspicuously devoid of any antitrust analysis. Indeed, the closest that Professor Hazlett comes to performing antitrust analysis is his conjecture concerning the opposition to the merger by the National Association of Broadcasters (NAB), whose members are only *potential* competitors of XM and Sirius in *advertising* markets.

10. *The XM-Sirius Merger: Monopoly or Competition from New Technologies: Hearing Before the S. Committee on the Judiciary, Subcommittee on Antitrust, Competition Policy and Consumer Rights*, 110th Cong. 8 (Mar. 20, 2007) (statement of Gigi Sohn, President of Public Knowledge) (“The new company should make available 5% of its capacity for noncommercial educational and informational programming over which it will have no editorial control.”).

6. The Merger Application is a classic example of rent seeking. By strategically designing its concessions, Sirius and XM seek to allocate a very small portion of the expected monopoly rents to the following key political constituencies: (1) proponents of mandatory à-la-carte offerings;¹¹ (2) social conservatives;¹² (3) public safety groups;¹³ and (4) minorities.¹⁴ XM and Sirius approach the necessary evidentiary showing for their transfer application as though it were a cross between a business negotiation and a media blitz for a political campaign. If a merger review were either, then instead of defining the relevant markets and assessing market power within those markets, merging parties would only need to focus their attention on eliciting the support of influential political interest groups. Economic analysis of the proposed merger's effect on consumer welfare would become completely irrelevant to the merger review process. In short, the approach of XM and Sirius, including their exploitation of interest groups endorsing this proposed merger, flouts at least three decades of refinements in antitrust jurisprudence that have sought to diminish political influence by elevating the principled analysis of consumer welfare through accepted economic methods.

7. For these reasons, XM and Sirius fail to carry their burden of proving that the proposed merger would advance the public interest. To the contrary, it is clear that the proposed merger would reduce competition and harm the public interest. The FCC should therefore deny the application for transfer of control.

11. *Merger Application*, *supra* note 1, at i-ii (“The efficiencies resulting from the merger will allow the combined company to provide consumers programming choices on a more à-la-carte basis at lower prices.”).

12. *Id.* at ii (“Consumers will also be able to block adult-themed channels and receive a price credit for those channels.”).

13. *Id.* at 14 (“This additional capacity also will allow the combined company to provide additional programming related to public safety and homeland security.”).

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

II. THE PURPORTED MARKET FOR “AUDIO ENTERTAINMENT”

8. As I demonstrated in my initial declaration, the relevant product market for purposes of antitrust analysis of the proposed merger is the market for SDARS. Stated differently, a hypothetical monopoly provider of SDARS would not need to control the supply of terrestrial radio or iPods to raise prices above competitive levels for a sustained period and thereby increase its profit. XM and Sirius avoid this inconvenient truth by avoiding what their distinguished counsel certainly understand to be the relevant legal question (and what their economic experts understand to be the relevant economic question). The result is humorous. XM and Sirius have offered a much larger market definition, which includes basically any device that transmits a sound detectable by the human ear: “Sirius and XM are established *audio entertainment* providers.”¹⁵ This purported market is also embraced by Professor Hazlett.¹⁶ Dr. Furchtgott-Roth actually introduces greater confusion into the proceeding by unveiling the concept of a “fixed and mobile communications market” as a possible market definition.¹⁷ Thus, Professor Hazlett and Dr. Furchtgott-Roth are not necessarily in agreement on what the relevant market is. XM and Sirius have done nothing in the record to clarify this important inconsistency and explain how Dr. Furchtgott-Roth’s report changes the arguments formally contained in the application.

15. *Merger Application*, *supra* note 1, at i (emphasis added).

16. *See, e.g., Hazlett Report*, *supra* note 2, at 3 (“First, by combining two small players in the audio entertainment market, the transaction will bring economic vitality to satellite broadcasters and strengthen the financial position of upstart competitors in radio broadcasting.”). *See also id.* at 4, 24. Professor Hazlett later claims that “[t]he proposed merger combines two niche players in the *radio market*.” *Id.* at 9 (emphasis added). It is not clear how a “radio market” relates to an “audio entertainment market.” Perhaps Professor Hazlett concedes that iPods do not constrain the prices of satellite radio service.

17. *Furchtgott-Roth Report*, *supra* note 3, at 4 (“XM and Sirius compete with numerous other providers of communications services, both in a fixed and a mobile environment, including terrestrial radio and fixed and mobile internet services.”).

A. XM and Sirius' Use of the Term "Audio Entertainment" Is Unprecedented in an Antitrust Context

9. XM and Sirius appear to have invented the phrase "audio entertainment market" from whole cloth. To confirm this conjecture, I have investigated the use of the term "audio entertainment" by three groups of authorities: (1) the FCC, the Department of Justice (DOJ), the Federal Trade Commission (FTC) (collectively, the "federal agencies"); (2) antitrust courts; and (3) authors of law review articles. The Appendix to this declaration presents those results in three tables. Table A1 summarizes the results from my survey of the agencies' websites using Google's advanced search algorithm. For each agency, I investigate whether the term "audio entertainment" has been used in a way that is synonymous with XM's and Sirius's definition and, if so, whether the definition was formed in the context of an antitrust analysis. Table A1 shows that the term "audio entertainment" does not appear to have been used by the DOJ in *any* of its case files. The term appears eight times in all documents on the FCC's website (and another sixteen times in LEXIS), and it appears 45 times in case documents on the FTC's website. When it has been used, the term has never been synonymous with XM's and Sirius's definition of the term. For example, the term is often used by the FTC to mean "services associated with the 900 prefix," "pay-per-call services," or other "services provided through the telephone." Because the term has never been used by a federal agency to mean all devices that transmit a sound that is detectable by the human ear, it is not applicable (N/A) to proceed to the subsequent question of whether the term was defined in an antitrust context.

10. Next, I repeat this exercise for antitrust court cases. Table A2 in the Appendix shows that when antitrust courts have used the term "audio entertainment," its meaning has been similar to its use by the federal agencies. In particular, the term often means "pay-per-call services," typically used for phone sex. Only two of the six cases used the term in a way that was

remotely synonymous with XM's and Sirius's definition, but in neither instance was the term defined in the context of a relevant product market. Of course, this finding is no accident, as subsets of the purported market for audio entertainment services—such as “portable hard drive digital music players” or “legal sale of online digital music files”¹⁸—have been recognized as antitrust product markets, which implies that XM's and Sirius's definition is overly broad.

11. Finally, I repeat this exercise for articles in law reviews. Table A3 shows that, although “audio entertainment” has been used in articles by a number of respected authorities on antitrust or telecommunications law, the term is rarely used in law reviews in a way that is synonymous with XM's and Sirius's definition. The closest definition can be found in a 2001 student note that uses the term to describe devices that produce audio entertainment, such as radios and CD players. Importantly, the term has not been used in a law review to define a product market for antitrust purposes.

12. Based on my survey of the existing literature on antitrust market definition, I conclude that XM and Sirius have invented the phrase “audio entertainment market” from whole cloth. And yet at least one of XM's and Sirius's economic experts (Professor Hazlett) has embraced that market definition without question. The phrase has no recognized relevance for purposes of the antitrust or telecommunications law analysis required to review or approve the proposed merger.

B. XM and Sirius Present No Empirical Evidence That Alternative Audio Entertainment Devices Constrain the Pricing of Satellite Digital Audio Radio Service

13. XM and Sirius argue that, because consumers use multiple devices to receive music and live entertainment, these devices must be part of the same product market:

18. *See* *Slattery v. Apple Computer, Inc.*, 2005 WL 2204981 (N.D. Cal. 2005) (plaintiff successfully pled the separate relevant markets of portable hard drive digital music players and legal sale of online digital music files).

As many parties have described to the Commission previously, consumers obtain audio entertainment using free “over-the-air” AM and FM radio, HD Radio, Internet radio, iPods and other MP3 players, cable providers’ music offerings, mobile phones, and CD players, as well as satellite radio.¹⁹

Whether or not this quoted proposition is true, it is not the relevant question for antitrust purposes. Instead, the relevant question is whether these alternatives *constrain the pricing* of SDARS to such an extent that a hypothetical monopolist of SDARS—which will no longer be hypothetical if this merger is approved—could not profitably raise prices above competitive levels for a nontransitory period of time. It is only a slight exaggeration to say that XM and Sirius claim that any sound that enters a human’s ear belongs to the same antitrust product market. This proposition is akin to arguing that everything that enters one’s mouth belongs to the same “oral entertainment” product market.²⁰

14. iPods and other alleged “audio entertainment” suppliers cannot discipline the price of SDARS. XM and Sirius argue that ease of substitution between iPods and SDARS implies that the two products are in the same product market: “the combined company will need to compete with providers offering services that can be *easily* substituted for satellite radio, and that consumers will potentially find even more appealing.”²¹ Although consumers without factory-installed iPod connections in their vehicles can use after-market attachments, the cost of such attachments is often prohibitive and the quality low. Devices that play an iPod through a cassette attachment or through unused AM/FM stations are available from consumer electronics

19. *Merger Application*, *supra* note 1, at iii.

20. The merging parties attempt to present an alternative market definition through Dr. Furchtgott-Roth that distinguishes between fixed and mobile communications services. *Furchtgott-Roth Report*, *supra* note 3, at 4. According to a Wilson Research Strategies survey, 79 percent of SDARS subscribers have their satellite radio receivers in their cars. The availability of local radio is far from universal; there is substantial and significant geographic variation. Mobile broadband has similar, and more pronounced variation in availability. It is highly unlikely that rural SDARS subscribers will have EVDO broadband access from a laptop computer in the near future. Although XM and Sirius offer two market definitions of “audio entertainment” and “fixed and mobile communications,” both are too broad and fail to address geographic variations in the availability of alternatives.

21. *Id.* at iii (emphasis added).

retailers for \$59.99 to \$90.99.²² These attachments offer relatively poor sound quality compared to in-dash audio systems.²³ After-market solutions with integrated iPod connections offer better quality, but are higher priced. According to the *Wall Street Journal*, in November 2006 the cost of installing after-market integrated stereos ranged from \$246 to \$487.²⁴ These costs exclude service time, which can range from 45 minutes to four hours.²⁵ As this reply was being prepared, an economist on my staff incurred a cost of \$600 at MyerEmco to connect his iPod to his car stereo via a USB connection in the glove compartment. In addition to installation costs, SDARS consumers seeking to cancel their service face a \$75 cancellation fee for cancellations prior to the end of a subscription period.²⁶ To non-economists living outside the Beltway, “switching costs” of such magnitude are economically significant, and thus likely prevent iPods from disciplining the price of SDARS. Even if a consumer has the means to incur that expense, it still will be impossible to hear either live events from the iPod or any exclusive SDARS content, such as Howard Stern.²⁷ XM and Sirius admit that “Sirius radios are available for installation in

22. BestBuy Website, iPod Accessories in the Car, (last accessed Apr. 4, 2007) available at <http://www.bestbuy.com/site/olspage.jsp?id=pcmcat63300050023&type=category>. It may be possible to construct a combination of a charger and FM broadcasting product for a lower price, but it is unclear which systems are compatible with each other.

23. Gina Chon, *Home and Family—Cranky Consumer: A Car Tune-Up of Another Kind*, WALL ST. J., Nov. 16, 2006, at D2. The *Wall Street Journal* described these devices as having “lousy sound quality.” *Id.* This experience was confirmed by two of my staffers, who complained that they constantly had to change channels to receive a clear signal.

24. *Id.*

25. *Id.*

26. See Sirius Website, Terms and Conditions, available at <http://www.sirius.com/servlet/ContentServer?pagename=Sirius/CachedPage&c=Page&cid=1019257316747> (“3. Cancellation Fee: If you cancel your Subscription prior to the end of a prepaid Subscription or committed Subscription period, we may charge you a cancellation fee of up to \$75.00.”).

27. According to Dr. Furchtgott-Roth, there is no significant exclusive content on SDARS: “On any of these services, American consumers can obtain practically the full range of programming services available on satellite radio.” *Furchtgott-Roth Report*, *supra* note 3, at 6. Of course, if this were true, then why would SDARS subscribers be willing to pay \$12.95 per month plus the equipment costs for satellite radio service? In a later section of his report, Dr. Furchtgott-Roth asserts, without factual substantiation: “If a combined XM and Sirius were to raise prices, consumers could find identical or similar programming elsewhere and switch services.” *Id.* at 13.

homes, automobiles, boats, and aircraft, and Sirius also has a variety of portable radios.”²⁸ It is not clear that Tweeter, BestBuy, or MyerEmco could install these attachments in boats or aircraft. For these reasons, it is not reasonable to suggest that an iPod can be easily substituted for satellite radio.

15. More generally, XM and Sirius make no attempt to demonstrate that alternative “audio entertainment” services *constrain the pricing* of SDARS. For example, they provide no data on the cross-price elasticity of demand for SDARS and iPods. Without that evidence, it is impossible to know whether iPods discipline the price of SDARS. Instead, they offer a potpourri of factoids related to penetration and revenues that show, at most, that these purported substitutes are growing in popularity.²⁹ Because these factoids do not inform the inquiry of market definition in any way, they are irrelevant to the public interest determination before the Commission and should be ignored.

16. It is one thing for XM and Sirius to offer up irrelevant market evidence in an effort to expand the scope of the product market. It is quite another for a witness providing economic expert testimony to do so. Antitrust economists understand that product markets are defined by data on the own- and cross-price elasticity of demand for the services in question. Yet Professor Hazlett does not cite a *single* statistic to substantiate the claim that satellite customers would substitute to terrestrial radio or iPods or any other “audio entertainment” device in response to a small increase in the price of satellite radio. Instead, he offers evidence that the demand for iPods is growing and that many iPod users have purchased accessories that allow for

28. *Merger Application, supra* note 1, at 3.

29. For example, the merging parties note that 89 percent of Americans aged 15 to 24 cited terrestrial radio as a primary source of music listening. *See id.* at 24-25.

in-car connections.³⁰ Such evidence, however, does not inform the relevant antitrust analysis. The demand for flat-panel displays has grown significantly over the past few years, but that does not imply that flat-panel displays are in the same product market as SDARS. Not all consumer electronics are fungible.

17. In an effort to expand the purported “audio entertainment” market offered by XM and Sirius, Professor Hazlett includes DVDs and the BlackBerry in his list of revolutionary “audio entertainment” devices from the last quarter century.³¹ The inclusion of these devices in the same product market as SDARS is untenable. According to Professor Hazlett, a hypothetical monopoly provider of SDARS could not profitably impose a small price increase *unless it also controlled the supply of all DVDs and BlackBerries*. It is inconceivable that an SDARS subscriber would substitute to a BlackBerry in response to a small price increase. Setting aside the relevant antitrust question, the comparison of SDARS to DVDs or BlackBerries strains credulity past the breaking point. Although DVDs offer sound, no one would classify them as a new audio format. Similarly, although a select few BlackBerries have sound capabilities, these devices are noteworthy for their email ability; BlackBerries with audio playback are noted for their mediocrity.

C. XM and Sirius’ Market Share Calculations Exaggerate the Role of Terrestrial Radio

18. After they advocate an incorrectly expansive market definition, XM and Sirius cite low share of the entire local and national radio audience.³² To analyze market power, one

30. *Hazlett Report, supra* note 2, at 8-9 (“More than 30 percent of Americans use MP3 players (including iPods) on a weekly basis, more than six times the number who listen to satellite radio. ‘[A]lmost 50% of iPod users had purchased accessories which allow for in-car connections,’ as per a January 2005 study.”).

31. *Id.* at 6 (“Of the top ten consumer innovations over the past quarter-century, USA Today lists five audio products, among them cellphones, Blackberries, DVDs and iPods.”).

32. *Id.* at iii (“Indeed, a recent Arbitron study found that satellite radio accounted for just 3.4 percent of all radio listening.”).

must first define the relevant product market appropriately. Although narrower than “audio entertainment,” a relevant product market defined as “all radio listening” is still too expansive. Computing the share of all radio listening that is attributable to SDARS provides no more meaningful results than computing satellite radio’s share of all U.S. subscription revenue, including video and audio services. So long as the denominator is artificially inflated relative to the relevant product market, the share will appear deceptively small.

19. SDARS subscribers consider terrestrial radio to be a complement, not a substitute, for SDARS. The Arbitron study cited by the merging parties shows that SDARS subscribers listen to 33 combined hours of radio per week, compared with 19 hours per week for (non-SDARS) radio subscribers.³³ The study breaks down the 33 hours for SDARS subscribers into 14 hours of terrestrial radio, 11 hours of SDARS, and 8 hours of Internet radio. Thus, radio listeners who subscribe to SDARS do not appear to reduce their consumption of terrestrial radio by a significant amount (14 hours of terrestrial radio for an SDARS subscriber versus 19 hours of terrestrial radio for a non-SDARS subscriber).

20. In a later study released in conjunction with Edison Media Research, Arbitron provided additional data suggesting that satellite radio is a complement to broadcast radio. The study found that digital radio subscribers listened to AM/FM radio three minutes longer per day than the average consumer.³⁴ Dr. Furchtgott-Roth’s comments are consistent with this demand complementarity. Despite his conclusions concerning the relevant product market, Dr. Furchtgott-Roth observes that “satellite radio subscribers continue to spend time listening to terrestrial radio rather than to satellite radio.”³⁵

33. See Phil Rosenthal, *Satellite Deal Foes Don't Hear Message*, CHI. TRIB., Feb. 28, 2007, at 3.

34. See Alex Mindlin, *Digital Subscribers Like Free Radio, Too*, N.Y. TIMES, Apr. 23, 2007, at C4.

35. Furchtgott-Roth Report, *supra* note 3, at 7

21. Moreover, XM's and Sirius's share of radio listeners presumes incorrectly that an SDARS *subscriber* is worth the same as a terrestrial radio *listener*. To compare those values, I calculated the average monthly value of a radio listener using advertising revenue. In particular, I divided the weekly advertising revenue for all radio stations by the weekly radio listeners to obtain a price per weekly listener. Table 1 shows the results.

TABLE 1: MONTHLY VALUE OF A TERRESTRIAL RADIO LISTENER, 2006

Variables	Values
(A) Annual advertising revenue for all radio stations ¹	\$20,000,000,000
(B) Weekly advertising revenue = (A) / 52	\$384,615,385
(C) Weekly radio listeners ²	230,000,000
(D) Price per weekly listener = (B) / (C)	\$1.67
(E) Monthly price per listener = (D) x 4.33	\$7.24
(F) Monthly subscription price for SDARS	\$12.95

Source: ¹ Richard Siklos, *Broadcast Radio is Scrambling To Regain Groove*, N.Y. TIMES, Sept. 15, 2006, at 1; ² XM Consolidated Application for Authority to Transfer Control.

