Testimony of Reed E. Hundt

Before the
Subcommittee on Communications and Technology
Committee on Energy and Commerce
U.S. House of Representatives

#CommActUpdate: Perspectives from Former FCC Chairmen

Wednesday, January 15, 2014

I thank the House Subcommittee on Communications and Technology for their invitation to speak here today on this important and timely issue. All chairs of the Federal Communications Commission, whether past, present or in the future, should welcome this Committee's question: should Congress fundamentally change the law that authorizes the FCC to implement Congressional intent by means of regulation?

My answer is: if it ain't broke, don't fix it – and the FCC is not only not broken, but also it is a model example of agency government.

Just yesterday the Court of Appeals for the D.C. Circuit remanded to the FCC the Open Internet order. This case surely requires more study than I have had the time to give it. But I suspect that the current FCC has the authority to re-write the regulation so as to accomplish its pro-competitive and pro-consumer goals, as they have been repeatedly stated by Congress. That, at any rate, is the mission this subcommittee ought to give the FCC.

This subcommittee and its counterpart in the Senate have created in the FCC a flexible, responsible and effective method for doing the people's business. As a result, the United States has a legal and regulatory regime for the information and communications technology ("ICT") market that is the envy of the world. Indeed, many countries have followed our paradigm of regulating so as to open closed markets and open new markets to innovation and investment. Imitation is flattery. But followership is not leadership. The success that Washington has had in creating a legal culture that welcomes ICT entrepreneurship has helped American businesses become wealth-creating, job-creating leaders of the global market.

Of course America also leads the world in self-criticism, and we can each of us find many ways that Congress and the FCC should have, could have, and would have done this or that better. The big

truth, however, is that Congress has repeatedly passed bipartisan legislation that has created an appropriately centralized and directed authority for the FCC to take the actions necessary to give Americans the chance to create the best ICT sector on the planet. Americans have seized that opportunity, and produced wondrous successes.

Congress has passed important laws delegating authority to the FCC about every two or three years in the 80 years since it created the FCC. Some of the key laws are the 1934 Communications Act (monopoly regulation), the 1992 Cable Act (monopoly regulation and program access), the 1993 OBRA (spectrum auctions), the 1996 Telecommunications Act (pro-competition), the 2005 Deficit Reduction Act (digital television), and the 2012 Middle Class Tax Relief and Job Creation Act (incentive auctions).

In recent years, Congress has asked the FCC to use regulatory and deregulatory means to open closed markets, to create new markets, to encourage firms in creating consumer welfare and public goods. Although the economic condition of the United States should be far rosier five years after the Great Recession ended, the ICT picture ought to give us pride and confidence. America is first among big countries in Internet access penetration, with 80% of residents using the Internet. (Twenty years ago, American internet penetration was less than 3%). Smartphone penetration is 60% and on its way to 100%. About 90% of the operating systems for smart phones in the world are American-originated; American mobile operating systems had a global market share of only 5% in 2005. Measured by revenue or market capitalization, American Internet firms dominate the top ranks of global corporations.

The characteristic American topology for Internet communication now is a seamless network of networks. These include vast racks of servers in data centers; long haul fiber connecting every city and most big buildings; metropolitan fiber rings and access networks; Internet access in two-thirds of homes,

and almost all other buildings, including classrooms, libraries, and medical care facilities; at least four cellular networks offering service to almost American; and Wi-Fi that soon will connect almost every computer, electrical appliance, and even many watches and glasses to the Internet.

This network of networks replaced the circuit-switched and analog networks of the 1980s. Almost nothing that worked on the old networks still works on the new ones. There is no more profound change in the history of business than the way that the digital networks of today supplanted the analog networks of the past. That construction project catalyzed the tech boom of the 1990s.

The boom accounted for about one-third of all economic growth in the decade of the 1990s. About one trillion dollars of private capital was poured into America's networks, creating vast fortunes, destroying some other wealth, producing huge productivity gains, and making America permanently better off. As a result of this investment, the ICT sector created about two million net new jobs in that halcyon era of full employment. In the rise and fall of the stock market from 1998 to 2002, the growth in some nations was offset by economic loss in other nations, but the global economy grew handsomely – and 98% of the total growth was American.

