

DRAFT

One Rule for Telecommunications Regulation

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This essay describes a “one rule” or “flat” model of telecommunications regulation. Since the 1990s writers have advocated layered models of telecommunications policy, inspired by the great success of such models in networks like the telephone and internet.² In general a layered model asks regulators to discard the Telecommunications Act’s model of vertically-integrated services (cable, telephone, etc.) in exchange for a regulatory model that stresses the distinctions between generic horizontal functions such as transport, addressing, and voice or data service. Over the last several years, however, critics have rightly criticized the complexity of some proposed horizontal models, pointing out that computer networks and telecommunications regulation do not present exactly the same problems. The critics have challenged backers of layered models to prove that a horizontal model provides more than aesthetic value.

¹ Tim Wu, University of Virginia School of Law, visiting professor University of Chicago Law School. I have benefited from discussions of these ideas with Scott Marcus, Lawrence Lessig, Phil Weiser, Kevin Werbach, and Stephen Williams. Versions of this idea were discussed at the 2005 Silicon Flatirons conference, and at the I thank Wayne Hsiung for research assistance.

² See Tim Wu, *Application-Centered Internet Analysis*, (1999); Kevin Werbach, *A Layered Model for Internet Policy*, 1 J. TELECOMM. & HIGH TECH. L. 37 (2002); Douglas Sicker, *Further Defining a Layered Model for Telecommunications Policy*, Telecommunications Policy Research Conference (“TPRC”) Paper 10 (2002); Lawrence Solum & Minn Chung, *The Layers Principle: Internet Architecture and the Law*, 79 NOTRE DAME L. REV. 815 (2004); c.f. Mark Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001); Richard S. Whitt, *A Horizontal Leap Forward, Formulating A New Public Policy Framework Based On The Network Layers Model*, 56 FED. COMM. L.J. 587 (2004); Doug Sicker & Joshua Mindel, *Comparing the Layered Model for Telecommunications Policy with the EU’s Newly Adopted Framework*, J. TELECOM. & HIGH-TECH L., 2003; Robert Frieden, *Adjusting the Horizontal and Vertical in Telecommunications Regulation: A Comparison of the Traditional and a New Layered Approach*, 55 FED. COMM. L.J. 207. An important antecedent was David Isenberg, *The Rise of the Stupid Network*, at <http://www.rageboy.com/stupidnet.html>.

The point of this paper is to ask how much of telecommunications regulation might be accomplished without multiple classifications, technologically specific schema or the full complexity of the antitrust law. It shows how simple a layered model for telecommunications could be: that it might be a “one rule” system that still might capture most of the benefits with very little complexity.

While simplicity isn’t everything, the interest in simple and clear rules may be neglected in the field of telecommunications law. This is not just a matter of aesthetics. Confusing and obsolete classifications can translate into real costs including endless litigation, specialized attorneys, and delays in the implementation of desirable reforms, both regulatory and deregulatory. While the simplicity of the flat model is extreme, it is worth asking how much is really lost.

The one-rule model has several features. As the name suggests, it relies on a single, ex-ante, anti-discrimination rule. To make the rule work, it divides all telecommunications services into two categories: (1) application, and (2) transport. The purpose, in addition to simplicity, is to try to put a particular principle front and center: that the hardest problems of telecommunications are repeat problems of public infrastructure and protection of market entry that might usefully be handled by ex ante rules. In this sense the model relies on decades of telecommunications experience. For one thing, something like the model described here is often *de facto* used by the FCC in its broadband regulation.³ For another, the division between infrastructure and applications central to the model makes frequent appearance in the history of telecommunications regulation.⁴

Two caveats. While the point of the model is to accomplish as much as possible with as few rules as possible, it obviously cannot capture everything. Among other things, indecency regulation, progressive redistribution and

³ On network neutrality rules for broadband, see Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. of Telecommunications & High Tech. Law 141 (2003); see also

⁴ It is, like some of the layered models, based on two of U.S. telecommunications law’s greatest successes: the Computer Inquiries, and the Part 68 Rules for network attachments. Its centerpiece is a rule of antidiscrimination and a two layer transport / applications distinction that is an import of the enhanced / basic service dichotomy from Computer Inquiries.

technical standard setting are not functions of the model. Second, in the interests in brevity I do not work out every possible objection of detail of the models operation. Instead the main purpose is to challenge writers in the field of telecommunications to reimagine what a minimal yet nonetheless durable scheme of regulation might look like.