As Table 1 shows, the comparative economic value of a terrestrial radio subscriber is significantly less than the value of a SDARS subscriber. The value per terrestrial listener is only 55 percent of the value of an SDARS subscriber (equal to \$7.24 divided by \$12.95).³⁶ This number is likely to be conservative because XM's and Sirius's SEC filings show that they derive some revenue from advertising, which would push their value per subscriber even higher. This analysis ignores any geographic difference in consumer value, which may be significant because SDARS service is more prevalent in rural areas. Thus, even if the relevant product market included SDARS and terrestrial radio, it still would not be appropriate to compute XM's and Sirius's shares based on listeners: In terms of revenue generated—through either subscriptions or

36. It could be argued that the value of a SDARS subscriber is better represented through monthly average revenue per user (ARPU), as opposed to monthly price per user. In 2005, XM had a monthly ARPU of \$9.51. XM RADIO, ANNUAL REPORT (SEC FORM 10-K), at 32 (Mar. 3, 2006). In 2005, Sirius had a monthly ARPU of \$10.34. SIRIUS SATELLITE RADIO, ANNUAL REPORT (SEC FORM 10-K), at 3 (Mar. 16, 2005). Even these numbers are larger than the value of a terrestrial radio listener.

sales of advertising—an SDARS “listener” is worth nearly twice the value of a terrestrial radio listener.

D. XM and Sirius Incorrectly Define the Relevant Product Market from the Perspective of Suppliers

22. XM and Sirius imply that evidence of how terrestrial broadcasters perceive SDARS proves that SDARS and terrestrial radio are part of the same antitrust product market:

It is clear that all of the above providers [terrestrial radio, HD radio, Internet radio, iPods and other MP3 players, mobile phones, and CD players] view themselves as being in direct competition with each other. In public filings and statements, various members of the radio broadcasting industry have emphatically stated that they compete directly with satellite radio and other forms of audio entertainment³⁷

This assertion is another telling example of how XM and Sirius choose to ignore the standard economic methodology in merger cases. Any law student taking antitrust knows that the *Merger Guidelines* dictate that market definition be done on the basis of *consumer* perceptions,³⁸ not from the perspective of producers (who are not contemplating product market definition when drafting their securities filings.) Furthermore, the consumer perceptions that count are those of SDARS customers, not casual radio listeners generally: SDARS customers would look to significantly imperfect substitutes in response to a hypothetical increase in the price of SDARS. As a matter of market definition analysis, the most charitable characterization that one can make of XM’s and Sirius’s statement concerning the perceptions of suppliers is that it is wildly irrelevant.

23. XM and Sirius fail to substantiate a claim that could have bolstered (but not proven) their assertion that alternative services constrain the pricing of SDARS: “Both

37. *Merger Application*, *supra* note 1, at 38.

38. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, released Apr. 8, 1997, § 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) [hereinafter *Merger Guidelines*].

companies have *priced* or modified their services in order to make them more competitive with other forms of audio entertainment.”³⁹ Given the importance of such a claim to competitive analysis of a proposed merger, it is again telling that XM and Sirius did not provide a citation in support of that factual claim. Without empirical proof, the claim that other forms of audio entertainment constrain the pricing of SDARS is mere rhetoric having no probative value.

E. New Survey Data Suggest That Satellite Radio Subscribers Do Not Perceive Terrestrial Radio to Be a Close Substitute for Satellite Radio

24. In June 2007, Wilson Research Strategies conducted a survey of current satellite radio subscribers at the request of the NAB. The survey polled 501 current SDARS subscribers on a range of questions on their reasons for subscribing and their demographic characteristics.⁴⁰ The survey results suggest that a significant number of satellite radio subscribers (1) are less likely to have a sufficient amount of terrestrial radio service by virtue of their geographic location, (2) value certain attributes of satellite radio that are not available on terrestrial radio, and (3) do not perceive MP3 players to be substitutes for satellite radio.

25. The survey data confirm that a majority of satellite radio subscribers reside in a small city, town, or rural area. Because local radio coverage declines with the size of the local population, this fact suggests that satellite radio subscribers reside in areas of below-average terrestrial radio coverage. The majority (58 percent) indicated that they lived away from a large city.⁴¹ This finding suggests that many XM and Sirius subscribers would be vulnerable to an increase in the price of satellite radio.

39. *Merger Application, supra* note 1, at 44 (emphasis added).

40. Press Release, Wilson Research Strategies, Survey of Satellite Radio Subscribers (Jul. 8, 2007), available at http://www.w-r-s.com/press/WRS_NAB_Sat_Radio_Survey_Press_Release_070710.pdf.

41. *Id.*

26. The survey data suggest that satellite subscribers value SDARS for qualities that are unavailable on terrestrial radio. These qualities include commercial-free music, uninterrupted signal, and greater number of channels. According to the survey, 87 percent of respondents listed commercial-free music as an “important” reason for subscribing; 77 percent of satellite subscribers cited “uninterrupted signal nationwide” as an “important” reason for subscribing; and another 77 percent identified “number of channels” as an “important” reason for subscribing.⁴² Because these features are not available on terrestrial radio, it is reasonable to infer that terrestrial radio does not constrain the price of satellite radio.

27. Finally, the survey data show that a majority of satellite subscribers already own or use MP3 players. The survey shows that a majority (53 percent) of satellite subscribers own or use an MP3 player.⁴³ Thus, most satellite subscribers are aware of MP3 players and do not perceive them as a substitute for satellite radio, since they continue to subscribe to XM or Sirius. Satellite subscribers more likely view MP3 players and satellite radio as distinct products used for different purposes.

III. XM’S AND SIRIUS’S CONCESSIONS ARE NOT “MERGER-SPECIFIC BENEFITS”

28. As this case makes clear, it is possible to extract rent where there is no reduction in marginal costs. For example, rent extraction can be funded by the elimination of fixed costs. Alternatively, rents can be paid from expected monopoly profits. The relevant inquiry here is: What is the proximate cause of the ability of XM and Sirius to divert these rents to third parties who endorse this proposed merger? By the merging parties’ own admission, we know that the proximate cause is not that the proposed merger would reduce marginal cost. This rent extraction would occur only because XM and Sirius must obtain regulatory approval of their proposed

42. *Id.*

43. *Id.*

merger to monopoly. Without an approval process, and without a source of funding (expected monopoly rents), there would be no occasion for XM and Sirius to dispense a portion of those rents.

A. Post-Merger Concessions Disguised as “Merger-Specific Benefits”

29. XM and Sirius suggest incorrectly that several “benefits” will flow naturally from the merger. Far from being efficiency gains, these goodwill gestures are merely concessions designed to please key political constituents, including proponents of à-la-carte pricing.⁴⁴ These giveaways are *not* merger-specific. For example, nothing prevents XM and Sirius from offering à-la-carte prices unilaterally or sharing content. Thus, XM and Sirius cannot claim à-la-carte pricing to be a merger-specific benefit. If one instead characterizes à-la-carte pricing not as a merger efficiency but as a proposed remedy for the potential abuse of monopoly power, there is reason to doubt the efficacy of that remedy. The hypothetical à-la-carte offerings could be constructed to ensure that very few subscribers select the smaller package. XM claims that these smaller packages “will include an attractive mix of music, news, informational, sports, children’s, and religious programming.”⁴⁵ But a phantom offer priced at slightly below \$12.95 that included everything except the valuable content could be designed to appeal only to regulators with a penchant for having content served à-la-carte.

30. The same can be said of the other “merger-specific benefits.” Consider the offer by XM and Sirius to lock in the existing monthly price at \$12.95 for a fixed duration: “Consumers who want to continue to receive substantially the same channel lineup of either

44. *Id.* at 11 (“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.”).

45. *Merger Application*, *supra* note 1, at 11.

Sirius or XM may continue to do so at the same price—\$12.95 per month.”⁴⁶ This “benefit” does not flow naturally from the proposed merger. Again, it is instead a proposed remedy against the abuse of monopoly power. Moreover, as I explained in my original declaration, locking in the existing monthly price would decrease consumer welfare if the price of SDARS in the absence of the merger would be less than \$12.95—a very likely scenario given the fact that the variable costs of the firms are expected to decline with greater penetration.

31. The merging parties’ offer to bundle both the XM and Sirius packages for something less than twice the current price of one of them would also fail to protect consumers from monopoly pricing. There are likely few subscribers who would be interested in both packages—even at a significant discount from \$25.90 per month. Depending on cost and demand conditions, even an unregulated profit maximizing monopolist might choose to set the price for this bundle at less than twice the current duopoly price of \$12.95. Again, XM and Sirius offer no serious economic evidence to substantiate the claims made in the Merger Application. XM and Sirius state in a footnote that “[f]inal decisions to make currently exclusive programming available on both services will be subject to contractual negotiations with programming partners.”⁴⁷ Clearly, a modest discount that failed to generate any consumer interest would allow XM and Sirius to honor their pledge without upsetting their current offerings.

32. Similarly, XM’s and Sirius’s offer of “rear-seat video” in exchange for merger approval is disingenuous.⁴⁸ Rear-seat video has already been deployed on a unilateral basis,⁴⁹ so XM and Sirius cannot claim this existing product offering as a “merger-specific benefit.” It is

46. *Id.*

47. *Id.* at 12 n.26.

48. *Id.* at 14.

49. *Sirius and Chrysler Buckle UP with Backseat TV*, WIRELESS NEWS, Apr. 3, 2007 (“Sirius Satellite Radio and Chrysler Group announced that Chrysler Group will be the first and only auto manufacturer to offer Sirius Backseat TV in its 2008 model-year vehicle lineup.”).

also unclear how XM and Sirius expect the FCC to weigh the significance of a rear-seat video offering in a merger that they claim concerns the “audio entertainment market.” By their own reasoning, such an innovation would have no competitive significance because there are already countless other forms of video entertainment. The larger point, however, is that the *next* round of innovation is what matters. Any claim by XM and Sirius that innovation would accelerate after the proposed merger is speculative and factually unsubstantiated.

33. Finally, consider XM’s and Sirius’s offer of interoperability: “After the transaction is consummated, the marketplace itself will provide economic incentives to encourage further innovation and the subsidization and commercial distribution of interoperable radios.”⁵⁰ It is not clear that interoperability in SDARS would generate net benefits for society. In particular, there may be no added consumer value in interoperability with the merger. Interoperability is valuable to subscribers who decide to *switch* providers. But there would be only one SDARS provider if the merger were approved. Thus, the value of interoperability would be significantly reduced.

B. Other Erroneous Assertions of “Merger-Specific Benefits”

34. In addition to their concessions, XM and Sirius offer two other “merger-specific benefits” that would not redound to the benefit of consumers.

1. The Failing-Firm Argument

35. Depending on their audience, XM and Sirius have either rejected or embraced the failing-firm argument in defense of their proposed merger. XM and Sirius have distanced themselves from the failing-firm argument in public, perhaps to assure shareholders that the

50. *Merger Application*, *supra* note 1, at 16.

respective companies are viable even if the merger is denied.⁵¹ In their Merger Application, however, XM and Sirius appear to resuscitate the failing-firm argument: “The proposed merger will also preserve and expand an FCC success story. The efficiencies from combining these two companies will produce *a stronger, more stable competitor* in the audio entertainment market.”⁵²

Gigi Sohn of Public Knowledge, a merger proponent, made the following failing-firm argument in Senate testimony:

I see parallels to the DBS merger here—one strong satellite radio company will be able to push radio broadcasters to provide better, more diverse programming and fewer commercials, particularly as broadcasters provide multiple HD radio streams. This competition could be even stronger if satellite radio providers are permitted to do more local programming, which they are currently prohibited from providing except in narrow circumstances. *But two weak companies are unlikely to provide any competitive or political pressure on broadcasters*, which goes a long way to explaining that industry’s opposition to the merger.⁵³

The implication in Ms. Sohn’s statement is that, in the absence of the merger, the two SDARS providers acting independently cannot be a viable competitor. Professor Hazlett also appears to resuscitate the failing-firm arguments to support the Merger Application.⁵⁴ As I demonstrated in my original declaration, these backward-looking arguments conflict with the findings of media analysts, which show that XM and Sirius will *unilaterally* earn very large margins across their expanding customer bases on a going-forward basis.⁵⁵ Thus, these failing-firm arguments or innuendos should be rejected.

51. Paul R. La Monica, *Sirius and XM Get Grilled in Congress*, CNNMONEY.COM, Feb. 28, 2007 (“[Sirius CEO Mel] Karmazin said, however, that he was not making a failed company argument and that life would go on for Sirius and XM if the government rejected the deal.”).

52. *Merger Application*, *supra* note 1, at 16 (emphasis added).

53. Testimony of Gigi B. Sohn, President, Public Knowledge, Before the U.S. Senate Committee on Commerce, Science, and Transportation, Hearing on: “XM-Sirius and the Public Interest,” Apr. 17, 2007, available at <http://www.publicknowledge.org/node/909> (emphasis added).

54. *Hazlett Report*, *supra* note 2, at 6 (“But the financial burdens are equally impressive. Together the two firms have expended about \$10 billion more than they have garnered in revenues; the market value of the firms reflects expectations that investors will not fully recoup losses.”).

55. Expert Declaration of J. Gregory Sidak, *supra* note 4, at 4 (“A review of reports by equity analysts demonstrates, however, that Sirius and XM are currently earning positive margins on their last subscribers. Moreover, SDARS penetration rates are expected to increase significantly, which will decrease average variable cost further and thereby generate even larger margins. Thus, the failing-firm argument is untenable in this context.”).

36. The classic “shut down” rule in economics holds that a firm exits the industry when its average variable cost exceeds price, which implies that the last unit sold makes a negative contribution to the firm’s margins.⁵⁶ In any network industry with significant fixed costs, average total cost will decline as the number of subscribers increases. Thus, the relevant question for evaluating a failing firm argument here is not whether each of the two SDARS providers is charging a price that exceeds its *current* average variable cost. Instead, the relevant question is whether each SDARS provider is charging a price that exceeds its *expected* average variable cost given projected (higher) penetration rates. Because the average cost per subscriber of SDARS declines as penetration increases, it is conceivable that a price charged today that does not generate positive margins would nonetheless generate large positive margins in the future. It is possible that such a market condition is imminent or already extant. A review of reports by equity analysts demonstrates that Sirius and XM are currently earning *positive* margins on their last subscribers.⁵⁷ Moreover, SDARS penetration rates are expected to increase significantly, which will decrease average variable cost further and thereby generate even larger margins. As far as the proposed merger of XM and Sirius is concerned, the failing-firm argument is bunk.

2. Reductions in Fixed Costs

37. As I explained in my original declaration, none of the claimed merger-related savings would redound to the benefit of end-users.⁵⁸ According to XM and Sirius, “operating

56. The firm is assumed to charge a uniform price. That is, it does not engage in price discrimination.

57. See, e.g. Craig Moffett & Amelia Wong, *XMSR: Few Surprises, but Strong Second Quarter Affirms Positive Long Term Trends*, BERNSTEIN RESEARCH CALL, Jul. 29, 2005 at 1 (“While strong subscriber growth numbers were already known before the quarter, the operating cost story was a clear positive, with variable contribution margins reaching 65% during this quarter.”).

58. Expert Declaration of J. Gregory Sidak, *supra* note 4, at 51-52 (“As Table 3 shows, the vast majority of the merger-specific savings are reductions in fixed costs. Assuming that “customer billings” is a variable cost, only 8.6 percent of the documented total merger-specific savings could offset the expected increases in prices. The reduction in variable cost would amount to a savings of \$0.05 per customer per month (equal to \$10 million per year divided

expense savings can be passed on to subscribers in the form of lower subscription rates.”⁵⁹ In the Merger Application, XM and Sirius cite five specific savings in operating expenses: (1) “duplicative programming expenses,” (2) “infrastructure used to broadcast and transmit satellite radio programming,” (3) “combined advertising and marketing campaigns,” (4) “cost of research and development efforts,” and (5) “duplicative General & Administrative expense.”⁶⁰ Because XM and Sirius have failed to establish that any of those costs varies with output, none can be considered an incremental or marginal cost. Thus, even if all five of the claimed “operating expense savings” were to materialize, they would reduce the merged firms’ fixed costs only. Because profit-maximizing firms do not take fixed costs into consideration when setting prices, these fixed-cost reductions would not produce lower prices. For this reason, XM’s and Sirius’s efficiency defenses should be rejected.

38. Consistent with this line of advocacy by XM’s and Sirius’s lawyers, Professor Hazlett cites Wall Street’s approval of the merger as support for the claim that the merger would be procompetitive. On eight separate occasions, he refers to the estimated cost savings of \$3 billion to \$7 billion.⁶¹ But the fact the merging parties might enjoy a private benefit (in terms of reduced fixed costs) does not imply that SDARS customers would be better off. According to Professor Hazlett, “If these independent analytical assessments [relating to expected cost savings] are accurate, and there is no evidence suggesting they are not, then this assessment is dispositive.”⁶² I disagree. Although this assessment by Wall Street analysts might be dispositive of something else, it is *not* dispositive that the proposed merger would be in the public interest.

by 17 million subscribers divided by twelve months) or a 1.1 percent reduction in XM’s monthly marginal cost per customer.”).

59. *Merger Application*, *supra* note 1, at 17.

60. *Id.*

61. *Hazlett Report*, *supra* note 2, at 3, 7, 14, 21, 31, 40, 41, 44.

62. *Id.* at 22.

Professor Hazlett elevates the opinion of Wall Street analysts, who judge transactions on a completely different standard—namely, the effect on shareholder wealth.⁶³ As with other merger proponents, the opinions of antitrust authorities, who use the criterion of consumer welfare, appear not to count.