The networks of the 1990s were generative: that is, they led to waves of new innovation. The networks themselves continued to evolve. So too did the products and services on them. As Marc Andreessen has colorfully put it, "software eats everything." Less pungently, it can be said that the ICT evolution has spawned creative destruction in almost every market for goods and services. In fact, the repercussions of the ICT breakthroughs in the 1990s are increasing. Most obviously, the narrowband and digital cellular networks of the 1990s are now being replaced by broadband, wif-fi mesh, and LTE networks in this decade. Even more importantly, the current networks carry the seeds of software and hardware innovation into every other business and social activity.

Now in the third decade of the Internet, we are on the verge of seeing what monumental changes to health care, education, and energy will stem from the new innovations arising from ICT. Sensors and motes will be gathering data transmitted to wearables that provide life-enhancing information specifically destined for an individual in a specific situation. That data will be transmitted over airwaves governed by the FCC. It will be aggregated on networks the FCC's legal culture encouraged entrepreneurs to build. It will be managed in data centers that could not exist but for the networks the FCC governs.

I am not saying that the FCC built these networks. I am saying that bad government can stifle any entrepreneur, curtail any form of economic growth, and deny to citizens even the most easily obtained fruits of progress. Plenty of bad governments prove this sad point.

On other hand, academics have concluded that a sound legal regime is the key to a growing, successful national economy. But a sound regime, according to Daron Acemoglu and James Robinson, has a difficult mission. It must permit "creative destruction, which replaces the old with the new in the economic realm and also destabilizes established power regimes in politics."[1]

In some nations, ICT regulators are what Acemoglu and Robinson would call "extractive institutions that are structured to extract resources from the many by the few and that fail to…provide incentives for economic activity."[2] A way for an agency to become "extractive" is to become captured by dominant incumbents in markets that the agency is supposed to regulate. Legislators too know well that if they lose focus they can be swayed by the arguments of powerful incumbents in any industry. Moreover, any firm can be tempted to try to use governmental power as an extractive tactic to benefit its shareholders, instead of the common good.

[1] Acemoglu & Robinson, "Why Nations Fail: The Origins of Power, Prosperity, and Poverty," (New York: 2012), page 430.
[2] Ibid.

However, when we look at the record of Congress and the FCC we must conclude that by and large, under Republican and Democratic leadership both, government has enabled in ICT a generative, creative, wealth-creating opportunity. And Americans have taken that opportunity. Indeed, it's fair to say that no country in the world has a legal regime for ICT that is superior to what we have here in America, and almost every country has an inferior legal and regulatory code. The FCC itself has a highly satisfactory range of legal authority. It is permitted, for instance, to rule ex ante on market structures, entrepreneurial opportunities, and public interest duties. It can help avoid path dependence, lock-in, and entrenched monopoly, each of which can block innovation and entrepreneurship. It can and does create new markets and new opportunities for new entrants to enter old markets.

Moreover, the FCC also houses the greatest competence and experience of any similar agency in the world. Any business executive in ICT can list a dozen ways the FCC could do better. Then that executive would admit that no other regulator in the world is superior in terms of integrity, knowledge, vision, and effectiveness.

Congress should take pride in the expert agency it has created, authorized, and funded.

What can Congress and its agency justly claim they got right over the last two decades, and how can the right choices be made in the present?

First, when the Internet was in effect invented commercially in 1992-93, thanks to the combination of the CERN protocols and the Mosaic browser, the United States wisely decided to allow Internet service providers full use of the existing telephone network without paying the owners – the Bell companies – anything. That is, Americans could unhook their telephone lines from telephones and connect them to computers, dial an ISP's phone number, and get on the Internet. The telephone companies were not allowed to charge an interstate access fee – then about 3 cents or more a minute –

because the FCC would not permit that. They were not permitted to limit the ISP's access to telephone lines. They had to pay what were called reciprocal compensation. These decisions were intended to allow thousands of ISPs to get started. That's what happened. They were intended to keep the local access telephone monopoly from extending its monopoly power to the Internet. That worked. These decisions were intended to give Americans the fastest, cheapest, best access to the Internet of any country in the world. That happened.

