

The Future of Telecommunications, The Future of Telecommunications Regulation

by
ELI M. NOAM*

Revisiting the Telecommunications Act of 1996 (the “’96 Act”) several years later, one meets dear old friends. There’s Interconnection, for example. And over there, good old RBOC long-distance service, looking as depressed as ever. And here is good old State Jurisdiction. And there, High Cost Areas, with its tax shelter accountants. Among such trusty companions, does one dare to speak of the future as anything but a continuation of the past?

Let us instead look ahead, to telecommunications ten years hence, and to the regulatory environment of 2020. The technology will not be radically different, just cheaper, smaller, faster, and spread throughout society. But even these near-term trends, exponential at present, add up to much change. For example, if one believes in the growth scenarios of e-commerce companies the way Wall Street does, we will have in 2020 one-half of the population employed as web masters, and the other half driving UPS delivery trucks.

The decade of the 1990’s was dominated by the revolution in processing power, based on the fundamental VLSI technology advances of the 1980’s. For awhile, transmission could not keep up with processing, because it was much more expensive to widen the channels than to add more powerful chips, and therefore bottlenecks emerged. But in the next decade, transmission will be the driver instead of the brake.

And what will be the impact of these trends? The most obvious one is a drop in prices, as transmission becomes a commodity. For example, MCI WorldCom’s winning bid for the Federal Government’s FTS 2001 included projected per-minute pricing of less than 1 cent per minute. Similarly, for international transmission, new projects will raise capacity to unheard levels. While trans-Atlantic

* Professor of Finance and Economics; Director, Columbia Institute for Tele-Information, Graduate School of Business, Columbia University. Presented at the Hastings Law Journal Symposium, San Francisco, California, March 6, 1999.

capacity was 5.1 Gbps in '94 and 65 Gbps in '99, it will be 865 Gbps in 2003—almost a quadrupling every two years. As that happens, international calls become priced at a flat rate, near zero. On an architectural level, networks become engineered for data, not voice. Bandwidth becomes a substitute for switches. And with flat pricing, monthly phone bills will probably become unnecessary.

But this is as far as the conventional providers of hype will take you: to a world with abundant information, in which all of mankind is linked up and well informed, in which information conquers illness, ignorance, and poverty, and in which democracy thrives. How wonderful. And how naive. It's a bit like techies rhapsodizing a hundred years ago over the automobile: There will be no smelly horses anymore! And everyone will take a leisurely fun drive to work in the morning! And the sky will be blue!

The problem is, the Internet is part technology (packet switched networks and applications) and part inkblot test, into which everyone projects her or his fantasies and nightmares. Some find pornography. Others find the New Man, free at last, with no hierarchy in the way. Others look at government and find it obsolete. Take the regulation of telecommunications: In this telecom environment of plenty, is there any use for telecom regulation? The knee jerk response is, NO. Thank you, Mr. Regulator, it's been a nice long century together. But now, we've got the Internet!

Part of this is wishful thinking—a preference for a return to the Garden of Eden before the apple and the Macintosh. The idea being, when we return to the state of plenty, regulation will disappear. The notion of the withering away of the State had been held by Marxists and utopian socialists. Today it's become the worldview of Wall Street insiders and Silicon Valley billionaires with imperfect grasps on history.

Of course, part of the *traditional* regulatory agenda becomes unnecessary. Price regulation. Profit regulation. Quality regulation. Protectionist rules on foreign ownership. Even interconnection. But that does not mean absence of regulation, and this is not just because some bureaucrats cannot let go. Regulation exists in response to interest groups. Whether they are incumbents, entrants, consumers, rural residents, or large users, these interest groups will never go away. And others will emerge.

If anything, the easy communication of the Internet will make it easier for interest groups to organize themselves. Just remember when the issue of Internet access charges came up: the FCC, Congress, and the White House were inundated by a campaign of millions of e-mail messages, and they beat a hasty retreat. So what is it that all of these stakeholder groups will want? At least 10 things:

1. *Redistribution.* In a democratic system, a majority always

wants something from the minority. Many people believe that somehow the efficiency of competition will shrink the subsidy slice of the pie to zero. But that assumes that the pie does not grow.

2. *E-commerce and consumer protection.* In the past, the Internet confronted little resistance in the political sphere. It faced public fascination—and rightfully so. Eyebrows were raised over porn and privacy, both politically correct targets of complaints. But, this will inevitably change. As the Internet moves from a nerd preserve to shopping mall and mass medium, it is unrealistic to expect that it will be treated differently than the rest of society's transactions. Which means that it is unrealistic to expect that it will be left alone.

Inevitably, there will be problems of fraud, misrepresentation, and theft; therefore, there will be pressures for consumer-protective regulation. Many people believe that one cannot regulate the Internet, even if one wanted to. After all, don't high school kids run electronic circles around flat-footed government rules? Sure. But that only proves that it is difficult to go after the electronic part of a transaction. But that is not the end of the story. If one cannot reach the bits, one can go after the physical parts. If one cannot block mobile elements, one can try to reach the static ones. Networks. People. Institutions. Assets. Land. Customers. This might not be elegant, but neither is the tax code. There are plenty of ways to do so, many of them involving the carriers and service providers, which puts them into the laps of telecom regulation.

