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Why Stovepipe Regulation No Longer Works: An Essay on the Need for a New Market-Oriented Communications Policy

Randolph J. May*

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I. INTRODUCTION

As we approach the ten year anniversary of the enactment of the Telecommunications Act of 1996 (“1996 Act”),¹ a fairly broad consensus has emerged that the existing “stovepipe” regulatory framework contained in the statute is woefully outdated and an impediment to the development of sound communications policy.² So, Congress is beginning to consider

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1. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections of 47 U.S.C.).

2. See, e.g., James B. Speta, *Deregulating Telecommunications in Internet Time*, 61 WASH. & LEE L. REV. 1063 (2004); Richard S. Whitt, *A Horizontal Leap Forward: Formulating a New Communications Public Policy Framework Based on the Network*

whether new communications legislation is needed to supplant the 1996 Act. In light of the profound technological and marketplace changes that have occurred in the last decade, especially those attributable to the accelerating proliferation of digital technologies and services, any new legislative reform effort should include an examination of the division between federal and state regulatory authority, the amalgam of subsidies known as the Universal Service system, and management of the spectrum.

But there is nothing more important to the project to conceive a new act than the replacement of the existing statute's stovepipe regulatory model with a new framework that reflects today's digital age competitive marketplace realities. Indeed, this effort has to be at the heart of any serious effort to write what one might call a new Digital Age Communications Act.

The purpose of this brief essay is to show why a replacement regulatory regime is needed. Its purpose is not to prescribe what the new model should look like, although I will conclude by suggesting that some form of market-oriented model should be adopted.

II. THE EXISTING REGULATORY FRAMEWORK: VERTICAL STOVEPIPES BASED ON TECHNO-FUNCTIONAL DISTINCTIONS

Stovepipe regulation refers to the fact that (1) the act contains definitions for variously denominated communications services, such as "telecommunications," "information services," "cable service," "mobile service," "broadcasting," and "open video system," and (2) different regulations apply depending upon a service offering's classification. Hence, the stovepipes, or vertical "silos" or "smokestacks" as some prefer, refer to the distinct sets of regulations that attach to a service offering once it is classified under one definition or the other.

The existing stovepipe regulatory framework no longer makes sense. With a bit of poetic license, you might say the fires of the digital revolution have destroyed the stovepipes. In any event, the point is that the old stovepipe paradigm, with its origins rooted in the original Communications Act enacted in 1934 ("1934 Act"), is now obsolete.

The current regime is obsolete because the statutory definitions found in the 1996 Act that are the foundation of the existing regulatory model rest upon what I have called "techno-functional constructs."³ These techno-functional constructs simply no longer work well in a digital world.⁴ These

Layers Model, 56 FED. COMM. L.J. 587 (2004); Christopher S. Yoo, *New Models of Regulation and Interagency Governance*, 2003 MICH. ST. L. REV. 701.

3. Randolph J. May, *Calling for a Regulatory Overhaul, Bit by Bit*, CNET NEWS, Oct. 19, 2004, <http://news.com/Calling+for+a+regulatory+overhaul%2C+bit+by+bit/> 2010-1028_3-5415778.html.

4. Christopher Yoo has put it this way: "Gone are the days in which each

particular techno-functional constructs are necessarily implicated in many of today's most hotly contested regulatory battles, for example, those involving the statutory definitions of "telecommunications" and "information service."

Telecommunications is defined as "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received."⁵ An information service is "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications . . . but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service."⁶ Now, these definitions are nothing if not grounded firmly in techno-functional constructions: transmitting information among points "specified by the user,"⁷ "without a change in form or content," "generating," "storing," "processing," "retrieving," "transforming" information, and so on.⁸

Think for a moment about the meaning these words convey. What does it mean to say "transforming" information, or transmitting information between two points "without change in the form or content" of the information? For example, I send you an instant message, or "IM," typing a letter in one font on my keyboard. As a result of your or my terminal settings or Internet Service Provider's protocols, the letter appears on your screen in another font, or without the smiley face I attached to it. Has there been a change in form or content of the information sent or received? Has there been a transformation of the information?

communications technology could be regarded as occupying a separate regulatory silo. The impending shift of all networks to packet-switched technologies promises to complete the collapse of any remaining attempt to base regulation on differences in the means of transmission." Yoo, *supra* note 2, at 714 (citation omitted).

5. 47 U.S.C. § 153(43) (2000).

6. § 153(20).

7. § 153(43).