39. If a reduction in fixed cost is a “merger efficiency,” as Professor Hazlett claims, then XM and Sirius could achieve the same efficiency by declaring bankruptcy and eliminating their debt. In other words, the availability of corporate reorganization through Chapter 11 bankruptcy means that the elimination of debt is not a merger-specific outcome. For this reason, the FCC should be reluctant to credit claims that reductions in fixed costs are merger-specific benefits. Professor Hazlett’s argument that significant antitrust concerns should be cast aside in the face of potentially large *private* savings to the merging parties is known as “ruinous competition” in antitrust law.⁶⁴ In the early 20th century, a number of antitrust cases involving price fixing arose in infrastructure industries plagued by overcapacity.⁶⁵ For example, price fixing does not become permissible when firms unilaterally have an incentive to cut price below the level required to recover sunk investment. For the same reason, an anticompetitive merger of competitors should not be permissible simply because it affords the merging parties an

63. Note that this standard does not diminish the relevance of Wall Street analyst reports with respect to assessing the future profitability of a firm. Wall Street analysts are not qualified, however, to opine on the net social welfare effects of mergers.

64. *See e.g.* DOJ, GE-HONEYWELL: THE U.S. DECISION, REMARKS OF DEBORAH PLATT MAJORAS, Nov. 29, 2001, at 8 (“In the 1890s, economists had difficulty explaining how a competitive enterprise could ever recover its fixed costs. They feared that firms with significant fixed costs would be driven to ‘ruinous competition’ resulting in bankruptcy and harmful destruction of assets.”).

65. *Id.* (“These arguments were quickly appropriated by defendants in the earliest Sherman Act railroad cartel cases, who argued that unregulated railroads would face ruinous competition unless allowed to fix their rates. The Supreme Court saw through that argument, holding that a ‘ruinous competition defense’ would force the court to decide what a reasonable rate of profit in a particular industry should be, and that the courts were not up to that task.”).

opportunity to reduce their fixed costs—a private benefit that will not likely redound to the benefit of SDARS subscribers.

IV. THE LIKELY ANTICOMPETITIVE MERGER EFFECTS

40. To justify this transaction, XM and Sirius advance an empirical proposition—namely, that the proposed merger would not create unilateral price effects. Yet again, XM and Sirius have failed to provide any empirical support for that explicitly economic proposition. It should not be accepted based on pure rhetoric—and certainly would not be accepted on that basis by the antitrust authorities.⁶⁶ According to XM and Sirius, “the merger will not harm competition *in any market*, because a combined satellite radio provider *will have no market power* and will need to continue to innovate and enhance its offerings to ensure that its service remains appealing to consumers.”⁶⁷ This statement is unsupported and exaggerated.

41. As I demonstrated in my original declaration, the proposed merger would increase prices *relative* to a world in which the merger is not consummated.⁶⁸ Because a monopolist charges more for a service than do oligopolists, the post-merger price would necessarily be higher (assuming no decrease in the merged firm’s marginal cost). A monopolist maximizes its profits by choosing a price such that the price-cost margin is equal to the inverse of the *industry* elasticity of demand. Unless they are coordinating, oligopolists pursue pricing strategies that generate below-monopoly prices. For example, under a differentiated product Bertrand model, a firm maximizes its profits by choosing a price such that the price-cost margin is equal to the inverse of the *firm’s* elasticity of demand. Because the firm elasticity of demand is always

66. See, e.g. Gregory J. Werden & Luke M. Froeb, *Unilateral Competitive Effects of Horizontal Mergers I: Basic Concepts and Models*, in HANDBOOK OF ANTITRUST ECONOMICS (Paolo Buccirossi ed., MIT Press 2006) (“Horizontal mergers—those of direct competitors—give rise to unilateral anticompetitive effects if they cause the merged firm to charge a higher price, produce a lower output, or otherwise act less intensely competitive than the merging firms, while non-merging rivals do not alter their strategies.”).

67. *Hazlett Report*, *supra* note 2, at 2 (emphasis added).

68. Expert Declaration of J. Gregory Sidak, *supra* note 4, at 34.

greater (in absolute terms) than the industry elasticity (consumers lose substitution possibilities at the industry level), the monopoly price will exceed the oligopoly price under Bertrand differentiated product competition. Using the new empirical industrial organization (NEIO) approach, one can estimate the post-merger margins, which are likely to significantly exceed the pre-merger margins.

42. Moreover, this anticompetitive unilateral effect is not limited to the incremental out-of-pocket costs that subscriber would have to pay to get programming. It also should take account of the costs associated with enduring additional commercials, a planned strategy of XM and Sirius conditional on their obtaining merger approval. In a February 20, 2007 conference call to discuss the proposed merger, Mel Karmazin explained that advertising would be central strategy of the combined firm:

Looking at the next slide, which would be number 10, given the combined year-end 2006 subscription figures for both companies, the merged company will be significantly more attractive to large national advertisers. AM-FM radio advertising is a \$20 billion industry. XM and Sirius compete for this advertising spend and in 2006 took a fraction of it. Advertisers look for reach, and as one company, we will have twice the reach of what either company has on its own, and as a consequence access to a greater number of advertising accounts than we have on our own. At the same time, we see an opportunity to capture savings on our respective advertising sales expense as we combine these operations. Sirius and XM currently have about 14 million subscribers, and that number is growing every day.⁶⁹

Later, XM and Sirius explained that the “advertising line is going to contribute significantly in the future towards ARPU.”⁷⁰

43. Although it is difficult to quantify the exact welfare loss associated with increased advertising time, it is reasonable to conclude that any increase in advertising time would generate

69. Conference call to discuss the merger of Sirius Satellite Radio and XM Satellite Radio, Feb. 20, 2007, available at <http://online.wsj.com/documents/transcript-xmsr-20070220.pdf>.

70. *Id.*

significant welfare losses.⁷¹ A simple example illustrates the point. Assume that the marginal SDARS subscriber, who values the service at the monthly price of \$12.99, allocates half of his willingness to pay to the commercial-free nature of the service and half to exclusive content that cannot be heard on terrestrial radio. Assuming that (1) terrestrial radio listeners must endure 9.42 minutes of commercials per hour of listening,⁷² and (2) the average SDARS subscriber listens to 11 hours of satellite radio per month,⁷³ the average SDARS customer avoids 103.6 minutes of commercials per month (equal to the product of 9.42 minutes of commercials per hour and 11 hours of satellite radio listening). For the marginal SDARS customer described above, the value of avoiding 103.6 minutes of commercials per month is \$6.50 (half of the monthly subscription price) or \$0.063 per minute of commercials avoided (equal to \$6.50 divided by 103.6 minutes). If a merged XM-Sirius were to increase commercials by only five minutes per hour, then the welfare of the marginal satellite radio subscriber would fall by \$3.47 per month (equal to the product of \$0.063 per minute of commercials avoided and five minutes per hour and 11 hours of listening per month).

44. Multiplying this reduction in welfare across 12 months and roughly 17 million SDARS customers by the end of 2007⁷⁴ yields an annual consumer welfare loss of roughly \$700 million per year. Of course, this estimate understates the full consumer welfare loss because the willingness to pay to avoid commercials for the *inframarginal* SDARS subscriber would substantially exceed that of the marginal customers, who values the service less. Assuming linear demand and an own-price elasticity of demand of unity at the current market price, the monthly

71. See, e.g., PATRICK S. MCCARTHY, *TRANSPORTATION ECONOMICS, THEORY & PRACTICES: A CASE STUDY APPROACH* 121 (Blackwell 2001) (showing the value-of-time estimates by income by transportation mode).

72. See Press Release, Empower Media Marketing, Empower Releases Analysis of Radio Advertising Clutter (Nov. 14, 2006) available at <http://www.empowermm.com/viewnews.asp?key=35>.

73. See Phil Rosenthal, *Satellite deal foes don't hear message*, CHI. TRIB., Feb. 28, 2007, at 3.

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

value to the *average* SDARS subscriber of avoiding commercials is \$9.75 (assumed to be half of the willingness to pay for satellite radio, which I estimate to be \$19.50). This calculation results in an annual consumer welfare loss of \$1.055 billion.⁷⁵

45. The proposed merger would also have adverse effects in the market for audio programming. Yet XM and Sirius argue the opposite: “Finally, a satellite radio merger will not affect competition at the programming level. There are many providers of programming and content that can easily reach listeners through a variety of means.”⁷⁶ XM and Sirius fail to offer any empirical support for the proposition that programming markets would be unaffected. Professor Hazlett goes one step further by claiming that the merger would lead to a “wider array of popular programming to subscribers.”⁷⁷ But economic theory and antitrust law suggest otherwise.⁷⁸ In particular, because a combined SDARS provider would have monopsony power over content, the amount of content should decline. One possible form of a reduction in quantity here would be a reduction in the variety of SDARS programming. Because consumers value variety, such a reduction would decrease consumer welfare.

46. Finally, the *Merger Guidelines* do consider entry as a possible price-constraining effect if “entry would be timely, likely, and sufficient in its magnitude, character and scope to deter or counteract the competitive effects of concern.”⁷⁹ In the Merger Application, the parties

75. Again, neither Professor Hazlett nor Dr. Furchtgott-Roth addresses the welfare effects of additional commercial time resulting from the proposed merger, implying that XM and Sirius concede this point. I disagree with Dr. Furchtgott-Roth on the role of commercial time when he asserts that the “incremental cost of switching from a satellite radio service to terrestrial radio or other audio services in an automobile is zero.” *Furchtgott-Roth Report*, *supra* note 3, at 7. The switching cost properly includes the cost to the consumer of enduring commercials.

76. *Merger Application*, *supra* note 1, at 47.

77. *Hazlett Report*, *supra* note 2, at 3-4 (“By combining operations, satellite operators seek to create greater scale economies in radio receivers, and to supply a wider array of popular programming to subscribers.”).

78. See *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 127 S. Ct. 1069 (2007).

79. *Merger Guidelines*, *supra* note 38, § 3.0.

acknowledge that Sirius⁸⁰ and XM⁸¹ have each invested roughly \$5 billion to date. Indeed, the list of capital expenditures for each firm is nearly identical. That admission establishes the fact—an inconvenient fact for XM and Sirius—that the entry cost for a third SDARS provider is roughly \$5 billion. Accordingly, it seems extremely unlikely that any firm will enter *de novo* in SDARS and have a constraining effect on price over the next two years.

V. CONGRESS HAS NOT DELEGATED TO THE FCC THE POWER TO REGULATE SDARS RATES

47. As a former deputy general counsel of the FCC, I do not believe that the FCC has the authority to create a rate-regulated monopoly for SDARS.⁸² Congress has not delegated to the FCC the power to regulate SDARS rates, and no delegation can be inferred. More specifically, if the FCC attempts to regulate the prices of the merged XM and Sirius, it will necessarily be setting rates for the future—a legislative act that far exceeds the FCC’s authority under current law. Attempts by agencies to regulate rates in this way have historically been struck down by the courts. The early attempts by the Interstate Commerce Commission (ICC) to regulate the prices of the railways provide a specific example. After the passage of the Interstate Commerce Act in 1888, a statute that delegated authority to the ICC to ensure that railway rates were “just and reasonable,” the ICC attempted to regulate the prices charged by railroads. That action was struck down as exceeding the authority of the agency under the statute.

80. *Merger Application*, *supra* note 1, at 3 (“Sirius has invested over five billion dollars to date, primarily to (1) develop and upgrade its network; (2) design chipsets and radios capable of receiving its service; (3) subsidize the cost of such chipsets and radios to encourage their distribution; (4) develop subscriber-based management systems and other information technology; (5) market its brand; and (6) create compelling programming for subscribers.”).

81. *Id.* at 5 (“XM has invested over five billion dollars to date, primarily to (1) develop and upgrade its network; (2) design chipsets and radios capable of receiving its service; (3) subsidize the cost of such chipsets and radios to encourage their distribution; (4) develop subscriber-based management systems and other information technology; (5) market its brand; and (6) create compelling programming for subscribers.”).

82. *See, e.g.*, Farrell Malone & J. Gregory Sidak, *Should Antitrust Consent Decrees Regulate Post-Merger Pricing?*, 3 J. COMPETITION L. & ECON. (forthcoming 2007).

48. When the Congress intends to delegate the authority to regulate price to an agency, such as the FCC, the delegation will be “open to no misconstruction,” and “clear and direct.”⁸³ By comparison, as Professor Hazlett has explained in his scholarly writings, subscription-based multichannel *video* programming delivery was subject to excruciatingly detailed legislation directing the FCC—at various times as political winds changed—to regulate, deregulate, reregulate, and rederegulate cable television prices.⁸⁴ But Congress clearly has not made any such legislative delegation to the FCC with respect to price regulation for SDARS.⁸⁵ Therefore, the FCC would be acting unlawfully if it were to approve the Merger Application on the condition that price regulation be imposed as a matter of administrative fiat. Never, to my knowledge, has the FCC permitted an industry to consolidate into a rate-regulated monopoly when the market structure currently is unregulated and supports two competitors.

VI. THE ANTITRUST SIGNIFICANCE OF THE OPPOSITION OF THE NATIONAL ASSOCIATION OF BROADCASTERS TO THE PROPOSED MERGER

49. XM and Sirius argue that the opposition of the NAB to the proposed merger is evidence that SDARS competes with broadcast radio:

In public filings and statements, various members of the radio broadcasting industry have emphatically stated that they compete directly with satellite radio and other forms of audio entertainment—a view that is underscored by the fervent opposition they expressed toward the proposed transaction before the ink on the merger agreement was even dry.⁸⁶

83. *ICC v. Cincinnati, New Orleans & Texas Pacific Railway*, 167 U.S. 479, 505 (1897).

84. Hazlett, *supra* note 2, at 26.

85. Nor has Congress given legislative delegation to the FCC with respect to price regulation for satellite video services. Indeed, Chairman Martin has publicly noted the FCC is not a rate regulator in this kind of situation. In discussing the proposed Echostar-DirecfTV merger, he stated that a “detail we would need to iron out is how this policy [of uniform national pricing] would be enforced—I, for one, am generally hesitant to enter the rate regulation business.” Kevin Martin, Commissioner, Federal Communications Commission, Remarks at The Carmel Group’s Satellite Entertainment 2002: TV and Radio From Space (Apr. 25, 2002) <http://www.fcc.gov/Speeches/Martin/2002/spkjm205.txt>.

86. *Merger Application*, *supra* note 1, at 38, citing Press Release, National Association of Broadcasters, NAB Statement in Response to Proposed Sirius/XM Merger, Feb. 19, 2007, at http://www.nab.org/AM/Template.cfm?Section=Press_Releases1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=8258 (last visited Mar. 18, 2007).

This argument has been echoed on the progressive left by Gigi Sohn of the advocacy group Public Knowledge⁸⁷ and on the libertarian right by Holman Jenkins of the *Wall Street Journal*.⁸⁸ Professor Hazlett offers NAB's opposition to the merger as his *first* piece of empirical evidence in support of the proposed merger. Rather than conduct a traditional antitrust analysis, Professor Hazlett performs what can only be described as a "political-economy exercise" to infer the relevant product market, which is justified principally on NAB's opposition to the merger.⁸⁹ This political-economy exercise is presented in the very first section of his report ("Rivalry and Antitrust") and in the single empirical appendix in the report ("NAB Statements on Terrestrial vs. Satellite Radio Competition").

50. The argument that NAB's opposition to the merger is proof that the merger is procompetitive is incorrect as a matter of logic, erroneous as a matter of economic analysis, and irrelevant as a matter of antitrust law. That the argument is so readily embraced by proponents of the merger underscores their failure to acknowledge, and to place their arguments within the context of, the complex nature of competition between SDARS (a subscription-funded service) and terrestrial broadcast radio (an advertiser-funded service) in what economists call a "two-sided market."⁹⁰

87. See *The XM-Sirius Merger: Monopoly or Competition from New Technologies: Hearing Before the S. Committee on the Judiciary, Subcommittee on Antitrust, Competition Policy and Consumer Rights*, 110th Cong. 8 (Mar. 20, 2007) (statement of Gigi Sohn, President of Public Knowledge) (noting NAB's opposition to the merger).

88. See Holman W. Jenkins, Jr., *Beyond Parity*, WALL ST. J. at A14, Apr. 25, 2007 ("Naturally, leading the opposition is the National Association of Broadcasters. That competitors would lobby against a merger as 'anticompetitive' is now accepted without a guffaw.") [hereinafter *Beyond Parity*].

89. *Hazlett Report*, *supra* note 2, at 9 ("Perhaps the most telling piece of evidence as to the likely economic effect of the satellite merger is found in this reaction by rival radio broadcasters. Their opposition signals precisely what regulators attempting to discern pro-competitive from anticompetitive combinations need to know: will the transaction result in higher outputs and reduced quality-adjusted prices?").

90. For explanations of the relevance of two-sided markets to antitrust analysis, see J. Gregory Sidak, *A Consumer Welfare Approach to Network Neutrality Regulation of the Internet*, 2 J. COMPETITION L. & ECON. 349 (2006); David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. ON REG. 325 (2003); Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 4 J. EUR. ECON. ASS'N 990 (2003).

51. By opposing the proposed merger, broadcasters are understandably concerned that a combined XM-Sirius would divert advertising dollars away from radio stations. Broadcasters fear that some *advertisers* (as opposed to consumers) perceive SDARS audiences and terrestrial broadcast radio audiences to be close substitutes for purposes of disseminating advertising messages. One can infer from this opposition by NAB that broadcasters believe that SDARS and terrestrial radio broadcasting compete (at least potentially) in the antitrust product market *for radio advertising*. Indeed, as I have described above, XM and Sirius have explicitly stated what their advertising strategy will be if the government approves their proposed merger. Given SDARS' unique nationwide footprint—and its potential ability to subsidize advertisement rates from subscriber revenues—terrestrial radio broadcasters may be unable to compete effectively with SDARS in the sale of radio advertisements that achieve nationwide clearance. Thus, NAB's concern reflects the impact of the merger *only* on one side of this two-sided market—the radio advertising side of the market, as opposed to the content side. This economic concern over loss of radio advertising revenue is sufficient to explain why NAB would oppose the proposed merger of XM and Sirius.

52. So it is here that the logical fallacy of XM, Sirius, Public Knowledge, the *Wall Street Journal*, and Professor Hazlett manifests itself. They attempt to use factors concerning the market for radio advertising as a means to draw inferences about consumer perceptions of product substitutability on the *other* side of this two-sided market. This error of logic has important implications for correct economic analysis in a merger review. The fact that two suppliers (potentially) compete in the market for radio advertising does not imply anything about whether *SDARS consumers* perceive terrestrial broadcast radio to be reasonably interchangeable

The seminal article on two-sided markets is William F. Baxter, *Bank Interchange of Transactional Paper: Legal and Economic Perspectives*, 26 J.L. & ECON. 541 (1983).

for SDARS. *That* question is the dispositive one for defining the relevant product market in a merger case and thereafter evaluating the merger's enhancement of market power with respect to that relevant product.

