Beyond Kolkata: Delivering on the Fundamental Goals of the Communications Act

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Home to more than 4.5 million people, Kolkata, India has a fascinating transportation network. A recent visit to the city revealed bicycles, motorbikes, taxis, buses, rickshaws, cyclerickshaws, cars, trucks, and trams crowding roads already thickly congested with pedestrians, students, street vendors, and parked cars. Perhaps as a result sharp-witted Indian critics have described traffic conditions in Kolkata's urban core as "hell" or worse.

Yet however uncertain and, at times, chaotic, the journey, Kolkata's transportation infrastructure continues to move people and goods through the city. Indeed, the striking part of the network is not the congestion or pollution, both of which one can find in abundance, but the resiliency and ingenuity of the system itself. As if by common understanding, drivers who find their lane blocked, identify the obstacle and rapidly commandeer control of the oncoming traffic lane. When faced with oncoming traffic in their lane, drivers approaching from the opposite direction may assume control of the open space or the sidewalk.

Kolkata's transit conditions are far from ideal. But for an aging metropolis that spreads across some 728 square miles and is home to every imaginable form of transport, the system still works. With little central planning, haphazard investment and limited law enforcement, the network supports more than hundreds of billions of dollars of economic activity and provides the foundation for one of India's great cities.

Perhaps the President's Council of Advisors on Science and Technology (PCAST) had Kolkata in mind when it issued its report on spectrum use in the United States. The report, entitled *Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth*, never mentions the roads of Kolkata, but it addresses a strikingly similar challenge: how to drive economic growth in an increasingly congested, increasingly chaotic environment where access to large, unencumbered swaths of infrastructure will prove time consuming at best and politically impossible at worst.[1]

PCAST had a fairly simple recommendation: share the road. With the volume of mobile broadband data more than doubling every year over the past four years and continued growth expected, PCAST concluded that the "the traditional practice of clearing government-held spectrum of Federal users and auctioning it for commercial use is not sustainable" and recommended spectrum sharing instead. PCAST identified three key initiatives: "[1] immediate sharing by new low-power devices in two existing Federal spectrum bands; [2] [the] formation of a Spectrum Sharing Partnership Steering Committee (SSP) of industry executives to advise on a policy framework to maximize commercial

[1] *See Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth*, Report to the President, President's Council of Advisors on Science and Technology (July 2012), *available at* http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf.

success; and [3] [the] creation of an urban Test City and a Mobile Test Service that can support rapid learning in spectrum management technology and practices."

Detractors and supporters of exclusive-use licensing pounced on the PCAST report. Spectrum license holders portrayed the report as either far too optimistic about the prospects of commercially successful spectrum sharing, or far too pessimistic about the ability of the Federal Communications Commission to identify additional spectrum for licensed use, or both. Meanwhile, unlicensed spectrum users lavished praise on the report as a long-overdue antidote to putting auction revenues associated with exclusive-use licensing ahead of the innovation and entrepreneurship seen in the less heavily regulated unlicensed bands.

Both sides make strong arguments. For example, the commercial wireless industry's main lobbying organization, CTIA, was undeniably right when it noted that "[c]leared spectrum and an exclusive-use approach has enabled the U.S. wireless industry to invest hundreds of billions of dollars, deploying world-leading mobile broadband networks and resulting in tremendous economic benefits for U.S. consumers and businesses."[2] Meanwhile, the Wireless Innovation Alliance, which boasts Microsoft, Google and other technology titans as members, also struck a chord when it noted that "computerized radio technologies could make better use of spectrum [than exclusive use licensing] . . . [by] potentially improve[ing] efficiency [over exclusive use spectrum-licensing models] by a factor of 40,000."[3]

Yet seemingly lost in the debate over the relative merits of exclusive-use licensing and shared-use licensing is any sense of the many other policy objectives that the Communications Act charges the FCC with satisfying. These include: affordable service, rapid deployment, rural access, safety of life, and access for the disabled. Regardless of whether the government pursues dynamic band-sharing more aggressively than exclusive-use licensed spectrum auctions, or vice versa, the spectrum assignment model that the Federal Communications Commission chooses to pursue has little bearing on the core concerns of section 1 of the Communications Act, which charges the FCC to "make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges."[4]

The FCC and its leaders have written eloquently and at some length about each of these goals. Universal Service, the FCC has written, is one reason why the United States has such a high telephone penetration rate, and Chairman Genachowski has noted the calls for universal broadband, which is "an essential ingredient for American economic competitiveness and job creation."[5] Former

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[2] Posting of Christopher Guttman-McCabe to CTIA Blog, http://blog.ctia.org/2012/07/20/pcast-report/ (July 20, 2012).

