
FACING TOMORROW'S CHALLENGES: LOOKING FORWARD, LOOKING BACK

Bryan N. Tramont[†] and Russell P. Hanser[‡]

During our time in the communications bar, the industry has witnessed myriad policy debates, as well as enormous technological change. Time and again, this journal and The Catholic University of America, Columbus School of Law have been at the forefront of the debate affecting these dramatic developments. We offer our very sincere congratulations to the editors and authors, past and present, who have worked to ensure that the *CommLaw Conspectus* remains an extremely valuable resource for practitioners and academics alike.

The articles appearing in this volume address many of today's most pressing communications controversies, including how to move toward a true next-generation public-safety network, how to promote broadband deployment, the quandaries posed by the "net neutrality" debate, the best ways to ensure privacy and safety in the online world, and the proper means of ensuring true intermodal competition both at the facility layer and at the "applications" layer of the network. Each of these topics has given rise to robust discussion. Whatever one's view of the authors' specific arguments, there can be little doubt that the contributions presented here shed light on issues of critical importance.

[†] Partner, Wilkinson Barker Knauer, LLP. Mr. Tramont previously served as Chief of Staff to Federal Communications Commission Chairman Michael K. Powell, and as senior legal advisor to Commissioners Kathleen Abernathy and Harold Furchtgott-Roth. Previously, he was an associate at Wiley Rein & Fielding, and clerked for the Hon. Duane Benton on the Supreme Court of Missouri. He earned his B.A. at George Washington University, and his J.D. at Yale Law School, where he was editor of the *Yale Law & Policy Review*. He is also an adjunct professor at The Catholic University of America, Columbus School of Law.

[‡] Partner, Wilkinson Barker Knauer, LLP. Mr. Hanser previously served as Acting Legal Advisor to FCC Commissioner Kathleen Abernathy, and held various positions in the FCC's Wireline Competition Bureau and Office of General Counsel. Previously, he was an associate at Wilmer, Cutler & Pickering and Ropes & Gray, and clerked for the Hon. Norman Stahl on the United States Court of Appeals for the First Circuit. He earned his B.A. at Amherst College, and his J.D. at Harvard Law School, where he was a Primary Editor on the *Harvard Law Review*. He is also a visiting adjunct professor at Franklin Pierce Law Center.

But it is also important to step back for a moment to examine the broader communications landscape. In particular, it is worth recognizing that most (if not all) of the articles that follow *could not have been written* even just a few years ago. Even as late as mid-2004—when we were working on broadband issues from within the Federal Communications Commission—there would have been little basis for even *considering* questions regarding net neutrality, or wireline providers’ efforts to obtain video franchises, or the real-world consequences of broadband over power line. At that time, the Commission was just beginning to explore the proper treatment of IP-enabled services. Key components of the “hands-off” broadband policy spearheaded by Chairman Powell were still tied up in litigation. “Convergence” was much discussed—and much planned for by visionaries in government and industry—but rarely put into practice in successful business plans. Put simply, the FCC was laying the groundwork for the future, but that future was only just beginning to become reality.

All of that has changed. The policies that then-Chairman Powell and current Chairman Martin have pursued since 2001 have borne their intended fruits, and will continue to do so, allowing us to turn our attention to new issues, such as those considered in this volume. Recent years have given rise to unprecedented innovation and network investment, spawning new offerings that could not have been envisioned even several years ago. In particular—whatever one might say about relative international rankings—our nation has experienced a truly stunning explosion in the deployment of multiple high-speed broadband networks. In turn, providers once associated with a given service—fixed telephony, mobile telephony, video, data, and so forth—are now offering packages including several of these offerings. And all the while, prices are declining, demonstrating that when companies are provided incentives to invest in and deploy new infrastructure, consumers win.

In light of the above, it seems useful to take stock of where we are, how we got here, and how the insights acquired on the way might guide us in moving toward where we are going next. Just as it is imperative that we learn from our mistakes, so too we must examine the lessons of our success, and work to apply those lessons to new challenges.

I. WHERE WE ARE

As noted above, since 2001 we have witnessed truly remarkable growth in broadband deployment. That deployment, moreover, has not been limited to just one or two platforms. Rather, growth has been strong in numerous sectors, and there is increasing evidence that such growth has made “convergence” a practical reality for consumers across the country.

