

**Market Definition in Satellite Radio:  
Why the Sirius/XM Merger Would Result in Anti-Competitive Conditions**

Philip M. Napoli, Ph.D.  
Associate Professor, Graduate School of Business  
Director, Donald McGannon Communication Research Center  
Fordham University  
New York, NY

Statement Prepared for the National Association of Broadcasters

April, 2007

Author Bio

Philip M. Napoli (Ph.D., Northwestern University) is an Associate Professor in the Graduate School of Business, and Director of the Donald McGannon Communication Research Center at Fordham University in New York. His research focuses on media regulation and policy. His books include *Foundations of Communications Policy: Principles and Process in the Regulation of Electronic Media* (Hampton Press, 2001), *Audience Economics: Media Institutions and the Audience Marketplace* (Columbia University Press, 2003), and *Media Diversity and Localism: Meaning and Metrics* (Erlbaum, 2007). He is also the author of over 40 journal articles and book chapters that have been published in outlets such as the *Federal Communications Law Journal*, the *Harvard International Journal of Press/Politics*, the *Virginia Journal of Law and Technology*, and *Telecommunications Policy*. His research has received awards from organizations including the Association for Education in Journalism and Mass Communication, the International Communication Association, the Broadcast Education Association, and the National Business and Economics Society. He has testified before Congress and the Federal Communications Commission on media regulation and policy issues. He has been interviewed on a wide range of media industry issues in media outlets such as the *NBC Nightly News*, *Rolling Stone*, the *Los Angeles Times*, *National Public Radio*, the *Chicago Tribune*, and the *Christian Science Monitor*. His research has received support from organizations such as the Ford Foundation, the Benton Foundation, the Social Science Research Council, and the Center for American Progress.

## Executive Summary

- Appropriately defining the relevant markets is central to properly considering the proposed merger of Sirius and XM satellite radio.
- Assessing the competitive conditions surrounding the proposed merger requires considering the following product markets:
  - The *upstream content market*
  - The *downstream content market*
  - The *audience market*
- In the *upstream content market*, in which the buyers are national audio program distributors such as Sirius and XM, and the sellers are content producers, a XM-Sirius merger would create a *monopsony* situation, in which there would be only *one buyer* for many forms of national audio programming.
- In the *downstream content market*, in which the buyers are consumers and the sellers are national audio program distributors such as Sirius and XM, the market needs to be defined very narrowly because:
  - The geographic context at issue needs to be limited to those services that are *mobile*.
  - The programming on satellite radio is fundamentally different in a *number of important ways* from programming available by other mobile audio content providers
  - Research finds consumer adoption patterns indicating *complementarity* rather than *substitutability* between satellite radio and other mobile audio services.
- In the *audience market*, in which the buyers are advertisers and the sellers are ad-supported audio programmers, there is *insufficient direct competition* between satellite radio and other ad-supported audio services (non-ad-supported portable audio services are not participants in this market) such as terrestrial radio to justify a market definition that includes both programming services, because:
  - Advertising revenue represents a very small component of satellite radio's revenue stream or business model, unlike terrestrial radio, which relies almost exclusively on advertising revenue.
  - From a geographic standpoint, terrestrial radio relies primarily on local advertising revenue, while satellite radio primarily serves national advertisers.

## Introduction

A number of compelling arguments have been put forth questioning the logic of allowing a merger between Sirius and XM, the nation's only two providers of satellite radio service. Many of these arguments revolve around the appropriate market definition to facilitate the analysis of this proposed merger. Media markets represent unique challenges from a competition analysis perspective because there are, in fact, multiple interacting markets that need to be taken into consideration and because the nature of the products (content and audiences) are very different from the products produced in other industries. This statement therefore outlines the appropriate framework for analysis for assessing competition in the markets in which satellite radio participates and offers some key points regarding how these markets should best be defined.

