

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Preserving the Open Internet)	GN Docket No. 09-191
)	
Broadband Industry Practices)	WC Docket No. 07-52
)	

COMMENTS OF DISH NETWORK L.L.C.

DISH Network L.L.C. (“DISH”) files these comments in support of the Commission’s efforts to preserve the open nature of the Internet.¹ DISH is a leader in the effort to integrate online content with linear television channels.² DISH’s advanced set-top boxes (“STBs”) are Internet capable, which allows DISH to offer over 3,000 movies and TV shows through its “DishOnline” Internet video-on demand (“VOD”) service. But plans to expand DISH’s online service are critically dependent on broadband access provided by its competitors. Because Direct Broadcast Satellite (“DBS”) is a one-way service with no ability to uplink a signal, DISH subscribers must connect their STBs to a broadband connection to order and watch DishOnline content. DISH thus relies on an open Internet to compete with other multichannel video programming distributors (“MVPDs”) and to provide innovative services to its subscribers.

¹ Preserving the Open Internet, *Notice of Proposed Rulemaking*, 24 FCC Rcd. 13064 (2009) (“*Notice*”).

² See Press Release, DISH Network Corporation, DISH Network® Introduces TV Everywhere™ (Jan. 6, 2010).

I. OVERVIEW

DISH agrees with the Commission that strong non-discrimination and transparency rules are necessary to preserve a free and open Internet, which will ensure consumer choice and promote competition.³ DISH therefore supports the Commission's proposal in the *Notice* to codify the principles in the *Internet Policy Statement*,⁴ as well as the proposed fifth and sixth principles.⁵

Nondiscrimination rules are necessary, because vertically-integrated broadband providers have the incentive and ability to discriminate against competitors like DISH. By favoring their own video services or degrading services of competitors, "telco" and cable providers can drive customers away from competitive DBS services. Permitting such anticompetitive behavior does not serve the public interest.

The Commission should also adopt rules that promote quick detection and prompt enforcement of discriminatory practices. Network operators must be required to make network management practices transparent. In addition, automated monitoring agents and random audits should be used to ensure accountability.

³ *Notice*, 24 FCC Rcd. at 13092 ¶ 69.

⁴ Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Policy Statement*, 20 FCC Rcd. 14986, 14988 ¶ 4 (2005) ("*Internet Policy Statement*") (entitling consumers to (1) access the lawful Internet content of their choice; (2) run applications and use services of their choice, subject to law enforcement needs; (3) connect their choice of legal devices that do not harm the network; and (4) competition among network providers, service providers, and content providers).

⁵ As the *Notice* puts it, subject to "reasonable network management," a broadband Internet access provider must (5) treat lawful content, applications, and services in a nondiscriminatory manner; and (6) disclose information concerning network management and other practices as is reasonably required for users and content, application, and service providers to enjoy the protections specified in the rules. *Notice*, 24 FCC Rcd. at 13104-11 ¶¶ 103-132.

II. BROADBAND PROVIDERS HAVE THE INCENTIVE AND ABILITY TO DISCRIMINATE

Vertically integrated network operators have the economic incentive and ability to discriminate by using their distribution “pipe” – which they control – to favor their own services over a competitor’s services.⁶ The country’s four largest and dominant broadband Internet access service providers – AT&T, Verizon, Comcast, Time Warner – are also MVPDs.⁷ They compete directly with other MVPDs, like DISH and DIRECTV, who do not own or control their own Internet pipe.

As competitive threats against the dominant providers continue to mount in the subscription television industry,⁸ vertically-integrated broadband providers have an economic incentive to favor their own services in order to reduce competition. Whereas three industries – cable, DBS, and telcos – participate vigorously in the pay TV market, the two vertically-integrated MVPDs – cable and telcos – control the broadband marketplace. Over 46 percent of households nationwide receive broadband access service from their local cable operator – Comcast or Time Warner in their respective franchise areas.⁹ Approximately 35 percent receive their broadband service from the local telephone company – Verizon or AT&T for large swathes of the country.¹⁰ Thus,

⁶ *Notice*, 24 FCC Rcd. at 13094-95 ¶¶ 72-73.