Further, in the 1996 Act, Congress required that the FCC provide internet access in every library and classroom. Now libraries are the gateway to economic success in America for all those who lack broadband at home; classrooms are where digital learning is destined to give American youth the chance to get smarter faster and better and cheaper than in any other country of the world. To this end, plainly the FCC needs to re-imagine the e-rate, with much higher goals for bandwidth, usage, spending, and outcomes. But in its first era, the e-rate has been a wildly successful way to bring the advantages of digital learning to children and adults, poor and rich, private, public and parochial, everywhere in the country. No other country has a better or more egalitarian form of universal broadband than the United States.

The FCC and Congress wanted the Internet's entrepreneurs at least to have the opportunity to subsume all other media, if its technological prowess and business models could do that.[3] And that's what happened. The American government hoped that American firms would lead the whole world on to the new global platform. Aided also by the international telecommunications treaty of 1997, that's what those firms did. That leadership continues to this day. Because all communications platforms support not just economic activity but cultural formation, our leadership is integral to creating the opportunity for our values of freedom and liberty to have a chance to flourish everywhere in the world.

[3] See Reed E. Hundt, "The Internet as 'The Common Medium,'" 19 Media L & Pol'y 143 (2010).

And that's just what the Internet is doing now, especially if we are able to persuade governments and firms to craft a much-needed global compact to guarantee an open Internet across all borders.

Second, Congress and the FCC wanted digital cellular to replace analog wireless, and to give American firms the chance to supplant the industry leaders – then in Europe. To that end, with Congressional authority, the FCC gave the new digital American wireless industry the chance to become the common medium of conversation and communication, supplanting the role of the fixed line telephony businesses.[4] And that's what happened – so robustly that the two biggest wireline firms, SBC and Verizon, eventually transformed themselves into the biggest wireless firms in America. (These are the two most successful large-scale corporate transformations in business history). The means for opening the possibilities of digital cellular included spectrum auctions, spectrum caps that assured competition, number portability, wireline interconnection, pre-emption of state regulation, pole attachment regulation, and other specific FCC actions.

In the 1990s many of these regulatory steps were opposed by incumbents in the wire line industry. The wire line-wireless interconnection and termination regime, for instance, shared network effects with wireless firms when the latter had less than a fifth of the market size possessed by the wire line industry. The duopolists in analog cellular did not welcome all these steps either. Number portability and spectrum caps, for example, benefited new entrants like Sprint PCS and T-Mobile much more than the incumbents. Some states opposed the federal preemption (just as they oppose similar efforts to empower the Federal Energy Regulatory Commission). But the Congressional mandate to use rules, and also to take deregulatory steps, to promote innovation was conveyed to the FCC with sufficient legal authority to permit the FCC to craft in the 1990s the most robustly competitive digital cellular market

[4] See Reed E. Hundt, "Wireless: The Common Medium of Conversation," 20 Media L & Pol'y 95 (2011).

structure of any country in the world. As a result, American firms running and riding on wireless networks caught up to the rest of the world very rapidly, and now lead in many respects.

From 1992 to 2000, wireless subscriptions went from 11 million to 109 million. Wireless investment had amounted to $11 billion in 1992; it increased by nine times in the 90's. Wireless average monthly bills went from the high $60s to the low $40s per month. As Al Gore used to say, everything that was supposed to go up, went up; everything that was supposed to go down, went down.

What was not so clear in the 1990s became the huge story of the 00s: namely, that the wireless boom and the Internet boom would converge so that smart phones and tablets would provide untethered access to the Internet. But it's a mistake to think that Internet data mostly travels on cellular networks; it does not. Mostly, data is transferred on fiber, through access networks, over Wi-Fi, and to nomadic and handheld devices. Wi-Fi of course exists because Congress and the FCC also made the correct decision to allocate unlicensed spectrum. Auction a lot, and leave a lot unlicensed for innovation and experimentation that does not require a government permit: that's American spectrum policy and it is the envy of the world.

