
On March 19, 2008, the Federal Communications Commission ("FCC" or "Commission") issued its Fifth Report analyzing advanced telecommunications capability usage in the United States. Advanced telecommunications capability includes "high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." It is also described as a service with transmission between customers and providers at a speed of "more than 200 kilobits per second." Section 706 of the Telecommunications Act of 1996, requires the FCC to analyze advanced telecommunications capability and to regularly determine "whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion." The FCC concluded that since its Fourth Report was issued in 2004, there have been significant increases in advanced telecommunications usage.

In particular, the Commission reported advancements including cable modem technology improvement through increased bandwidth and improvements to hybrid fiber coaxial networks. As the report observed, cable providers are working on new technologies in order to provide customers with a higher data transmission rate and enhanced video and digital services. Telephone carriers are providing high-speed Digital Subscriber Lines as another means of broadband access and deployment of fiber technologies such as Verizon's FiOS have increased. Unlicensed wireless technologies have also expanded since the Fourth Report. Notably, with an increase in public Internet hot spots, Wireless Fidelity ("Wi-Fi") Internet access has also grown. Wi-Fi networks enable a user to perform functions such as transmitting voice communications with a phone or photographs with a digital camera. With an expansion in technological advancements for laptops and Personal Digital Assistants wireless service from licensed operators has evolved. In June 2007, Internet ready mobile devices using high-speed service, which were practically non-existent in 2003, were estimated to number 35.3 million. Mobile networks are estimated to cover an area encompassing approximately 82% of the United States population.
Regarding licensed wireless technologies, the Commission reported that utility companies are working with broadband over power line technology manufacturers to increase home broadband usage via power lines. Satellite Internet service provides another option for users living in areas where broadband technologies are unavailable. However, as the Commission noted, satellite technology does not always transmit data at the minimum high-speed data transmission rates required by the Commission.

The FCC concluded that broadband usage and access is increasing in the United States. For example, in 2008 there were nearly four times as many high-speed Internet lines meeting the minimum FCC standards than there were in December 2003. Additionally, residential subscriptions to high-speed Internet access have increased from 26 million to 65.9 million over the same period. The FCC has taken numerous steps since the *Fourth Report* such as updating its regulations, issuing new orders, and spectrum reassignment initiatives—all of which open up new opportunities for broadband deployment.

The FCC concluded “that the deployment of advanced telecommunications capability to all Americans is reasonable and timely.” In particular, the FCC noted that an estimated 72% of adult Americans regularly access the Internet with high speed access. The FCC anticipates significant expansion in broadband usage over the next few years. Nearly all public schools in the United States now offer high-speed Internet access. Broadband usage among low-income users (those earning under $30,000) has doubled from 15% in 2005 to 30% in 2007. The FCC forecasts increased demand for broadband technology as it continues to work towards its goal of affordable broadband access for every American.

*Summarized by Nicholas Myers*


On March 19, 2008, the Federal Communications Commission ("Commission" or "FCC") adopted a Report and Order ("Order" or "Form 477 Order") and Further Notice of Proposed Rulemaking ("Further Notice") amending the FCC's Form 477 data collection program in order to collect more information and provide greater detail about broadband service subscriptions. The Commission also issued an Order on Reconsideration in which it reconsidered *sua*
sponte its June 12, 2008 Form 477 Order and expanded the broadband connection reporting conditions to require reporting of the percentage of residential broadband connections.

Since May 2000, the FCC has collected data from broadband Internet service providers using Form 477. In April 2007, the Commission issued a Notice of Proposed Rulemaking ("Data Gathering Notice") seeking comment on how to modify Form 477 to better capture information about broadband deployment and adoption in rural areas. The Data Gathering Notice sought comment on ways to improve the quality of data collection for wireless broadband Internet access service, asked if alternative speed tier information should be collected, and inquired how best to collect information about subscribeship to interconnected Voice over Internet Protocol ("VoIP") service.

The Order first modified Form 477 to require wired, terrestrial fixed wireless, and satellite broadband providers to report subscriber counts in individual Census Tracts. Providers previously reported subscribers only at the state level by providing a list of the 5-digit zip codes in which they had at least one customer. The modified Form 477 requires providers to report the number of connections that they have in service to households and businesses in each Census Tract. It also requires them to provide data in a standardized database format broken down by technology type and upload and download speed.

