

EMERGING COMMUNICATIONS TECHNOLOGIES: WIRELESS DEVELOPMENTS AND BEYOND

JENNIFER A. MANNER*

It is a very exciting time to be in the telecommunications industry as we are seeing the development of many new emerging technologies, including several that have the potential to deliver a third competitive broadband service to the home. While technological innovation must come from industry, I believe that regulators must ensure that the Federal Communications Commission (FCC) adopts and implements rules and policies that provide a framework that allows that to happen or, at the very least, does not provide disincentives to innovation. As demonstrated by many of the FCC's most recent wireless items, I believe that such regulatory restraint is necessary in order to allow the competitive marketplace to foster technological innovations. Accordingly, the FCC must place its faith in the competitive marketplace, and where it has the discretion, refrain from regulation.

As counsel to FCC Commissioner Kathleen Abernathy, I am keenly interested in the development of new technologies for a number of reasons. First, one of the Commissioner's central objectives is to facilitate the deployment of broadband services to all Americans. Second, Commissioner Abernathy and I fundamentally believe that the FCC can best promote consumer welfare by relying on market forces, rather than heavy-handed regulation. The development of many of the technologies that are being considered today, such as broadband over powerline and WiFi networks will serve both of these key goals. These services will not only bring broadband to previously un-served communities, but the introduction of a new broadband pipeline into the home will foster the kind of competitive marketplace that will eventually enable the Commission to let go of its regulatory reins. Consumers

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should have a choice of multiple, facilities-based providers, including not only cable and DSL, but also powerline, wireless, and satellite services. Such a robustly competitive and diversified marketplace is something we should aim for.

In order to achieve the long-term objective of a robustly competitive marketplace that is free of regulatory distortions, the FCC must engage in regulatory restraint. It is tempting for regulators to take every new technology or service that comes along and apply the same rules that govern incumbent services. After all, regulatory parity and a level playing field are intuitively appealing concepts. But it would be a huge mistake to carry forward legacy regulations whenever new technology platforms are established. Many of our regulations are premised on the *absence* of competition, and when that rationale is eroded, we must not reflexively hold on to regulations that no longer serve their intended purpose and in some cases, actually stifle the development of new services. That is why I also believe that it is necessary for the FCC to regularly review its regulations to see whether changes are necessary in light of evolving technology and other considerations.

I. THE NASCENT SERVICES DOCTRINE

This policy of restraint is something that has been described as the Nascent Services Doctrine.¹ By avoiding the imposition of anachronistic regulations, regulators can best allow new technologies and services to flourish. Once facilities-based competition has taken root, regulators can begin to dismantle legacy regulatory regimes, rather than extend those regimes to include the new platforms. This is not a matter of picking winners and losers; it is about creating an environment conducive to investment in new infrastructure. New platform providers create competition and innovation that ultimately benefits consumers far more than prescriptive regulation. In essence, short-term regulatory disparities are tolerated in order to generate long-term facilities-based competition.

Incubating new technologies and platforms helps establish new facilities-based competitors, and the increased competition ultimately delivers benefits to consumers, including lower prices, better service quality, more innovation, and more choice. Regulatory restraint is a necessary part of fostering such competition, because there is little doubt that overregulation can do substantial damage to nascent technologies and platforms. As the recent turbulence in the capital markets has shown, companies take enormous risks when they invest heavily in

1. See Kathleen Q. Abernathy, Remarks Before the Federal Communications Bar Association New York Chapter (July 11, 2002) at <http://www.fcc.gov/Speeches/Abernathy/2002/spkqa217.pdf>.

communications networks — such as the broadband networks being built today. To avoid creating disincentives to investment, beyond those risks that are inherent in the marketplace, we must resist the reflexive tendency to apply legacy regulations to new platforms.

Regulatory parity is an important *long-term* goal, because applying different regulations to providers in a single market inevitably causes marketplace distortions and leads to inefficient investment. As a *short-term* policy, however, accepting some degree of disparity is not only tolerable, it is essential. For example, when the Direct Broadcast Satellite (DBS) platform was created, it was appropriately exempted from most of the legacy regulations imposed on cable operators.² This regulatory restraint allowed those nascent platforms to develop into effective competitors. Today, as electric utilities, wireless carriers, and satellite operators strive to bring new broadband platforms to the market, it will be equally important to avoid stifling these nascent platforms with the heavy-handed broadband regulations associated with the wireline telecom platform.

