

*Essential Facilities, Infrastructure, and Open Access**

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I. INTRODUCTION

There is a debate raging concerning the merits of private control over (or conversely, open access to) various types of resources. Treating something as private property grants the property holder the right to exclude others. Treating something as infrastructure or a commons conversely welcomes all users on a nondiscriminatory basis. The battle over which regime best serves society's interests exists in numerous areas of the law including land use, intellectual property, regulated industries, antitrust, and most aspects of law and economics. It is currently in vogue to propertize, privatize, and deregulate legal regimes under a variety of rationales all connected with maximizing wealth, supporting price discrimination, promoting allocative efficiency, and internalizing externalities.

In intellectual property law, these issues are most prominent in contemporary debates over

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the continued expansion of intellectual property rights.¹ The conflict over access and exclusion is a central, persistent feature of intellectual property law. Those who create, invent, innovate, and participate in similar intellectually driven, productive activities often borrow from or share with others. It is impossible to divest from oneself that which one has been exposed to, and inevitably, the intellectual products of past and contemporary producers (a shorthand reference for creators, inventors, innovators, thinkers, and so on) serve as inputs into each of our own productive activities. So, to be intellectually productive, we necessarily borrow and share. Open access facilitates widespread borrowing, sharing, and participation in intellectual production.²

But at the very core of intellectual property is the right to exclude, without which some producers would abandon their efforts for fear of free riding (unlicensed sharing) by competitors. Without *some* exclusion, competition by unlicensed borrowers would, at times, undermine incentives to invest resources in the first place. Yet exclusion introduces deadweight losses and may stifle productive use of intellectual resources. And so, in the end, intellectual property laws strike a balance and create a semicommons arrangement—a complex mix of private rights and commons designed to facilitate both exclusion and open access (unlicensed sharing).³ The pivot on the

¹ For an overview of these debates and discussion of the expansion of intellectual property rights, see, for example, YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* (2006); Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031 (2005); WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* (2003); LAWRENCE LESSIG, *THE FUTURE OF IDEAS* (2001).

² See Brett Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917 (2005). For a comprehensive account of widespread peer production of information, see BENKLER, *SUPRA*; see also Brett Frischmann, *Cultural Environmentalism as a Lens to (Re)View The Wealth of Networks*, U. CHI. L. REV. (forthcoming 2007) (reviewing Yochai Benkler, *A Wealth of Networks* (2006)).

³ See generally Brett Frischmann & Mark Lemley, *Spillovers*, COLUM. L. REV. (forthcoming 2007).

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intellectual property seesaw has steadily been pushed toward privatization, but the debate rages on.

In telecommunications, these issues have surfaced again and again. Communications networks have traditionally been conceptualized as infrastructure subject to substantial access and nondiscrimination norms, and have, as a result, been heavily regulated. In recent decades, efforts to introduce competition and at the same time to deregulate communications industries has led to vociferous debates about the merits of private control, government regulation, and open access. Most recently, the issues manifest in the network neutrality debate.⁴ At the heart of this debate is whether (i) the Internet will continue to be managed in an openly accessible, nondiscriminatory manner or (ii) the owners of the networks that jointly comprise the physical infrastructure of the Internet will be able to discriminate among Internet users and/or uses in efforts to extract as much of the value realized by users as possible.

In antitrust law, the same fault lines appear only they often are not recognized as such. The essential facilities doctrine holds that dominant firms may incur antitrust liability if they do not provide access to their truly unique facilities on a non-discriminatory basis, even to their competitors, where sharing is feasible and the competitors cannot obtain or create the facility on their own.⁵

⁴ For an overview of the network neutrality debate, see Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOM. & HIGH TECH 141 (2003); Barbara Van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. ON TELECOMM. & HIGH TECH. L. (forthcoming 2007); Brett Frischmann & Barbara van Schewick, *Yoo's Frame and What it Ignores: Network Neutrality and The Economics of an Information Superhighway*, Working Paper (2006).

⁵ Closely related is the possibility of antitrust liability for dominant firms who refuse to deal with competitors, even the possibility of liability for refusal to license intellectual property rights. *Compare* *Image Technical Services, Inc. v. Eastman Kodak Co.*, 125 F. 3d 1195 (9th Cir. 1997), *cert. denied*, 523 U.S. 1094 (1998)(refusal to license without objective business justification may be antitrust violation) *and* *In Re Independent Service Organizations Antitrust*

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Although antitrust liability on this theory is long established in past case law and the past enforcement actions of the Antitrust Division and the Federal Trade Commission, there is a current four pronged attack to shield dominant firms from ever having to share their property under pain of antitrust liability using the same rhetoric of private rights that is fueling the same debates and the same positions in IP, communications, and other fields. First, the Supreme Court has dealt with the essential facilities doctrine through an apparent strategy of death by dicta, all but disavowing its prior case law on the subject. Second, a Congressionally created antitrust review commission is considering whether to abolish liability on these grounds. Third, U.S. and foreign antitrust enforcement agencies have scheduled hearings on the legal standards governing dominant firms where these theories are likely to face significant critique. Finally, academic scholars have subjected both theories to withering criticisms.