I. Layered Models and their Critics

Since about 1999 legal academics and telecommunications professionals have urged courts and regulators to consider the layered nature of communications networks in their decisions. As Timothy Denton puts it “How regulators act invariably depends on how they see the world. The most important thing about a layered model is that it can rearrange the ‘mental furniture’ with which regulators act.”⁵ Kevin Werbach, author of one of the first major layering proposals, writes that a layered model “is most useful in framing questions, helping policymakers identify hidden tension points and giving them a better vocabulary to craft solutions.”⁶

The layered model is a reaction to the classic and extant model of American telecommunications regulation, which regulates on the basis of service type. The current law, as most in the field know, has separate regimes for voice, cable television, broadcasting, and so on. That system, sometimes called a “vertical” or “silo” structure, reflects the fact lawmakers simply wrote a new law for each new network as it arrived. The result was a giant pile of network-specific laws we know as the Telecommunications Act.

Horizontal proposals aim to either get rid of or supplement the current system and replace it with a regulatory structure that regulates on the basis of *function* as opposed to historical contingency. Since network functions are generally organized in horizontal layers, such proposals are usually called “layered” or “horizontal” models of telecommunications regulation.

⁵ Timothy Denton, Comments, Freedom to Connect Conference, March 31, 2005.

⁶ Kevin Werbach, Breaking the Ice, 4 J. Telecom & High Tech. (forthcoming 2005)

Why bother making a change? In general, advocates give two sets of reasons for why layered regulatory models are attractive.⁷ The first is *descriptive* coherence. Since the 1970s, telecommunication networks have been built on horizontal models.⁸ It is important to realize that the internet, while an important example, is not the only example. Cable television networks, and even dedicated phone networks have long been conceptualized and built on a horizontal architectures. The vertical regulatory silos are more out of touch than many lawyers may realize: they reflect practices abandoned in the engineering world decades ago. Rick Whitt is therefore right when he says “the layers model represents a shift in thinking that successfully mirrors the way that networks and markets actually operate.”⁹

Greater descriptive coherence is closely related to another advantage heavily stressed in the literature: analytical clarity. The horizontal model is a useful tool for uncovering anti-competitive or otherwise wrongful behavior. Just as a doctor might need an X-ray machine to see things he cannot see with the naked eye, so can the horizontal model serve as a tool to help the regulator see problems in telecommunications competition. In the words of Robert Cannon of the FCC, “By conceptualizing the policy as layers, the analyst is capable of grouping and segregating issues” He can “identify markets, clarify issues, create boundary regulations that are effective, and, in so doing, target solutions where issues reside without interfering with other industries and opportunities.”¹⁰

Layered models are not without their critics. A major criticism of the layered models is that they are either too complicated or inconclusive for regulatory purposes.¹¹ Such criticism sharpens when the issue is the

⁷ What follows is a summary. A survey of arguments in favor of a horizontal model can be found in Richard Whitt, *A Horizontal Leap Forward*, in *OPEN ARCHITECTURE AND COMMUNICATIONS NETWORKS* 292, 312-317 (Mark Cooper, ed., 2004).

⁸ See Andrew Tannenbaum, *Computer Networks*, Chapter __ (4th ed. 2002).

⁹ Whitt, *Horizontal Leap Forward*, 317

¹⁰ Robert Cannon, *The Legacy of the Federal Communications Commission's Computer Inquiries*, 55 *FED. COMM. L.J.* 167, 195 (2003).

¹¹ See, e.g., Comments of David Reed, *Silicon Flatirons Conference 2005; Free Ride: Deficiencies of the MCI 'Layers' Policy Model and the Need For Principles that Encourage Competition in the New IP World*, New Millennium Research Council, July 2004, available at

redrafting the Telecommunications Act along horizontal lines. The question is then whether a horizontal model would create more regulatory overhead than solved problems.

This is an important point. The layer models actually used in today's networks can be too complicated to serve as a model for regulation. There is a danger that any purported benefits of a layered model may be dwarfed by delays, litigation and other regulatory costs of administering such a complex system. It is true that there is some necessary minimal complexity in any conceivable scheme. Nonetheless the point remains: if the impact of a regulatory model is to increase the total number of classifications and rules, those are additional costs, it is must be asked whether the costs are justified.