There are two distinct applications of this doctrine. First, it applies to *nascent technologies*, which appear in the market without any clear sense of the services they will ultimately support or the markets in which they will ultimately compete. Second, it applies to *nascent platforms*, which Commissioner Abernathy and I think of as new competitors to incumbents in already-defined markets. Ultra-wideband is an example of a nascent technology. We do not know precisely how this technology will be used, but we do know that it has tremendous potential and we should approach it in a restrained manner. Broadband over Powerline (BPL) is the quintessential example of a nascent platform. There is little question that BPL services will compete with more-established cable modem and DSL services — and in some markets, satellite and fixed wireless services.³

The FCC has a pretty good track record of adhering to these principles. When wireless voice services were first developed, the Commission refrained from imposing common carrier price and service-quality regulations, despite many calls to do so in order to establish parity with wireline regulation.⁴ Similarly, the Commission generally took a hands-off approach to DBS services as they emerged as competitors to

2. See Nat'l Ass'n of Broadcasters v. FCC, 740 F.2d 1190, 1195 (D.C. Cir. 1984).

3. See Carrier Current Systems, including Broadband over Power Line Systems; Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems, *Notice of Proposed Rulemaking*, 19 FCC Rcd. 3335 (2004).

4. See 47 U.S.C. § 332(c)(1) (2000); see also Implementation of Sections 3(n) & 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Second Report & Order*, 9 FCC Rcd. 1411, ¶¶ 124-219 (1994).

cable in the Multi-channel Video Programming Distributor's (MVPD) market.⁵

Of course, the interest in nurturing nascent platforms cannot justify preserving regulatory disparities forever. While the Nascent Services Doctrine calls for tolerating short-term disparities, it also recognizes that the *benefit* of such disparities is that they provide the impetus to reconsider the appropriateness of our regulation of incumbent providers. If we succeed in spurring investment in new platforms — and robust facilities-based competition takes hold — we can then begin to dismantle regulations imposed on incumbent providers and replace them with more appropriate rules. In this way, the Nascent Services Doctrine provides a laboratory to assess the necessity of our regulatory intervention on the incumbent provider when compared with its nascent competitor. In contrast, if we were to extend legacy regulations immediately in a reflexive drive toward symmetry, that would assume the ongoing need for the underlying regulation and never allow us to assess deregulation in the real world. Indeed, reflexive symmetry actually institutionalizes the legacy regulation by imposing it on more providers across all platforms, ultimately making it all the more difficult to remove regulations from the books even after they have outlived their usefulness. The Nascent Services Doctrine places the burden on the regulator to re-institutionalize the regulations after a new competitor has established itself in the marketplace.

We are seeing this process unfold right now as we review the rules applied to wireline broadband services offered by incumbent local exchange carriers (LECs).⁶ The emergence of cable operators as the leading providers of mass market broadband services makes clear that applying more stringent regulations to wireline providers at a minimum must be reconsidered. As other platforms, including BPL and wireless, become more widely available, that will further undermine the justification for regulating incumbent LECs' broadband services as if they were the only available offerings. When the Commission completes this rulemaking, I expect that we will eliminate many existing rules and substantially modify others; the central question is the degree of regulation that will remain during the transition to a more robustly competitive market.

Finally, it is important to recognize that although the emergence of new platforms like WiFi will eliminate the need for many *competition-related* regulations, *other* types of regulation may well remain necessary.

5. See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Third Annual Report*, 12 FCC Rcd. 4358, ¶ 4 (1997).

6. See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Notice of Proposed Rulemaking*, 17 FCC Rcd. 3019 (2002).

For example, the FCC must implement public policy goals unrelated to competition, or even at odds with competition. Universal service and access for persons with disabilities are examples of this kind of regulation. These public policy goals generally should be applied to *all* service providers, to the extent permitted by the Communications Act. The FCC also must intervene to prevent competitors from imposing externalities on one another and to protect consumers where market failures are identified. Although, as I have noted, the Commission was right to refrain from imposing heavy-handed price and service-quality regulations on PCS services when they were originally introduced, it was also right to adopt strict interference rules to prevent competitors from externalizing their costs.⁷ The same principle will apply to BPL. The key point is that, while some degree of regulation is both inevitable and desirable, we should ensure that it is narrowly tailored to the particular governmental interests at stake.

II. NEXT STEPS

I believe that there are three primary tasks that the FCC should focus on.

First, the Commission should continue to promote the development of additional broadband platforms. While the growth in cable modem and DSL subscribership is encouraging, consumers will benefit most if other facilities-based providers enter the market. Economists agree that duopoly conditions generally are not sufficient to ensure the benefits associated with a robustly competitive marketplace including choice, a high degree of innovation, improved services, and lower prices.⁸ The emergence of new broadband platforms will enable the Commission to minimize regulation in this arena, and thus fulfill Congress's goal of developing a pro-competitive, deregulatory framework.

That is why I am very excited by the proceeding the Commission launched on powerline broadband systems.⁹ As many have noted, nearly every consumer has electric power and in the not-so-distant future may be able to obtain broadband service through ordinary power outlets. The Commission should expeditiously resolve any signal interference issues that arise and ensure that we have removed regulatory obstacles to the deployment of this exciting new service.