We propose in this essay not only to reinvigorate the essential facilities doctrine but to do so on traditional economics grounds and tie its revitalization (even resurrection) to the ongoing debates over open access in other fields. The essential facilities doctrine is one expression of the venerable principle in Anglo-Saxon law that open access is required for certain facilities, assets, and property that are “affected with the public interest.”⁶

In more modern parlance, the kind of assets and facilities which normally are identified as

Litigation, 203 F.3d 1322 (Fed. Cir. 2000)(no duty for owner of intellectual property to deal with competitors), *cert. denied*, 1143 (2001). See generally Joseph P. Bauer, *Refusal to Deal with Competitors by Owners of Patents and Copyrights: Reflections on the Image Technical and Xerox Decisions*, 55 DEPAUL L. REV. 1211 (2006); Michael A. Carrier, *Refusals to License Intellectual Property after Trinko*, 55 DEPAUL L. REV. 1191 (2006); Robert Pitofsky, *Challenges of the New Economy: Issues at the Intersection of Antitrust and Intellectual Property*, 68 ANTITRUST L.J. 913, 919-23 (2001).

⁶ See generally Walton H. Hamilton, *Affection with Public Interest*, 39 YALE L.J. 1089, 1100-01 (1930).

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such are most often described as infrastructure. Traditional infrastructure includes bridges, highways, ports, electrical power grids, and telephone networks, but infrastructure can also include non-traditional even non-commercial items such as ideas, the Internet, and other assets which are vital inputs to the production of wealth at later stages of production on a basis disproportionate from their actual use. The significant positive externalities (“spillovers”) that open access produces make open access socially desirable and internalization through exclusive property rights inefficient. Stated more broadly, open access to infrastructural resources supports society’s economic interest in wealth maximization and allocative efficiency as well as other societal goals of fairness, equality, and non-discrimination.

In the antitrust field, all this is an abstract debate until a dominant firm controls such a unique infrastructural asset and unreasonably refuses to grant access to a competitor who needs access in order to compete with the monopolist at some other stage of production. This could include a long distance telephone company which requires interconnection to the local phone system or a wholesale power company which requires physical interconnection with the local power transmission or distribution system. There is no theoretical reason why a computer software program, the Internet itself, or even an idea might not similarly constitute true infrastructure and thus require a regime of open access. When refusal to grant access to such infrastructure constitutes a means of either acquiring or maintaining a monopoly, antitrust liability should ensue.

In this essay, we set out our theory why the essential facility doctrine is a vital, but limited, tool to ensure more efficient economically desirable open access to both traditional and non traditional infrastructure; reframe the debate to the question of whether a dominant firm is denying

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access to infrastructural assets that benefit us all; show how the European Union has instinctively recognized and implemented such a rule better than its U.S. counterparts, and finally demonstrate the administrative and judicial feasibility of such a rule.

II. THE ESSENTIAL FACILITIES DOCTRINE

A. *The Traditional Doctrine*

The essential facilities doctrine arose early in the history of U.S. antitrust law. The Supreme Court used Section One of the Sherman Act in a variety of settings to impose obligations of equal and non-discriminatory access, although it did not use the doctrine by name. In *Terminal Railroad Association*, the Court directed the issuance of an injunction requiring the joint operators of the only railroad bridge across the Mississippi River to grant open and equal access to all competitors.⁷ Later the Court required the Associated Press to offer non-discriminatory membership terms to news organizations which competed with its existing members.⁸ Finally, in the case closest to the core conception of the essential facilities doctrine, the Court affirmed the grant of an injunction against a regulated power company which refused to transmit power generated by competing companies through its transmission system to municipal distribution systems that wanted to buy cheaper power from the defendant's competitors.⁹

⁷ *United States v. Terminal Railroad Ass'n of St Louis*, 224 U.S. 383 (1912).

⁸ *Associated Press v. United States*, 326 U.S. 1 (1945).

⁹ *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

The modern version of the doctrine and its classic elements were laid out in *MCI v. AT&T*.¹⁰ *MCI* concerned an antitrust challenge by a long distance competitor of the then regulated monopolist AT&T. AT&T controlled the local phone systems necessary to connect both ends of any long distance phone call. The plaintiff alleged an unjustified failure to interconnect MCI's superior microwave technology to the local loop so calls could be completed. AT&T argued cream skimming, technological incompatibility, and lack of regulatory approval.

On appeal, the 7th Circuit affirmed liability under the essential facilities doctrine where a plaintiff can establish:

1. that the monopolist controls access to essential facility;
2. the facility cannot be reasonably duplicated by competitor;
3. the monopolist denies access to competitor, and
4. it was feasible to grant access.¹¹

¹⁰ *MCI Communications Corp. v. American Tel. and Tel. Co.*, 708 F.2d 1081 (7th Cir.), *cert. denied*, 464 U.S. 891 (1983).

¹¹ *Id.* at 1132-33.