8. § 153(20). The definitions found in the 1996 Act of "telecommunications" and "information service" essentially track the "basic" and "enhanced" services definitions developed in the Federal Communication Commission's ("FCC") landmark *Computer II* proceeding to distinguish between regulated transmission services and unregulated online services employing computer processing. Second Computer Inquiry, *Final Decision*, 77 F.C.C.2d 384 (1980) [hereinafter *Computer II*]. They have been interpreted by the FCC to extend essentially to the same functions so that all of the services the FCC previously considered to be "enhanced services" are "information services." See Implementation of Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934 as amended, *First Report and Order and Further Notice of Proposed Rule Making*, 11 F.C.C.R. 21905, paras. 102-04 (1996).

This surely is the stuff of digital age philosophers. That is why, in early 2004 in connection with thinking about the then just-over-the-horizon but sure-to-come fights regarding the new Internet telephony, or Voice over Internet Protocol (“VoIP”) services, I referred to the distinctions to be suggested and argued for purposes of regulatory classification as metaphysical. Certainly, the statute’s definitions are in accord with Webster’s definition of metaphysics: (1) “of or relating to what is conceived as transcendent, supersensible, or transcendental;” (2) “highly abstract or abstruse;” (3) “expressions of attitudes about which rational argument is impossible.”⁹ In fact, so convinced was I of the importance of hastening an understanding that the current techno-functional regulatory regime rested on collapsing ground that I could not resist dashing off a brief commentary entitled, only half facetiously, *The Metaphysics of VoIP*.¹⁰

It is not only the telecommunications and information service stovepipes which rest on techno-functional constructs. Consider the statute’s “mobile services” definition, which includes terms such as “a regularly interacting group of base, mobile, portable, and associated control and relay stations . . .” and so on.¹¹ The definition of “cable service” turns on whether the transmissions are “one-way,” and either “video programming” or “other programming service[s],” and whether any “subscriber interaction” is required for the selection of such video programming.¹² Whether a transmission is “broadcasting” or not depends on whether radio communications, which itself turns on whether the transmission by radio is of writings, signs, signals, pictures, and sounds of all kinds, “intended to be received by the public,” are disseminated, whether “directly or by the intermediary of relay stations.”¹³

However serviceable these definitional constructs may have been at an earlier time, when analog systems were by far the prevalent communications transmission mode, they no longer are serviceable in a

9. WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1420 (1993).

10. Randolph J. May, *The Metaphysics of VoIP*, Jan. 5, 2004, CNET NEWS, http://news.com.com/The+metaphysics+of+VoIP/2010-7352_3-5134896.html. For anyone interested in immersing him or herself more deeply in communications law metaphysics, I suggest reading some of the orders in the FCC’s almost decade-long effort to settle on a classification of protocol processing and protocol conversion services. To begin such a metaphysical feast, sample Federal-State Joint Board on Universal Service, *Report to Congress*, 13 F.C.C.R. 11501, paras. 49–52 (1998) [hereinafter *Federal-State Joint Board*] (dealing with the struggle to classify services under the 1996 Act’s definitions and the FCC’s *Computer II* regime).

11. 47 U.S.C. § 153(27).

12. 47 U.S.C. § 522(6) (2000).

13. § 153(6).

world in which digital technology is rapidly displacing analog. The old saying “a bit is a bit is a bit” really does have important implications from a regulatory policy perspective. It is economically, if not technically, infeasible to distinguish among voice, data, and video bits that travel along in the same communications stream. In other words, “[o]nce all communications are reduced to bits and bytes, all media will constitute substitutes for one another, and attempts to segment markets based on the means of conveyance will become increasingly problematic.”¹⁴

I do not mean to deny the regulators’ ingenuity or their good intentions in creating these definitional constructs, or in striving to render them serviceable for as long as possible. Take the FCC’s landmark *Computer II* proceeding from the early 1980s.¹⁵ It was then, when data processing capabilities and communications services first were becoming intertwined in nascent online applications such as e-mail and data retrieval, that the FCC created the regulatory distinction between basic and enhanced service. And it was this distinction that was carried over into the 1996 Act in the form of the current “telecommunications” and “information services” definitions.¹⁶ In essence, a basic service was pure transmission capacity while enhanced services were applications with computer processing capabilities dependent upon telecommunications to be carried from one place to another.¹⁷

The FCC’s purpose in creating this new distinction was salutary: if the new online services had been classified as just another form of basic communications, the services would have been subject to public utility-style regulation under the common carrier mandates of Title II of the 1934 Act.¹⁸ The FCC thought, correctly, that online services could and would develop on a competitive basis, and therefore, should be free from the economic regulation to which common carriers were subject.¹⁹

Acting under the constraints of the 1934 Act, the FCC’s *Computer II* decision was sound policy. Online services, from the early CompuServe and Prodigy services, to the upstart America Online, and on through the birth and spread of the ubiquitous World Wide Web, did indeed flourish on

14. Yoo, *supra* note 2, at 714.

15. *Computer II*, *supra* note 8.