By the same token, the Commission is striving to facilitate the development of broadband platforms via wireless technologies. In

7. See Revision of the Commission's Rules Regarding Ultrawideband Systems, *First Report & Order*, 17 FCC Rcd 7435, 7491 (2002). See also 47 C.F.R. § 24.3 (2004).

8. RICHARD POSNER, *ANTITRUST LAW* 307 (2d ed. 2001).

9. Carrier Current Systems, including Broadband over Power Line Systems, *Notice of Inquiry*, 18 FCC Rcd. 8498 (2003).

November, in cooperation with National Telecommunications and Information Administration (NTIA), the FCC allocated 90 Megahertz of spectrum for 3G services, and is working on licensing and service rules.¹⁰ In addition, the deployment of WiFi systems in the 2.4 Gigahertz unlicensed bands has been rightly hailed as a tremendously promising development. Thus far, WiFi systems complement, rather than compete with, last mile technologies. But experiments underway demonstrate that the next generation of WiFi systems may have much greater range, and eventually may serve as a last-mile replacement. I strongly support the Commission's plan to make 250 Megahertz of additional unlicensed spectrum available in the 5 Gigahertz bands. I also support granting providers flexibility to provide new services in existing bands, such as the ITFS and MMDS bands, and developing secondary markets so that consumers more rapidly will get the benefits of the explosion of innovation that is underway.

Satellite operators also are striving to be part of the broadband future. To date, satellite broadband providers have lagged far behind cable operators and wireline providers in most markets. But some companies and joint ventures are preparing to launch a new generation of satellites that will be capable of providing more robust broadband services, and such offerings might be particularly attractive in rural areas. I also believe that the Order adopted last week reforming the satellite licensing process will eventually help speed the delivery of new services to consumers.¹¹

A second area of focus for the Commission is clarifying the regulatory framework that governs the provision of broadband services. In the *Triennial Review* proceeding, the FCC decided how to regulate the wireline *facilities* that are used to provide broadband; now it must complete its review of the statutory classification of broadband *services* and the appropriate regulatory requirements.¹² The Commission is likely to adopt orders this summer in the *Wireline Broadband* and *Cable Modem* proceedings.¹³ These proceedings should determine which services fall under Title I and which fall under Title II. The Commission also should address the extent to which regulations are necessary to prevent cable operators and incumbent LECs from

10. Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, *Report & Order*, 18 FCC Rcd. 25,162, 25,165 (2003).

11. Amendment of the Comm'n's Space Station Licensing Rules & Policies, *First Report & Order & Further Notice of Proposed Rulemaking*, 18 FCC Rcd. 10,760 (2003).

12. Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, *Report & Order & Order on Remand & Notice of Proposed Rulemaking*, 18 FCC Rcd. 16,978 (2003).

13. See Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities, *Declaratory Ruling & Notice of Proposed Rulemaking*, 17 FCC Rcd. 4798 (2002).

discriminating against unaffiliated Internet service providers (ISPs) or content providers, as well as questions about whether and how broadband service providers should contribute to universal service.

Finally, apart from unbundling rules and our regulatory framework for broadband services, the Commission should remain vigilant in its efforts to remove any *other* regulatory impediments to broadband deployment. For example, service providers have argued that right-of-way regulation can be a significant barrier to entry.¹⁴ Carriers and cable operators assert that some municipalities have subjected them to long processing delays and overly burdensome application processes, and some have charged excessive fees. The Commission held a right-of-way forum last year to bring stakeholders together and encourage cooperative solutions.¹⁵ National Association of Regulatory Utility Commissioners (NARUC) also has been active on this front, and Nancy Victory has shown great leadership at NTIA, both in her initiation of a comprehensive review of right-of-way management on *federal* lands and in her attempts to bring state and local officials together to develop best practices.¹⁶

In sum, I believe it is imperative that the FCC continue to create a market-based regulatory regime so that innovators will be able to provide the services that consumers demand. To do so, the FCC, as a regulator, needs to continue down this path of letting go and having faith in the marketplace as it drafts its rules and policies. Such faith requires the Commission to refrain from regulating where the market can do a better job and afford sufficient flexibility to its licensees to allow innovation. In the long run, this approach will best serve the public interest by getting out to consumers the largest selection of technologies and services.

14. See, e.g., Comments of the Nat'l Ass'n of Telecomms. Officers & Advisors & the Alliance for Cmty. Media at i, Annual Assessment of the Status of Competition in the Mkt. for the Delivery of Video Programming, *Notice of Inquiry*, FCC MM Dkt. No. 04-227 (filed July 23, 2004), available at [http://www.natoa.org/public/articles/NATOA_Comments_No._04-227_\(04-23-04\).pdf](http://www.natoa.org/public/articles/NATOA_Comments_No._04-227_(04-23-04).pdf).

15. See Commission Public Forum on Rights-of-Way Issues to be Held on October 16, 2002, *Public Notice*, DA 02-1832 (rel. July 29, 2002).

16. *Id.*