Terrestrial mobile wireless providers will be required to report the Census Tracts that best represent their broadband service footprint for each of the speed tiers in which they offer service. For purposes of Form 477, entities that use unlicensed devices to provide a commercial broadband Internet access service that can be received at any location within a service footprint will continue to report subscriber information in the "terrestrial mobile wireless" category. By contrast, entities that use unlicensed devices to provide broadband Internet access connections to dispersed, fixed end-user premises are required to report information in the "terrestrial fixed wireless" category.

The Order next modified Form 477 to establish more detailed transfer speed categories. The lowest tier on the old Form 477 included connections with transfer rates that exceed 200 Kbps in both directions and are less than 2.5 Mbps in the faster direction. The Commission determined that this tier captured too broad a range of actual service levels, ranging from services capable of transmitting real-time video to simple always-on connections not suitable for more than basic email or web browsing activities. The revised Form 477 lists 8 tiers: (1) greater than 200 Kbps but less than 768 Kbps; (2) equal to or greater than 768 Kbps but less than 1.5 Mbps; (3) equal to or greater than 1.5 Mbps but less than 3.0 Mbps; (4) equal to or greater than 3.0 Mbps but less than 6.0 Mbps; (5) equal to or greater than 6.0 Mbps but less than 10.0 Mbps; (6) equal to or greater than 10.0 Mbps but greater than 25.0 Mbps; (7) equal to or greater
than 25.0 Mbps but less than 100.0 Mbps; and (8) equal to or greater than 100 Mbps. The Commission will revisit these category divisions every two years to assess whether advances in technology warrant further refinements.

The Commission also revised Form 477 with regard to mobile wireless broadband providers. First, Form 477 was modified by adding a second reporting category in which mobile services providers report the number of subscribers whose devices and subscriptions permit them to access the Internet content of their choice. This category excludes customers who can only access customized-for-mobile content and customers who lack an Internet-capable data plan. Second, the instructions for Form 477 were modified to direct mobile wireless broadband providers to report subscriptions that are not billed to a corporate, business, government, or institutional account as residential.

Regarding VoIP, the Commission concluded that under Title I of the Telecommunications Act of 1996, it has authority to impose reporting obligations on providers of interconnected VoIP service. The Commission found that it met both the "subject matter" and the "reasonably ancillary" predicates for ancillary jurisdiction. Pursuant to this jurisdiction, the Commission modified Form 477 to require providers of interconnected VoIP service to report information about the number of end-user and resale subscribers they have in individual states, as well as the percentage of those subscribers who purchase a residential-grade service plan. Additionally, the Commission modified form 477 to require providers of interconnected VoIP service to report a list of 5-digit zip codes within each state in which they have at least one subscriber.

In response to the recurring comments that the new reporting standards would impose undue burdens on providers, the Commission created a "hardship exception" to the reporting requirements. Upon a showing of "significant hardship," instead of reporting by Census Tracts, reporting entities may report a list of service addresses or Graphic Information System coordinates of service along with the speed and technology of service offered at each address.

The Further Notice contains request for comments on several additional proposals to further increase the granularity of Form 477 data collection. First, the Commission sought comment on the benefits and burdens associated with requiring local exchange carriers and interconnected VoIP providers to report the number of voice telephone service connections and the percentage of those that are residential at the 5-digit zip Code or Census Tract level. Second, the Commission sought comment on the adoption of a national broadband mapping program with an objective of creating a highly detailed map of broadband availability nationwide. Third, the Commission sought comment on how it might require service providers to report actual, rather than ideal, service speeds. Fourth, the Commission questioned methods for gathering and using broadband pricing information, including requiring providers to report, by state
or Census Tract, the monthly price standalone broadband service and the average revenue per user. Fifth, the Commission sought comment on how to collect, maintain, and disseminate broadband availability mapping while maintaining the confidentiality of the customer data collected. Finally, the Commission sought comment about whether it should conduct and publish a voluntary periodic survey of broadband customers to obtain information about the price, technology, and speed of their connections and information about the applications and services that they use over the connections.

In its Reconsideration on Order, the Commission revisited its Form 477 Order and expanded the broadband connection reporting requirement to require reporting of the percentage of residential broadband connections. It required wired, terrestrial fixed wireless, and satellite broadband service providers to report, for each Census Tract and each speed tier in which the provider offers service, the number of subscribers and the percentage of subscribers that are residential. Terrestrial mobile wireless broadband service providers are not affected by those requirements, and continue to report percentage of residential broadband connections at the state level.