It follows that a successful horizontal regulatory model should care less about maintaining fidelity to their technological cousins and more about market principles. As Douglas Sicker writes, "We should not confuse the technical implementation of the Internet with the policy goals of a layered model. What we should take away from the protocol design is its design philosophy; including things like decentralized control, autonomy, efficiency, etc."¹² It is around such indicia that a regulatory model should be built.

All of this leads us to the one rule model itself. The next part shows how simple and indeed deregulatory a layered model can be, while still accomplishing the most important goals of telecommunications law. The final part presents the case for an ex-ante, rule-based system for telecommunications regulation.

II: The One Rule Model

The one rule system relies on a single classification, and a single ex-ante anti-discrimination rule. Each is described briefly. The underlying question is, what happens if we rely on a single anti-discrimination rule and single classification? Is, in fact, anything lost?

http://www.newmillenniumresearch.org/news/071304_report.pdf.

¹² Douglas Sicker, Further Defining a Layered Model for Telecommunications Policy, Telecommunications Policy Research Conference ("TPRC") Paper 10 (2002).

Classification

The critical question for any anti-discrimination rule is this: discrimination as between what? What are the classes, as between which, discrimination is prohibited?

The one rule model's answer to this question is single classification as between which discrimination is prohibited. The distinction is between *transport infrastructure*, and *application services*. It gives rise to the name "flat model," because it sweeps a very broad range of technologies into two long and twin regulatory layers.

The Flat Model

Application Services				
video (television)	voice	web	email	[future]
wireline	cable	wireless	fiber optic	[future]
Transport Infrastructure				

This distinction like any classification cannot be perfect but is meant to be as general and as future-proof as possible. It borrows on the principle and most useful distinction already employed in telecommunications regulation: the distinction between infrastructure and applications. This, as Robert Cannon writes, was a critical matter the *Computer Inquiries* rulings.¹³ Or as Bryan Tramont, Chief of Staff to Chairman Michael Powell, explained the FCC's approach to regulation: "The main difference for us is between how we regulate the *infrastructure*, and *services*. Each has its own concerns and priorities."¹⁴

This distinction relies on a key assumption about an economic difference between the two services. Transport infrastructure, it assumes, requires a large upfront investment, and subsequently can be operated at relatively low marginal cost. Application services, meanwhile, do not require

¹³ Robert Cannon, The legacy of the Federal Communications Commission's Computer Inquiries. 55 FED. COMM. L.J. 167-205 (2003).

¹⁴ See Bryan Tramont, Comments, Silicon Flatirons 2005.

a large initial investment. In some cases these assumptions may not be correct, but there seems little evidence that this distinction is going away.

Converted to definitions, an infrastructure or a transport service is any service that primarily transports information from one point to another—similar to the 1996 Act’s definition of a “telecommunications service.”¹⁵ An applications service, meanwhile, is simply any service that offers the user anything other than primarily transport—roughly what the *Computer Inquiries* called an “enhanced service.”¹⁶ As with any classification, there is some uncertainty created, but that does not eviscerate the case for the classification—it merely weighs against its expected benefits.

The obvious question is this – hasn’t this attempted distinction already proved a failure? The 1996 Act includes an information service / telecommunications service distinction, yet it has led to endless debate over the classification of cable internet and DSL services. Yet the current debate can be misleading. The reason that the broadband issue has become so complicated is the fact that the current structure of the Act means that classification as a telecommunications service lead to potentially drastic consequences, namely unbundling requirements.¹⁷ The classification “telecommunications service” is not a true horizontal classification: it was written with telephone service in mind. Given the fact that today’s de facto horizontal classifications are still heavily influenced by the larger vertical structure of the Telecommunications Act, their efficacy cannot be evaluated in that context. Freed from the consequences that today come with classification as an information or telecommunications service, horizontal classification should become significantly easier.

¹⁵ 47 U.S.C. § 153(43) "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."

¹⁶ 47 U.S.C. §153(20) "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, 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." This is too specific.

¹⁷ See 47 U.S.C. §251 (interconnection duties, including unbundling requirements).