In a 2004 *CommLaw Spectus* preface, for example, one of us noted that by the end of 2005, the number of cable modem subscriptions was expected to increase to “over 18.5 million”; the number of xDSL subscriptions to “over 13.4 million”; the number of fixed wireless subscriptions to “just over 1 million”; the number of fiber-to-the-home (“FTTH”) subscriptions to 776,000; and the number of satellite broadband subscriptions to “over 1 million.” These figures were cited to show how successful the nation’s broadband policy had been. As it turned out, however, the overall deployment figures predicted for the end of 2005 looked quaint only one year later. According to the FCC’s most recent data, as of the end of 2006 there were more than 32 million high-speed cable modem lines in service (almost twice as many as had been predicted for the end of 2005) and more than 26 million high-speed xDSL lines (just about double the number predicted for the end of 2005). The past several years have seen truly stunning growth in high-speed mobile wireless services, which accounted for fewer than 400,000 high-speed lines in June 2005 but for almost 22 million such “lines” by December 2006.²

Further, while fiber, fixed wireless, and satellite broadband still serve relatively few customers, each of these platforms stands poised for significant expansion in the coming years: Verizon reported in 2007 that its fiber-based “FiOS” offering was already available to 6.8 million homes and businesses, and that it planned to make FiOS available to 18 million homes and businesses by the end of 2010.³ Companies such as FiberTower and Telecom Transport Management have begun to offer high-capacity point-to-point wireless services that compete with wireline “special access.” Market analysts expect particularly strong growth in providers’ use of this technology to transport mobile wireless voice and data traffic. According to one, “[r]oughly 20% of mobile base stations in the United States are backhauled via wireless technologies today,” whereas “globally 65% of mobile base stations are linked via wireless backhaul.”⁴ Satellite broadband deployment proceeds apace as well. The number of satellite broadband lines grew by more than 20% in 2006 alone, and

¹ Bryan Tramont, *The Digital Migration: The Future is Upon Us*, 12 *COMMLAW CON- SPECTUS* 127, 131 (2004).

² Putting aside the current debate over the extent of deployment and the definition of what qualifies as “broadband,” there is no question that the rate at which high-speed services have been deployed and adopted has exceeded all expectations.

³ See *In re Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Comments of Verizon and Verizon Wireless*, GN Docket No. 07-45, at 1 (May 16, 2007) (accessible via FCC Electronic Comment Filing System).

⁴ Press Release, Visant Strategies, Inc., US Mobile Backhaul: Evolving Market 2007 (May 7, 2007), available at http://www.visantstrategies.com/forecast/wireless_backhaul.html.

some press reports have indicated that demand is developing even faster than providers had hoped.⁵

In all, the number of high-speed lines in service rose from just over 6.75 million in December 2000 and 51.2 million in December 2005 to 82.5 million in December 2006. There is good reason to expect that these trends are continuing to accelerate. This explosive infrastructure growth, moreover, has been matched by an unprecedented erosion of outmoded “line-of-business” boundaries. A sizable proportion of voice subscribers have “cut the cord” and begun to rely entirely on their mobile phones—if they ever relied on a “cord” in the first place. Millions of customers are receiving circuit-switched voice service provided over coaxial cable, and many millions more have migrated to interconnected voice over Internet protocol offerings utilizing their broadband connections. The FCC recently found that almost 30 percent of television viewers who subscribed to for-pay video service were choosing satellite providers over cable companies, that millions of households were subscribing to wireline broadband providers’ video offerings, and that power utilities were also making noticeable inroads into the video market. The Commission also noted rising reliance on mobile wireless video and Internet streaming video. And in the data market, as mentioned above, xDSL and cable-modem offerings have lost significant market share to mobile wireless, FTTH, power line, and other platforms.

II. HOW WE GOT HERE: APPLYING LESSONS LEARNED

The tremendously dynamic communications marketplace described above was not inevitable, and the fact that we have reached this moment is not accidental. Our success has derived from a specific set of intentional policy choices designed to maximize consumer welfare by promoting competition and investment in new facilities. This framework, promoted by Chairmen Powell and Martin, rests on three core principles: (1) a commitment to regulatory restraint; (2) fidelity to technological neutrality; and (3) a willingness to recognize and address the limited areas where markets cannot provide optimal outcomes.