16. *See id.* and accompanying text.

17. *Id.* paras. 95–97.

18. *Id.* para. 114; *see also* IP-Enabled Services, *Notice of Proposed Rule Making*, 19 F.C.C.R. 4863, para. 25 (2004) [hereinafter *IP-Enabled Services*] (“Providers of ‘basic’ services were subjected to common carrier regulation under Title II of the Act. . . . [T]he Commission declined to treat providers of enhanced services as ‘common carriers’ subject to regulation under Title II of the Act.”) (citations omitted).

19. *See Computer II*, *supra* note 8, para. 101; Speta, *supra* note 2, at 1084.

an unregulated basis. Without any real controversy, *Computer II*'s "basic" and "enhanced service" definitions were embodied in essentially the same form in the 1996 Act as "telecommunications" and "information services."

III. THE PROBLEM: DIGITAL TECHNOLOGY AND ABUNDANT BANDWIDTH UNDERMINE THE STOVEPIPES

What once may have been wise policy, and manageably serviceable, in a predominantly narrowband communications environment is much more problematic today as broadband networks become more ubiquitous. Recall that in the narrowband world, at least as a matter of shorthand, we could, commonly if not universally, equate voice with telecommunications, data with information services, and video with cable service. For a long time, limited bandwidth in the narrowband world masked the inherently problematic nature of the separate techno-functional boundaries upon which both the 1934 and 1996 acts' regulatory boundaries rested.

The abundant bandwidth of broadband networks, which enables fast-growing services such as Internet access and VoIP Internet telephony to be technically and economically viable, tugs mightily at the regulatory mask. Is high speed cable modem Internet access service "cable," "telecommunications," or an "information service"? The FCC deemed cable modem service an unregulated information service under the 1996 Act's definitional scheme. In June 2005, a divided Supreme Court handed down a decision in *National Cable & Telecommunications Association v. Brand X Internet Services*, which reversed an appeals court decision holding that cable modem service is a combination of "telecommunications" and "information service" potentially subject to public utility-type regulation.²⁰ What about the high speed Digital Subscriber Line ("DSL") Internet access services offered by the traditional telephone companies? Until September 2005, when the FCC finally reclassified it as an unregulated information service not long after the *Brand X* decision was handed down,²¹ DSL was classified a regulated telecommunications service.

Next, consider the VoIP Internet telephony services. The FCC has

20. Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, *Declaratory Ruling and Notice of Proposed Rule Making*, 17 F.C.C.R. 4798 (2002), *vacated in part and remanded sub nom. Brand X Internet Servs. v. FCC*, 345 F. 3d 1120 (9th Cir. 2003), *rev'd and remanded*, *National Cable & Telecomm. Ass'n. v. Brand X Internet Servs.*, Nos. 04-277 and 04-281, 2005 U.S. LEXIS 5018 (June 27, 2005), 125 S.Ct. 2688 (2005) [hereinafter *Brand X*].

21. See *Appropriate Framework for Broadband Access to Internet Over Wireline Facilities, Report and Order and Notice of Proposed Rulemaking*, 20 F.C.C.R. (forthcoming 2006), 236 Comm. Reg. (P & F) 944 (2005).

ruled that pulver.com's "Free World Dialup" ("FWD") service, which is a "computer-to-computer" voice application that does not use ordinary telephone numbers or originate or terminate calls on the public switched network, is an information service.²² Following the 1996 Act's formulation, the FCC concluded that FWD "is an information service because FWD offers 'a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.'"²³ The FCC added that the fact that FWD happens "to, among other things, enable members to talk over the Internet,"²⁴ rather than, for example, play video games, does not affect its characterization as an information service.