Summarized by Preston N. Thomas

_In re Applications for Consent to the Transfer of Control of Licenses, XM Satellite Radio Holdings Inc., Transferor To Sirius Satellite Radio Inc., Transferee, FCC 08-178, MB Docket No. 07-57, Memorandum Opinion and Order and Report and Order (July 25, 2008)._ 

On July 25, 2008, the Federal Communications Commission ("FCC" or the "Commission") adopted the Memorandum Opinion and Order and Report and Order ("Order") finding that the grant of the consolidated application of Sirius Satellite Radio Inc. and XM Satellite Radio Holdings Inc. (jointly, the "Applicants") for consent to the transfer of control of the licenses and authorizations for the provision of satellite digital audio radio service ("SDARS") held by Applicants and their subsidiaries, was in the public interest. Applicants—the sole providers of SDARS in the United States—contended such a merger would confer greater value to subscribers by allowing for the customization of content, while voluntary commitments by Applicants would effectively mitigate potential public interest harms. While finding that the harms of the merger would outweigh the benefits absent the voluntary commitments and conditions, the Commission concluded that the inclusion of the Applicants’ concessions tilted the balance in favor of granting the application. The Order set forth the Commission’s findings in four principal components: (1) potential horizontal and vertical harms; (2) public interest benefits; (3) balance between public
harms and benefits; and (4) an examination of whether the proposed transac-
tion complied with the Communications Act, other statutes, and the Commis-
sion’s rules and policies.

A lack of evidence on the record compelled the Commission to evaluate po-
tential competitive harms under assumptions that maximized the potential for
such harm. The Commission considered horizontal concentration of market
power through the combination of the two sole SDARS providers, vertical ef-
fects stemming from a monopoly in the market for SDARS receivers, and a
potential monopsony in the content market. While rejecting the argument of
public harm in the form of a content monopsony, the Commission concluded
that there likely would be harm by having one company gain increased lever-
age over contracts for the manufacture of SDARS radios. However, the Com-
mission concluded that the Applicants addressed this concern by voluntarily
committing to an open, non-exclusive architecture, thus permitting continued
innovation in the development of SDARS receivers. The Commission also
found that the Applicants’ voluntary commitments for allotment of capacity to
certain entities and programming addressed concerns over potential loss of
diversity. The merger was likewise deemed unlikely to frustrate localism goals,
as the Commission found insufficient evidence of a detriment to advertising
prices that would affect the amount of locally produced programming.

Public interest benefits claimed by the Applicants included: (1) more pro-
gramming choice at lower prices; (2) more diverse programming; (3) acceler-
ated deployment of advanced technology; (4) commercialization of interoper-
able radio receivers; and (5) operational efficiencies to safeguard the future of
satellite radio. The Applicants also claimed that an elimination of redundant
programming would free capacity for additional offerings, including expanded
programming for children and minorities. Specifically, the Applicants cited
new programming packages and the availability of a la carte offerings as evi-
dence of potential improvements to programming prices and options. The
Commission found that while these programming options did offer consumers
enhanced choices and were merger-specific benefits, the other claimed benefits
were not found to be merger-specific. The Commission agreed with comment-
ers who expressed concern that some of the potential savings stemming from
operational efficiencies were speculative and that only a small percentage of
consumers would benefit.

In balancing the public interest harms and benefits, the Commission noted
the significant voluntary commitments and conditions proffered by the Appli-
cants. Findings that harms would otherwise outweigh benefits, the Commission
accepted Applicants’ commitment to a price cap on the basic subscription
package, a la carte package, music, news, sports and talk packages, and a dis-
counted family-friendly package. The cap time-frame would last at least thirty-
six months after the consummation of the merger. After the first anniversary of
merger consummation, an allowance for the pass through of cost increases in-
curred since filing of the merger application as a result of required payments to
music, recording, and publishing industries would come into effect. The com-
bined company also may not reduce the number of channels in either their cur-
rent packages or their new packages for three years. In consideration of the
shifting competitive landscape, the Commission required a re-evaluation of the
price cap six months prior to the expiration of the commitment period, at
which point the Commission would seek public comment on whether the cap
continues to be necessary to protect the public interest. The Commission would
then determine whether it should be modified, removed, or extended.