53. There is intermodal competition among media outlets for advertising. The following example makes this point clear. AT&T would like to buy print, radio, and cable television advertising to promote its new iPhone. (AT&T has an exclusive deal with Apple.) The fact that the *Washington Post* (a print medium) and Comcast (a television medium) vie for the same advertising dollars from AT&T does not imply anything about whether *Washington Post* readers and Comcast subscribers perceive the *Washington Post* to be reasonably interchangeable with Comcast cable television service. (Obviously, one cannot watch movies or baseball games in the pages of the *Washington Post*, even if Comcast and the *Washington Post* compete for the same advertising accounts on the other side of the market.) Similarly, the fact that Apple might advertise on both SDARS and broadcast radio does not imply that SDARS subscribers perceive broadcast radio to be a reasonable substitute for SDARS. Indeed, a merged XM-Sirius could capture a significant percentage of all broadcast advertising dollars without inducing any significant substitution *by SDARS subscribers* to terrestrial broadcast radio—which, it bears repeating, is the correct legal and economic question to ask for defining the relevant antitrust product market for consumers in this merger proceeding. In short, XM, Sirius, and their partisans make specious arguments about consumer substitution because they fail to analyze the two-sided nature of the market in which XM and Sirius operate.

54. In addition to clouding the truth about competition, the Greek chorus of merger proponents argues that all the accepted principles and precedents of merger analysis should be

set aside for this merger. The following *Wall Street Journal* editorial parrots this logic in what could be a tribute to John D. Rockefeller:

Even one or two normally sentient commentators have fretted that if the Justice Department and Federal Communications Commission (which have joint custody) fail to challenge the merger, the nation's inventory of antitrust "principles" and "precedents" might be rendered null. But those principles and precedents are mostly bunk, the fruit of the self-interested exertions of the antitrust professionals themselves. Such whimsies and brainstormers make a poor excuse for brushing aside the rights of companies and their owners (rights that are rarely acknowledged in antitrust discussions anymore).⁹¹

Statements like these sometimes mirror talking points routinely distributed to journalists and think tanks by parties to a pending merger who essentially seek an antitrust exemption—either because antitrust is nothing but “bunk” and “whimsies,” or because a merger to monopoly can be spun as serving the public interest in the highly selective sense. If XM and Sirius wish to dissociate themselves from these intemperate views expressed by supporters of the proposed merger, the record in this FCC proceeding provides them the appropriate forum.

55. The short answer to either of these two rationales for approving this merger is that creating new antitrust exemptions is the job of Congress and determining whether antitrust exemptions are implicit in existing statutes is the job of the federal courts.⁹² Meanwhile, the merger to monopoly being proposed in this case must be evaluated according the *Merger Guidelines* that the Department of Justice and the Federal Trade Commission have seen fit to employ for several decades. So scrutinized, the proposed merger to monopoly of XM and Sirius is an exceedingly simple case to decide. The hard question that remains is, “Why would XM and Sirius pursue with such hubris a monopolistic merger that any competent antitrust lawyer could tell them obviously violates section 7 of the Clayton Act?”

91. See *Beyond Parity*, *supra* note 88. Lest any doubt remain, Mr. Jenkins has subsequently pronounced antitrust law to be “an infinitely pliable tissue of myths.” Holman W. Jenkins, Jr., *Whole Food Fight*, WALL ST. J., June 27, 2007, at A12.

92. See, e.g., *Credit Suisse Securities (USA) LLC v. Billings*, 127 S. Ct. 1507 (2007); *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

CONCLUSION

56. In concocting the phrase “audio entertainment,” the expert antitrust and regulatory legal team assembled by XM and Sirius has invented a new product market definition that finds no support in precedent or in the accepted principles by which the FCC, DOJ, and FTC analyze the competitive effects of a proposed merger. This concept of an “audio entertainment” product market—or its equally broad surrogate, the “fixed and mobile communications service” product market—cannot be dismissed as loose talk by a CEO under the bright lights of a congressional hearing. It is a carefully worded legal argumentation intended to bamboozle the decision maker.

57. To an informed observer, this strained advocacy is telling. The lawyers for XM and Sirius cannot in good faith argue that this proposed merger would never harm competition in a properly defined product market. So, instead, they erect the straw man of the “audio entertainment” market and then argue that an SDARS monopoly will not harm consumers in this imaginary product market. The logical fallacy, of course, is that knocking down the straw man in the imaginary “audio entertainment” market tells us nothing about the harm to consumers from a merger to monopoly in the real-world market for SDARS. It necessarily follows that knocking down the “audio entertainment” product market straw man cannot shift the initial burden of proof from XM and Sirius to the Commission or petitioners to deny.

58. The lawyers representing XM and Sirius are sophisticated intermediaries in the Washington regulatory game who form an enduring layer of specialized human capital sandwiched between regulators and regulated companies. These intermediaries are repeat players who must preserve their reputation before the FCC, the DOJ, and the FTC so as to serve other clients effectively in the future. To constrain their grasping pair of merger clients, counsel for XM and Sirius have chosen to draw the line in this case by avoiding any claim in the Merger Application that XM and Sirius lack market power *in the SDARS relevant product market*.

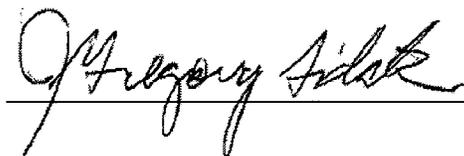
Strictly speaking, *counsel for XM and Sirius never dispute that the merger would produce a monopoly in the market for SDARS.*

59. Instead, counsel for XM and Sirius seek to defend a proposed merger of XM and Sirius under a fictional market definition that has never been used and does not comport with the economic facts of the case. Ultimately, the answer to whether or not there is a relevant antitrust product market for “audio entertainment” is utterly irrelevant to this proceeding. The framing of that question is calculated by counsel for XM and Sirius to distract attention from the actual antitrust questions presented by a proposed merger to monopoly in the real-world market for SDARS. An informed observer witnessing this legerdemain can discern that, as intermediaries, the eminent law firms retained by XM and Sirius implicitly reveal something very important about the merits of this proposed merger: Under any intellectually defensible product market definition in this case, these lawyers could not represent to the Commission that the proposed merger of XM and Sirius would be lawful under section 7 of the Clayton Act.

60. To defend the public interest and to protect the welfare of consumers of SDARS, the Commission cannot allow XM and Sirius to monopolize the satellite radio market. Established principles of antitrust law and economics dictate that the Commission deny 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 July 9, 2007.



J. Gregory Sidak

APPENDIX : TABLES CONCERNING USE OF THE PHRASE “AUDIO ENTERTAINMENT”

TABLE A1: USE OF “AUDIO ENTERTAINMENT” BY FEDERAL AGENCIES

<i>Agency</i>	<i>Number of Unique Hits</i>	<i>Has the term been used in a way that is synonymous with the merging parties’ definition?</i>	<i>If yes, has the term been used for the purpose of market definition in an antitrust context?</i>
DOJ	0	No. The term has never been used.	NA
FTC	45	No. The term has been used but not in a way that is synonymous. “have a ‘local single’ return the call” ¹ ; “services associated with the 900 prefix” ² ; “pay-per-call services” ³ ; “placing a call, receiving a call, or comparable action of the caller results in a charge to a customer” ⁴ ; “simultaneous voice conversation services” ⁵ ; “900-number services” ⁶ ; “international audiotext” ⁷ ; “pay-per-call service (currently 900 number services)” ⁸ ; “services provided through the telephone” ⁹ ; “audiotext” ¹⁰ ; “audio files” ¹¹	NA
FCC	24	No. The term has been used to describe “pay-per-call services” ¹¹ ; “pay-per-call Industry” ¹² ; “audio CDs” ¹³ ; “audiotext” ¹⁴ ; “audio components of gaming consoles” ¹⁵ ; audio portion of in-flight programming” ¹⁶ ; “over the airwaves entertainment” ¹⁷ ; “cablecast radio services.” ¹⁸	NA

Sources: ¹ Available at <http://www.ftc.gov/opa/1998/07/cramming.htm>; ² Available at <http://www.ftc.gov/bcp/adcon/900rule/comments/uswest.htm>; ³ Available at <http://www.ftc.gov/bcp/adcon/900rule/comments2/ameritec.htm>; ⁴ Available at <http://www.ftc.gov/os/1999/04/imalincstipfinal.htm>; ⁵ Available at <http://www.ftc.gov/bcp/adcon/900rule/markup.pdf>; ⁶ Available at <http://www.ftc.gov/bcp/adcon/900rule/comments2/mci.htm>; ⁷ Available at <http://www.ftc.gov/bcp/adcon/900rule/brecher.htm>; ⁸ Available at <http://www.ftc.gov/ogc/stat3.htm>; ⁹ Available at <http://www.ftc.gov/bcp/adcon/900rule/ppc-ss.htm>; ¹⁰ Available at <http://www.ftc.gov/bcp/adcon/900rule/comments/at&t.htm>; ¹¹ Available at <http://www.fcc.gov/omd/pr/docs/3060-0749/3060-0749-06.doc>; ¹² Available at <http://www.fcc.gov/eb/Orders/da002449.txt>; ¹³ Available at <http://www.fcc.gov/ownership/materials/already-released/survivor090002.pdf>; ¹⁴ Available at http://www.fcc.gov/Bureaus/OSEC/library/legislative_histories/1462.pdf; ¹⁵ Press Release, Federal Communications Commission, FCC Releases Twelve Studies on Current Media Marketplace; Research Represents Critical First Step in FCC’s Fact Finding Mission, MB Docket 02-277, Oct. 1 2002; ¹⁶ In the Matter of Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 9 F.C.C.R. 6779 (Nov. 8, 1994); ¹⁷ In the Matter of Review of the Technical Assignment Criteria for the AM Broadcast Service, 6 F.C.C.R. 6273 (Oct. 25, 1991); ¹⁸ In the matter of: Amendment of Part 76 of the Commission’s Rules and Regulations to Govern Importation of Radio Signals by Cable Television Systems, 67 F.C.C.2d 491 (Feb. 7, 1978).

TABLE A2: USE OF "AUDIO ENTERTAINMENT" BY ANTITRUST COURTS

<i>Antitrust Court Cases</i>	<i>Has the term been used in a way that is synonymous with the merging parties' definition?</i>	<i>If yes, has the term been used for the purpose of market definition?</i>
Niehaus v. AT&T Corp., 218 F. Supp. 2d 531 (S.D.N.Y. 2002).	Statutory definition of "pay-per-call-services" under 47 U.S.C. 228(i). "Audio information or audio entertainment produced."	N/A
Whitaker v. Ameritech Corp., 1996 U.S. Dist. LEXIS 8573 (N.D. Ill. June 20, 1996).	Statutory definition of "pay-per-call-services" under 47 U.S.C. 228(i). "Audio information or audio entertainment produced."	N/A
Northern Telecom, Inc. v. Datapoint Corp., 9 U.S.P.Q.2D 1577 (N.D.Tex. 1998)	Refers to magnetic tape cassettes as a familiar component of the "audio entertainment field."	N/A
Price v. Trans World Airlines, Inc., 481 F.2d 844 (9 th Cir. 1973)	"Audio entertainment" refers to audio portions of in-flight movies and other radio offered in-flight.	No. Dispute over interception of "clean feed" of NFL broadcasts. Refers to the different forms of "audio entertainment" that could have copyright protection circumvented if the "clean feed" interception was allowed. Case dismissed for lack of evidence for statutory damages.
Blotteaux v. Qantas Airways Ltd., 2006 WL 475458 (9 th Cir. Mar. 1, 2006).	"Audio entertainment system" refers to in-flight services, including radio and audio portions of movies and television.	N/A
National Football League v. McBee & Bruno's, 621 F. Supp. 880 (E.D. Mo. 1985)	Audio entertainment. Used in the context of "all forms of live video and audio entertainment."	No. Audio entertainment free for first class passengers, but not for coach passengers. Case dismissed for failure to state a claim and frivolity.

TABLE A3: USE OF "AUDIO ENTERTAINMENT" BY AUTHORS IN LAW REVIEW ARTICLES

Law Reviews	Use of "Audio Entertainment"
Mark S. Fowler, <i>Forward</i> , 32 CATH. U.L. REV. 523 (1983).	Audio entertainment combined with video entertainment and information distributions systems, term used as a complement to "broadcasting."
James M. Snyder, Note, <i>Online Auction Fraud: Are the Auction Houses Doing All They Should or Could to Stop Online Fraud?</i> , 52 FED. COMM. L.J. 453 (2000).	Statutory definition of "pay-per-call-services" under 47 U.S.C. 228(i). "Audio information or audio entertainment produced." Further, Commission has power to extend definition [of pay-per-call-services] to other similar services providing audio entertainment.
Don E. Tomlinson & Christopher R. Harris, <i>Free-Lance Photojournalism in a Digital World: Copyright, Lanham Act and Droit Moral Considerations Plus a Sui Generis Solution</i> , 45 FED. COMM. L.J. 1 (1992).	Audio entertainment industry revolves around "pre-recorded works," as contrasted with the work of free-lance photojournalists.
David G. Grossman, <i>Screening the Screeners</i> , 45 IDEA 361 (2005).	Audio entertainment industry used to describe the music recording industry (context of music piracy).
James P. Nehf, <i>Contract Remedies: Contract Damages as a Substitute for Full Performance</i> , 32 IND. L. REV. 765 (1999).	Audio entertainment products and repairs of said products.
John P. Gillard, Note, <i>Pay-Per-Call Legal Advice, Professional Integrity, and Legal Licences: Why 1-900-Lawyers is a Call to the Wrong Number</i> , 79 MARQ. L. REV. 549 (1996).	Statutory definition of "pay-per-call-services" under 47 U.S.C. 228(i). "Audio information or audio entertainment produced."
Paul K. Hentzen, Note, <i>The Trouble With Telematics: The Uneasy Marriage of Wireless Technology and Automobiles</i> , 69 UMKC L. REV. 845 (2001).	Describes devices the produce audio entertainment, such as radios and CD players.
Seth A. Miller, Note, <i>Peer-to-Peer File Distribution: An Analysis of Design, Liability, Litigation, and Potential Solutions</i> , 25 REV. LITIG. 181 (2006).	Producers of audio entertainment, in the context of the "entire film and audio entertainment world [sued Grokster]."
Peter Alan Block, Note, <i>Modern Day Sirens: Rock Lyrics and First Amendment</i> , 63 S. CAL. L. REV. 777 (1990).	Quote from a Frank Zappa album, stating "Barking Pumpkin is pleased to provide stimulating digital audio entertainment."
Brian Leubitz, Note: <i>Digital Millenium? Technological Protections for Copyright on the Internet</i> , 11 TEX. INTELL. PROP. L.J. 417 (2003).	Audio entertainment <i>industry</i> refers to the recording industry, used in the context of copyright violations.
Mike From, <i>The Technological Environment</i> , 20 TRANSP. L. J. 153 (1991).	Airlines may purchase anybody's "audio entertainment." Context of radio and audio potions of in-flight TV and movies.
Debra Valentine, <i>About Privacy: Protecting the</i>	Audio entertainment services refer to pay-per-call phone

Law Reviews	Use of "Audio Entertainment"
<i>Consumer on the Global Information Infrastructure</i> , 1 YALE SYMP. L. & TECH. 4 (1999).	services.
Ilene Knable Gotts & Stacey M. Berg, <i>Developments in Consumer Protection: Enforcers Get Tough on Fraudulent And Deceptive Practices in Telecommunications Services</i> , 11 ANTITRUST 39 (1997).	Statutory definition of "pay-per-call-services" under 47 U.S.C. 228(i). "Audio information or audio entertainment produced"
Rodney Fort & Robert Rosenman, <i>Rethinking the Value of Lost Health</i> , 5 J. LEGAL ECON. 63 (1995).	Audio entertainment refers to a person's consumption in the home of radio and other audio services.
Therese A. Ehkle, <i>Disc, Dat and Fair Use: Time to Reconsider?</i> , 25 CASE W. RES. L. REV. 97 (1988).	Audio entertainment is what a person listens to, facilitated by audio equipment.

EXHIBIT C



Consumer Vulnerability to a Satellite Radio Monopoly in Rural, Unserved and Underserved Geographic Areas

Consumer Coalition for Competition in Satellite Radio
1718 M St. NW, # 335
Washington, DC 20036
www.C3SR.org

July 9, 2007

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Appendix A – Arbitron Radio Market Rankings

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INTRODUCTION

On February 19, 2007, Sirius Satellite Radio Inc. (“Sirius”) and XM Satellite Radio Holdings Inc. (“XM”) announced their plan of merger. The proposed Sirius/XM merger will completely eliminate competition in satellite radio service, with no meaningful opportunity for competitive entry in the future. Sirius and XM are the only two firms licensed by the Commission to provide satellite radio service, which is the only nationwide, multi-channel, commercial-free radio service in the nation.

The Consumer Coalition for Competition in Satellite Radio (“C3SR”), representing Sirius and XM subscribers, opposes the merger. As part of its Petition to Deny, C3SR undertook the following analysis of the impact of a satellite radio monopoly on consumers in rural, unserved and underserved geographic areas.¹ The analysis reveals the extent of potential harm resulting from this merger in rural areas by identifying areas where satellite radio service may be the only available radio service, or where it is critically important because there are few, if any, free local radio stations. In 1997, when the FCC found that the public interest was served in granting licenses to Sirius and XM, the technological potential to provide service to rural and mountainous sections of the country that had historically been underserved by terrestrial radio was an explicit part of that public interest finding.

The Commission and antitrust authorities in a previous merger proceeding involving national satellite television service gave careful consideration to the impact on consumers in rural, unserved and underserved areas.² In designating the merger application of DirecTV and EchoStar for hearing, the FCC gave considerable weight to the potential impact on consumers in areas without cable television service.³ In that case, consumers in local markets would have experienced a reduction in the number of suppliers from three (the incumbent cable operator, DirecTV and EchoStar) to two in locations where consumers were served by cable television systems. Notably, in the DirecTV/EchoStar merger, each of the three suppliers in local markets carried comparable content with similar channel capacities. The FCC identified some five million Direct Broadcast Satellite (“DBS”) subscribers in areas not served by cable systems, and the Department of Justice (“DOJ”) with 23 State Attorneys General filed an action in Federal District Court under Section 7 of the Clayton Act to prohibit the merger.⁴ As noted in the DOJ complaint, subscribers in unserved areas were most vulnerable to the merger because for them it was a merger of two to one – a merger to monopoly.⁵

¹ C3SR hereby acknowledges the financial support of the National Association of Broadcasters.