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Following *MCI*, the essential facilities doctrine was widely adopted in the lower courts,¹² but never used by name by the Supreme Court. Besides *Otter Tail*, the closest the Supreme Court came to doing so was in the *Aspen Skiing* case where it affirmed a jury verdict where the appellate court had relied on the essential facilities case. In *Aspen* the defendant “monopolist” controlled three of four ski mountains in Aspen, Colorado. The defendant had engaged in a long standing pro-consumer joint venture with the remaining competitor who owned the fourth mountain in the valley. The monopolist abruptly terminated the joint venture without credible business justification. The Supreme Court affirmed the verdict for the plaintiff but declined to address the essential facilities test used by the lower court. Instead, the Supreme Court relied on the monopolist’s termination of a successful consumer friendly program that lacked a plausible business justification and on the defendant’s willingness to sacrifice profits to injure a competitor.¹³

Since *MCI* and *Aspen*, there has been a gradual narrowing of the essential facilities doctrine. Nonetheless, the lower courts have repeatedly turned to it because it represents a fundamental understanding about the nature of the misuse of monopoly power. Courts are becoming increasingly sophisticated about insisting on the truly “essential” nature of the facility at issue. For example, even a small town hospital is not an essential facility for antitrust purposes where the excluded doctor had other reasonable alternatives to perform surgical procedures including out patient surgery in an office setting.¹⁴ Courts have had even easier times rejecting essential facilities claims when

¹² Cases collected at ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 278-84 (5th ed. 2002).

¹³ The significance and legacy of the *Aspen* decision is debated in a recent symposium issue in the Antitrust Law Journal. *Symposium: Aspen Skiing 20 Years Later*, 73 ANTITRUST L.J. 1- 59-267 (2005).

¹⁴ *McKenzie v. Mercy Hospital*, 854 F.2d 365 (10th Cir. 1988).

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the plaintiff wanted access to advertising to a competitor's magazine when it was free to create its own magazine or advertise in any normal media channel.¹⁵ Most recently, little more than common sense doomed an antitrust claim by a disfavored seller excluded from an annual three day recreation of 19th century fur trading in Wyoming when he remained free to sell his wares anywhere except on the event grounds for the long weekend.¹⁶

The best cases for the essential facilities model typically involve to the denial of access to infrastructure and networks, particularly in the context of regulated industries in transition. In a time of privatization and deregulation, antitrust generally is being asked to do the heavy lifting previously done by traditional command and control regulation to assure a competitive marketplace. However, it is precisely these cases, despite being well supported by theory and precedent, which are most under attack and most in need of revival.

B. *Death by a Thousand Cuts*

The counterattack against the essential facilities doctrine is in full bloom. It has been subject to increasing scholarly criticism.¹⁷ In the influential Areeda and Hovenkamp treatise, for example, the authors describe the doctrine as “harmful” and “unnecessary,” and argue that it “should be

¹⁵ *Twin Lab., Inc. v. Weider Health & Fitness*, 900 F. 2d 566 (2d Cir. 1990).

¹⁶ *Gregory v. Fort Bridger Rendezvous Ass'n*, 448 F.3d 1195 (10th Cir. 2006).

¹⁷ HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 237 (2006); AREEDA & HOVENKAMP, *ANTITRUST LAW* 771c (2d ed. 2002) (“harmful,” “unnecessary,” and “should be abandoned”); Paul D. Marquandt & Mark Leddy, *The Essential Facilities Doctrine and Intellectual Property Rights: A Response to Pitofsky, Patterson & Hooks*, 70 *ANTITRUST L.J.* 847 (2003); Abbott B. Lipsky & Gregory Sidak, *Essential Facilities*, 51 *STAN. L. REV.* 1187 (1999)(No coherent rationale for doctrine); Philip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 *ANTITRUST L.J.* 841 (1989); Michael Boudin, *Antitrust Doctrine and the Sway of Metaphor*, 75 *GEO. L.J.* 395, 397-403 (1986); Note, *Rethinking the Monopolist's Duty to Deal: A Legal and Economic Critique of the Doctrine of 'Essential Facilities'*, 74 *VA. L. REV.* 1069 (1988). *But see* Pitofsky, Patterson & Hooks, *The Essential Facilities Doctrine Under U.S. Antitrust Law*, 70 *ANTITRUST L.J.* 443 (2002).

abandoned.”¹⁸

The *Trinko* decision in 2004 represents the near extinction of the doctrine at the Supreme Court, when it probably shouldn't have been discussed at all.¹⁹ In *Trinko*, a customer of the incumbent local phone service monopolist, on behalf of a class of all similarly situated persons, challenged the dominant firm's discrimination against a competitor which allegedly resulted in overpriced and inadequate phone service. The Supreme Court ultimately ruled that the antitrust complaint was barred by provisions of the Telecommunications Act of 1996 and that the sole remedy was through state and federal regulatory provisions.

Although not “essential” to the ruling and technically dicta, *Trinko* was quite negative on the essential facilities doctrine. The court stated:

This conclusion would be unchanged even if we considered to be established law the “essential facilities” doctrine crafted by some lower courts, under which the Court of Appeals concluded respondent's allegations might state a claim. We have never recognized such a doctrine, and we find no need either to recognize it or to repudiate it here. It suffices for present purposes to note that the indispensable requirement for invoking the doctrine is the unavailability of access to the “essential facilities”; where access exists, the doctrine serves no purpose. Thus, it is said that “essential facility claims should ... be denied where a state or federal agency has effective power to compel sharing and to regulate its scope and terms.” Respondent believes that the existence of sharing duties under the 1996 Act supports its case. We think the opposite: The 1996 Act's extensive provision for access makes it unnecessary to impose a judicial doctrine of forced access. To the extent respondent's “essential facilities” argument is distinct from its general § 2 argument, we reject it.²⁰

The essential facilities doctrine is also being reviewed in various forums, including the

¹⁸ AREEDA & HOVENKAMP, *supra*.