How does the FCC classify the VoIP offering by Vonage, a company that bills itself as "the broadband telephone company"?²⁵ Vonage's Digital Voice customers, who must have access to a broadband connection to subscribe, make calls that use ordinary telephone numbers and may either originate or terminate on the public network. The FCC recently acted to preempt state economic regulation of Vonage's Digital Voice and other VoIP services with similar characteristics, such as those offered by cable companies, by ruling that they are interstate services.²⁶ Pointing to its already initiated rulemaking regarding VoIP and other IP-enabled services, the FCC refrained from addressing the classification of Vonage's Digital Voice and similar services for federal regulatory purposes. But note that the FCC did point out that Vonage's service "resembles the telephone service provided by the circuit-switched network."²⁷

In its IP-Enabled Services rulemaking notice, the FCC explains how the greater bandwidth of broadband networks encourages the introduction of services "which may integrate voice, video, and data capabilities while maintaining high quality of service."²⁸ Then, in a truism, the FCC adds: "[I]t may become increasingly difficult, if not impossible, to distinguish 'voice' service from 'data' service, and users may increasingly rely on

22. Petition for Declaratory Ruling that Pulver.com's Free World Dialup is Neither Telecomm. Nor a Telecomm. Serv., *Memorandum Opinion and Order*, 19 F.C.C.R. 3307 (2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-27A1.pdf [hereinafter *Pulver.com Petition*].

23. *Id.* para. 11 (citing 47 U.S.C. § 153(20)).

24. *Id.* para. 19.

25. Vonage Home Page, <http://www.vonage.com>.

26. Vonage Holdings Corp. Petition for Declaratory Ruling Concerning an Order of the Minn. Pub. Utils. Comm'n, *Memorandum Opinion and Order*, 10 F.C.C.R. 22,404 (2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-267A1.pdf [hereinafter *Vonage Petition*].

27. *Id.* para. 4.

28. *IP-Enabled Services*, *supra* note 18, para. 16.

integrated services using broadband facilities delivered using IP rather than the traditional PSTN (Public Switched Telephone Network).²⁹ At the end of 2004, there already were almost thirty-eight million high-speed broadband Internet connections in service, an increase of 34% during just that year.³⁰ Analysts project that as soon as 2009 there will be twenty-seven million VoIP lines in service.³¹

IV. THE CONSEQUENCES: COMPARABLE SERVICES ARE REGULATED DIFFERENTLY UNDER THE STOVEPIPE REGIME

But does it matter that, according to the FCC's own characterization, Vonage and other providers of similar Internet telephony services that "enable [users] to talk over the Internet"³² and "resemble"³³ what we used to call POTS, or "plain old telephone service," may be regulated very differently? Does it matter that broadband Internet access services provided by cable television and telephone companies (and perhaps soon to be provided by satellite and power companies) may be regulated differently, even while they already compete vigorously with each other?

Of course it matters. Providers of telecommunications services are generally subject to price and entry regulation as common carriers; information services providers are not.³⁴ Telecommunications services may be required to be unbundled so that competitors may access the unbundled network elements at regulated rates.³⁵ Information services are not subject to mandatory access requirements. Telecommunications services are subject to certain social obligations, such as universal service contributions and tax payments, from which non-telecommunications services presently are exempt.³⁶ Telecommunications services also are subject to certain health and safety mandates. For example, telecommunications services must provide enhanced 911 ("E911") service, and are subject to disability and wiretap capability requirements that are not generally applicable to non-telecommunications services.³⁷ Cable operators are subject to certain

29. *Id.*

30. See Press Release, FCC, Federal Communications Commission Releases Data on High-Speed Internet Access Services (July 7, 2005) (explaining that the number of high-speed lines in service at the end of 2004 reported to be 37.9 million).

31. net2phone, 2005 Annual Report 3 (2005), available at <http://web.net2phone.com/about/investor/2005AR.pdf>.

32. See *Pulver.com Petition*, *supra* note 22, para. 19 and accompanying text.

33. See *Vonage Petition*, *supra* note 26, para. 4.

34. See *IP-Enabled Services*, *supra* note 18, paras. 24–25.

35. *Id.* para. 26.

36. See generally *Federal-State Joint Board*, *supra* note 10; see also *IP-Enabled Services*, *supra* note 18, paras. 63–66.