² See generally, Application of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, Hearing Designation Order, 17 FCC Rcd 20559 (2002) (“EchoStar HDO”).

³ *Id.* at para. 177.

⁴ See generally, Complaint, United States v. EchoStar Comm. Corp., No. 1:02CV02138 (D.D.C. Oct. 31, 2002) (“EchoStar Complaint”).

⁵ *Id.* at para. 37.

In this case, the merger parties have advocated an expansive and nebulous market definition, which incorrectly includes local radio. The merger parties have failed even to recognize variations in the availability of local radio among and between local radio markets, and outside those markets. In fact, an economic analysis using the DOJ and Federal Trade Commission's *Horizontal Merger Guidelines* reveals that even if local radio is considered a part of the market definition, a harmful degree of market concentration would result from the merger in all Arbitron markets – even in the largest urban markets.⁶ In large part, that fact is the result of a relatively simple observation: in even the largest urban markets, all of the local radio stations added together do not equal the channel capacity of even one of the two satellite radio systems to be merged. The following analysis takes a closer look at these implications outside of urban areas.

Because the Sirius/XM merger is a merger to monopoly for all consumers in all areas, it is important for policymakers to consider the impact on consumers both within and outside of the larger Arbitron markets, especially in the areas where there is service by few, if any, local radio stations.^[7] While the majority of the US population is urban (approximately 79%), and local radio stations within the Arbitron metro survey areas cover this population (approximately 71% of the US population resides within Arbitron's metro areas), **29% of the US population (age 12+) resides outside of Arbitron's metro survey areas.** As illustrated in the following analysis, consumers in certain areas will experience the effects of monopoly more severely. In these areas, satellite radio may be most highly valued by consumers, and, for some, the only source of *radio* service.

MAJOR FINDINGS

- Substantial portions of the United States have few, if any, local radio signals;
- Significant portions of major highways in the United States traverse areas where there are few, if any, local radio signals;
- An estimated 44 million trips each week are made on major highways that traverse these areas;
- A majority of satellite radio subscribers are likely to be residents of areas with few, if any, local radio signals or travelers through these unserved and underserved areas;⁸
- On average, the urban population of the United States receives 30 local radio signals;

⁶See J. Gregory Sidak, *Expert Declaration of J. Gregory Sidak Concerning the Competitive Consequences of the Proposed Merger of Sirius Satellite Radio, Inc. and XM Satellite Radio, Inc.* (March 16, 2007), paras. 61-67 (“*Sidak Declaration*”), available at http://www.c3sr.org/news/industry/Sidak_declaration.pdf.

⁷ A complete list of Arbitron metro survey areas is attached hereto at Appendix A

⁸ Fifty-eight percent of respondents to a recent survey of Sirius and XM subscribers indicated that they reside in a small city/town/rural area. Eighteen percent of respondents indicated they reside in a city; and 23% indicated they reside in a suburb.

- However, 2.3 million US residents are located in areas served by five or fewer local radio signals;
- An additional 45 million US residents are located in areas served by only six to fifteen local radio signals;
- 44.6% of the territory in the United States is served by five or fewer local radio signals;
- Approximately 48 million US residents of the 50 states are located in areas where there are few, if any, local radio signals;
- Approximately 80% of the geographic area of the United States is served by 15 or fewer local radio signals.

THE LACK OF SUBSTITUTES FOR SATELLITE RADIO

Satellite radio is a unique service, and there is no effective substitute to mitigate the market power of a satellite radio monopoly for consumers who have purchased satellite radios for their vehicles and homes. Satellite radio offers a wide range of musical genres, live news, live weather, live traffic and live sports, on a nationwide basis, in even the most remote areas, which most alternatives cannot offer. Satellite radio service offers a passive listening experience driven by the preferences of listeners for specific musical genres and offers a vast multi-channel package of music, news, weather, traffic and sports with virtually “something-for-everyone.” Most importantly for many subscribers, satellite radio today is nearly commercial free.

Free local radio is not a substitute for satellite radio’s exclusive and uncensored content, vast channel capacity and national footprint. Among other things, satellite radio is the only mobile *radio* service with the ability to aggregate local demand across the nation to offer certain radio formats and genres of music. Because of its nationwide footprint and its vast channel capacity, satellite radio can offer those formats and genres in many locations where there is insufficient demand to sustain a local radio station dedicated to the format or genre.⁹ Moreover, satellite radio is the only service that can offer programs without censorship, such as Howard Stern. Most importantly, satellite radio can reach every American, including nearly 100 million listeners age 12 and over who are beyond the range of the largest 50 local radio markets measured by Arbitron, and 36 million who live outside of the smallest Arbitron market.¹⁰

Local radio (HD, AM and FM), which is not available universally and cannot deliver either the uncensored and exclusive programming or the channel capacity of satellite

⁹ For example, Zydeco music might now draw a large enough audience in New Orleans to justify a local radio station devoted to that genre. Elsewhere, there is insufficient demand to sustain a Zydeco-oriented local station. In contrast, satellite radio can aggregate the demand for Zydeco in New Orleans with the demand for Zydeco among all its subscribers nationally. In the aggregate, this demand would be quite sufficient.

¹⁰ XM Satellite Radio Holdings Inc., SEC Form S-1 (filed June 13, 2000).

radio, is at best an imperfect alternative with varying degrees of availability based on location.¹¹ Pre-recorded media such as MP3 players and iPods cannot offer live programming and do not permit passive listening. These devices require a significant investment of time and money in the selection, purchase, recording and downloading of content. Cellular telephone providers offer downloadable music, or the distinctive content of other radio services; but these offerings either are not universally available or do not permit passive listening.¹² Internet radio is not a practical alternative for use in automobiles today or in the next several years.¹³ Sixty-eight percent of the respondents to a recent survey of XM and Sirius subscribers indicated they do not listen to Internet radio.

Even if there were an effective substitute, most subscribers have significant embedded investments in satellite radio receivers (as much as \$575 to \$1000 for a dealer-installed in-dash satellite radio system including parts and installation), and many would face early termination penalties under their existing service contracts.¹⁴ Fifty-nine percent of respondents to a recent survey of XM and Sirius subscribers reported that they signed satellite radio subscription contracts for one year or longer.¹⁵ It has been reported that satellite radio subscriptions are difficult to cancel. Recently, XM subscribers who attempted to cancel their subscriptions in reaction to the suspension of Opie and Anthony found out how difficult it can be.¹⁶

CONSUMERS AND A SATELLITE RADIO MONOPOLY

Several leading economists and antitrust experts have concluded that satellite radio is a unique product market, and their analyses conclude that a satellite radio monopoly could exercise its market power over consumers who would be quite vulnerable to price increases and service quality reductions.¹⁷ A satellite radio monopoly will be free to raise prices

¹¹ Local radio is the only alternative that can offer live weather, traffic, news and sports, but as demonstrated in this study, local radio service is not universally available. Moreover, because the content of local radio is regulated by the FCC, it cannot offer similar programming, much of which is prohibited under the FCC's rules as obscene or indecent.

¹² The cost of this alternative includes a properly enabled handset, the recurring monthly cost of cellular service, a special-service incremental charge and the recurring cost of content.

¹³ Mobile broadband service, necessary to receive high-quality Internet radio service in vehicles, generally costs far more than a satellite radio subscription, and mobile broadband service is not universally available. The two leading internet radio service providers, Slacker and Pandora Media, Inc., do not have sufficient market share (even in the aggregate) to be included in the relevant market; and the subscribers they serve today are not able to receive the service in automobiles.

¹⁴ According to Crutchfield, an expert in car audio and retail partner of Sirius and XM, the cost of a dealer-installed XM satellite radio sound system in a 2005 Honda Odyssey ranges from \$950 to \$1000. The cost of a dealer-installed Sirius satellite radio sound system in a 2004 BMW 330i is \$575. See *Satellite Radio In My Car*, at <http://www.crutchfield.com/S-zuhUfzeLE5J/satelliteradio/incar.html>.

¹⁵ See survey conducted by Wilson Research Strategies for the National Association of Broadcasters ("Wilson Survey"), available at http://www.w-r-s.com/press/WRS_NAB_Sat_Radio_Survey_Press_Release_070710.pdf.

¹⁶ "Customers Say XM Didn't Let Them Go Without A Fight," *Washington Times* (June 10, 2007).

¹⁷ See generally, *Sidak Declaration*; Dr. Mark N. Cooper, *Competition and the Future of Digital Music* (Feb. 28, 2007) (statement before the Intellectual Property Taskforce of the House Judiciary Committee on behalf of the

in a variety of ways, even if direct price increases are temporarily frozen – a hollow concession offered by the merger parties.¹⁸ Where the subscription price for satellite service is frozen, but the programming content, equipment and quality of the package remain variable, a price freeze is meaningless and illusory. The effective price of satellite radio service can be increased indirectly. Price is relative to value, and value is not held constant (or meaningfully increased) under the price concessions offered by the merger parties.¹⁹

All satellite radio subscribers who purchased satellite radio service to avoid radio commercials will face a tremendous loss in value as a result of this merger. Immediately following the announcement of the merger, Mel Karmazin promised investors and analysts that the merger would enable satellite radio to become an advertiser-supported medium. He said, “. . . the merged company will be significantly more attractive to large national advertisers.”²⁰ Elsewhere, both XM and Sirius have stated, “. . . [the] advertising line is going to contribute significantly in the future towards ARPU [average revenue per user].”²¹ The result for existing subscribers will be an added cost of enduring commercials in the rapid transformation of satellite radio from commercial-free to advertiser-supported/subscription service. The result for consumers at large will be the loss of a commercial-free alternative in radio service.

In geographic areas where local radio service is effectively unavailable (*unserved* areas), or in geographic areas where local radio service is thinly available (*underserved* areas), local radio service clearly could not be considered an effective alternative to satellite radio service, and consumers will be most adversely affected by a satellite radio monopoly. These unserved and underserved areas are significant not only to the residents of these areas but especially to those who travel the roads in these areas. **Table 1** shows the growth trend in vehicle miles traveled each year.²² Clearly, Americans are spending more time in cars, and the vast majority of satellite radio subscribers listen to satellite radios in their cars.²³

Consumer Federation of America, Consumers Union, and Free Press), available at http://www.hearusunow.org/fileadmin/sitecontent/2007_-_0228_CU-FP-CFA_Testimony_On_Sirius-XM_Merger.pdf; *Comments of the American Antitrust Institute in Opposition to Transfer Application*, MB Docket No. 07-57 (June 5, 2007).

¹⁸ Notably, in a competitive environment, as the subscriber base grows and costs fall, subscription prices would fall, not increase. Satellite radio is one of the fastest growing subscription services in the history of electronic mass media. Therefore, a price freeze masks the potential for real consumer gains from continued competition and falling prices.

¹⁹ When each satellite radio system is operating at full-channel-capacity, in order to cross-sell the content of each satellite radio system on the other system the overall number of channels currently offered on each system must be reduced. The merger parties intend to cross-sell the content of both systems in this manner, so there will be an overall reduction in current channel offerings between the two systems.

²⁰ Conference call to discuss the merger of Sirius Satellite Radio and XM Satellite Radio (Feb. 20, 2007), available at <http://online.wsj.com/documents/transcript-xmsr-20070220.pdf>.

²¹ *Id.*

²² All tables referred to are attached hereto in Appendix B.

²³ According to the Wilson Survey, 77 percent of respondents to a recent survey of Sirius and XM subscribers indicated that they listen to satellite radio most often in their cars. Sixty-eight percent of the respondents listen to satellite radio on their way to and from work, with nearly half spending over a half hour each day in the commute.

Most local radio stations are quite limited in terms of their geographic coverage. Even among the most powerful AM clear-channel stations (restricted in number to 25 nationally by virtue of the FCC frequency allocations), it is impossible for each station to provide reliable radio service to more than a relatively small region of the United States, even during nighttime hours when service areas are at a maximum size (700-750 miles from the transmitter).²⁴ All other local radio stations are licensed by the FCC to serve even smaller geographic areas, as defined by their authorized transmission power and antenna height in their FCC licenses.

It is not practical to measure the *actual reception* of all local radio signals in the United States in all locations. Consequently, this analysis follows the FCC's practice of relying upon measures of predicted signal coverage. For example, under the FCC's rules only the predicted signal contours of local stations are protected from interference in the FM service. Coverage in the AM service is more variable due to propagation characteristics, but the FCC similarly relies on measures of predicted coverage. Accordingly, this analysis has used predicted signal contours as a measure of local radio service.

The maps attached hereto in Appendix C were prepared for this report by Dataworld, a division of BIA Financial Network ("BIAfn"). These graphic illustrations are based on Dataworld's analysis of the number of predicted coverage contours of local radio stations reaching each Census Block's centroid. The predicted signal contours of local radio stations are defined by the use of the 60 dBu contour for FM stations and the 2 mV/m contour for AM stations (groundwave service).²⁵ For FM radio stations, the 60 dBu contour is relied on by BIAfn and other valuation firms when determining the value of FM radio stations, and defines a listening area greater than the 70 dBu contour used by the FCC to define the required signal strength for coverage of an FM station's principal community. For AM radio stations, the 2 mV/m contour is commonly used by radio networks to determine exclusive market areas for AM radio network affiliates. It provides an accurate assessment of the actual listening area for an AM station.

These maps identify geographic areas that receive virtually no service (five or fewer local radio signals) compared to the average level of local radio service for the US population generally. They also identify areas with six to 15 local radio signals. US residents (age 12+) averaged across all 300 Arbitron Metro Areas have access to a mean number of 30 local radio stations. The areas identified on these maps have access to half, or fewer, of that

²⁴ See Clear Channel Broadcasting in the AM Broadcasting Band, 78 FCC2d 1345 (1980).

²⁵ The geographic skywave coverage of nighttime aural service in the AM broadcasting band is greatly variable due to propagation characteristics. "The service and interference ranges of groundwave signals are substantially constant day and night. There is therefore no significant difference, day and night, in the distance from the transmitter at which the groundwave signal's field strength will have a given service or interference potential. At night, however, a phenomenon called 'skywave transmission' very substantially increases the distances at which AM signals can render a usable service, and enormously increases the distances at which they can create destructive interference to the service of other stations operating on the same channel. The signals which radiate upward and outward have no consequential effect at the earth's surface during most daytime hours. At night, however (and to a lesser extent during certain transitional periods before sunset and after sunrise), that part of an AM station's radiation reflects off an atmospheric layer called the ionosphere. This enables such 'skywave' signals to return to the surface many hundreds and, under occasional conditions, thousands of miles away, thereby enormously extending the nighttime service and interference ranges of the station." *Id.* at para 11.

number. For purposes of this presentation, we refer to areas with five or fewer stations as “unserved” and areas with access to six to 15 stations as “underserved.” These characterizations refer only to the *quantity* of local radio signals available in certain geographic areas and should not be interpreted as any reference to the quality of local radio service in those areas.

Table 2 (see Appendix B) identifies the locations in each State with maximum coverage. For example, in Los Angeles, California, there are 69 local radio signals (AM and FM) depending on location (in East LA you receive signals unavailable in West LA, and *vice versa*).²⁶ Similarly, in Washington, DC, there are only 50 local radio signals (AM and FM). In Denver, Colorado, there are only 37 local radio signals (AM and FM). Most importantly, there is no location in the United States where a listener can receive as many local radio stations as either one of the two satellite radio systems offer (over 130 channels on Sirius and approximately 170 channels on XM).

Table 3 (see Appendix B) provides a summary of these areas across the US based on data from the most recent US census and a local radio coverage analysis performed by Dataworld for all states. The state-by-state impact is summarized in the following section, including an estimate of the traffic in these areas. All road usage data supplied herein are based on the most-recent, available bidirectional traffic data for each Interstate and major highway referenced for each individual state. These data reflect peak daily traffic points on these roadways in the unserved/underserved areas. Travelers throughout the United States make an estimated 44 million trips per week on major Interstates and highways through areas that have access to few, if any, local radio stations. **Table 4** (see Appendix B) provides a state-by-state breakdown of the major roadways affected and the estimated total weekly trips on such roadways.

SUMMARY ANALYSIS OF RURAL, UNSERVED AND UNDERSERVED AREAS

ALABAMA

While approximately 80,000 Alabama residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.3 million Alabama residents (over 28 percent of Alabama’s population) are located in unserved and underserved areas. Over 65 percent of Alabama’s geographic area receives service from 15 or fewer over-the-air local radio channels.** Over 42 percent of Alabama’s geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 631,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Haleyville, Camden, Evergreen and Butler, Alabama. See map attached hereto at Appendix C, Tab 1.

²⁶ Stated differently, the highest sum of the predicted service contours of all the local radio stations covering each Census Block centroid in LA equals 69 signals.

The location within Alabama with the greatest amount of coverage by local radio stations is the city of Hoover, which receives a total of 36 local radio signals. All other areas within the state have less coverage by free local radio stations.

Alabama would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Alabama is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Alabama will be harshly affected. Some of the most heavily traveled portions of I-20, I-59, I-65 and US 411, with peak annual average daily traffic rates ranging from approximately 26,000 to 39,000 vehicle trips per day, traverse unserved and underserved areas within Alabama.²⁷ Drivers in Alabama making an estimated 182,000 to 273,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

ALASKA

While approximately 139,000 Alaska residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 260,000 residents (over 41 percent of Alaska's population) are located in unserved and underserved areas. Over 99 percent of Alaska's geographic area receives service from 15 or fewer over-the-air local radio channels.** Similarly, over 98 percent of Alaska's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. In sum, approximately 219,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Fairbanks North Star and Kenai Peninsula. *See* map attached hereto at Appendix C, Tab 2.

The location within Alaska with the greatest amount of coverage by local radio stations is the city of Anchorage, which receives a total of 30 local radio signals. All other areas within the state have less coverage by free local radio stations.