As Justice Scalia dissent in *Brand X* showed, as a textual matter the question of cable modem's classification fairly straightforward.¹⁸ Cable internet or telephone services are the provision of two services: one transport service (a 64K or coaxial line) plus one application service (voice or internet service respectively). It is only to avoid the specific regulatory consequences of classification as a telecommunications service that the issue became complicated and a subject of intense litigation.

The Anti-Discrimination Rule

The one rule model, as the name suggests, relies upon a single anti-discrimination rule. But first we need discuss the various ways in which a non-discrimination rule can operate.

In telecommunications as elsewhere there is a basic theoretical distinction between negative and positive anti-discrimination rules. A negative rule announces that discrimination is illegal and seeks to punish identified episodes of discrimination on a case-by-case basis. A positive rule, conversely, creates affirmative legal duties that are intended to remedy either past or the likelihood of future discrimination.

While there is great debate over this matter in other contexts, few can deny that enforcing a negative prohibition puts the government in its more familiar and easier position of forbidding bad behavior as opposed to trying to compel good behavior. As Judge Charles Fried put the point in another context:

“Discrimination ... should be stamped out whenever it occurs. This, like all the most stringent injunctions of morality, is a negative—not a positive—duty. ‘Thou shall not kill’ is an injunction at once more absolute, more definite, and more readily enforced than ‘Love your neighbor as yourself.’”¹⁹

¹⁸ See *Brand X v. FCC*, ___ U.S. ___ (Scalia J., dissenting).

¹⁹ Charles Fried, *Order and Law: Arguing the Reagan Revolution : A Firsthand Account* (1992).

In the telecommunications context “love thy neighbor” policies are rules of compelled sharing, particularly those pursuant to government-set rates. As with a positive moral duty, it would be very nice if incumbent phone companies would share their lines with entrants, but creating a duty to do so pursuant to government rates has by common consensus proved a disaster. The FCC’s role is decidedly simpler when it enforces “thou shall nots.”

The one rule model depends, as much as possible, on a negative anti-discrimination rule. Let’s now identify what anti-discrimination rule means in the context of the two-layer model described here. We may put it like this: discrimination in the telecommunications sense exists when any entity on the network wishes to connect to another, but the owner of the network or an application service wrongfully prevents him from doing so. That may happen in two ways, horizontal and vertical. Horizontal discrimination occurs when either an application or transport provider refuses to connect with other application or transport providers, respectively. An example comes from the 19th century when AT&T often refused physical connections to rival local carriers, or today, users of AOL’s instant messenger service cannot connect with users of Yahoo’s instant messenger service. Vertical discrimination occurs when a carrier bars its users from using a given application, usually in favor its own, competing application. This was the case of local Bell companies in the 1970s who wanted to prevent users from accessing MCI’s long distance services, or the case in the early 2000s when some cable broadband operators tried to prevent their users from accessing VPN services. In any case, the flat-model’s anti-discrimination rules states that, absent some strong justification, horizontal or vertical discrimination is illegal and punishable with sanctions as described in the next section.

While there is not space here for a full history of telecommunications anti-discrimination rules, we may consider a few successful examples of such rules in action.²⁰ The first example is from antitrust: the 1914 Kingsbury Commitment. Here, in negotiation with the Justice Departments, AT&T

²⁰ This article is not a history of interconnections. For more detailed historical treatments see Phil Weiser book, see also Kevin Werbach, *The Federal Computer Commission* (forthcoming 2005).

agreed to interconnect with the independent telephone carriers.²¹ Consumers wanted to be able to reach people on other telephone networks but were denied permission by Bell. That was a form of network discrimination that justified an interconnection remedy. The history of the Kingsburg Commitment and its aftereffects is too complex to discuss here, but the basic principle was the prevention of discrimination against rival carriers.