3. *The problem of trade wars.* Zero-cost global transmission leads to a realignment of commercial transactions. And here, U.S. firms will dominate. They will be at the leading edge technologically, with risk capital at their disposal, with the advantage of early entry and a large home market. Once one establishes a successful model for the U.S. market, and once transmission price is near zero, there is no reason to stop at the border.

But this success will lead to backlash. Big losers are always good in at least one thing: organizing themselves. Inevitably, they will use the domestic and international regulatory apparatus to slow things down. (One can see it already: in the trans-Atlantic fights over privacy, in the "national culture" quotas, in the fights over domain name registration, and in the fights over electronic signatures and authentication.) But who are we to complain? Right now, the Clinton administration is going around the world preaching Internet free trade zones.

But imagine how the tune will be different when we face a serious influx of Mexican tele-doctors. Monaco tele-gambling. Bahamian tax dodges. Thai child tele-pornography. Nigerian securities deals. There is no way the U.S. would let this happen without protective regulation. And here, too, telecom providers and

ISP's will be forced to patrol their systems.

4. *Monopoly power.* Many people believe that issues of market power do not apply to the Internet, because it is so wide open that any dog can start its own business. We are told that the bit economy plays by different economic rules than the atom economy, that silicon-based transactions are different from those based on carbon, and similar nonsense.

It is unclear why packet switching would make Adam Smith obsolete. We might indeed observe that computer communication and market power have been kissing cousins for a long time: AT&T. IBM. Microsoft. Intel. Each of them deserves a chapter in any textbook on antitrust. And why should it stop here? Yahoo? AOL? Amazon.com? Are they the next chapters? Presumably, these companies are trading at such high levels because of investor expectations of abnormally high profits, not because of a competitive return. The economic logic is relatively simple. Development costs are high, marginal costs are low. So there are large economies of scale. Brands are important. First entrants have advantages. There are network externalities. The Internet may still have the image of small is beautiful, but the reality is changing fast.

Now, some might object and point out how easy it is to set up a web page. True, but that's for a narrowband world, and even there less and less so. In a broadband Internet world, websites will be multimedia, with video and with lots of bells and whistles. User expectations will grow. Development costs will zoom, and entry barriers will become much higher, just as they are in movies, newspapers, and major software. And when that happens, some Internet submarkets will become heavily concentrated. Inevitably, calls for antitrust, breakups, and fully-separated subsidiaries will emerge.

Other issues that will emerge on the regulatory agenda:

5. *Privacy protection.*

6. *Intellectual property right protection.*

7. *Education and training.*

8. *Taxation and incentives to maintain innovation.*

9. *Content standards.* Congress keeps trying. Right now, the pressure is for "self-regulation" that is supposedly voluntary.

10. *Legacy rules.* Let us not forget that we do not start from scratch. In the process of implementing the '96 Act and its policies (the two were not always the same), the FCC and the States have added in recent years a vast amount of regulation, usually in the name of competition. We regulate to deregulate. And the clarification and harmonization of these rules, and their upgrade to new circumstances will add much more still. We are creating a system which, in the old days, Lenin would have chosen, if only he had had computers.

The implication is that to reduce legacy regulation one cannot expect that technology and abundance will do it. One has to go and change the equilibrium. But one should not be unrealistic regarding what can be achieved. A libertarian paradise will not happen, because while it is easy to embrace such a model in the abstract, everyone has a little exception in mind, a little help that they need. (See, for example, how the ISP industry has started to seek the regulation of the cable TV industry.)

One way to change the equilibrium is simply to abolish the FCC. Which is what, for example, the Heritage Foundation proposes. But that would leave the field to the state commissions—which Heritage presumably likes even less—it means, practically speaking, abolishing the state commissioners, too, at least for telecommunications. Also, even if the U.S. does away with its regulation, other countries will not. So we may end up substituting regulation from Washington and Sacramento for regulation from Brussels. And in any event, this solution may feel good, but it is not likely to solve the problem. The interest groups in question will find some forum that will take up their case. Remember Judge Greene: was it any better, as a process, to have an elderly judge with two law clerks slowly and non-expertly run the American telecom industry structure?

The alternative is to focus on substantive policy, not on institutional structure. If one wants to deal with legacy regulation, one should do so—affirmatively and proactively. This would mean that a commission and a legislature would look ahead and set goals for getting out of certain regulations with a clear time frame. It means formulating an endgame scenario. In five years, we could be rid of much of the traditional baggage.

The problem here is the potential for dilatory action of incumbents in the meantime. But that could be dealt with by setting a schedule, with steps and dates along the way, as well as penalties (including a second divestiture) and rewards.

This is an ambitious agenda, but if one does not set one's sights high, one ends up the slow ship in the convoy to the Information Age. This does not mean the disappearance of state or federal regulation in the communications sector. It means that these institutions need to become expert in new areas. Privacy. Consumer protection in the cyber field. Broadband and media. Dealing with new types of market power. To do so the regulatory bodies need to transform themselves from early twentieth century utility-style commissions to early twenty-first century communications-protection agencies. Look forward. Change the culture. Change the expert mix. Accelerate the decision cycle.

What, then, is the conclusion? Like it or not, regulatory bodies for communications will continue to exist as vessels through which

society establishes some control mechanisms on the revolutionary electronic environment. To expect otherwise feels good, but good feelings are not what Washington is about.