Alaska is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, **nearly all** the State of Alaska is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major highways. Long-distance commuters and highway travelers in Alaska will be harshly affected. Some of the

²⁷ *Alabama Traffic Statistics*, at <http://aldotgis.dot.state.al.us/trafficvolume/viewer.htm> (last visited June 9, 2007).

most heavily traveled portions of the Sterling Highway, Kenai Spur Highway and Richardson Highway, with peak annual average daily traffic rates ranging from approximately 13,000 to 20,000 vehicle trips per day, traverse unserved and underserved areas within Alaska.²⁸ Drivers in Alaska making an estimated 91,000 to 140,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

ARIZONA

While approximately 235,000 Arizona residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 763,000 Arizona residents (nearly 15 percent of Arizona's population) are located in unserved and underserved areas. Eighty-one percent of Arizona's geographic area receives service from 15 or fewer over-the-air local radio channels.** Well over two-thirds of Arizona's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 541,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Cochise, Graham, Greenlee and Mohave. See map attached hereto at Appendix C, Tab 3.

The location within Arizona with the greatest amount of coverage by local radio stations is the city of Phoenix, which receives a total of 53 local radio signals. All other areas within the state have less coverage by free local radio stations.

Arizona is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Arizona is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Arizona will be harshly affected. Heavily traveled portions of I-8, I-10, I-19 and I-40, with peak annual average daily traffic rates ranging from approximately 20,000 to 37,000 vehicle trips per day, traverse unserved and underserved areas within Arizona.²⁹ Drivers in Arizona making an estimated 140,000 to 259,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

ARKANSAS

While approximately 57,000 Arkansas residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 954,000 Arkansas residents (over 46 percent of Arkansas's population) are located in unserved and underserved areas. Over 69 percent**

²⁸ *Alaska Highway Data*, at http://www.dot.state.ak.us/stwdplng/highwaydata/traffic.shtml#traffic_maps (last visited June 8, 2007).

²⁹ *Arizona Department of Transportation*, at <http://tpd.az.gov/datateam/aadt.php> (last visited June 8, 2007).

of Arkansas's geographic area receives service from 15 or fewer over-the-air local radio channels. Over 44 percent of Arkansas's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 467,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Hope, Monticello, Melbourne and De Queen, Arkansas. See map attached hereto at Appendix C, Tab 4.

The location within Arkansas with the greatest amount of coverage by local radio stations is the city of West Memphis, which receives a total of 37 local radio signals. All other areas within the state have less coverage by free local radio stations.

Arkansas would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Arkansas is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Arkansas will be harshly affected. Some of the most heavily traveled portions of I-40, I-30 and Arkansas Route 7, with peak annual average daily traffic rates ranging from approximately 25,000 to 36,000 vehicle trips per day, traverse unserved and underserved areas within Arkansas.³⁰ Drivers in Arkansas making an estimated 175,000 to 252,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

CALIFORNIA

While approximately 156,000 California residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.1 million California residents (over three percent of California's population) are located in unserved and underserved areas.** **Approximately 66 percent of California's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-half of California's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 460,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Siskiyou, Imperial, Trinity, Kings and Fresno. See map attached hereto at Appendix C, Tab 5.

The location within California with the greatest amount of coverage by local radio stations is the city of Los Angeles, which receives a total of 69 local radio signals. All other areas within the state have less coverage by free local radio stations.

³⁰ 2006 Annual Average Daily Traffic Estimates, at <http://www.arkansashighways.com/maps/trafficcountymaps/2006ADT/TrafficCount.htm> (last visited June 8, 2007).

California would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of California is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in California will be harshly affected. Heavily traveled portions of I-5, I-8, I-10, I-15 and I-40, with peak annual average daily traffic rates ranging from approximately 38,500 to 94,000 vehicle trips per day, traverse unserved and underserved areas within California.³¹ Drivers in California making an estimated 269,500 to 658,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

COLORADO

While approximately 114,000 Colorado residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 442,000 Colorado residents (over 10 percent of Colorado's population) are located in unserved and underserved areas. Almost 79 percent of Colorado's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over two-thirds of Colorado's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 285,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Routt, Washington, Morgan and Rio Blanco. See map attached hereto at Appendix C, Tab 6.

The location within Colorado with the greatest amount of coverage by local radio stations is the city of Denver, which receives a total of 37 local radio signals. All other areas within the state have less coverage by free local radio stations.

Colorado is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Colorado is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Colorado will be harshly affected. Some of the most heavily traveled portions of I-25, I-70 and I-76, with peak annual average daily traffic rates ranging from approximately 16,000 to 38,000

³¹ *Traffic and Vehicle Data Systems Unit*, at <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/> (last visited June 7, 2007).

vehicle trips per day, traverse unserved and underserved areas within Colorado.³² Drivers in Colorado making an estimated 112,000 to 266,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

CONNECTICUT

While only about 9,800 Connecticut residents live in areas served by 5 or fewer local radio stations -- the unserved areas -- **approximately 404,000 Connecticut residents (over 12 percent of Connecticut's population) are located in unserved and underserved areas. Over 40 percent of Connecticut's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately one-fifth of Connecticut's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 131,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Litchfield, New London and Windham. *See* map attached hereto at Appendix C, Tab 7.

The location within Connecticut with the greatest amount of coverage by local radio stations is the city of Stamford, which receives a total of 41 local radio signals. All other areas within the state have less coverage by free local radio stations.

Connecticut would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, over forty (40) percent of the State of Connecticut is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Connecticut will be harshly affected. Some of the most heavily traveled portions of US 44, Route 82 and Route 85, with peak annual average daily traffic rates ranging from approximately 22,000 to 25,000 vehicle trips per day, traverse unserved and underserved areas within Connecticut.³³ Drivers in Connecticut making an estimated 154,000 to 175,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

DELAWARE

While only about 4,000 Delaware residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 361,000 Delaware residents (over 46 percent of Delaware's population) are located in unserved and underserved areas. Over 73 percent**

³² *Traffic Data*, at

http://www.dot.state.co.us/App_DTD_DataAccess/Traffic/index.cfm?fuseaction=TrafficMain&MenuType=Traffic (last visited June 7, 2007).

³³ *ConnDOT Maps*, at <http://www.ct.gov/dot/cwp/view.asp?a=1380&Q=305564&PM=1&dotNav=|> (last visited June 8, 2007).

of Delaware's geographic area receives service from 15 or fewer over-the-air local radio channels. Over one-third of Delaware's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 148,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Dover, Clayton, Middleton and Milford, Delaware. See map attached hereto at Appendix C, Tab 8.

The location within Delaware with the greatest amount of coverage by local radio stations is the city of Claymont, which receives a total of 40 local radio signals. All other areas within the state have less coverage by free local radio stations.

Delaware is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Delaware is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in Delaware will be harshly affected. Some of the most heavily traveled portions of I-95, US 301, US 40 and SR 1, with peak annual average daily traffic rates ranging from approximately 30,000 to 76,000 vehicle trips per day, traverse unserved and underserved areas within Delaware.³⁴ Drivers in Delaware making an estimated 210,000 to 532,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

FLORIDA

While approximately 47,000 Florida residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.32 million Florida residents (over eight percent of Florida's population) are located in unserved and underserved areas. Nearly 49 percent of Florida's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately one-quarter of Florida's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 376,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Flagler, Monroe and Highlands. See map attached hereto at Appendix C, Tab 9.

The location within Florida with the greatest amount of coverage by local radio stations is the city of Boca Raton, which receives a total of 53 local radio signals. All other areas within the state have less coverage by free local radio stations.

³⁴ 2005 Traffic Summary, at http://www.deldot.gov/static/pubs_forms/traffic_counts/2005/index.shtml (last visited June 5, 2007).

Florida will be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, nearly half of the State of Florida is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Florida will be harshly affected. Some of the most heavily traveled portions of I-75, SR-30, SR-85 and I-95 with peak combined annual average daily traffic rates ranging from approximately 44,500 to 65,000 vehicle trips per day, traverse unserved and underserved areas within Florida.³⁵ Drivers in Florida making an estimated 311,500 to 455,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

GEORGIA

While a large number of Georgia residents (approximately 133,000) are in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.87 million Georgia residents (over 23 percent of Georgia's population) are located in unserved and underserved areas.** **Over 70 percent of Georgia's geographic area receives service from 15 or fewer over-the-air local radio channels.** Forty percent of Georgia's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 813,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Butler, Blairsville, Eastman and Cordele, Georgia. See map attached hereto at Appendix C, Tab 10.

The location within Georgia with the greatest amount of coverage by local radio stations is the city of Atlanta, which receives a total of 48 local radio signals. All other areas within the state have less coverage by free local radio stations.

Georgia would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Georgia is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Georgia will be harshly affected. Some of the most heavily traveled portions of I-16, I-20, I-75 and I-85, with peak annual average daily traffic rates ranging from approximately 16,000 to 63,500 vehicle trips per day, traverse

³⁵ *Annual Average Daily Traffic Reports, at*
<http://www.dot.state.fl.us/planning/statistics/trafficdata/AADT/aadt.htm> (last visited June 6, 2007).

unserved and underserved areas within Georgia.³⁶ Drivers in Georgia making an estimated 112,000 to 444,500 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

HAWAII

While approximately 21,000 Hawaii residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 213,000 Hawaii residents (over 10 percent of Hawaii's population) are located in unserved and underserved areas. Over 84 percent of Hawaii's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately two-thirds of Hawaii's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 87,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the islands with such residents are Hawaii, Maui and Kauai. See map attached hereto at Appendix C, Tab 11.

The location within Hawaii with the greatest amount of coverage by local radio stations is the city of Honolulu, which receives a total of 37 local radio signals. All other areas within the state have less coverage by free local radio stations.

Hawaii would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Hawaii is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major highways. Long-distance commuters and tourists traveling throughout Hawaii will be harshly affected. Some of the most heavily traveled portions of Routes 56, 186 and 365, with peak average daily traffic rates ranging from approximately 16,000 to 26,000 vehicle trips per day, traverse unserved and underserved areas within Hawaii.³⁷ Drivers in Hawaii making an estimated 112,000 to 182,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

IDAHO

While approximately 48,000 Idaho residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 270,000 Idaho residents (almost 21 percent of**

³⁶ *Annual Traffic Counts*, at http://www.dot.state.ga.us/DOT/plan-prog/transportation_data/traffic_counts/index.shtml (last visited June 9, 2007).

³⁷ Daily traffic estimates reflect average of bi-direction traffic data for a 24-hour period measured in two daily surveys in 2005 by the State of Hawaii, Department of Transportation, Highways Division ("Hawaii DOT"). Traffic data are available from the Hawaii DOT by request.

Idaho's population) are located in unserved and underserved areas. Over 79 percent of Idaho's geographic area receives service from 15 or fewer over-the-air local radio channels. Over two-thirds of Idaho's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 145,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Lewis, Cassia, Franklin, Bear Lake, Fremont, Clark and Butte. *See map attached hereto at Appendix C, Tab 12.*

The location within Idaho with the greatest amount of coverage by local radio stations is the city of Boise, which receives a total of 37 local radio signals. All other areas within the state have less coverage by free local radio stations.

Idaho is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Idaho is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Idaho will be harshly affected. Some of the most heavily traveled portions of US 95, SH 27 and SH 75, with peak annual average daily traffic rates ranging from approximately 11,000 to 13,000 vehicle trips per day, traverse unserved and underserved areas within Idaho.³⁸ Drivers in Idaho making an estimated 77,000 to 91,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

ILLINOIS

While just over 42,000 Illinois residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.6 million Illinois residents (over 13 percent of Illinois's population) are located in unserved and underserved areas. Over 65 percent of Illinois's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately one-third of Illinois's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 520,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Carroll, Livingston, Menard, Cumberland, Coles, Jasper and Saline. *See map attached hereto at Appendix C, Tab 13.*

The location within Illinois with the greatest amount of coverage by local radio stations is Cook County, which receives a total of 56 local radio signals. All other areas within the state have less coverage by free local radio stations.

³⁸ 2005 Traffic Flow Maps, at http://www.itd.idaho.gov/planning/reports/atr_wim/RTFMaps/2005/index.html (last visited June 5, 2007).

Illinois would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Illinois is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in Illinois will be harshly affected. Heavily traveled portions of I-55, I-57, I-70 and I-80, with peak annual average daily traffic rates ranging from approximately 20,000 to 25,000 vehicle trips per day, traverse unserved and underserved areas within Illinois.³⁹ Drivers in Illinois making an estimated 140,000 to 175,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

INDIANA

While just over 66,000 Indiana residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 2 million Indiana residents (over 33 percent of Indiana's population) are located in unserved and underserved areas. Over 70 percent of Indiana's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately one-third of Indiana's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 751,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Jay, Randolph, Jennings, Sullivan, Clay, Montgomery and Jasper. See map attached hereto at Appendix C, Tab 14.

The location within Indiana with the greatest amount of coverage by local radio stations is the city of Hammond, which receives a total of 47 local radio signals. All other areas within the state have less coverage by free local radio stations.

Indiana would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Indiana is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Indiana will be harshly affected. Some of the most heavily traveled portions of I-65, I-69, I-70, and I-74, with peak annual average daily traffic rates ranging from approximately 32,000 to 38,000 vehicle trips per day, traverse

³⁹ *Getting Around Illinois*, at <http://www.gettingaroundillinois.com/default.aspx?ql=aadt> (last visited June 8, 2007).

unserved and underserved areas within Indiana.⁴⁰ Drivers in Indiana making an estimated 224,000 to 266,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

IOWA

While only about 23,000 Iowa residents live in areas served by five or fewer local radio stations - the unserved areas -- **approximately 1 million Iowa residents (over 34 percent of Iowa's population) are located in unserved and underserved areas. Almost 65 percent of Iowa's geographic area receives service from 15 or fewer over-the-air local radio channels.** Nearly one-fourth of Iowa's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 361,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Cherokee, Crawford, Carroll, Wapello, Jackson, Iowa, Floyd and Cerro Gordo. *See* map attached hereto at Appendix C, Tab 15.

The location within Iowa with the greatest amount of coverage by local radio stations is the city of Council Bluffs, which receives a total of 33 local radio signals. All other areas within the state have less coverage by free local radio stations.

Iowa would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Iowa is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstate and highways. Long-distance commuters and highway travelers in Iowa will be harshly affected. Some of the most heavily traveled portions of I-35, I-80 and US 18, with peak annual average daily traffic rates ranging from approximately 16,000 to 34,000 vehicle trips per day, traverse unserved and underserved areas within Iowa.⁴¹ Drivers in Iowa making an estimated 112,000 to 238,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

KANSAS

While approximately 73,000 Kansas residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 626,000 residents (over 23 percent of Kansas's population) are located in unserved and underserved areas. Over 80 percent of Kansas's**

⁴⁰ *See generally, Indiana Department of Transportation, at <http://www.in.gov/dot/div/traffic/count/02/2002.pdf> (last visited June 8, 2007).*

⁴¹ *Vehicular Traffic, at <http://www.iowadotmaps.com/msp/pdf/current/stmapmain.pdf> (last visited June 7, 2007).*

geographic area receives service from 15 or fewer over-the-air local radio channels.

Approximately 58 percent of Kansas's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 311,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Hodgeman, Graham, Lincoln, Marshall, Montgomery and Labette. See map attached hereto at Appendix C, Tab 16.

The location within Kansas with the greatest amount of coverage by local radio stations is Kansas City, which receives a total of 46 local radio signals. All other areas within the state have less coverage by free local radio stations.

Kansas is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Kansas is unserved and underserved by local radio broadcasting.

These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state. In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstate and highways. Long-distance commuters and highway travelers in Kansas will be harshly affected. Heavily traveled portions of I-35 and I-70 with peak annual average daily traffic rates ranging from approximately 14,000 to 16,000 vehicle trips per day, traverse unserved and underserved areas within Kansas.⁴² Drivers in Kansas making an estimated 98,000 to 112,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

KENTUCKY

While only about 7,500 Kentucky residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.5 million Kentucky residents (over 38 percent of Kentucky's population) are located in unserved and underserved areas. Over 72 percent of Kentucky's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-third of Kentucky's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 587,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Harlan, Wayne, Graves, Crittenden, Breckinridge, Marion, Washington, Rowan, Carter and Breathitt. See map attached hereto at Appendix C, Tab 17.

The location within Kentucky with the greatest amount of coverage by local radio stations is the city of Newport, which receives a total of 35 local radio signals. All other areas within the state have less coverage by free local radio stations.

⁴² 2005 Traffic Summary, at <http://www.ksdot.org/burtransplan/maps/MapsTrafficDist.asp> (last visited June 8, 2007).

Kentucky would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Kentucky is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Kentucky will be harshly affected. Some of the most heavily traveled portions of I-24, I-64, I-65, I-71 and I-75, with peak annual average daily traffic rates ranging from approximately 18,000 to 50,000 vehicle trips per day, traverse unserved and underserved areas within Kentucky.⁴³ Drivers in Kentucky making an estimated 126,000 to 350,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

LOUISIANA

While only about 11,600 Louisiana residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 743,000 Louisiana residents (over 17 percent of Louisiana's population) are located in unserved and underserved areas. Over 56 percent of Louisiana's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost one-third of Louisiana's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 263,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the parishes with such residents are Vernon, Natchitoches, La Salle, Madison, Washington and Terrebonne. See map attached hereto at Appendix C, Tab 18.

The location within Louisiana with the greatest amount of coverage by local radio stations is the city of Kenner, which receives a total of 39 local radio signals. All other areas within the state have less coverage by free local radio stations.

Louisiana would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Louisiana is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Louisiana will be harshly affected. Some of the most heavily traveled portions of I-10, I-20, I-49 and I-55, with peak annual average daily traffic rates ranging from approximately 15,000 to 41,000 vehicle trips per day, traverse

⁴³ *Traffic Counts and Count Stations*, at http://www.planning.kytc.ky.gov/maps/count_maps/count_maps.asp (last visited June 8, 2007).

unserved and underserved areas within Louisiana.⁴⁴ Drivers in Louisiana making an estimated 105,000 to 287,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MAINE

While approximately 50,000 Maine residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 579,000 Maine residents (over 49 percent of Maine's population) are located in unserved and underserved areas. Over 91 percent of Maine's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over three-fourths of Maine's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 250,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Oxford, Knox, Hancock, Washington and Penobscot. *See map attached hereto at Appendix C, Tab 19.*

The location within Maine with the greatest amount of coverage by local radio stations is Falmouth Foreside (CDP), which receives a total of 31 local radio signals. All other areas within the state have less coverage by free local radio stations.