In the 1950s and 1960s, consumers wanted the freedom to connect devices to their telephone lines—most importantly telephones made by companies other than Bell, and later answering machines, fax machines, and modems. Since the FCC at first blocked even the attachment of a simple rubber cup to a telephone, it fell to the D.C. Circuit to create a non-discrimination rule for network attachments. It did so in the *Carterphone* decision, creating the following rule: a telephone subscriber has a “right reasonably to use his telephone in ways which are privately beneficial without being publicly detrimental.”²² In compliance, the FCC ultimately created the Part 68 Rules, which let users connect whatever they wanted so long as it created no harm to the network or other users.²³

Today, finally, the same issues arise in the Network Neutrality disputes in broadband regulation. In the late 1990s and early 2000s, Broadband operators imposed various limits the activities of their subscribers. In the best known examples, they disciplined users of Virtual Private Networks and in one example warned users that home-networking and WiFi constituted “theft of service” and a federal crime.²⁴

The remedy was what are now called “network neutrality” rules. Chairman Michael Powell announced the relevant non-discrimination rules, which he called the principles of “Network Freedom.”²⁵ As he explained later,

²¹ See generally, Adam Candeub, NETWORK INTERCONNECTION AND TAKINGS, 54 Syracuse L. Rev. 369 (2004).

²² Hush-A-Phone v. United States, 238 F.2d 266, 268 (D.C. Cir. 1956).

²³ 13 F.C.C.2d 420 (1968). For more history see Kevin Werbach, Breaking the ICE, 4 J. Telecom & High Tech. L. J. (forthcoming 2005).

²⁴ See Tim Wu, Network Neutrality, Broadband Discrimination, 2 J. Telecom. High Tech 141 at n. 57 (2003).

²⁵ Powell’s discussion of “Internet freedom” focuses on users’

“My approach is like this: we give companies a lot of room to do what they want. But they need to know, when they break the rules, we’re going to really slam them.”²⁶ Under pressure from the FCC and consumer groups, the broadband operators generally relaxed their most glaring limits. In 2005, the Federal Communications Commission for the first time enforced its stated network neutrality rules, fining a local telephone carrier for blocking VoIP service. As then-FCC Chairman Michael Powell stated, “The industry must adhere to certain consumer protection norms if the Internet is to remain an open platform for innovation.”²⁷ As this example shows, today’s network neutrality rules for broadband are in fact the closest approximation for what the flat model would suggest for telecommunications regulation generally.

Discrimination Remedies

The distinction between a negative anti-discrimination rule and positive duties may seem slippery when the question of remedies is reached. If the Government encounters a discrimination problem and seeks to cure it, it usually issues injunctive orders, and thereby converts the negative rule into a series of positive duties. But as we shall discuss in this section, administration of an anti-discrimination rule need not be so complex.

A typical assumption is that any interconnection remedy may require a complex, government administered rate-setting scheme. Yet a recent literature sheds doubt on that view. The “bill and keep” literature argues, that an economically efficient interconnection scheme can be maintained without a system of government-set compensation for forced interconnection.²⁸ The premise is that both ends of any connection benefit

rights. The “freedoms” relevant here are (1) freedom to access content, (2) freedom to use applications, and (3) freedom to attach personal devices. See Michael K. Powell, Preserving Internet Freedom: Guiding Principles for the Industry, 3 J. ON TELECOMM. & HIGH TECH. L. 5, 12 (2004).

²⁶ Comment, Silicon Flatirons Conference 2005.

²⁷ “Phone Company Settles in Blocking of Internet Calls,” Washington Post, March 4, 2005.

²⁸ See Jay Atkinson & Christopher Barnekov, A Competitively Neutral Approach to Network Interconnection 7-16 (Office of Plans & Policy, FCC, Working Paper No. 34, Dec. 2000), http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp34.pdf; Patrick DeGraba, Central Office Bill and Keep as a Unified Inter-Carrier Compensation Regime, 19 Yale J. on Reg. 37, 40 (2002) [hereinafter DeGraba, Central Office Bill]; Patrick DeGraba, Efficient Inter-carrier

from that connection, and that the best system is have carriers on both sides collect from their customers for the connection. A full discussion of bill and keep is beyond the scope of this essay. However, its insights show how the Telecommunication Act might maintain anti-discrimination remedies without necessarily maintaining a complex rate-setting scheme.

Let's consider two proposals briefly. First, in a reformed telecom model the FCC, consistent with other areas of law, might first turn to damage remedies to combat instances of discrimination. The presumption here is that network discrimination might be only slightly in the interest of the carrier. The threat of damage remedies can change that calculus to represent the public's calculus, without involving the FCC is more complicated injunctive oversight.