A. Regulatory Restraint

Perhaps the most critical lesson to be gleaned from the transformation of the communications landscape is that competitive markets generally do far more

⁵ See Heather Forsgren Weaver, *WildBlue Slows Marketing as Satellite Broadband Fills Spot Beam Capacity*, COMM. DAILY, Dec. 3, 2007, at 11 (“WildBlue Communications has been so successful in selling its satellite broadband service that it has stopped marketing in some places, said David Brown, vice president and general counsel.”).

than regulation to place new technologies at the disposal of consumers. Experience has shown that when providers have both the incentive and the ability to compete for consumers' communications dollars, they will develop and deploy the technologies that the people demand. Conversely, when circumstances deprive them of that incentive or that ability, investment and innovation are blunted, deployment lags, and consumers suffer.

Chairmen Powell and Martin have put these principles to work in numerous contexts. First, they have adopted investment-oriented strategies designed to stimulate infrastructure deployment by ensuring that those who invest capital reap the rewards of that investment (just as they would bear the costs if their investments failed). To this end, the FCC has sharply limited unbundling and other network-sharing obligations with regard to high-capacity network facilities, eliminating those obligations entirely in the case of OCn-capacity transmission links, fiber-to-the-home facilities, packet switching, and various other types of residential and enterprise broadband services. Moreover, the FCC refused to apply such requirements to cable, wireless, and other platforms that lacked any history of market power in the voice market. Perhaps most critically, it has recognized that new competitive offerings, whether they involve next-generation facilities or innovative applications—should be permitted to flourish free from burdensome economic regulation. As the Commission has recognized, regulation meant for a bygone “narrowband, analog, one-wire” era, is simply not appropriate with respect to the broadband, digital, multi-platform market of the 21st century.

Second, the FCC has worked to ensure that providers have the *ability* to compete. Where market conditions have obviated the need for regulation, Chairmen Powell and Martin have utilized regulatory forbearance, the biennial review, the section 271 process, and other tools to remove outmoded requirements that had fettered one provider (or class of providers) but not another. Likewise, where artificial market restraints are keeping critical resources out of the hands of those who value them most—for example, through the cellular-era's spectrum caps—the Commission has worked to ensure that those restrictions are lifted and carriers can provide the bandwidth that consumers desire.

Third, though its record in this area has not been perfect, the FCC has been most successful when it has recognized that markets must be given time to work. Too often the regulations that look the worst in hindsight are those that were driven by impatience with market outcomes. Thus, efforts to impose comprehensive network unbundling in the context of the so-called “UNE platform” (“UNE-P”), increased the number of providers but did little to foment real competition, and efforts to ensure “open access” to cable networks by unaffiliated Information Service Providers may in fact have *undermined* broadband deployment. Similarly, some would argue that the FCC's recent decision

to reserve spectrum in the 700 MHz band for “open access” usage may have been precipitous in view of market developments. This argument is strengthened by Verizon Wireless’s recent announcement that it will support device portability generally, and Google’s open-network “Android” platform in particular, for its own business reasons.

Fourth, in an industry in which distance matters less and less every day and packet routing is quickly replacing circuit-switched service, regulatory restraint often demands a single federal regime rather than a patchwork of often-inconsistent state regulation. Broadband and IP-based services are inherently interstate. As the Commission has recognized, they should not be subjected to state economic regulation, which often imposes substantial costs and operational burdens at the expense of innovation and investment.

B. Regulating Down to Parity

Another lesson learned from recent experience is that consumers are best served by technologically neutral policies that ensure a level regulatory playing field. Policies that discriminate on the basis of technology channel resources to some platforms rather than others purely on the basis of governmental preference. Conversely, technologically neutral policies permit customers to evaluate services based solely on the value provided and the costs incurred, and thus promote the efficient allocation of resources. Thus, like offerings generally should be treated alike. The Commission’s commitment to neutral regulation enabled the wireline industry to catch up with cable in the provision of broadband Internet access after years of fighting, as it were, with one hand tied behind its back. It is also responsible for cable’s impressive forays into the provision of voice service. Going forward, it promises to ensure that convergence becomes a permanent feature of the market landscape, and that companies succeed or fail based on the merits of their offerings, rather than on regulatory fiat.

Of course, technological neutrality should never become a justification for hobbling an entrepreneur not otherwise meriting regulation. A reflexive neutrality that encumbers one provider with a particular obligation only because that obligation applies to a competitor harms consumers. Rather, regulators must ask themselves whether the existence of the new competing offering in fact eviscerates the rationale for applying the regulation to *either* offering. Put differently, in considering new regulatory problems, we must beware of efforts to “regulate up” to parity, and must think broadly about the prospects for “regulating down” in markets seeing new entry.