37. See *IP-Enabled Services*, *supra* note 18, paras. 26, 45–60.

regulatory obligations that do not apply to non-cable services, such as obtaining a local franchise and paying local franchise fees.³⁸ States and localities impose different rights-of-way obligations and fees, depending on how a service is classified.³⁹

Thus, services that are comparable, at least from the consumers' perspective, and that compete head-to-head against each other in the marketplace, are subject to different regulatory requirements based solely on how the service offerings are classified. For example, despite the fact that cable operators have had close to twice as many broadband Internet access subscribers as do the telephone companies,⁴⁰ until very recently the broadband offerings of cable and telephone companies were subject to very different regulatory regimes.⁴¹ In short, the existing service classifications based upon techno-functional characteristics have little or nothing to do with how consumers perceive the services or the marketplace position of the service providers.

V. THE SOLUTION: A NEW MARKET-ORIENTED MARKET PARADIGM

It should be obvious that a new regulatory framework is needed for communications policy. My purpose here has been to provide the background and context for understanding why a new paradigm is needed rather than to offer any detailed prescription for such regulatory framework. Nevertheless, in concluding, some general thoughts about the direction such change should take may not be out of order.

First, what should be avoided is a new framework that just substitutes one set of techno-functional constructs for another. For example, MCI's Senior Director for Global Policy and Planning, Richard Whitt, has proposed that policymakers "adopt a comprehensive legal and regulatory framework founded on the Internet's horizontal network layers."⁴² He identifies four layers—content, applications, logical, and physical—that he claims comprise the Internet's architecture.⁴³ He urges that public policy be formulated to respect the integrity of the distinct layers for purposes of determining whether regulation is needed of providers of services within

38. See 47 U.S.C. §§ 541, 542 (2000) (authorizing local governments to award franchises for the provision of cable service and to require payment of franchise fees).

39. See National Telecommunications and Information Administration, 50-State Survey of Rights-of-Way Statutes, <http://www.ntia.doc.gov/ntiahome/staterow/rowtableexcel.htm>.

40. See Press Release, FCC, *supra* note 30.

41. See *supra* notes 20–21 and accompanying text.

42. See Whitt, *supra* note 2, at 591.

43. *Id.* at 592.

the layers.⁴⁴

Whitt then suggests that the two lower layers, the logical and physical, should be targeted for discrete regulation based on his claim that significant market power resides in these layers.⁴⁵ The physical layer roughly corresponds to the network facilities of the cable, telephone, satellite, wireless, and other companies that transport information. The logical layer roughly corresponds to the software codes and protocols, such as Transmission Control Protocol/Internet Protocol (“TCP/IP”), that interface with the physical layer below and the applications and content layers above. Whitt calls this proposed layers model “a horizontal leap forward.”⁴⁶

But turning stovepipes on their side is not necessarily a leap forward; rather, it is an invitation to stultify the continued evolution of our physical networks and the service applications that may be integrated into such networks. It is difficult to predict, especially in a technologically dynamic environment, how network platforms, or the Internet, really an interconnected network of network platforms, will evolve on a technical or functional basis. Today’s seemingly discrete Internet layers may be obsolete, or at least meaningfully altered, tomorrow.

What is needed is a new market-oriented model that breaks with the past, not a replacement regime based on just another set of techno-functional constructs.⁴⁷ A market-oriented model that employs antitrust law or antitrust-like principles would focus on the structure of the marketplace: whether individual service providers possess market power that should be constrained by some form of regulation, and whether such constraints generally should be applied in the form of *ex ante* proscriptions or more narrowly-tailored *ex post* remedial orders. Such a market-oriented model would put the focus on the consumer—and consumer welfare—where it belongs, not on distinctions grounded in particular technology platforms or arcane functional characteristics that have little to do with existing marketplace realities. It would greatly reduce the opportunities for regulatory gaming that are inherent in the current regime.

Thus, under this approach, comparable services (“substitutable” services in antitrust parlance) from the consumers’ perspective would not

44. *Id.*

45. *Id.*

46. *Id.* at 587.

47. What is also needed is a slimmer, more efficient, and more accountable regulatory agency with jurisdiction over communications, in other words, a transformed and reformed FCC. But that is another story unto itself. See Randolph J. May, *The FCC’s Tumultuous Year 2003: An Essay on an Opportunity for Institutional Agency Reform*, 56 ADMIN. L. REV. 1307 (2004).

be subject to differential regulatory treatment just because they are delivered over different technology platforms or employ different functional bells and whistles. By the same token, comparable services might be subjected to differential regulatory treatment if there is a market-oriented reason to do so in order to enhance consumer welfare.

After all, any regulatory regime ultimately should be judged based on whether or not it advances or impairs marketplace competition and promotes consumer welfare, not on whether it advances or impairs the prospects of particular competitors, or protects the jobs of current regulators.