⁷ High Speed Internet, Broadband Internet Statistics, <http://www.high-speed-internet-access-guide.com/articles/broadband-statistics-for-2008.html> (last visited Jan. 14, 2010).

⁸ *See* Annual Assessment of the State of Competition in the Market for the Delivery of Video Programming, MB Docket No. 06-189, *Thirteenth Annual Report*, FCC 07-206 ¶¶ 4-6 (rel. Jan. 16, 2009) (“*2009 Video Competition Report*”).

⁹ Industry Analysis and Technology Division, Wireline Competition Bureau, High-Speed Services for Internet Access at 3 (July 2009).

¹⁰ *Id.*

over 80 percent of the country's broadband-served population receives its broadband Internet access service from the duopoly of cable operators and incumbent telephone companies. While recent trends suggest an increase in mobile broadband, the lion's share of subscriptions goes to the wireless divisions of Verizon and AT&T themselves. No matter how one defines the relevant Internet access market, vertically-integrated providers have significant market power.

By harming the ability of DBS companies to compete, vertically-integrated providers can increase their share of the video distribution market. DBS providers have been the cable industry's main competitors over the past decade, and DBS penetration continues to increase.¹¹ Yet access to broadband services, mostly provided over cable- and telco-owned pipes, is necessary to the competitive viability of DBS providers

Trends show that consumers increasingly want content from multiple sources – multichannel video, online video, two-way Internet access, file sharing, and telephone service.¹² Some operators, such as Comcast, are vertically integrated along a number of fronts, offering broadband, a multichannel video service, an interactive or on demand content distribution network over the broadband connection (Comcast's Fancast Xfinity

¹¹ Cable's MVPD market share, while still dominant, has been marginally declining, from 75.9% in June 2002 to 68.2% for the FCC's last video competition report, compared to DBS's increase over the same period from 20.8% to 29.2%. *2009 Video Competition Report* ¶ 8 & Table B-1. DISH's growth continues, reaching the 14 million households milestone in December 2009.

¹² See Mike Farrell and R. Thomas Umstead, *TV Shift Is Coming*, Multichannel News (Nov. 2, 2009), available at http://www.multichannel.com/article/367053-Burke_Warns_TV_Shift_Is_Coming.php (noting the "shifting habits of video viewers to online" is "one of the biggest movements" in the video marketplace).

TV service), and their own content, including regional sports networks.¹³ Unlike facilities-based broadband providers that offer a single package of these services, one-way DBS providers such as DISH must depend on their competitors for ingredients of that package. If vertically-integrated broadband providers are permitted to prioritize their own VOD services over IP-VOD those provided by DBS companies, customers who want the best quality service will have little choice but to switch to a vertically-integrated MVPD – *i.e.*, a cable company or telco. Competition in the video distribution marketplace will suffer.

Vertically-integrated broadband providers also have the ability to harm competition by degrading the services of their competitors. Advanced technology offers a plethora of hard-to-detect ways to sabotage the service of a single competitor. Examples of discriminatory conduct include dropping packets, indirectly routing content, increasing the number of hops, imposing artificial time delays, increasing jitter, blocking, limiting investment in upgrade of routers and network technology at interconnection points, and using a reserved portion of the operator’s network to deliver content services, such as VOD. In the past, Comcast has used deep packet inspection to “falsif[y] network traffic” and send fraudulent reset or RST packets, which signal that the connection to its network should be terminated and a new one established.¹⁴ The spurious packets

¹³ Comcast Corporation, <http://www.comcast.com/corporate/about/pressroom/corporateoverview/corporateoverview.html> (last visited Jan 14, 2010).