Second, it is a truism that the most powerful form of anti-discrimination remedy is simply market entry. Network discrimination is often inefficient and persists thanks to lack of competition. An ex-ante antidiscrimination rule, to the extent it facilitates market entry, may thereby indirectly remedy inefficient discrimination.

III. The Case for an Ex-Ante Anti-Discrimination System

The primary benefit of a rule-based anti-discrimination system is its protection of market entrants both in new applications and transport services. The point is to provide a potential investor in new applications or transport service an ex ante legal guarantee against deliberate or inadvertent discrimination practiced by incumbent providers. That is the central point of the one rule model, and arguably addresses the central problem in telecommunications regulation.

The point may seem clearer for application service providers. Consider an entrepreneur wants to market, say, a new P2P dating service. That entrepreneur needs to reach his customers. The ex-ante anti-discrimination rule creates a certain security of investment, by providing that

Compensation for Competing Networks When Customers Share the Value of a Call, 12 J. Econ. & Mgmt. Strategy 207 (2003); for an excellent survey of the issues see Adam Candeub, NETWORK INTERCONNECTION AND TAKINGS, 54 Syracuse L. Rev. 369 (2004).

new application, if legal, cannot be blocked by providers who, for whatever reason, don't like P2P or don't like dating services. This benefit has been discussed elsewhere, by analogy to the electric network:

“When consumers buy a new toaster made by General Electric they need not worry that it won't work because the utility company makes a competing product. At the heart of this success story lies the predictability of the network and a certain security of investment. The uniformity of the electric grid is a safeguard against the risk of restrictions and uneven standards.”²⁹

But what about the market entry of transport providers? It has long been argued that transport providers cannot be convinced to enter the transport market unless they are allowed to engage in application discrimination. As Charles Goldfarb in a recent Congressional Report put it, “The physical network providers (local exchange carriers and cable system operators) argue that they will be discouraged from undertaking costly and risky broadband network build-outs and upgrades if their networks are subject to open access and/or non-discrimination requirements that might limit their ability to exploit vertical integration efficiencies or to maximize the return on (or even fully recoup) their investments.”³⁰ But while loudly proclaimed the importance of this argument is greatly overstated.

Market entry in any infrastructure market is likely to be challenging for reasons having nothing to do with anti-discrimination rules and everything to do with recovering the considerable costs of infrastructure deployments. The infrastructure problem is familiar one across industries. So is its chief remedy: government subsidies of some sort, or direct government build-outs, as with the national highway system.

In this sense, the idea that the government's choice of subsidy should be an exemption from anti-discrimination rules is bizarre. For one thing, it is highly unclear whether discrimination is, in fact, a profitable long-term

²⁹ Ex parte letter from Tim Wu and Lawrence Lessig, dated August 22, 2003, submitted to the FCC in CS Docket No. 02-52

³⁰ Charles B. Goldfarb, *Telecommunications Act: Competition, Innovation, and Reform*, Congressional Research Service, August 12, 2005 at CRS-7.

policy, and so allowing it as a form of subsidy may fail. For another, it is hard to see clearly that the potential revenues that might stem from being allowed to block customers from applications will be enough to encourage companies to invest in the cost of infrastructure deployment absent any other prospect of profit. Instead, it seems that if government wants to promote the construction of new infrastructure, it should do so directly, either by providing direct subsidies, or by doing so itself.

In other respects, an anti-discrimination rule may also promote transport layer market entry. First, transport entrants are protected from horizontal discrimination—that is to say, physical interconnection with other transport providers. Second, while not yet seen, the *ex ante* rule from discrimination practiced by powerful application providers. In other words, the transport layer entrant, as much as anyone else, has reason to want a law that prevents blocking market entry.

To this advocacy of a one rule system, there is an important rejoinder. Does the model obscure the real issue: market power and its abuse? Stated other wise, any proposed reform of the Telecommunications Act along horizontal lines must be defended not only as against the existing vertical structure, but also the position that the FCC be replaced altogether by antitrust courts.³¹ It also must be compared with the attractions of a European-style telecommunications scheme, wherein the telecommunications regulator focuses particularly on the problem of “significant market power.”³²

Both the antitrust model and European model have their attractions. They seize on a concept that is today increasingly understood: that telecommunications law is a species of antitrust regulation.³³ The case for the one rule system does not dispute this premise. Instead, it is an argument

³¹ See Peter W. Huber, *Law & Disorder in Cyberspace: Abolish the FCC and Let Common Law Rule the Telecosm*, (1997).