The key principles of the American legal regime in ICT in their modern form are three: competition among similar networks, efficient creation and distribution of public goods over those networks, and ample opportunity for innovation and experimentation.[5] Technological and market change are constants, but so also should be these principles. The law as it exists now permits the FCC to apply these principles openly, fairly, and effectively. Leadership at the agency and support from Congress, as well as appropriate deference in the appellate process, are all necessary. But surely everyone agrees, as current FCC chairman Tom Wheeler has admirably said, that networks are at the

[5] See Reed E. Hundt & Gregory L. Rosston, *Articulating a Modern Approach to FCC Competition Policy*, 66 Fed. Comm. L.J. 71 (2013), containing a discussion of how wire line network effects and scale economies were shared by rule with wireless networks.

core of the FCC's focus. No better explanation can be found than in the national broadband plan. Written under the leadership of my former chief of staff Blair Levin, the plan makes clear that the American goal is faster, better, cheaper Internet access that includes everyone and also provides a platform for efficient and creation of public goods.[6]

To these ends, the FCC always must address new patterns of fact and new technological possibilities. As the expert agency of Congress, acting on delegated authority, the FCC should constantly alert Congress to the pending issues and seek the sort of detailed guidance that this Committee has historically provided. The Chairman acting as CEO under the pertinent statute ought to re-organize the agency as seems fit to accomplish Congressionally mandated purposes, while always being transparent and mission-directed in effecting re-organizations.

As an example of success, we can look at the digital wireless market. There is much evidence that wireless network competition has encouraged rapid penetration, new investment in upgraded bandwidth, and falling prices per device and per unit of bandwidth. However, as the American wireless market approaches saturation, wireless firms naturally will test the willingness of government to allow consolidation. Public policy should focus instead, in my view, on motivating and enabling firms to innovate instead of merely to seek higher margins on existing products by way of reducing competition. At the same time, it is fairly clear that the FCC ought to have taken more effective action in the past to provide lower frequency spectrum to all competing firms, lower cost backhaul access, clearer spectrum aggregation rules, and more predictable rules for using re-purposed spectrum for wireless broadband. In all these respects, the current FCC is poised, I suspect, to act, and I am sure that like all FCC chairs, the current chair would like your guidance and support.

[6] See, Hundt & Levin, "The Politics of Abundance: How Technology Can Fix the Budget, Revive the American Dream, and Establish Obama's Legacy." (Odyssey e-book: 2012).

New challenges in existing and future markets always exist. For instance, the FCC should be less than delighted with the status of DSL in America. The unbundling regime dictated by the 1996 Act was not, I'm sorry to say, effectively applied in the 00s. I believe this is one reason why our country does not have more robust innovation in DSL. I speak as a board member of the leading DSL software and hardware firm ASSIA so I admit to a motivated perspective. But still, it would be useful, as the FCC debates the transition to all IP-networks, to consider whether that evolution could be coupled with greater expansion of DSL either by proprietors or by rivals that could use fiber-to-the-curb and copper-to-the-house as a platform for providing competitive fixed line broadband service. ASSIA estimates that about 75% of American homes can be reached by FTTC and VDSL ("vectored" is the "V") at a cost of about $400 per household. AT&T is a leader in this respect and reportedly can lower costs below that level. The throughput is said to be 50 to 100 Mbps. This topic alone might be worth this subcommittee's consideration.

The re-imagination of the e-rate is another welcome opportunity for the FCC to apply its time-honored policies to a changing situation. It can and should upgrade not just access networks to libraries and classrooms, but also to lift up the aspirations for digital learning that we ought to have for all our people. Unlike when the '96 Act was passed, we see now that libraries and schools need to provide Wi-Fi access in all parts of their buildings. All learners – young and old, in and out of school - need broadband to take advantage of rich media that instructs, trains, provides access to public services, and simply delights the mind. That broadband should be very high speed, catalyzing higher demand for commercial access in homes and offices. Libraries in particular need to fund architectures that focus on BYOD – users bringing their own devices – while assuring security and protection from inappropriate material for users. Libraries and school districts need better tools for buying the piece parts of new networks; they would benefit from streamlined processes at the FCC and at the administrative entity

managing the e-rate. My views here are shaped by my role as attorney to the Urban Libraries Council, but I suspect that most members of this Committee would like to see these modernizing steps taken.

Congress does not need to pass a new law to have its expert agency address these, or any of the other important issues that need addressing if the United States is to maintain its leadership in creating the world-best legal culture for ICT. If the appellate courts err, Congress may wish to step in. If the FCC blunders, Congress also has the power and the duty to step in to correct its expert agency. But history shows that at least as to this sector, government's mistakes are outweighed by its successes and I am confident that this committee and the very able new FCC chair, who has assembled a very savvy team, can continue that history into the future.