¹⁴ Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications, *Memorandum Opinion and Order*, 23 FCC Rcd. 13028, 13031 ¶ 8 (2008) (quoting the Associated Press, internal quotes omitted). The Electronic Frontier Foundation also conducted testing and found Comcast’s “packet forgery prevented the transfer of data.” *Id.* The FCC rightly concluded that Comcast’s practices were “ill-tailored to the company’s professed goal of

interfered with the delivery of information by blocking a certain type of Internet traffic. Remarkably, within the past week, Comcast reiterated its view that this practice constitutes reasonable network management.¹⁵

Given their dominant share of the broadband market and unsupervised control of the pipe leading into the home, cable and telco broadband service providers have both the incentive and ability to discriminate against their competitors. In sum, they have all the necessary tools to stifle competition.

III. DISH SUPPORTS PUBLIC DISCLOSURE OF NETWORK MANAGEMENT PRACTICES, ROBUST TOOLS TO DETECT DISCRIMINATION, AND EFFECTIVE ENFORCEMENT

The Commission should require network operators to develop and comply with transparent policies and protocols that do not favor or disfavor legal content, applications, or services in any way. DISH agrees with the Commission that network operators should be required to post on a publicly available website their specific network management protocols and practices.¹⁶ In addition, the Commission should encourage the development and implementation of tools for use by the public, including but not limited to tools that would:

combating network congestion. In sum, the record evidence overwhelmingly demonstrates that Comcast's conduct poses a substantial threat to both the open character and efficient operation of the Internet, and is not reasonable." *Id.* at 13094 ¶ 72.

¹⁵ David Cohen, Executive Vice President, Comcast Corporation, *Comcast, the FCC, and "Open Internet" Rules: Where We Stand*, comcastvoices, <http://blog.comcast.com/2010/01/comcast-the-fcc-and-open-internet-rules-where-we-stand.html> (last visited Jan. 14, 2010) (defending Comcast's network management practices as "reasonable and consistent with the Internet Policy Statement.").