### Market Definition in Satellite Radio – Considering Content and Audience Markets

It is well known in antitrust analysis that the accurate assessment of competitive conditions depends upon the appropriate definition of the relevant product and geographic markets. In the case of a media industry such as satellite radio, there are multiple product markets that need to be examined. Specifically, like most media industries, satellite radio operates in both the content and the audience markets.<sup>1</sup> And, of course, both of these product market categories must be considered geographically.

#### *Content Markets in Satellite Radio*

Turning first to the content market, we find that there are, in fact, *two* discrete content markets that need to be considered: the *upstream* content market and the *downstream* content market. And the geographic parameters of these markets of course also need to be taken into consideration as well.

#### *The Upstream Content Market*

The upstream content market is the market in which the buyers are program distributors (i.e., XM and Sirius) and the sellers are program producers (those providing programming to XM and Sirius). To a certain extent, both Sirius and XM are vertically integrated, in that they produce some of the programming they distribute. However, they still draw quite heavily from a number of independent programming sources. Perhaps the most compelling concern that the proposed merger raises in regards to this content market is the extent to which it would result in a *monopsony* – a market in which there is a single buyer and multiple sellers. Such a scenario gives the buyer tremendous leverage over the sellers and undermines the efficient operation of the market.

From a geographic standpoint, satellite radio operates in a national upstream content market, given that satellite radio seeks to obtain and provide programming serving a

national listening audience. Technological and regulatory limitations currently prevent satellite radio from meaningfully entering into the market for local programming.<sup>2</sup> At the same time, given the generally localized nature of terrestrial radio content, the relatively limited program transmission capacity of terrestrial radio relative to satellite radio,<sup>3</sup> and the content regulations imposed on terrestrial broadcasters (discussed below), terrestrial radio is not a meaningful competitor for much of the programming being purchased by satellite radio. Nor are those services (iPods, etc.) in which users are responsible for selecting and compiling their own content meaningful competitors in the market for the type of more traditional linear programming being purchased and distributed by satellite radio. Consequently, a merger of Sirius and XM would create the kind of bottleneck in the flow of this type of national content from producer to consumer that long has been a source of concern for media policymakers.

### *The Downstream Content Market*

The second content market that needs to be considered is the *downstream* content market, in which the buyers are audiences and the sellers are the program distributors. Considering the nature of the downstream content market is particularly important, as this market is where audiences are choosing between the various content options available to them. In this context, we must consider the extent to which the programming provided by satellite radio is similar to – and satisfies the same audience needs and wants as – the programming provided by other delivery systems, such as terrestrial radio, on-line music sources (such as Internet radio), and portable devices such as iPods, MP3 players, and cell phones.

A key factor that must be considered in defining this downstream content market is the extent to which the content available from all of these potentially competing sources is available in a mobile format. That is, the geographic dimension of this downstream market is narrowed by the extent to which consumers can access the content in places such as automobiles (a primary consumption point for both terrestrial and satellite radio).<sup>4</sup>

It is certainly the case that, to some extent, satellite radio competes with terrestrial radio and other mobile audio services for audience attention in the content market, but the extent of substitutability between satellite radio programming and other portable audio content options is mitigated by a number of important characteristics that distinguish satellite radio from these other distribution systems. This perspective reflects the fact that, from a regulatory standpoint, a narrower approach to the definition of downstream content markets is generally more appropriate than a broader approach.

Historically, regulators have frequently seen fit to apply narrow market definitions in the media sector, whether it be in the context of cable television, direct broadcast satellite, movie theaters, or alternative weekly newspapers.<sup>5</sup> The logic of this approach stems in large part from the fact that, from an economic standpoint, markets have been characterized as “monopolistically competitive.”<sup>6</sup> That is, even when there are multiple

content providers in a market, the fact that these content providers provide highly differentiated programming limits the extent to which any one content provider is a true substitute, from a consumer's standpoint, for another.<sup>7</sup>