¹⁹ Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004).

²⁰ 540 U.S. at 410-11 (Citations omitted).

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United States Antitrust Modernization Commission²¹ and joint hearings by the FTC and the Antitrust Division of the Antitrust Division on single firm dominance.²² In addition, the International Competition Network is creating a working group on exclusionary conduct,²³ and the European Union is reviewing standards for abuse of a dominant position under their competition law.²⁴ It is anticipated that with the possible exception of the EU, the essential facilities is in for further critique in each of these forums.

III. THE ESSENTIAL NATURE OF INFRASTRUCTURE (or THE INFRASTRUCTURAL NATURE OF ESSENTIAL FACILITIES)²⁵

Infrastructure resources generate value as inputs into a wide range of productive processes, often supporting many distinct markets downstream. The term “infrastructure” generally conjures up the notion of physical resource systems made by humans for public consumption. A list of common examples includes: (1) *transportation systems*, such as highway and road systems, railways, airline systems, and ports, etc.; (2) *communication systems*, such as telephone networks and postal services; (3) *governance systems*, such as court systems; and (4) *basic public services and facilities*, such as schools, sewers, and water systems.

Two generalizations about infrastructure are worth noting at the outset. First, the

²¹ See Antitrust Modernization Commission, Commission Hearings, Exclusionary Conduct, at http://www.amc.gov/commission_hearings/pdf/050929_Exclus_Conduct_Transcript_reform.pdf.

²² See Public Hearings, Antitrust Division, Single-Firm Conduct and Antitrust Law, at http://www.usdoj.gov/atr/public/hearings/single_firm/sfchearing.htm#issues.

²³ www.internationalcompetitionnetwork.org.

²⁴ See Article 82 Review, at http://ec.europa.eu/comm/competition/antitrust/others/article_82_review.html.

²⁵ This Part is drawn, with some modification, from Frischmann, *An Economic Theory of Infrastructure and Commons Management*, *supra* note 2.

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government has played and continues to play a significant and widely-accepted role in ensuring the provision of many infrastructure resources. While private parties and markets play an increasingly important role in providing many types of traditional infrastructure due to a wave of privatization as well as cooperative ventures between industry and government, the government's position as provider, coordinator, subsidizer, and/or regulator of traditional infrastructure provision remains intact in most communities throughout the world.²⁶

Second, traditional infrastructures generally are managed in an openly accessible manner. That is, they are managed such that the resources are accessible to members of a community who wish to use the resources on nondiscriminatory terms. This does not mean that access is free. We pay tolls to access highways, we buy stamps to send letters, we pay telephone companies to have our calls routed across their lines, and so on. Users must pay for access to some (though not all) of these resources. Nor does it mean that access to the resource is unregulated. Transportation of hazardous substances by highway or mail, for example, is heavily regulated. The key point is that the resource is openly accessible to all within a community on nondiscriminatory terms regardless of the identity of the end-user or the end-use.

Managing infrastructure in this fashion makes economic sense. The general value of this management regime is that it maintains openness, does not discriminate among users or uses of the resource, and eliminates the need to obtain approval or a license to use the resource. As a general matter, managing infrastructure resources in this fashion eliminates the need to rely on either market

²⁶ The wave of privatization should be associated with *more*, not less, need for the essential facilities doctrine, as infrastructure once held in government hands is now private. Oddly, the law is moving in the opposite direction.

actors or the government to “pick winners” downstream. This facilitates competition downstream, innovation and experimentation with new uses, and often the generation of positive externalities that result in large social gains (a/k/a spillovers).²⁷

Infrastructure resources thus constitute an important class of resources for which society values public access. The point is not that all infrastructure resources should be managed in an openly accessible manner. Rather, for certain classes of resources, the economic arguments for managing the resources in an openly accessible manner vary in strength and substance.

A. *Demand-side theory of infrastructure*

Infrastructure resources²⁸ satisfy the following demand-side criteria:

1. The resource may be consumed nonrivalrously;
2. Social demand for the resource is driven primarily by downstream productive activity that requires the resource as an input; and

²⁷ See Frischmann, *An Economic Theory of Infrastructure and Commons Management*, *supra* note 2; Frischmann & Lemley, *Spillovers*, *supra* note 3. Most economists agree that infrastructure resources generate significant positive externalities that result in “large social gains.” W. Edward Steinmueller, *Technological Infrastructure in Information Technology Industries*, in *TECHNOLOGICAL INFRASTRUCTURE POLICY: AN INTERNATIONAL PERSPECTIVE* 117, 117 (Teubal et al., eds. 1996). Carol Rose was the first legal academic to draw an explicit, causal connection between open access and these positive externalities. In her path-breaking article, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, Rose, *The Comedy of the Commons*, 53 U. CHI. L. REV. 711 (1986), Rose explained that a “comedy of the commons” arises where open access to a resource leads to scale returns—greater social value with greater use of the resource. With respect to road systems, for example, Rose considered commerce to be an “interactive practice whose exponential returns to increasing participation run on without limit. . . . Through ever-expanding commerce, the nation becomes ever-wealthier, and hence trade and commerce routes must be held open to the public, even if contrary to private interest. Instead of worrying that too many people will engage in commerce, we worry that too few will undertake the effort.” *Id.* at 769–70. Critically, as Rose recognized, managing road systems in an openly accessible manner is the key to sustaining and increasing participation in commerce, and commerce is itself a productive activity that generates significant positive externalities.