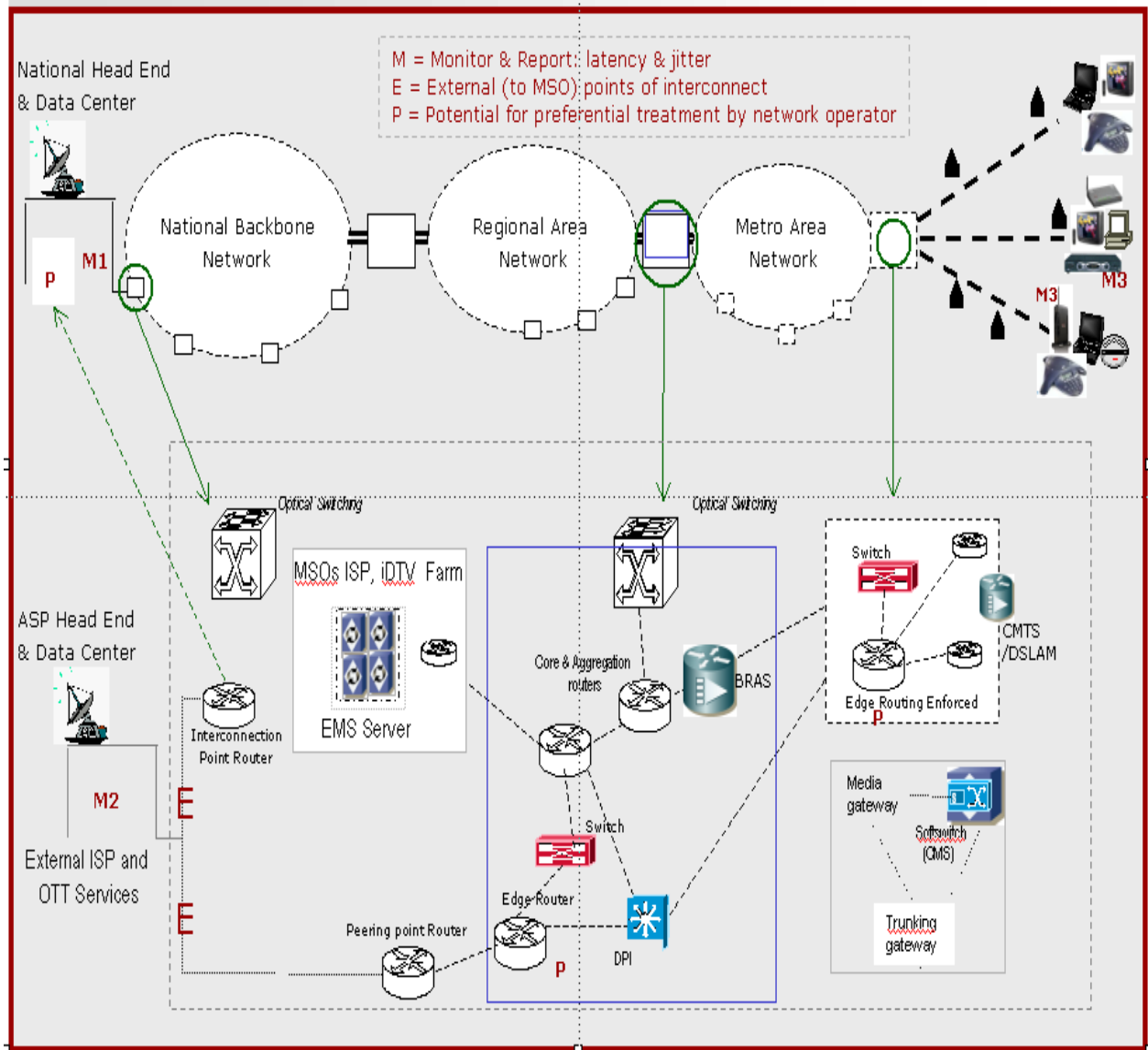
¹⁶ *See Notice*, 24 FCC Rcd. at 13109-10 ¶ 124.

- Monitor bandwidth usage and speed of delivery;
- Monitor points of network congestion in real time;
- Determine whether certain content, applications or services are being degraded over “substantially similar” content, applications or services; and
- Detect packet injection and spoofing by network operators with software capable of comparing two packet captures and identifying potentially forged, dropped, or mangled packets. (*e.g.*, Switzerland and Pcapdiff tools).

To detect discrimination, the Commission should require that automated monitoring agents be placed at national headends and at the edge of the networks to track latency and jitter. As shown in the below diagram, the network operator should monitor at the points marked M1 (national headend or origination point of the service) and M3 (customer delivery point) the moving average latency and jitter values for like-for-like classes of service:



Monitoring non-discrimination



The moving averages can be updated at reasonably discrete time intervals within a day. Results of monitoring agents should be posted promptly on publicly available websites. Because this information is already being collected by network operators, such a rule would not impose additional burdens.

The Commission should also adopt rules that prevent network operators from blocking or subverting use of such transparency tools. And, to ensure accountability, network operators should be required to submit to random audits, including by Commission field engineers, to determine compliance with the non-discrimination rules, and the results of any audits should be made public. Finally, the Commission should adopt strong enforcement mechanisms with tight time frames and high penalties, including the use of temporary restraining orders, so that network operators do not continue to discriminate while a complaint is pending.

IV. CONCLUSION

An open Internet fuels a competitive and efficient marketplace where consumers make the ultimate choices about which products succeed. This allows businesses of all sizes, from the smallest startup to the largest multinational corporation, to compete, yielding the maximum economic growth and opportunity. America's technological leadership has been due, in large part, to the open Internet. By codifying the six principles in a manner that recognizes only narrow exemptions to nondiscrimination, avoids creating loopholes, and provides for real enforcement measures, the Commission can ensure that innovation and competition continue to thrive.

Respectfully submitted,

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