C. Recognizing and Addressing Market Failure

A third key lesson from the last decade is that there are some problems the market will *not* address, and that in those limited areas, government still has an important role to play. In particular, markets can fail where needs are felt by only a relatively small number of consumers, or where services involve costs or benefits not borne by the purchaser (i.e., where there exist economic “externalities”). For example, the market cannot always be expected to account for the needs of Americans with disabilities. The Commission therefore has a role to play in ensuring that those Americans are not left behind as communications migrate to next-generation networks. Likewise, the market might not meet the needs of law enforcement with regard to the interception of communications sent over digital networks, because the benefits of such interception are reaped by the public as a whole, rather than by the specific consumer making decisions as to which service to purchase. Thus, even as it has worked to remove stultifying economic regulations (such as those involving rates and entry), the Commission under Chairmen Powell and Martin has endeavored to ensure that evolving communications networks remain accessible by persons with disabilities, and closed to criminals and terrorists. These actions have been critical to guaranteeing the success of our communications policies: Just as minimal regulation opens the floodgates of investment and (properly conceived) neutrality helps to ensure that offerings compete on the merits, the FCC’s efforts to correct for market failures where they exist has helped bring us to where we are today, by ensuring that the communications space remains vibrant and open to all but does not abet those who would do us harm.

III. ADDRESSING TOMORROW’S CHALLENGES

As noted above, many of the issues discussed in the articles that follow this Preface would not even have arisen if not for the dramatic success of our previous policy choices. As we consider new conundrums such as those with which these articles grapple, it behooves us to heed the principles responsible for that success.

First and foremost, regulators must continue to embrace the light regulatory touch that has characterized the regulation of next-generation services thus far. This principle has special applicability to the “net neutrality” debate discussed in detail by Jerry Brito and Jerry Ellig. At the heart of this debate lie two competing claims about communications policy: Supporters of net neutrality regulation argue that the benefits of existing networks would be distributed more equitably if network providers were subject to more expansive non-discrimination requirements, while opponents argue that such requirements would undermine any incentives to construct newer, better networks going

forward, ultimately harming those whom neutrality advocates seek to help. It is worth noting that on both sides, virtually identical arguments were made in the context of wireline network unbundling and cable “open access.” The experience of the past decade strongly suggests that sharing requirements suppress investment, and ultimately contradict the goal of ensuring better service for all.

Second, regulators should bear in mind the importance of technological neutrality—and also the importance of avoiding reflexive parity. Lindsay Capodilupo is right to underscore the importance of ensuring that electric utility ratepayers do not cross-subsidize broadband over power line networks; such subsidies would provide the owners of such networks with an unfair advantage over other network providers, distorting market incentives. But Matthew Phelps is *also* right to recognize that new video entrants should not be subjected to the same burdensome franchising rules that were applied to monopoly cable providers in a long-gone era; the fact that providers facing one set of circumstances were subjected to regulation is not, alone, an appropriate basis on which to subject competitive providers to that same regulation.

Third, where markets are ill-equipped to solve certain specific social problems, regulators should craft focused rules that serve the American people. Just like the task of ensuring law enforcement’s ability to intercept communications when authorized by warrant, the task of creating a true next-generation public safety network will likely require appropriate government involvement, as made clear by Phil Weiser and Dale Hatfield. Likewise, while network providers will face market incentives to protect young users from online predators, any long-term solution may well require the sort of national policy framework discussed by Jessica Groppe. Furthermore, whatever one ultimately concludes about his recommendations, Robert Atkinson’s arguments that broadband deployment is subject to various externalities must be taken seriously, because such externalities can indeed disrupt the proper functioning of the market.

IV. CONCLUSION

Of course, the fact that a given approach has served us well in the past does not *guarantee* that it will serve us well in every case. Social thinker Eric Hoffer observed that “[i]n times of profound change, the learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.” So too, the lessons of the past should serve us as guideposts, but should never become dogma. As we stated in the opening of this Preface, the debates addressed in this volume will not be resolved in this volume—and they certainly will not be resolved by this preface. What matters is that we bring the very best economic, legal, and policy arguments to bear as

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