[3] Posting to WIA News Center, http://www.wirelessinnovationalliance.org/index.cfm?objectid=B5E0CED6-B591-11E1-96E9000C296BA163 (June 6, 2012) (citing Brian X. Chen, *Companies Try to Create Room on Radio Spectrum*, N.Y. TIMES, June 6, 2012, *available at* http://www.nytimes.com/2012/06/07/technology/as-wireless-spectrum-is-squeezed-sharing-is-seen-as-solution.html?_r=0).

[4] 47 USC § 151.

[5] Federal-State Joint Board on Universal Service, Schools and Libraries Universal Service Support Mechanism, Rural Health Care Support Mechanism, Lifeline and Link-Up, CC Docket No. 96-45, CC Docket No. 02-6, WC Docket No. 02-60, WC Docket No. 03-109, *Order*, 20 FCC Rcd 16883 ¶ 8 (2005); Connect America Fund, A National Broadband Plan for Our Future, Establishing Just and Reasonable Rates for Local Exchange Carriers, High-Cost Universal Service Support, Developing a Unified

FCC Commissioner Deborah Taylor Tate called public safety and homeland security "the Commission's most important area of authority."[6] And as the Commission noted in its *Seventh Broadband Progress Report and Order*, that speed of deployment is "an essential component of [broadband] availability."[7]

But what the FCC has not done – and what the community of lawyers, scholars, economists and engineers that set the agenda for the FCC must do – is to focus less on whether to pursue licensed or unlicensed models of spectrum deployment and more on precisely how the FCC can satisfy the lofty goals of the Communications Act. The question is not whether a licensed or an unlicensed model will better serve the public. But rather what factors, under either model, will frustrate consumer expectations, raise prices, hamstring competition, or limit deployment. In an unlicensed environment, for example, constraints on access to critical rights-of-way threaten to limit the ability of unlicensed devices to provide critical capacity for broadband services. Similarly in a licensed environment, the lack of interoperability across common spectrum bands will curtail investment, harm consumers, and frustrate deployment. On both of these issues and many others, the FCC has only taken the first steps to identify solutions to these problems.[8]

The FCC faces strong and compelling arguments from the advocates of both licensed and unlicensed spectrum. Neither model will singlehandedly solve the problem or carry the day. And industry and the FCC will almost certainly pursue an "all of the above" solution with extensive use of both licensed and unlicensed spectrum. Advocates and policymakers should therefore avoid the tantalizing philosophical debate about the merits of the different spectrum-assignment models and instead get down to the hard work of deciding how these existing and fairly well understood models will promote competition, consumer welfare, rapid service, public safety and the other critical goals of the Act.

The FCC should ensure that competition and continued investment drive deployment, and it should consider these and other core policy goals when auctioning spectrum or allowing shared access.

Intercarrier Compensation Regime, Federal-State Joint Board on Universal Service, Lifeline and Link-Up, Mobility Fund, WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, WT Docket No. 10-208, *Statement of Chairman Julius Genachowski*, 26 FCC Rcd 18396 (2011).

[6] *Hearing on Oversight of the Federal Communications Commission Before the H. Comm. on Energy and Commerce Subcomm. on Telecomm. and the Internet*, 110th Cong. (2007) (statement of Deborah Taylor Tate, Commissioner, Federal Communications Commission).

[7] 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, as Amended by the Broadband Data and Improvement Act, GN Docket No. 10-159, *Seventh Broadband Progress Report and Order on Reconsideration*, 26 FCC Rcd 8008 ¶ 1 (2011).

[8] *See* Promoting Interoperability in the 700 MHz Commercial Spectrum, Interoperability of Mobile User Equipment Across Paired Commercial Spectrum Blocks in the 700 MHz Band, WT Docket No. 12-69, RM-11592, *Notice of Proposed Rulemaking*, 27 FCC Rcd 3521 (2012); Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting, WC Docket No. 11-59, *Notice of Inquiry*, 26 FCC Rcd 5384 (Apr. 7, 2011); Petition for Declaratory Ruling To Clarify Provisions of Section 332(c)(7)(B) To Ensure Timely Siting Review and To Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance, WT Docket No. 08-165, *Declaratory Ruling*, 24 FCC Rcd 13994 (2009); *Order on Reconsideration*, 25 FCC Rcd 11157 (2010), *cert. granted.*

Likewise, industry and public interest advocates pushing for more spectrum resources should not overlook the need to establish equitable, pro-competitive rules of the road before a multitude of devices compete for limited space on our communications infrastructure. Not long from now, government radar, consumer smartphones, utility meter readers, WiFi hot spots, and other innovative devices will share spectrum bands. But with advance planning and careful attention to the fundamental goals of the Communications Act, the United States might prove able to capture some of the ingenuity of Kolkata's commuters without replicating its cacophony of horns and notoriously slow-moving traffic.