²⁸ We are defining a category of infrastructure resources. The category is not all-inclusive in the sense that some resources generally considered to be infrastructure do not fit within this definition neatly. This does not affect our analysis, which only applies to resources that do fit within the definition.

3. The resource is used as an input into a wide range of goods and services, including private goods, public goods, and/or non-market goods.

Traditional infrastructure, such as roadways, telephone networks, and electricity grids, satisfy this definition, as do a wide range of resources not traditionally considered as infrastructure resources, such as lakes, ideas, and the Internet.

The first criterion captures the consumption attribute of nonrival and partially (non)rival goods. In short, this characteristic describes the “sharable” nature of infrastructure resources. Infrastructure is sharable in the sense that the resources can be accessed and used by multiple users at the same time. Infrastructure resources vary in their capacity to accommodate multiple users, and this variance in capacity differentiates nonrival (infinite capacity) resources from partially (non)rival (finite but renewable capacity) resources. Simply put, nonrivalry opens the door to widespread access and productive use of the resource. For nonrival resources of infinite capacity, the marginal costs of allowing an additional person to access the resource are zero. For partially (non)rival resources of finite capacity, the cost-benefit analysis is more complicated because of the possibility of congestion. These resources may be consumed nonrivalrously or rivalrously depending upon the conditions, such as how the resource is managed, the number of users, and the available capacity. During off-peak hours, for example, the (information) highway may be consumed nonrivalrously, but when usage is at its peak there may be congestion, in which case consumption becomes rivalrous. Rivalrous consumption of a partially nonrival good can be overcome through management choices, such as expansion of capacity, regulation by the market (price), the government (command

and control), norms, or even technology to avoid congestion.²⁹

The second and third criteria focus on the manner in which infrastructure resources create social value. The second criterion emphasizes that infrastructure resources are intermediate goods that create social value when utilized productively downstream and that such use is the primary source of social benefits. In other words, while some infrastructure resources may be consumed directly to produce immediate benefits, most of the value derived from the resources results from productive use rather than consumption.

The third criterion emphasizes both the variance of downstream outputs (the *genericness* of the input) and the nature of those outputs (particularly, public goods and non-market goods). The reason for emphasizing variance and the production of public goods and non-market goods downstream is that when these criteria are satisfied, the social value created by allowing additional users to access and use the resource may be substantial but extremely difficult to measure. The information problems associated with assessing demand for the resource and valuing its social benefits plague both infrastructure suppliers and users where users are using the infrastructure as an input to produce public goods or non-market goods. This is an information problem that is pervasive and not easily solved.

Whether we are talking about transportation systems, the electricity grid, basic research (ideas), environmental ecosystems, or Internet infrastructure, the bulk of the social benefits generated by the resources derives from the downstream uses. Value is created downstream by a wide variety of end-users that rely on access to the infrastructure. Yet social demand for the

²⁹ See Frischmann, *An Economic Theory of Infrastructure and Commons Management*, *supra* note 2.

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infrastructure itself is extremely difficult to measure.

From an economic perspective, it makes sense to manage certain infrastructure resources in an openly accessible manner because doing so permits a wide range of downstream producers of private, public, and non-market goods to flourish. As Professor Yochai Benkler has noted, “[t]he high variability in value of using both transportation and communications facilities from person to person and time to time have made a commons-based approach to providing the core facilities immensely valuable.”³⁰

To better understand and evaluate these complex economic relationships, we define three general categories of infrastructure resources, illustrated in Table 1, based on the nature of the distribution of downstream activities: commercial, public, and social infrastructure.

³⁰ Yochai Benkler, PROPERTY, COMMONS, AND THE FIRST AMENDMENT: TOWARDS A CORE COMMON INFRASTRUCTURE 47-48 (White Paper for the Brennan Center for Justice) (2001).

Table 1: Typology of Infrastructure Resources

Type	Definition	Examples
<p>COMMERCIAL INFRASTRUCTURE</p>	<p>Nonrival or partially (non)rival input into the production of a wide variance of private goods</p>	<p>1. Basic manufacturing processes 2. Ports 3. The Internet 4. Highway systems 5. Electric power grid</p>
<p>PUBLIC INFRASTRUCTURE</p>	<p>Nonrival or partially (non)rival input into the production of a wide variance of public goods</p>	<p>1. The Internet 2. Electric power grid 3. Basic research</p>
<p>SOCIAL INFRASTRUCTURE</p>	<p>Nonrival or partially (non)rival input into the production of a wide variance of nonmarket goods</p>	<p>1. The Internet 2. Highway systems 3. Basic research 4. Electric power grid</p>

These categories are neither exhaustive nor mutually exclusive. Real-world infrastructure resources often fit within more than one of these categories at the same time. For example, the Internet is a combination of all three types of infrastructure, and is thus a *mixed infrastructure*. The

analytical advantage of this general categorization schema is that it provides a means for understanding the social value generated by these infrastructure resources, identifying different types of market failures, and formulating the appropriate rules to correct such failures.