Applicants also voluntarily committed to making available an interoperable
receiver in the retail aftermarket within nine months of the consummation of
the merger. Subscribers who already have purchased non-interoperable receiv-
ers would be able to transition to a receiver that has the ability to receive either
of the complete programming offerings that the merged entity will offer with-
out having to purchase two separate receivers. Applicants also agreed to other
voluntary commitments in the interest of open access to technical specifica-
tions of technology and devices, third party access to SDARS capacity, and
capacity allotments for non-commercial educational programming amounting
to 4% of the full-time audio channels.

The Commission also addressed the issue of compliance with applicable
statutes and FCC rules. The Commission first found rule 25.118—which pro-
hibits transfers or assignments of licenses except upon application to the
Commission and upon a finding by the Commission that the public interest
would be served thereby—constitutes a binding Commission rule, rather than a
policy statement. The Commission then repealed the part of Paragraph 170 of
the 1997 SDARS Service Rules Order that prohibited merger of the two
SDARS, finding that the public interest would be served by allowing such ac-
tion. Finally, the Commission noted that evidence of past failures by the Ap-
plicants regarding compliance with Commission regulations were disposed of
in consent decrees and that the combined entity would be monitored closely for
future compliance.

Summarized by In-Sung Yoo

*In re* Formal Complaint of Free Press and Public Knowledge Against
Comcast Corporation for Secretly Degrading Peer-to-Peer Applications;
Broadband Industry Practices Petition of Free Press et al. for Declaratory
Ruling that Degrading an Internet Application Violates the FCC's
Internet Policy Statement and Does Not Meet an Exception for
"Reasonable Network Management", Memorandum Opinion and Order,

On August 1, 2008 the Federal Communications Commission ("Commission") adopted a Memorandum Opinion and Order ("Order") striking down Comcast's network management practices, based on a complaint filed by Free Press and Public Knowledge. The Order stated that Comcast's practices of selectively targeting and terminating peer-to-peer connections were "discriminatory and arbitrary," stifled the open Internet, and did not constitute reasonable management of their network. The Order directed Comcast to disclose details of its current network management practices within thirty days and to submit a plan to replace them with more reasonable policies by the end of the year.

Peer-to-Peer Networking Services, such as BitTorrent, allow users to share free music and video files over the Internet. Comcast argued that such practices took revenue away from its own video and cable services, as well as congested the networks. Seeking to slow down the file sharing, Comcast sent RST packets to computers using BitTorrent, which resulted in the termination of such connections. Comcast at first denied that it took such action, but then admitted to sending the packets during heavy periods of network congestion. However, studies by BitTorrent and other groups said the practice targeted a much larger population than previously reported, and many users affected were not responsible for heavy network use.

Despite Comcast's argument that the Commission had no authority to end this practice, the Order noted several provisions of the Communications Act under which the Commission could claim ancillary jurisdiction regarding Comcast's methods. In particular, section 257 of the Communications Act authorizes the Commission to eliminate hurdles for individuals and small businesses enabling them to take advantage of telecommunications services. Additionally, section 601, authorizes the Commission to provide a diverse range of information services to the public. Tests showed that Comcast interfered with as many as 75% of peer-to-peer connections in certain communities. The Commission ruled that the interference impeded with the continued development of the Internet because customers were limited in their choices of content.

Additionally, section 201, authorizes the Commission to ensure that all practices of common carriers are just and reasonable. While Comcast argued that its practices qualified as reasonable network management, the Commission disagreed, stating that Comcast's actions violated the expectations of computer users who did not anticipate having their connections knowingly interrupted. The Order noted that some experts contended the practice resembled consumer fraud. The Commission also argued that Comcast's practices were not closely
tailored to its goal of easing network congestion. Studies show that Comcast’s methods affected many users who took up little bandwidth, but were targeted because they used an unfavorable application. Additionally, the Commission noted that Comcast did not selectively target certain times of day or certain neighborhoods, but instead connections in much broader terms. The Commission disagreed with Comcast’s argument that no other options existed except for resetting the connections. The Order stated that Comcast had several other choices to remedy their situation, including imposing user caps, or cutting connection speeds for high-capacity users.

Summarized by Jeremy Berkowitz