Maine is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Maine is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstate and highways. Long-distance commuters and highway travelers in Maine will be harshly affected. Some of the most heavily traveled portions of I-95, US 1 and SR 163, with peak annual average daily traffic rates ranging from approximately 10,000 to 30,000 vehicle trips per day, traverse unserved and underserved areas within Maine.⁴⁵ Drivers in Maine making an estimated 73,000 to 210,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MARYLAND

While very few Maryland residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 691,000 Maryland residents (over 13 percent of Maryland's**

⁴⁴ Detailed traffic rate data is available from the Louisiana Department of Transportation and Development upon request.

⁴⁵ *Yearly Images of Traffic Data Count*, at <http://www.maine.gov/mdot/traffic-counts/yearly-traffic-counts.php> (last visited June 8, 2007).

population) are located in unserved and underserved areas. Over 52 percent of Maryland's geographic area receives service from 15 or fewer over-the-air local radio channels. Over one-fifth of Maryland's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 249,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Garrett, Frederick, Cecil, Caroline, Dorchester and St. Mary's. See map attached hereto at Appendix C, Tab 20.

The location within Maryland with the greatest amount of coverage by local radio stations is Prince George's County, which receives a total of 53 local radio signals. All other areas within the state have less coverage by free local radio stations.

Maryland would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Maryland is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Maryland will be harshly affected. Some of the most heavily traveled portions of I-68, I-70, I-95 and US 15, with peak annual average daily traffic rates ranging from approximately 46,000 to 108,000 vehicle trips per day, traverse unserved and underserved areas within Maryland.⁴⁶ Drivers in Maryland making an estimated 322,000 to 756,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MASSACHUSETTS

While only about 4,600 Massachusetts residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 696,000 Massachusetts residents (over 11 percent of Massachusetts's population) are located in unserved and underserved areas. Over 44 percent of Massachusetts's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-fifth of Massachusetts's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 117,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Berkshire, Franklin, Hampshire, Hampden, Worcester, Dukes and Nantucket. See map attached hereto at Appendix C, Tab 21.

The location within Massachusetts with the greatest amount of coverage by local radio stations is the city of Boston, which receives a total of 48 local radio signals. All other areas within the state have less coverage by free local radio stations.

⁴⁶ *Maryland's Traffic Volume Maps by County*, at <http://www.marylandroads.com/SHAServices/mapsBrochures/maps/OPPE/tvmaps.asp> (last visited June 8, 2007).

Massachusetts would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, nearly half of the State of Massachusetts is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstate and highways. Long-distance commuters and highway travelers in Massachusetts will be harshly affected. Heavily traveled portions of I-95, I-90 and I-84, with peak annual average daily traffic rates ranging from approximately 45,000 to 63,000 vehicle trips per day, traverse unserved and underserved areas within Massachusetts.⁴⁷ Drivers in Massachusetts making an estimated 315,000 to 441,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MICHIGAN

While only about 23,000 Michigan residents live in areas served by five or fewer local radio stations -- the unserved areas -- **almost 2 million Michigan residents (over 21 percent of Michigan's population) are located in unserved and underserved areas. Over 71 percent of Michigan's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately one-half of Michigan's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 824,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Houghton, Baraga, Iron, Marquette, Dickinson, Delta, Chippewa, Lake, Osceola, Montcalm, Missaukee, Clare, Roscommon, Gladwin, Ogemaw, Arenac, Huron, Oscoda, Alcona, Alpena, St. Joseph, Branch and Hillsdale. See map attached hereto at Appendix C, Tab 22.

The location within Michigan with the greatest amount of coverage by local radio stations is Wayne County, which receives a total of 43 local radio signals. All other areas within the state have less coverage by free local radio stations.

Michigan would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Michigan is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Michigan will be harshly affected. Some of the most heavily traveled portions of I-69, I-75, I-94 and I-96, with peak annual average daily

⁴⁷ *Traffic Volume Counts*, at <http://www.mhd.state.ma.us/default.asp?pgid=content/traffic01&sid=about#para8> (last visited June 9, 2007).

traffic rates ranging from approximately 21,000 to 54,000 vehicle trips per day, traverse unserved and underserved areas within Michigan.⁴⁸ Drivers in Michigan making an estimated 147,000 to 378,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MINNESOTA

While only about 58,000 Minnesota residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1 million Minnesota residents (over 24 percent of Minnesota's population) are located in unserved and underserved areas. Over 78 percent of Minnesota's geographic area receives service from 15 or fewer over-the-air local radio channels.** Well over one-half of Minnesota's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 518,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Redwood, Stevens, Todd, Cass and Itasca. *See* map attached hereto at Appendix C, Tab 23.

The location within Minnesota with the greatest amount of coverage by local radio stations is the city of Minneapolis, which receives a total of 43 local radio signals. All other areas within the state have less coverage by free local radio stations.

Minnesota would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Minnesota is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Minnesota will be harshly affected. Some of the most heavily traveled portions of I-35, I-90 and I-94, with peak annual average daily traffic rates ranging from approximately 12,000 to 31,500 vehicle trips per day, traverse unserved and underserved areas within Minnesota.⁴⁹ Drivers in Minnesota making an estimated 84,000 to 220,500 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MISSISSIPPI

While only about 2,000 Mississippi residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.2 million Mississippi residents (nearly 45 percent of Mississippi's population) are located in unserved and underserved areas. Over**

⁴⁸ *Michigan 2005*, at http://www.michigan.gov/documents/adtftrnt_20092_7.pdf (last visited June 8, 2007).

⁴⁹ *Traffic Volume*, at <http://www.dot.state.mn.us/traffic/data/html/volumes.html> (last visited June 9, 2007).

70 percent of Mississippi's geographic area receives service from 15 or fewer over-the-air local radio channels. Over one-third of Mississippi's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 455,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Macon, Magnolia, Charleston and Carthage, Mississippi. *See map attached hereto at Appendix C, Tab 24.*

The location within Mississippi with the greatest amount of coverage by local radio stations is the city of Olive Branch, which receives a total of 40 local radio signals. All other areas within the state have less coverage by free local radio stations.

Mississippi would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, over half of the State of Mississippi is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in Mississippi will be harshly affected. Some of the most heavily traveled portions of I-20, I-55 and I-59, with peak annual average daily traffic rates ranging from approximately 19,000 to 27,000 vehicle trips per day, traverse unserved and underserved areas within Mississippi.⁵⁰ Drivers in Mississippi making an estimated 133,000 to 189,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MISSOURI

While only about 7,000 Missouri residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.3 million Missouri residents (over 24 percent of Missouri's population) are located in unserved and underserved areas.** **Over 69 percent of Missouri's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-third of Missouri's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 459,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Greenville, Warsaw, Bowling Green and Lancaster, Missouri. *See map attached hereto at Appendix C, Tab 25.*

The location within Missouri with the greatest amount of coverage by local radio stations is Kansas City, which receives a total of 45 local radio signals. All other areas within the state have less coverage by free local radio stations.

Missouri would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of

⁵⁰ *County Traffic Volume Maps*, at http://www.gomdot.com/maps/county_volume.asp (last visited June 9, 2007).

Missouri is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Missouri will be harshly affected. Some of the most heavily traveled portions of I-35, I-44, I-55 and I-70, with peak annual average daily traffic rates ranging from approximately 20,000 to 35,000 vehicle trips per day, traverse unserved and underserved areas within Missouri.⁵¹ Drivers in Missouri making an estimated 140,000 to 245,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

MONTANA

While a large number of Montana residents (approximately 111,000) are in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 388,000 Montana residents (over 51 percent of Montana's population) are located in unserved and underserved areas.** **Over 95 percent of Montana's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over 86 percent of Montana's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 215,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Shelby, Lewiston, Dillon and Red Lodge, Montana. See map attached hereto at Appendix C, Tab 26.

The location within Montana with the greatest amount of coverage by local radio stations is the city of Billings, which receives a total of 29 local radio signals. All other areas within the state have less coverage by free local radio stations.

Montana is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, nearly the entire State of Montana is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers per month who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in Montana will be harshly affected. Some of the most heavily traveled portions of I-15, I-90 and US 93, with peak annual average daily traffic rates ranging from approximately 9,500 to 13,500 vehicle trips per day, traverse unserved and underserved areas within Montana.⁵² Drivers in

⁵¹ 2005 Traffic Volume Map, at http://www.modot.org/safety/documents/2005_Traffic_Statewide.pdf (last visited June 9, 2007).

⁵² 2005 Rural Traffic Flow Map, at http://www.mdt.mt.gov/travinfo/docs/2005_traffic_flow_map.pdf (last visited June 9, 2007).

Montana making an estimated 66,500 to 94,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NEBRASKA

While approximately 36,000 Nebraska residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 425,000 Nebraska residents (over 28 percent of Nebraska's population) are located in unserved and underserved areas. Over 85 percent of Nebraska's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over two-thirds of Nebraska's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 211,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Thayer, Dundy, Kimball and Cherry. See map attached hereto at Appendix C, Tab 27.

The location within Nebraska with the greatest amount of coverage by local radio stations is the city of Lincoln, which receives a total of 38 local radio signals. All other areas within the state have less coverage by free local radio stations.

Nebraska is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Nebraska is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstate and highways. Long-distance commuters and highway travelers in Nebraska will be harshly affected. Some of the most heavily traveled portions of I-80, US 26 and US 81, with peak annual average daily traffic rates ranging from approximately 8,000 to 26,000 vehicle trips per day, traverse unserved and underserved areas within Nebraska.⁵³ Drivers in Nebraska making an estimated 56,000 to 182,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NEVADA

Approximately 33,000 Nevada residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 147,000 Nevada residents (eight percent of Nevada's population) are located in unserved and underserved areas. Almost 91 percent of Nevada's geographic area receives service from 15 or fewer over-the-air local radio channels; nearly an equal percentage of Nevada's geographic area receives 10 or fewer local radio signals.**

⁵³ *Traffic Flow Map, at*

<http://www.nebraskatransportation.org/maps/Statewide%20Traffic%20Flow%20Maps/2004%20Statewide%20Traffic%20Flow%20Map.pdf> (last visited June 9, 2007).

This total includes signals from both AM and FM stations. Approximately 95,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Lincoln, Elko, Humboldt, Pershing and Mineral. See map attached hereto at Appendix C, Tab 28.

The location within Nevada with the greatest amount of coverage by local radio stations is the city of Las Vegas, which receives a total of 42 local radio signals. All other areas within the state have less coverage by free local radio stations.

Nevada is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the overwhelming majority of the State of Nevada is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstate and highways. Long-distance commuters and highway travelers in Nevada will be harshly affected. Some of the most heavily traveled portions of I-15, I-80 and US 95, with peak annual average daily traffic rates ranging from approximately 7,000 to 23,500 vehicle trips per day, traverse unserved and underserved areas within Nevada.⁵⁴ Drivers in Nevada making an estimated 49,000 to 164,500 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NEW HAMPSHIRE

While only about 11,000 New Hampshire residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 900,000 New Hampshire residents (almost 75 percent of New Hampshire's population) are located in unserved and underserved areas. Over 94 percent of New Hampshire's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost two-thirds of New Hampshire's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 286,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Lancaster, Berlin, Woodsville and Colebrook, New Hampshire. See map attached hereto at Appendix C, Tab 29.

The location within New Hampshire with the greatest amount of coverage by local radio stations is the city of Nashua, which receives a total of 32 local radio signals. All other areas within the state have less coverage by free local radio stations.

New Hampshire is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of New Hampshire is unserved and underserved by local

⁵⁴ 2005 Annual Traffic Report, at http://www.nevadadot.com/reports_pubs/traffic_report/2005/ (last visited June 9, 2007).

radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in New Hampshire will be harshly affected. Some of the most heavily traveled portions of I-89, I-93 and I-95, with peak annual average daily traffic rates ranging from approximately 35,000 to 88,000 vehicle trips per day, traverse unserved and underserved areas within New Hampshire.⁵⁵ Drivers in New Hampshire making an estimated 245,000 to 616,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NEW JERSEY

While only about 300 New Jersey residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.17 million New Jersey residents (over 14 percent of New Jersey's population) are located in unserved and underserved areas.** **Nearly 34 percent of New Jersey's geographic area receives service from 15 or fewer over-the-air local radio channels.** More than one-tenth of New Jersey's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 383,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Montague, Newton, Toms River and Hopatcong, New Jersey. See map attached hereto at Appendix C, Tab 30.

The location within New Jersey with the greatest amount of coverage by local radio stations is Bergen County, which receives a total of 59 local radio signals. All other areas within the state have less coverage by free local radio stations.

New Jersey would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, one-third of the State of New Jersey is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in New Jersey will be harshly affected. Some of the most heavily traveled portions of I-76, I-80, I-95 (New Jersey Turnpike) and NJ 444 (Garden State Parkway) , with peak annual average daily traffic rates ranging from approximately 91,000 to 160,000 vehicle trips per day, traverse unserved and underserved areas within New Jersey.⁵⁶ Drivers in New Jersey making an estimated 637,000 to 1,120,000 trips per

⁵⁵ *Statewide Traffic Volumes for the State of New Hampshire*, at <http://www.nh.gov/dot/transportationplanning/traffic/> (last visited June 8, 2007).

⁵⁶ *Roadway Information and Traffic Counts*, at <http://www.state.nj.us/transportation/refdata/roadway/traffic.shtm> (last visited June 9, 2007).

route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NEW MEXICO

While approximately 54,000 New Mexico residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 440,000 New Mexico residents (over 27 percent of New Mexico's population) are located in unserved and underserved areas. Over 89 percent of New Mexico's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over three-quarters of New Mexico's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 230,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Truth or Consequences, Tatum, Silver City and Taos, New Mexico. See map attached hereto at Appendix C, Tab 31.

The location within Mexico with the greatest amount of coverage by local radio stations is the city of Albuquerque, which receives a total of 49 local radio signals. All other areas within the state have less coverage by free local radio stations.

New Mexico is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of New Mexico is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in New Mexico will be harshly affected. Heavily traveled portions of I-10, I-25 and I-40, with peak annual average daily traffic rates ranging from approximately 11,000 to 16,500 vehicle trips per day, traverse unserved and underserved areas within New Mexico.⁵⁷ Drivers in New Mexico making an estimated 77,000 to 115,500 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NEW YORK

While a significant number of New York residents (about 67,000) are in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 2.32 million residents are located in unserved and underserved areas (almost 13 percent of New York's total population). Over 69 percent of New York's geographic area receives service from 15 or fewer over-the-air local radio channels.** Nearly one-half of New York's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 791,000 residents are severely affected, with 10 or fewer local radio

⁵⁷ *New Mexico 2006 Traffic Survey*, at <http://nmshtd.state.nm.us/main.asp?secid=15370> (last visited June 14, 2007).

stations within reach -- especially the residents of Allegany, Warren, Otsego and St. Lawrence counties. *See* map attached hereto at Appendix C, Tab 32.

The location within New York with the greatest amount of coverage by local radio stations is Nassau County, which receives a total of 62 local radio signals. All other areas within the state have less coverage by free local radio stations.

New York would be most harshly impacted by a satellite radio monopoly in terms of the total areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of New York is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers throughout the state will be harshly affected. Some of the most heavily traveled portions of I-81, I-87, I-88 and I-495, with peak annual average daily traffic rates ranging from approximately 20,000 to 76,000 vehicle trips per day, traverse unserved and underserved areas within New York.⁵⁸ Drivers in New York making an estimated 140,000 to 532,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NORTH CAROLINA

While only about 3,700 North Carolina residents live in areas served by five or fewer local radio stations -- the unserved areas -- **almost 1.4 million North Carolina residents (over 17 percent of North Carolina's population) are located in unserved and underserved areas. Over 46 percent of North Carolina's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost one-fifth of North Carolina's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 399,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Ashe, Wilkes, Scotland, Hoke, Robeson, Bladen, Washington, Tyrrell and Hyde. *See* map attached hereto at Appendix C, Tab 33.

The location within North Carolina with the greatest amount of coverage by local radio stations is the city of Greensboro, which receives a total of 36 local radio signals. All other areas within the state have less coverage by free local radio stations.

North Carolina would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, nearly half of the State of North Carolina is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh

⁵⁸ *Traffic Count Information*, at <https://www.nysdot.gov/portal/page/portal/divisions/engineering/technical-services/highway-data-services/traffic-volume> (last visited June 6, 2007).

impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in North Carolina will be harshly affected. Some of the most heavily traveled portions of I-40, I-77, I-85 and I-95, with peak annual average daily traffic rates ranging from approximately 25,000 to 52,000 vehicle trips per day, traverse unserved and underserved areas within North Carolina.⁵⁹ Drivers in North Carolina making an estimated 175,000 to 364,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

NORTH DAKOTA

While approximately 60,000 North Dakota residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 290,000 North Dakota residents (over 53 percent of North Dakota's population) are located in unserved and underserved areas.** **Over 93 percent of North Dakota's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over three-quarters of North Dakota's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 164,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Dickinson, Forman, Grafton and Cavalier, North Dakota. See map attached hereto at Appendix C, Tab 34.

The location within North Dakota with the greatest amount of coverage by local radio stations is the city of Buxton, which receives a total of 27 local radio signals. All other areas within the state have less coverage by free local radio stations.

North Dakota is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of North Dakota is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers per month who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in North Dakota will be harshly affected. Some of the most heavily traveled portions of I-29, I-94, US 2 and US 52, with peak annual average daily traffic rates ranging from approximately 9,500 to 14,000 vehicle trips per day, traverse unserved and underserved areas within North Dakota.⁶⁰ Drivers in North Dakota making an estimated 66,500 to 98,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

⁵⁹ *Traffic Survey County Maps 2005*, at <http://www.ncdot.org/it/gis/DataDistribution/TrafficSurveyMaps/byYear.html?year=2005> (last visited June 8, 2007).

⁶⁰ *2006 Traffic Volume Map*, at http://www.dot.nd.gov/road-map/pdf/traffic/trafficstate_2006.pdf (last visited June 9, 2007).

OHIO

While only about 13,000 Ohio residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 2.2 million Ohio residents (almost 20 percent of Ohio's population) are located in unserved and underserved areas. Nearly 60 percent of Ohio's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-quarter of Ohio's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 650,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Putnam, Highland, Williams and Fulton. *See* map attached hereto at Appendix C, Tab 35.

The location within Ohio with the greatest amount of coverage by local radio stations is the city of Akron, which receives a total of 42 local radio signals. All other areas within the state have less coverage by free local radio stations.

