

Changing Federal Policies in Response to the Broadband Revolution

by John P. Janka

Virtually all of us rely on broadband access to the Internet in our law practices, and many are using social media as a means of enhancing our professional profiles. These tools, coupled with the broad availability of mobile wireless communications devices, enable us to stay connected wherever we travel, providing increased flexibility, but also expanding the work day. This article provides a brief overview of some of the evolving federal legal issues in the industry.

Over the past decade, a revolution has occurred in the field of broadband communications. Access to the Internet has become a necessity: Email is increasingly displacing voice as the preferred means of communications for many, students must have Internet access to do their homework, and many businesses rely on the Internet to get their products to market. We are no longer tethered to our desks. What used to be a simple analog cell phone has evolved into a sophisticated digital device that can serve as a pocket computer, television, camera, and phone, all in one.

The introduction of the iPad launched the development of a range of easy-to-use and 'always on' tablet computers. A wide variety of apps allow these mobile and portable devices to perform functions that once were the domain of desktop computers or dedicated function devices, such as GPS navigation systems. Many people are cutting the cord with their landline phone company, and relying instead on wireless phones and voice over Internet protocol (VoIP) service through the Internet connection to their homes. The broadcast television and cable television sectors also are in a state of evolution, as more and

more video content is now viewed online, from services such as Hulu, Netflix, HBO to Go, and YouTube. The Internet has become the virtual highway over which we travel each day.

Broadband service is available to almost the entire U.S. population, through a variety of technologies, including cable, fiber optics, satellite and wireless.¹ However, large parts of the land mass of the U.S. do not have mobile broadband service (except for some satellite-based services). And even in the populated areas that are served, the existing technology many telephone companies rely upon has passed its prime, and does not provide the quality of service needed to support many increasingly important broadband applications, such as two-way, high-definition (HD) video conferencing (for distance learning and business meetings), running multiple applications over a virtual private network (*i.e.*, making VoIP calls and accessing files while working remotely), or streaming HD video programming (to catch up on the latest shows while away from home). In many areas, the choice of service providers is limited. And broadband service to the home, as well as mobile broadband service, can be more expensive than plain old telephone service (POTS).

For these reasons, among others, the developing 'digital divide' between the haves and have nots remains a serious policy concern. Thus, a number of federal initiatives are aimed at making broadband service more available, affordable, and capable of meeting growing demand.

The Federal Communications Commission (FCC) is the lead regulator on broadband Internet access matters. The FCC, an independent regulatory agency established by the U.S. Congress pursuant to the Communications Act of 1934, as amended, is charged with regulating commercial use of the radiofrequency spectrum (such as that used for wireless broadband service), interstate communications, and international communications involving an end-point in the United States.²

At the state level, the provision of communications is governed by state regulatory agencies (such as the New Jersey Board of Public Utilities), typically having jurisdiction over

telephone companies, cable television companies, and other 'public utilities' providing services within the state, as well as many consumer protection matters. In addition, municipalities often have zoning regulations that govern the location of communications facilities (such as towers), and many issue franchises that allow cable television systems to run their cables over public rights of way. The authority of these types of public utility commissions (PUCs) and municipalities is provided by state constitutions and statutes, but is limited by the principle of federal supremacy under the U.S. Constitution.³ In the case of a conflict between FCC and state regulations, the state usually is preempted, unless Congress or the FCC permits the states to enforce divergent regulations.⁴

The FCC has indicated that it has exclusive jurisdiction over most matters involving broadband Internet access services, due to the interstate and international nature of the Internet.⁵ The FCC has already preempted state and local restrictions on the installation of small antennas used for wireless services or the provision of satellite-based communications (such as Internet access and subscription television service).⁶ Moreover, Congress has generally preempted state regulation over wireless mobile communications, while leaving states with authority over the location of transmission towers and consumer protection issues.⁷

Initially, the federal government used a relatively light touch with respect to the regulation of broadband Internet access service, relying largely on market forces. By many accounts, this hands-off approach contributed to the rapid growth of the U.S. Internet-based sector, and the growing reliance on broadband Internet access as an effective substitute for services such as landline telephony and cable television. However, the FCC now is playing a more active role in attempting to facilitate the deployment

of, and also regulating, broadband Internet access services.

The FCC's 2010 National Broadband Plan⁸ represents a blueprint for U.S. broadband policy, and includes recommendations for expanded access to broadband services in areas deemed 'unserved' by the FCC. Initially, the plan recommends that all Americans have dedicated Internet access at speeds of at least four megabits per second (Mbps) downstream (*i.e.*, receiving information in the home or office) and one Mbps upstream (*i.e.*, sending information from the home or office). These broadband speeds generally are considered the bare minimum of what is needed today, but are rapidly becoming inadequate for Internet applications such as streaming HD TV shows and movies, and two-way HD videoconferences.