Pure commercial infrastructure resources are used to produce private goods. Consider the examples listed in Table 1. Basic manufacturing processes, such as die casting, milling, and the concept of the assembly line, are nonrivalrous inputs into the production of a wide variety of private manufactured goods. Basic agricultural processes and food processing techniques similarly are nonrival inputs into the production of a wide variety of private agricultural goods and foodstuffs. Many commercial infrastructure resources are used productively by suppliers purely as a delivery mechanism for manufactured goods, agricultural goods, foodstuffs, and many other commercial products. Ports, for example, act as an infrastructural input into the delivery of a wide range of private goods. Similarly, the Internet and highway systems are mixed infrastructures used by a wide range of suppliers to delivery private goods and services; the Internet and highway systems, in contrast with ports, also are used to support a wide range of other socially valuable activities.

Public and social infrastructure resources are used to produce public goods and non-market goods, respectively.³¹ For both public and social infrastructure, the ability of competitive output

³¹ From the demand-side, the important distinction between these outputs—what separates non-market goods in particular from public goods—is the means by which they create value for society. The value of public goods is realized upon consumption. That is, upon obtaining access to a public good, a person “consumes” it and appreciates benefits (value or utility). The production of public goods has the potential to generate positive externalities. Whether the benefits are external to production depends upon the conditions of access and whether the producer internalizes the value realized by others upon consumption. By contrast, the value of non-market goods is realized in a more osmotic fashion and not through direct consumption. Non-market goods change environmental conditions and social interdependencies in ways that increase social welfare. Take, for example, active participation in democratic dialogue or education. While participants may realize direct benefits as a result of their activity, non-participants (non-consumers) also benefit—not because they also may gain access to the good (dialogue or education), but instead because of the manner in which

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markets to effectively generate and process information regarding demand for the required input is less clear than in the case of commercial infrastructure. Infrastructure users that produce public goods and non-market goods suffer valuation problems because they generally do not fully measure or appropriate the (potential) benefits of the outputs they produce and consequently do not accurately represent actual social demand for the infrastructure resource. Instead, for public and social infrastructure, demand generated by competitive output markets will tend to reflect the individual benefits realized by a particular user and not take into account positive externalities.³² Difficulties in measuring and appropriating value generated in output markets translates into a valuation/measurement problem for infrastructure suppliers, who will not fully take into account or provide the services for the broader set of social benefits attributable to downstream producers of public or non-market goods.

Consider the Internet, for example. Common nondiscriminatory access to the Internet infrastructure facilitates widespread end-user participation in a variety of socially valuable

dialogue or education affect societal conditions. *See generally* Frischmann, *An Economic Theory of Infrastructure and Commons Management*, *supra* note 2, at 964-67.

³² In contrast with network effects, infrastructure effects do not necessarily increase users' willingness to pay for access to the infrastructure resource. A user's willingness to pay for access to the infrastructure resource is limited to the benefits that can be obtained by the user, which depends upon the nature of the outputs produced, the extent to which such outputs generate positive externalities, and the manner in which those externalities are distributed. Infrastructure effects resemble indirect network effects in the sense that a larger number (or a wider variance) of applications may lead to an increase in consumers' valuation of the infrastructure or network, but the externalities generated by public and social infrastructure are even more indirect in that they are diffuse, derived from public and non-market goods, and not simply a function of increased availability of desired end-users or end-uses. Further, the externalities generated by public and social infrastructure often positively affect the utility of non-users, that is, members of society that are not using the infrastructure itself. In a sense, the positive externalities generated by the outputs are closely connected to the nature of the outputs and only loosely connected to the complementary relationship between the infrastructure and the output. This is important because the prospect of infrastructure suppliers internalizing complementary externalities is much less likely, making the possibility of a demand-side market failure much more likely. *See generally* Frischmann, *An Economic Theory of Infrastructure and Commons Management*, *supra* note 2, at 970-74.

productive activities.

End-users ... engage in innovation and creation; they speak about anything and everything; they maintain family connections and friendships; they debate, comment, and engage in political and nonpolitical discourse; they meet new people; they search, research, learn, and educate; and they build and sustain communities. . . . These are the types of productive activities that generate substantial social value, value that too easily evades observation or consideration within conventional economic transactions. When engaged in these activities, ... end-users interact with each other to build, develop, produce, and distribute public and nonmarket goods. . . . [P]articipation in such activities results in external benefits that accrue to society as a whole (online and offline) [and] are not captured or necessarily even appreciated by the participants.³³

Shifting to a system where access to and use of the Internet are allocated and prioritized according to downstream users' willingness and ability to pay—which is the basic objective of network discrimination—preferences certain end-user activities (i.e., those that generate observable and appropriable benefits) over others (i.e., those that generate spillovers).³⁴ As we noted earlier, this issue of how to allocate access to Internet infrastructure is the very heart of the debate over network neutrality.