Within the context of satellite radio, the current providers of this service offer a distinctive collection of content options, many of which can not be obtained elsewhere, and certainly the full programming bundles offered by each satellite radio service are available from no other content provider. Many of the out-of-market sports packages and feeds from national news and entertainment sources (e.g., Major League Baseball, NFL Football, FOX News, E!, the Weather Channel) represent options that are unavailable by other mobile audio options such as terrestrial radio, iPods, or cell phones. Many of the formats found on satellite radio (e.g., stand-up comedy, drama, movie soundtracks/scores) are virtually non-existent on terrestrial radio – indeed, satellite radio represents a sheer quantity of content options that far exceeds that available via terrestrial radio in any radio market in the U.S. And of course, to the extent that many of satellite radio's content forms do not, for whatever reason, represent viable formats for terrestrial radio, this further limits the extent to which terrestrial radio represents a competitor in the upstream programming market discussed previously.

And, we should not forget that the absence of FCC regulation of content in satellite radio means that its programming can – and does – exhibit substantial differences from the content that can be found in terrestrial radio, and that these content differences represent a valuable point of distinction for many satellite radio users, and a content dimension that terrestrial radio never will be able to provide.

Further separating satellite radio from many of its potential mobile audio competitors is the fact that satellite radio is a “programmed” service. There is a tremendous focus today on the extent to which the contemporary media environment empowers media consumers to be their own programmers, via developing their own content playlists for their iPods or MP3 players. The prominence, and the potential implications, of this development can lead us to lose sight of the fact that, for many media consumers (both now and for the foreseeable future), there is tangible value in the services provided by a programmer.<sup>8</sup> The editorial functions of a programmer are a key mechanism via which consumers are exposed to new content. Programmers take audiences down paths they might not otherwise travel on their own, and save consumers the time and energy associated with having to make their own content selection decisions. For many consumers, the presence of a programmer represents a value-added component that is an important point of separation between a product such as satellite radio and a product such as an iPod or MP3 player.

Together, this combination of characteristics represents significant points of distinction between satellite radio and the various other content options that might be considered as part of satellite radio's downstream content market. There is no evidence to date suggesting that the quantity or quality of available terrestrial radio stations are significantly related to satellite radio penetration in individual radio markets. Nor have we seen any evidence of such relationships between Internet penetration or iPod/MP3

penetration and satellite radio diffusion. Compelling evidence of strong relationships of these types would be essential to a convincing conclusion of substitutability across products and a broader definition of satellite radio's market parameters.

Instead, we have evidence of satellite radio forming part of a *technology adoption cluster* with other audio technologies such as on-line music sources.<sup>9</sup> That is, research indicates a significant positive relationship between a consumer's likelihood of paying for on-line music downloading services and his/her likelihood of subscribing to satellite radio.<sup>10</sup> Such patterns suggest a complementary, rather than a competitive, relationship between these services, and can help explain why the diffusion of satellite radio has proceeded rapidly at *the same time* as the rapid diffusion of technologies such as the iPod and cell phone-based audio services.<sup>11</sup> It would seem, therefore, that the availability of these alternative technologies is not significantly curtailing demand for satellite radio.

The logic of a more narrow approach to market definition is well-illustrated by the history of cable television regulation, in which efforts to define the competitive conditions faced by individual cable systems at one point focused on the quantity of available broadcast television stations in the cable system's market. However, it soon became clear that the quantity of available broadcast stations had no meaningful ability to discipline cable rates, and as a result the assessment of the competitive conditions facing cable operators was ultimately redefined in such a way that the availability of broadcast signals was completely removed from the calculus.<sup>12</sup>

#### *Audience Markets in Satellite Radio*

Finally, we must consider the audience market, in which the buyers are advertisers and the sellers are the programmers who attract and sell their audience. In media, there generally are separate national and local audience markets,<sup>13</sup> with advertisers seeking audiences nationwide participating in the national audience market, and those advertisers (i.e., local or regional businesses) interested in a more limited audience participating in the local audience market, of which there are, of course, many.<sup>14</sup> Obviously, to the extent that many portable audio services such as iPods, MP3 players, and cell phone-based music services are supported by consumer payments rather than advertising dollars, these services do not represent meaningful competition in the audience market (whether it be local or national). Terrestrial radio's evolution has been one in which the medium today relies much more heavily on local advertising dollars than it does on national advertising dollars. Given that satellite radio is a national programming service it does not at this point compete with terrestrial radio in the local audience market.