Ohio would be harshly impacted by a satellite radio monopoly in terms of the total population and total areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Ohio is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in Ohio will be harshly affected. Some of the most heavily traveled portions of I-70, I-71, I-75 and SR-60, with peak annual average daily traffic rates ranging from approximately 42,000 to 62,000 vehicle trips per day, traverse unserved and underserved areas within Ohio.⁶¹ Drivers in Ohio making an estimated 294,000 to 434,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

OKLAHOMA

While approximately 25,000 Oklahoma residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 744,000 Oklahoma residents (over 23 percent of Oklahoma's population) are located in unserved and underserved areas. Over 69 percent of Oklahoma's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost 45 percent of Oklahoma's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 265,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Hobart, Fairview, Holdenville and Beaver, Oklahoma. *See* map attached hereto at Appendix C, Tab 36.

⁶¹ *Traffic Count Information and Maps, at* <http://www.dot.state.oh.us/techservsite/offceorg/traffmonit/CountInformation/> (last visited June 6, 2007).

The location within Oklahoma with the greatest amount of coverage by local radio stations is Oklahoma City, which receives a total of 38 local radio signals. All other areas within the state have less coverage by free local radio stations.

Oklahoma would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Oklahoma is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Oklahoma will be harshly affected. Some of the most heavily traveled portions of I-35, I-40 and US 69, with peak annual average daily traffic rates ranging from approximately 22,000 to 27,000 vehicle trips per day, traverse unserved and underserved areas within Oklahoma.⁶² Drivers in Oklahoma making an estimated 154,000 to 189,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

OREGON

While approximately 26,000 Oregon residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 372,000 Oregon residents (over 11 percent of Oregon's population) are located in unserved and underserved areas. Over 81 percent of Oregon's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over two-thirds of Oregon's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 148,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Lakeview, Burns, Gold Beach and Baker, Oregon. See map attached hereto at Appendix C, Tab 37.

The location within Oregon with the greatest amount of coverage by local radio stations is the city of Portland, which receives a total of 46 local radio signals. All other areas within the state have less coverage by free local radio stations.

Oregon is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Oregon is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West

⁶² *Annual Average Daily Traffic*, at <http://www.okladot.state.ok.us/hqdiv/p-r-div/maps/aadt/statewide05.pdf> (last visited June 9, 2007).

Interstate and highways. Long-distance commuters and highway travelers in Oregon will be harshly affected. Some of the most heavily traveled portions of I-5, I-84 and US 101, with peak annual average daily traffic rates ranging from approximately 14,000 to 45,000 vehicle trips per day, traverse unserved and underserved areas within Oregon.⁶³ Drivers in Oregon making an estimated 98,000 to 315,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

PENNSYLVANIA

While approximately 40,000 Pennsylvania residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 2.7 million Pennsylvania residents (over 22 percent of Pennsylvania's population) are located in unserved and underserved areas. Over 68 percent of Pennsylvania's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-third of Pennsylvania's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 876,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Potter, Pike, Jefferson and Fulton. See map attached hereto at Appendix C, Tab 38.

The location within Pennsylvania with the greatest amount of coverage by local radio stations is the Philadelphia suburbs, which receive a total of 49 local radio signals. All other areas within the state have less coverage by free local radio stations.

Pennsylvania is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Pennsylvania is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Pennsylvania will be harshly affected. Heavily traveled portions of I-70, I-76, I-80 and Route 222, with peak annual average daily traffic rates ranging from approximately 22,000 to 35,000 vehicle trips per day, traverse unserved and underserved areas within Pennsylvania.⁶⁴ Drivers in Pennsylvania making an estimated 154,000 to 245,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

RHODE ISLAND

While only about 1,000 Rhode Island residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 73,000 Rhode Island residents (almost 31**

⁶³ *Traffic Flow Map 2005*, at http://www.oregon.gov/ODOT/TD/TDATA/tsm/docs/Flow_Map_GIS_2005.pdf (last visited June 8, 2007).

⁶⁴ *Internet Traffic Monitoring System*, at <http://www.dot7.state.pa.us/itms/default.asp> (last visited June 8, 2007).

percent of Rhode Island's population) are located in unserved and underserved areas. Over 34 percent of Rhode Island's geographic area receives service from 15 or fewer over-the-air local radio channels. Approximately 3,400 residents are severely affected, with 10 or fewer local radio stations within reach. See map attached hereto at Appendix C, Tab 39.

The location within Rhode Island with the greatest amount of coverage by local radio stations is the city of Providence, which receives a total of 35 local radio signals. All other areas within the state have less coverage by free local radio stations.

Rhode Island would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, over one-third of the State of Rhode Island is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstate and highways. Long-distance commuters and highway travelers in Rhode Island will be harshly affected. Some of the most heavily traveled portions of I-95, Route 1 and Route 138, with peak annual average daily traffic rates ranging from approximately 15,000 to 50,000 vehicle trips per day, traverse unserved and underserved areas within Rhode Island.⁶⁵ Drivers in Rhode Island making an estimated 105,000 to 350,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

SOUTH CAROLINA

While only about 200 South Carolina residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.1 million South Carolina residents (over 27 percent of South Carolina's population) are located in unserved and underserved areas. Nearly 62 percent of South Carolina's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost one-third of South Carolina's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 377,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the cities with such residents are Dillon, Hampton, New Berry and Allendale, South Carolina. See map attached hereto at Appendix C, Tab 40.

The location within South Carolina with the greatest amount of coverage by local radio stations is in parts of Greenville County, which receive a total of 34 local radio signals. All other areas within the state have less coverage by free local radio stations.

South Carolina would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of South Carolina is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of**

⁶⁵ 2006 Traffic Flow Map, at <http://www.dot.state.ri.us/projects/gis/maps/sm02.pdf> (last visited June 8, 2007).

thousands of travelers on major roads and highways in the state. In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in South Carolina will be harshly affected. Some of the most heavily traveled portions of I-20, I-26, I-77 and I-95 with peak annual average daily traffic rates ranging from approximately 37,500 to 41,000 vehicle trips per day, traverse unserved and underserved areas within South Carolina.⁶⁶ Drivers in South Carolina making an estimated 262,500 to 287,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

SOUTH DAKOTA

While 61,000 South Dakota residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 328,000 South Dakota residents (over 49 percent of South Dakota's population) are located in unserved and underserved areas. Over 90 percent of South Dakota's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over three-quarters of South Dakota's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 180,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Pierre, Hot Springs, Clark and Chamberlain, South Dakota. See map attached hereto at Appendix C, Tab 41.

The location within South Dakota with the greatest amount of coverage by local radio stations is the city of Sioux Falls, which receives a total of 30 local radio signals. All other areas within the state have less coverage by free local radio stations.

South Dakota is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of South Dakota is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstate and highways. Local commuters and highway travelers in South Dakota will be harshly affected. Some of the most heavily traveled portions of I-29, I-90 and US 12, with peak annual average daily traffic rates ranging from approximately 9,000 to 28,000 vehicle trips per day, traverse unserved and underserved areas within South Dakota.⁶⁷ Drivers in South Dakota making an estimated 63,000 to 196,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

⁶⁶ *Average Annual Daily Traffic*, at <http://www.scdot.org/getting/aadt.shtml> (last visited June 7, 2007).

⁶⁷ *2006 South Dakota Traffic Flow Map*, at <http://www.sddot.com/PE/data/Docs/trafficmaps/Trafficflow2006.pdf> (last visited June 7, 2007).

TENNESSEE

While only about 700 Tennessee residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.3 million Tennessee residents (over 23 percent of Tennessee's population) are located in unserved and underserved areas. Over 59 percent of Tennessee's geographic area receives service from 15 or fewer over-the-air local radio channels.** Nearly one-quarter of Tennessee's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 347,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Hardin, Wayne, Van Buren and Scott. *See* map attached hereto at Appendix C, Tab 42.

The location within Tennessee with the greatest amount of coverage by local radio stations is the city of Nashville, which receives a total of 44 local radio signals. All other areas within the state have less coverage by free local radio stations.

Tennessee would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Tennessee is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Tennessee will be harshly affected. Some of the most heavily traveled portions of I-24, I-40, I-65 and I-75, with peak annual average daily traffic rates ranging from approximately 20,000 to 41,000 vehicle trips per day, traverse unserved and underserved areas within Tennessee.⁶⁸ Drivers in Tennessee making an estimated 140,000 to 287,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

TEXAS

A substantial number of Texas residents, over 167,000, are in areas served by five or fewer local radio stations -- the unserved areas. **Approximately 1.98 million Texas residents (nearly 11 percent of Texas's population) are located in unserved and underserved areas. Over 69 percent of Texas's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-half of Texas's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 1.17 million residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Fort Stockton, Pecos, Del Rio and Laredo, Texas. *See* map attached hereto at Appendix C, Tab 43.

⁶⁸ *Tennessee City and County Maps*, at <http://www.tdot.state.tn.us/projectplanning/adt.asp> (last visited June 6, 2007).

The location within Texas with the greatest amount of coverage by local radio stations is the city of Dallas, which receives a total of 65 local radio signals. All other areas within the state have less coverage by free local radio stations.

Texas would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Texas is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Texas will be harshly affected. Heavily traveled portions of I-10, I-45, I-35 and I-20, with peak annual average daily traffic rates ranging from approximately 20,000 to 48,000 vehicle trips per day, traverse unserved and underserved areas within Texas.⁶⁹ Drivers in Texas making an estimated 140,000 to 336,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

UTAH

While only about 14,800 Utah residents live in areas served by five or fewer local radio stations - the unserved areas -- **approximately 231,000 Utah residents (over 11 percent of Utah's population) are located in unserved and underserved areas. Approximately 86 percent of Utah's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over three-fourths of Utah's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 180,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Iron, Sevier, Millard, Emery and Duchesne. See map attached hereto at Appendix C, Tab 44.

The location within Utah with the greatest amount of coverage by local radio stations is the city of South Salt Lake, which receives a total of 58 local radio signals. All other areas within the state have less coverage by free local radio stations.

Utah is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Utah is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways (North/South and East/West). Long-distance commuters and highway travelers in Utah will be harshly affected. Some of the most heavily traveled portions of I-15, I-70 and I-80,

⁶⁹ Texas traffic district maps are available upon request from the Texas Department of Transportation.

with peak annual average daily traffic rates ranging from approximately 11,000 to 21,000 vehicle trips per day, traverse unserved and underserved areas within Utah.⁷⁰ Drivers in Utah making an estimated 77,000 to 147,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

VERMONT

While only about 8,000 Vermont residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 390,000 Vermont residents (over 69 percent of Vermont's population) are located in unserved and underserved areas. Over 91 percent of Vermont's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost two-thirds of Vermont's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 195,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Chelsea, Hyde Park, Leicester and Beecher Falls, Vermont. See map attached hereto at Appendix C, Tab 45.

The location within Vermont with the greatest amount of coverage by local radio stations is the city of Burlington, which receives a total of 27 local radio signals. All other areas within the state have less coverage by free local radio stations.

Vermont is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Vermont is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in Vermont will be harshly affected. Some of the most heavily traveled portions of I-89, I-91 and Vermont Route 9, with peak annual average daily traffic rates ranging from approximately 17,000 to 26,000 vehicle trips per day, traverse unserved and underserved areas within Vermont.⁷¹ Drivers in Vermont making an estimated 119,000 to 182,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

VIRGINIA

While approximately 36,000 Virginia residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.5 million Virginia residents (over 24 percent of Virginia's population) are located in unserved and underserved areas. Over 70 percent**

⁷⁰ *Traffic Maps for 2005*, at <http://www.udot.utah.gov/main/f?p=100:pg:11870329641124412308:::V,T:,1616> (last visited June 7, 2007).

⁷¹ *Traffic Data Electronic Publications*, at <http://www.aot.state.vt.us/Planning/Documents/TrafResearch/Publications/pub.htm> (last visited June 7, 2007).

of Virginia's geographic area receives service from 15 or fewer over-the-air local radio channels. Nearly 45 percent of Virginia's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 760,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Stafford, Culpeper, Halifax and Fauquier. See map attached hereto at Appendix C, Tab 46.

The location within Virginia with the greatest amount of coverage by local radio stations is parts of Arlington (CDP), which receive up to 44 local radio signals. All other areas within the state have less coverage by free local radio stations.

Virginia is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Virginia is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major Interstates and highways. Long-distance commuters and highway travelers in Virginia will be harshly affected. Some of the most heavily traveled portions of I-64, I-66, I-81 and I-95, with peak combined annual average daily traffic rates ranging from approximately 45,000 to 160,000 vehicle trips per day, traverse unserved and underserved areas within Virginia.⁷² Drivers in Virginia making an estimated 315,000 to 1,120,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

WASHINGTON

While approximately 45,000 Washington residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 543,000 Washington residents (over 10 percent of Washington's population) are located in unserved and underserved areas.** **Almost 70 percent of Washington's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-half of Washington's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 253,000 residents are severely affected, with 10 or fewer local radio stations within reach. Counties with such residents include Whatcom, Skagit, Clallam and Lewis. See map attached hereto at Appendix C, Tab 47.

⁷² AADT Primary Interstate 2005, at www.virginiadot.org/info/resources/AADT_PrimaryInterstate_2005.xls (last visited June 6, 2007).

The location within Washington with the greatest amount of coverage by local radio stations is the city of Seattle, which receives a total of 52 local radio signals. All other areas within the state have less coverage by free local radio stations.

Washington would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Washington is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Washington will be harshly affected. Some of the most heavily traveled portions of Washington's main Interstates, I-5 and I-90, with peak annual average daily traffic rates ranging from approximately 27,000 to 65,000 vehicle trips per day, traverse unserved and underserved areas within Washington.⁷³ Drivers in Washington making an estimated 189,000 to 455,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

WEST VIRGINIA

While approximately 40,000 West Virginia residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 840,000 West Virginia residents (over 51 percent of West Virginia's population) are located in unserved and underserved areas.** **Over 82 percent of West Virginia's geographic area receives service from 15 or fewer over-the-air local radio channels.** Over one-half of West Virginia's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 300,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Logan, Franklin, Marlinton and West Union, West Virginia. See map attached hereto at Appendix C, Tab 48.

The location within West Virginia with the greatest amount of coverage by local radio stations is the city of Weirton, which receives a total of 34 local radio signals. All other areas within the state have less coverage by free local radio stations.

West Virginia is among the states that would be most severely impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of West Virginia is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers

⁷³ 2005 Annual Traffic Report, at http://www.wsdot.wa.gov/mapsdata/tdo/PDF_and_ZIP_Files/Annual_Traffic_Report_2005.pdf (last visited June 6, 2007).

who use the roads in these unserved and underserved areas, which include substantial segments of the major North/South Interstates and highways. Long-distance commuters and highway travelers in West Virginia will be harshly affected. Some of the most heavily traveled portions of I-68, I-77, I-79 and I-81 with peak annual average daily traffic rates ranging from approximately 16,500 to 58,000 vehicle trips per day, traverse unserved and underserved areas within West Virginia.⁷⁴ Drivers in West Virginia making an estimated 115,500 to 406,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

WISCONSIN

While only about 32,000 Wisconsin residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 1.2 million Wisconsin residents (over 24 percent of Wisconsin's population) are located in unserved and underserved areas. Over 70 percent of Wisconsin's geographic area receives service from 15 or fewer over-the-air local radio channels.** Approximately one-half of Wisconsin's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Over 506,000 residents are severely affected, with 10 or fewer local radio stations within reach. Some of the counties with such residents are Barron, Langlade, Clark, Monroe, Crawford and Richland. See map attached hereto at Appendix C, Tab 49.

The location within Wisconsin with the greatest amount of coverage by local radio stations is the city of Milwaukee, which receives a total of 41 local radio signals. All other areas within the state have less coverage by free local radio stations.

Wisconsin would be harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, the majority of the State of Wisconsin is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of the major East/West Interstates and highways. Long-distance commuters and highway travelers in Wisconsin will be harshly affected. Some of the most heavily traveled portions of I-43, I-90 and I-94, with peak annual average daily traffic rates ranging from approximately 19,000 to 39,000 vehicle trips per day, traverse unserved and underserved areas within Wisconsin.⁷⁵ Drivers in Wisconsin making an estimated 133,000 to 273,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

⁷⁴ *WVDOT – Planning & Research*, at http://www.wvdot.com/3_roadways/tp/analysis_traffic_counts.htm (last visited June 7, 2007).

⁷⁵ *Traffic Count Maps by County*, at <http://www.dot.wisconsin.gov/travel/counts/maps.htm> (last visited June 7, 2007).

WYOMING

While over 35,000 Wyoming residents live in areas served by five or fewer local radio stations -- the unserved areas -- **approximately 300,000 Wyoming residents (over 66 percent of Wyoming's population) are located in unserved and underserved areas. Over 98 percent of Wyoming's geographic area receives service from 15 or fewer over-the-air local radio channels.** Almost 90 percent of Wyoming's geographic area receives 10 or fewer local radio signals. This total includes signals from both AM and FM stations. Approximately 162,000 residents are severely affected, with 10 or fewer local radio stations within reach -- especially the residents of Gillette, Powell, Rock Springs and Wheatland, Wyoming. See map attached hereto at Appendix C, Tab 50.

The location within Wyoming with the greatest amount of coverage by local radio stations is the city of Cheyenne, which receives a total of 31 local radio signals. All other areas within the state have less coverage by free local radio stations.

Wyoming is among the states that would be most harshly impacted by a satellite radio monopoly in terms of the areas unserved and underserved by free local radio. As the attached map illustrates, **nearly all** of the State of Wyoming is unserved and underserved by local radio broadcasting. **These unserved and underserved areas affect both residential populations and hundreds of thousands of travelers on major roads and highways in the state.** In other words, the harsh impact of a satellite monopoly will be felt not only by residents of the unserved and underserved areas but also by the many hundreds of thousands of travelers who use the roads in these unserved and underserved areas, which include substantial segments of all major Interstates and highways. Long-distance commuters and highway travelers in Wyoming will be harshly affected. The vast majority of the most heavily traveled portions of I-25, I-80 and I-90, with peak annual average daily traffic rates ranging from approximately 6,100 to 20,000 vehicle trips per day, traverse unserved and underserved areas within Wyoming.⁷⁶ Drivers in Wyoming making an estimated 42,700 to 140,000 trips per route/per week will be at the mercy of a satellite radio monopoly in those unserved and underserved areas.

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⁷⁶ WYDOT Traffic Analysis, at <http://www.dot.state.wy.us/Default.jsp?sCode=hwyta> (last visited June 7, 2007).