³² See Scott Marcus, *The Potential Relevance to the United States of the European Union’s Newly Adopted Regulatory Framework for Telecommunications*, FCC Office of Plans and Policy Working Paper No. 36 (2002).

³³ See Phil Weiser & Jon Nuechterlein, *Digital Crossroads: American Telecommunications Policy in the Internet Age*, ch. 1 (2004) (discussing use of antitrust and telecommunications law for similar purposes); see also Timothy Wu, *Copyright’s Communications Policy*, 103 Mich. L. Rev. 278, n. 24 (2005).

for a system of rules as opposed to standards.³⁴ As we shall see, the repeat nature of telecom problems may make a rule-based approach attractive.

Consider the repeat features which characterize telecommunications problems. Most telecommunication problems feature many if not all of the following economic features: (1) a physical infrastructure of high fixed cost, that is (2) a large source of both positive externalities including network externalities, that (3) can be used to provide a range of services, and (4) in an environment of rapid technological change that makes the infrastructure useful for different services than those for which it was originally designed. While the problems are still antitrust problems at a certain level of generality, these four features make telecommunications problems distinct.

Since Telecom law encounters the same problems on a repeat basis, it can create a rule-based regime that informs parties in advance what is prohibited. As just discussed, we know, for example, that market entry at the infrastructure level – “facilities-based competition” may prove challenging, if only because of the initial investment needed. We also know that control of physical infrastructure can be (though is not always) used as a bottleneck to block both competitors and new uses of the existing infrastructure. Finally, given the rapidity of technological change, we should know by now that planned visions of the future through regulation or infrastructure owners are likely to face rapid obsolescence: if pressed too far, may act as a bar to innovation. Given what we know about telecommunications competition, the law can be rule-based: given these economic factors, it can do what it can to eliminate likely barriers to market entry *ex ante*.

Antitrust law is conversely a much more general-purpose instrument that with a few exceptions is based on standards that operate *ex post*. Nor is it simple or rapid: while it may seem a great simplification, as Peter Huber suggested, to abolish the FCC and leave matters to the antitrust courts, it is worth remembering that and litigated cases are extraordinarily

³⁴ This is a stronger argument with respect to a pure antitrust approach. The European approach is somewhere between a rules and standard based approach. Unlike a pure antitrust approach, it assesses market power and impose remedies *ex ante*. See Marcus, *supra* n. __, at 18-20.

lengthy and antitrust doctrine can become complex enough to baffle even telecom lawyers. Finally, given the ex poste nature of antitrust, potential market entrants cannot rely on ex ante rules that might prevent the imposition of barriers to entry. And as we've already seen, market entry is the great public challenge in the telecommunications industry, suggesting that ex ante rules that prevent attacks on entrants might be particularly important.

As stated above, one advantage of a one rule model is that it may be particularly keyed to the problem of market entry and discriminatory treatment of similar competitors.³⁵ Stated in FCC lingo, the one-rule approach by its nature focuses attention on inter-modal parity, or the similar regulation of similar services. For example, in the early 2000s, the most obvious deviation from the parity principle was as between cable and DSL broadband services, a direct consequence of their differing vertical classifications. The one-rule model makes it obvious that cable and DSL broadband merit similar treatment. Here is how Rick Whitt puts the point about layered models in general: they “prevent the exercise of market power at lower network layers from impinging upon the otherwise robustly competitive and innovative upper service layers, and to limit/eliminate unnecessary regulation of upper layers.”³⁶

Conclusion

This short paper presents telecommunications writers with a challenge: how much of the present Telecommunication's Acts objectives might be accomplished with a minimal of regulatory overhead? The flat model is one answer: but further developments or insights may necessitate further reflection on what form an ideal telecommunications regime might take.

³⁵ See Tim Wu, *The Broadband Debate, a User's Guide*, 3 J. Telecom (describing central tenants of Schumpeterian innovation theory as applied to telecommunications policy).

³⁶ Rick Whitt, *A Horizontal Leap Forward*, 56 Fed. Comm. L.J. 587, 650 (2004).