As our typology shows, however, the issue of open access to infrastructure is “ubiquitous.”³⁵

³³ Frischmann, *supra* note 2, at 1017 (footnotes omitted). For further discussion of such activities and the manner in which value is generated, see *id.*

³⁴ We recognize that network owners have the incentive to let some spillovers flow so as to increase the net value of their platform and encourage innovation in complementary markets for goods and services. See Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85 (2004). But there are limits to this. See *id.*; Barbara Van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. ON TELECOMM. & HIGH TECH. L. (forthcoming 2007), available at <http://ssrn.com/abstract=812991>; Frischmann, *An Economic Theory of Infrastructure and Commons Management*, *supra* note 2, at 970-74; Brett Frischmann & Barbara van Schewick, *Yoo's Frame and What it Ignores: Network Neutrality and The Economics of an Information Superhighway*, Working Paper (2006).

³⁵ We are not the first to notice the ubiquity of the open access debate. See Farrell & Weiser, *supra* note 30, at 88 (“The open access question is even more ubiquitous than it may first appear, as policymakers and commentators often use

Not surprisingly, the issue arises in antitrust law as well, most commonly in the form of the essential facilities doctrine.

B. *The Case for Open Access to Infrastructure*

The case for open access must be evaluated carefully and contextually. Broad prescriptions are not easily derived. This section briefly sets forth the economic arguments for managing these different types of infrastructure in an openly accessible manner.

For commercial infrastructure, downstream producers of private goods accurately manifest demand for infrastructure because consumers realize the full value of the goods (*i.e.*, there are no positive externalities) and are willing to pay for such benefits. Accordingly, from the demand-side, there is less reason to believe that government intervention into markets is necessary, absent anticompetitive behavior.

For public or social infrastructure, the case for open access becomes stronger for a few reasons. First, output producers are less likely to accurately manifest demand due to information/appropriation problems. It is difficult for these producers to measure the value created by the public good or non-market good outputs; producers of such outputs are not able to appropriate the full value because consumers are not willing to pay for the full value (due to positive externalities); and such producers' willingness to pay for access to the input likely will be less than the amount that would maximize social welfare.

The social costs of restricting access to public or social infrastructure can be significant and

different terms to describe the issue. Antitrust commentators discuss the 'primary' (or 'bottleneck') market and the 'secondary' (or 'complementary') market. In telecommunications, participants talk of 'conduits' and 'content.'").

yet evade observation or consideration within conventional economic transactions. Initially, we may analyze the issue as one of high transaction costs and imperfect information. Yet, even with perfect information and low/no transaction costs with respect to input suppliers and input buyers, input buyers would still not accurately represent social demand because it is the benefits generated by the relevant outputs that escape observation and appropriation. To the extent that infrastructure resources can be optimized for particular applications, which is often the case, there is a risk that infrastructure suppliers will favor existing or expected applications. Moreover, there is a significant risk that infrastructure suppliers will favor applications that generate appropriable benefits at the expense of applications that generate positive externalities.

Economists recognize that there is a case for subsidizing public and non-market goods producers because such goods are undersupplied by the market. The effectiveness of directly subsidizing such producers will vary, however, based on the capacity for subsidy mechanisms to identify and direct funds to worthy recipients.

In some cases, open access to infrastructure may be a more efficient, albeit blunt, means for supporting such activities than targeted subsidies. Open access eliminates the need to rely on either the market or the government to “pick winners” (or uses worthy of access). On one hand, the market picks winners according to the amount of appropriable value generated by outputs and consequently output producers’ willingness to pay for access to the infrastructure. On the other hand, to subsidize production of public goods or non-market goods downstream, the government needs to pick winners by assessing social demand for such goods (based on the social value they create). The inefficiencies, information problems, and transaction costs associated with picking winners under

either system may justify managing public and social infrastructure resources in an openly accessible manner.

C. *Two roles for essential facilities doctrine*

We see two roles for the essential facilities doctrine with respect to infrastructure. First, when dealing with pure commercial infrastructure—that is, infrastructure resources primarily used to produce private goods, the doctrine should play a very narrow, cautious role and only mandate nondiscriminatory access on clear satisfaction of the grounds articulated in *MCI*. Second, when dealing with mixed infrastructure—that is, infrastructure with the potential to support productive activities that yield private, public and nonmarket goods, the doctrine should play potentially a larger role because the case for nondiscriminatory access is greater than for pure commercial infrastructure.

1. Commercial infrastructure

For pure commercial infrastructure, basic economic theory predicts that (1) *competitive* output markets should work well and effectively create demand information for the input; (2) market actors (input suppliers) will process this information; and (3) satisfy the demand efficiently. Simply put, for commercial infrastructure, output producers should fully appropriate the benefits of the outputs (via sales to consumers) and thus should accurately manifest demand for the required inputs in upstream markets. Therefore, with respect to demand for commercial infrastructure, the key is maintaining competition in the output markets, where producers are competing to produce and supply private goods to consumers. Competition is the linchpin in this context because the consumptive demands of the public can best be assessed and satisfied by competitive markets.