Recognizing the need for increasing broadband speeds, the FCC's plan also recommends that 100 million American households have access to broadband transmission capability within 10 years that provides 100 megabit per second download speeds, and 50 megabit per second upload speeds.⁹

The FCC is attempting to advance these goals through a number of initiatives, including expanding the federal 'universal service' program to cover broadband,¹⁰ and making additional spectrum bands available for mobile broadband networks to ease the capacity crunch caused by the rapid adoption of smartphones and tablet computers.¹¹ In addition, the FCC's recently adopted (and controversial) 'network neutrality' rules that restrict how broadband providers operate their networks reflect a perception by some that broadband, a critical part of our nation's infrastructure, must be further regulated.¹²

Universal Service

The Communications Act of 1934, as amended, directs the FCC to facilitate the nationwide availability of essential

telecommunications and information services at affordable rates through, among other things, a federal universal service fund (USF).¹³ The USF is used to finance a number of separate programs with different focuses.¹⁴ One program supports service to so-called 'high-cost' areas, where geographic features, remoteness, low population density, or other factors, raise the cost of service to the end user above what it typically is in urban areas. Another program provides subsidies to make basic services more affordable to those of limited means. Yet another program provides funding for schools and libraries. And another program provides funding for rural healthcare facilities. All in all, about \$8.5 billion in subsidies were provided under these programs in 2011, with the high-cost program consuming over half of this total.

The USF is funded through contributions from all providers of interstate and international telecommunications and all providers of voice over Internet protocol services that are interconnected with the public switched telephone network, as well as certain other providers of 'telecommunications.' Notably, providers of broadband Internet access historically have not been required to contribute, but this may change in the future.¹⁵ Typically, service providers recover the cost of the contributions they make to the USF by adding a surcharge to the customer's bill. The required contribution rate varies, but is currently 15.7 percent of covered revenues.¹⁶

As initially proposed in the National Broadband Plan, the FCC has taken steps to modify the existing high-cost USF program to target broadband infrastructure deployment to areas the FCC has identified as currently unserved by terrestrial-based broadband providers.¹⁷ (The FCC does not take into account nationwide, satellite-delivered broadband service for these purposes.) The FCC justifies this new Connect America Fund (CAF) by asserting that broadband

service providers do not have a business case to extend service to these areas, absent this type of financial support. These changes are being coupled with changes to the existing—and exceedingly complex—‘intercarrier compensation’ scheme by which local and long distance carriers pay or receive compensation for traffic that is handed off to each other’s networks.¹⁸

As with the legacy USF program, the new CAF program has a number of structural biases in favor of the local, incumbent phone company. (The subsidy schemes underlying the legacy USF program were established at a time when the local phone company was a monopoly—before wireless service existed and before the cable companies offered phone service.) It essentially provides the incumbent phone company with first dibs on the new high-cost broadband subsidy, and ends the prior support for multiple service providers in a given area. While these aspects are based on a stated desire to ensure continued broadband network deployment and reduce the burden of the CAF on the consumers who fund it, it is not at all clear that the first of these goals will be achieved. There currently are no clear penalties for an incumbent electing to receive CAF funding, but not ultimately providing broadband to all of the unserved households and businesses in its service area.

Another concern with the CAF is that it has not been tailored for the competitive broadband environment. Those who live in urban areas enjoy the benefits of vibrant competition among the cable company, the phone company, a number of wireless providers, and a number of satellite providers. This dynamic leads to better service, as evidenced by the new 50 to 300 Mbps broadband speed tiers that some service providers recently have launched in urban areas. One risk with the government subsidizing just one provider to serve an unserved area is that by effec-

tively picking one ‘winner’ in that area, competition from other providers is stifled. It is tough for a business to compete with someone who is getting an advantage in the form of a significant government subsidy.

Another risk is that if the subsidy recipient does not face effective competition, it may have little incentive to innovate and keep up with the improved broadband speeds in urban areas. If these issues are not addressed, there is a significant risk that those Americans who currently are unserved will be given the broadband equivalent of horses while the rest of us enjoy the broadband equivalent of race cars.

Another issue is how this new program gets funded. As noted above, there is essentially a ‘tax’ of about 16 percent of the interstate portion of each phone bill to fund the current USF programs. The FCC has just proposed to extend this surcharge to all broadband Internet access services.¹⁹ The idea is to spread the burden of the surcharge, and thus lower the rate. The risk is that doing so may make broadband service less affordable in these challenging economic times, particularly for those without it.