We see a bit more competition in the national audience marketplace – specifically between satellite radio and terrestrial radio. However, the extent to which terrestrial radio relies primarily on local advertising dollars, and the extent to which a key selling point for satellite radio has been, and continues to be, its many commercial-free channels (and its subsequent reliance on consumer subscription revenues), means that the presence

of competition on this front provides a relatively insubstantial justification for broadening satellite radio's overall market definition.

### **Conclusion**

As should be clear, a rigorous and appropriately stringent approach to defining the relevant markets leads to the conclusion that a merger of the two providers of satellite radio service would lead to conditions of both monopoly and monopsony that our antitrust laws are intended to prevent. The public interest remains better served by the preservation of competing service providers seeking to provide the best possible service at the lowest possible price.

## Endnotes

---

<sup>1</sup> For a discussion of media industries as “dual product” markets, see Philip M. Napoli (2001). *Foundations of Communications Policy: Principles and Process in the Regulation of Electronic Media*. Cresskill, NJ: Hampton Press.

<sup>2</sup> See *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service*, 12 FCC Rcd 5754 (1997).

<sup>3</sup> Even in a large city such as New York, there are only 47 licensed radio stations according to Arbitron, compared with a combined 303 stations provided by Sirius and XM.

<sup>4</sup> See The Carmel Group (2007, April). *The Proposed Sirius-XM Merger: Its Harmful impact on Consumers, Content Providers, and Performing Artists* (Noting that the majority of XM and Sirius subscribers and revenues come from in-vehicle subscriptions, and that “the most critically important competitive environment where this merger impacts consumers will be in their motor vehicles” (p. 4).

<sup>5</sup> For a discussion of these decisions, see David A Balto (2007, March 20). *The XM-Sirius Merger: Monopoly or Competition from New Technologies*. Testimony before the United States Senate Committee on the Judiciary. Available: [http://judiciary.senate.gov/print\\_testimony.cfm?id=2601&wit\\_id=6190](http://judiciary.senate.gov/print_testimony.cfm?id=2601&wit_id=6190) (last accessed March 24, 2007).

<sup>6</sup> For a discussion of monopolistic competition in media markets, see Bruce M. Owen, and Steven S. Wildman (1992). *Video Economics*. Cambridge, MA: Harvard University Press.

<sup>7</sup> For example, a broadcast of a San Diego Padres baseball game is not an acceptable substitute for a broadcast of a Boston Red Sox game. Both programs are baseball games, but the distinguishing details are of tremendous significance for consumers.

<sup>8</sup> See Wilson Rothman (2007, March 29). “A radio station just for you.” *New York Times* (noting that the growth of Internet radio is a function of the presence of “users who are not in the mood to hunt for tracks”).

<sup>9</sup> The concept of *technology adoption clusters* asserts that audiences tend to adopt clusters of new media technologies with functional similarities so that the technologies can serve as complements to one another. See Everette M. Rogers (2003). *Diffusion of Innovations* (5<sup>th</sup> ed.). New York: Free Press.

<sup>10</sup> See Carolin A. Lin (2006). Predicting satellite radio adoption via listening motives, activity, and format preference. *Journal of Broadcasting & Electronic Media*, 50(1), 140-149.

<sup>11</sup> Satellite radio subscribership increased nearly 50% between 2005 and 2006 according to the SEC 10-5 filings of Sirius and XM.

<sup>12</sup> See Napoli (2001), *Foundations of Communications Policy*, pp. 163-165.

<sup>13</sup> For a detailed discussion of the markets for media audiences, see Philip M. Napoli (2003). *Audience Economics: Media Institutions and the Audience Marketplace*. New York: Columbia University Press.

<sup>14</sup> Arbitron, for instance, has defined 299 distinct local radio markets in the U.S. See <http://www.arbitron.com/home/mm001050.asp> (Last accessed March 28, 2007).