Net Neutrality

One of the ways the FCC has enabled broadband service to flourish is by avoiding the burdens typically imposed on providers of common carrier ‘telecommunications service,’ such as rate regulation, and the obligation to sell capacity to consumers and competing service providers. Telecommunications service providers tend to be heavily regulated by both the FCC and the state PUCs. In contrast, providers of ‘information services’ are not subject to common carrier regulation, and traditionally have been lightly regulated at the federal level. The FCC has classified broadband Internet access as an information service, and thus largely exempted it from telecommunications

service regulation.²⁰ As noted above, state PUC jurisdiction over broadband Internet access services has been severely limited by federal preemption.

That said, the FCC has recently decided to regulate broadband Internet access providers in another way—through its ‘net neutrality’ rules, which generally aim to constrain the rights of broadband network providers to block, filter or prioritize lawful Internet applications, websites and content. The first step was a 2005 policy statement that consumers are entitled to: 1) access to the lawful Internet content of their choice; 2) run applications and use services of their choice (subject to law enforcement); 3) connect any legal devices that do not harm the network; and 4) benefit from competition among network providers, application and service providers, and content providers, all subject to a service provider’s right to engage in “reasonable network management.”²¹

Exactly what constitutes reasonable network management remains unclear. After a federal court overturned, on jurisdictional grounds, the FCC’s attempt to apply these ‘principles’ to the operation of Comcast’s broadband network,²² the FCC adopted express, new rules.²³ The new rules, which are very general in nature, also are being challenged in federal court on jurisdictional grounds.²⁴ They require all broadband Internet access providers to disclose the network management practices, performance characteristics, and terms and conditions of their broadband services.²⁵

The rules then go on to treat ‘fixed’ (e.g., cable, DSL, and fiber) broadband Internet access providers differently than mobile providers (the FCC asserts that mobile providers face more competition and have greater operational constraints than fixed providers).²⁶ Subject to reasonable network management, fixed broadband Internet access providers may not block lawful content, applications, services, or non-harmful

devices, and may not unreasonably discriminate in transmitting lawful network traffic over a consumer's broadband Internet access service.²⁷ Subject to reasonable network management, mobile broadband Internet access providers may not block lawful websites, or applications that compete with their voice or video telephony services. Thus, wireless providers appear to have more latitude to block other websites and applications, and to impose greater constraints on other network traffic and devices.²⁸ These distinctions also are being challenged in federal court.²⁹

Many aspects of these new rules remain unclear. If they are sustained in court, it may well take some time before the FCC provides further guidance on what tools broadband Internet access providers may use to address network congestion, address concerns about content providers who want to use the networks of others to deliver their services to consumers (but do not want to pay for the network capacity they consume), and decide the extent to which broadband service providers can prioritize some types of traffic to provide a quality service to the end user.

Spectrum Policy

In order to facilitate the deployment and growth of broadband Internet access services, the National Broadband Plan recommends the repurposing of at least 500 MHz of radiofrequency spectrum.³⁰ Some spectrum would be used to address the strains on wireless system capacity caused by the growing number of end users, and the more data-intensive applications supported by smartphones and tablets. Other spectrum would be used for the essential 'back-haul' infrastructure connecting wireless towers in remote areas with the telecommunications backbone that ties into the Internet.

Radiofrequency spectrum is a portion of the electromagnetic spectrum defined

by the lengths of the waves of an emitted signal. Like real property, some spectrum is more valuable than other spectrum, because of the propagation characteristics at a given wavelength—how far an emitted signal will travel (and thus how many transmission towers are needed to cover an area), how well the emitted signal can penetrate foliage and buildings (*i.e.*, does it provide a signal inside a building?), and whether the signal can be disrupted by heavy rain.

Because of its propagation characteristics, some of the most desirable spectrum for wireless communications consists of the portion currently being used by many broadcast television stations. Congress has recently enacted legislation that will allow television broadcasters to 'turn in' some of the spectrum they use for their television channels, in return for a portion of the proceeds when the spectrum is re-auctioned by the government for mobile broadband use.³¹ Because today's digital signals do not require a broadcaster to use all of its spectrum, a TV station could still continue to provide service, largely as it does today. Or a TV station could stop broadcasting over the air, and opt to deliver its programming through a cable system, a phone company, a satellite company, or over the Internet. It remains to be seen how many broadcasters will choose to take advantage of this opportunity.

Other spectrum that is being 'refarmed' for wireless use was previously set aside for mobile satellite service (MSS) systems.³² LightSquared is one of the companies planning to use a portion of its licensed MSS spectrum in this manner—specifically, to deploy a state-of-the-art 4G wireless network as a competitive alternative to AT&T's and Verizon's wireless offerings. As evidenced by the controversy surrounding LightSquared's efforts,³³ converting spectrum to higher and better uses presents difficult challenges when current users of spectrum seek to protect

their use both through FCC processes and congressional lobbying, even though that use is not authorized.

Technological developments have always outpaced the development of the law. Perhaps this is most true in the communications field, where the demand for Internet-based services and devices has driven a number of new federal policies, and will continue to do so over the coming years. ☞

Endnotes

1. See National Broadband Map, available at www.broadbandmap.gov/technology (last visited July 17, 2012).
2. Communications Act of 1934, as amended, 47 U.S.C. §§ 151-52.
3. U.S. Const. Art. VI, cl. 2.
4. See generally *Capital Cities Cable v. Crisp*, 467 U.S. 691 (1984).
5. See generally, *e.g.*, *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, 17 FCC Rcd 4798 (2002) (the 9th Circuit initially reversed this decision, but, after a remand by the U.S. Supreme Court in *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 545 U.S. 967 (2005), the 9th Circuit ultimately affirmed the FCC's decision in *Brand X Internet Services v. F.C.C.*, 435 F.3d 1053 (9th Cir. 2006)); *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, 19 FCC Rcd 22404 (2004); see also *Framework for Broadband Internet Service*, Notice of Inquiry, 25 FCC Rcd 7866, 7910 (2010).
6. 47 C.F.R. § 1.4000 (2011).
7. 47 U.S.C. §§ 253, 332 (c)(3), (7).
8. See Federal Communications Commission, *Connecting America: The National Broadband Plan* (rel. March

- 16, 2010) (“*National Broadband Plan*”), available at www.broadband.gov/plan (last visited July 17, 2012).
9. *Id.* at xiv.
 10. See, e.g., *Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (2011) (CAF Order), pets. for review pending *sub nom. Direct Commc’ns Cedar Valley, LLC v. FCC*, No. 11-9581 (10th Cir. filed Dec. 8, 2011) (and consolidated cases).
 11. See, e.g., *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, Notice of Proposed Rulemaking and Notice of Inquiry, FCC 12-32 (rel. March 21, 2012) (2 GHz NPRM).
 12. *Preserving the Open Internet; Broadband Industry Practices*, Report and Order, 25 FCC Rcd 17905 (2010) (*Net Neutrality Order*), petitions for review and notices of appeal pending *sub nom. Verizon v. FCC*, No. 11-1355 (D.C. Cir. filed Sept. 30, 2011) (and consolidated cases).
 13. 47 U.S.C. § 254.
 14. See generally www.usac.org/about/about/universal-service/overview.aspx (last visited July 17, 2012).
 15. See *infra* n.19 and associated text.
 16. Proposed Third Quarter 2012 Universal Service Contribution Factor, *FCC Public Notice*, DA 12-917 (rel. June 11, 2012).
 17. *CAF Order*, 26 FCC Rcd at 17668-70; 17709.
 18. *Id.* at 17872-18044.
 19. *Universal Service Contribution Methodology; A National Broadband Plan For Our Future*, FCC 12-46 (rel. April 30, 2012).
 20. Essentially, Internet access is distinguished from ‘telecommunications’ and is deemed an ‘information service’ that involves the manipulation of information—that is, it involves more than just mere transmission capabilities. See *National Cable & Telecommunications Ass’n v. Brand X Internet Services*, 545 U.S. 967 (2005).
 21. *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986 (2005).
 22. *Comcast Corporation v. FCC*, 600 F.3d 642 (D.C. Cir. 2010).
 23. *Net Neutrality Order*, 25 FCC Rcd 17905.
 24. See *supra* n.12.
 25. *Id.* at 17936-41.
 26. *Id.* at 17956-58.
 27. *Id.* at 17941-56.
 28. *Id.* at 17956-61.
 29. See *supra* n.12.
 30. *National Broadband Plan* at xii.
 31. Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112-96 § 6403, available at www.gpo.gov/fdsys/pkg/PLAW-112publ96/pdf/PLAW-112publ96.pdf (last visited July 17, 2012).
 32. See, e.g., 2 GHz NPRM, FCC 12-32.
 33. See Daniel Fisher, Lightscrewed, *Forbes*, Jan. 16, 2012, at 64; Susan Crawford, Geo-Location, Geo-Location, Geo-Location: The Tragedy of Lightsquared, Feb. 23, 2012, available at www.wired.com/epicenter/2012/02/pipeline-crawford-telecomm-goliath (last visited July 17, 2012).

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