For pure commercial infrastructure,³⁶ traditional antitrust principles provide a sufficient basis for determining whether open access is desirable. The essential facilities doctrine and related refusal to deal doctrines still play an important role in the antitrust framework where pure commercial infrastructures are at stake. However, under our theory, the essential facilities doctrine would operate slightly differently than its current contours.³⁷ In fact, liability might be less broad than its current contours for pure commercial infrastructure because access would not lead to the massive and hard to measure spillovers that make access desirable in the first place. Thus, access to sports stadiums and convention bureaus may not be the best application since the demand side justification for the doctrine is largely absent.³⁸ At the same time, an infrastructure theory of essential facilities would expand access (and potential liability) to infrastructural products, platforms, networks, and processes that support significant downstream positive externalities.

2. Public, social, and mixed infrastructure

Public, social, and mixed infrastructures are critical to the fabric of our society. We tend to take for granted many of these foundational resources and fail to recognize the array of mixed infrastructure that are truly essential to our economic and social systems. As a result, a far greater number and type of infrastructural assets should be considered more than purely commercial in nature. As a result, access to such assets is more likely to generate the kind of hard to measure

³⁶ We should emphasize that “pure” infrastructure are the exception, rather than the rule. Most infrastructure resources are mixed.

³⁷ We would require strong supply side reasons to justify mandating access. The *MCI* test reflects the relevant supply side considerations, such as the lack of alternative means of supply.

³⁸ Compare *Fishman v. Estate of Wirtz*, 807 F.2d 520, 539 (7th Cir. 1986) (access to publicly subsidized sports stadium) with *Hart Productions, Inc. v. Greater Cincinnati Convention & Visitors Bureau*, 1990-2 Trade Cas. (CCH) ¶ 69,233 (S. D. Ohio 1990).

spillovers that justify a somewhat more expansive use of the essential facilities doctrine.

These types of infrastructure contribute to more than just commercial goods which are often best provided by markets—these infrastructures also contribute to social and public goods. This means there are significant “non-market” uses for the infrastructure that are not well reflected in demand for and willingness-to-pay for access to the infrastructure. Relying on market provisioning of these goods will result in under-consumption by public/non-market goods producers. Generally, attempts to directly subsidize these public/non-market goods producers are not appropriate because there are too many and the implications are too diverse. Open access, then, is a fix to ensure that willingness-to-pay is not used to allocate access to infrastructure. By disabling the capacity to exclude on the basis of market-value/willingness-to-pay, access to infrastructure is not biased against uses that produce public and social goods.

The essential facilities doctrine (and related refusal to deal doctrines) plays a critical role in ensuring nondiscriminatory access to public, social, and mixed infrastructures. We are not arguing for a broad essential facilities doctrine. Rather, we are providing a way to understand what makes nondiscriminatory access to certain facilities essential. Infrastructure theory helps us identify when facilities are “affected with the public interest,”³⁹ and thus optimal candidates for open access via essential facilities or other related doctrines, such as common carriage.⁴⁰ We believe that this theory strengthens the case where the traditional factors are present. That is, the traditional test for essential facilities should remain in place, but we should generally feel more comfortable with its

³⁹ See generally Walton H. Hamilton, *Affection with Public Interest*, 39 YALE L.J. 1089, 1100-01 (1930).

application to mixed infrastructure.

Changing the focus from a textual analysis of the “essentialness” of the facility in question to an economic analysis of its role as infrastructure, as we have defined it, does two important things. First, it better captures the essence of what the case law has been doing for nearly one hundred years. The law basically gets it right that phone networks, pipelines, electrical power grids, networks for the production and dissemination of news, and transportation networks require some form of non-discriminatory access and support the imposition of antitrust liability when the denial of access creates or maintains a monopoly at one of the stages of production.

Second, our theory responds to the critics who contend that there can be no theoretical basis for the doctrine. We agree that judges and antitrust enforcers should do more than a seat of the pants analysis of whether the defendant controls something that is “essential.” Refocusing the inquiry on the issue of the presence of infrastructure and the question of downstream externalities may be difficult in particular cases, but is a veritable Occam’s Razor compared to the current formulations and the criticisms they have engendered.

IV. THE ESSENTIAL FACILITIES DOCTRINE AND INFRASTRUCTURE

It is our goal to restore the essential facilities doctrine to its important, but limited place, in helping to police access to those types of infrastructural assets which require open access in order to create the massive positive externalities that benefit society as a whole. The essential facilities

⁴⁰ See RICHARD A. EPSTEIN, PRINCIPLES FOR A FREE SOCIETY: RECONCILING INDIVIDUAL LIBERTY WITH THE COMMON GOOD 279-318 (1998) (detailing the history of common carrier regulation).

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doctrine works best as a theory of monopolization when dealing with infrastructure, in the sense that the facility in question is an input which creates such substantial downstream positive externalities that a regime of open access is socially desirable.⁴¹ As one of the authors has previously noted, this can include traditional commercial infrastructure such as bridges, roads, ports, etc but also other foundational resources such as ideas and the Internet.⁴² If the firm controlling the essential infrastructure is not a competitor to those seeking access, certain duties to deal have been imposed since common law times under the common carrier doctrine.⁴³ If the firm controlling the essential infrastructure is a competitor of those seeking access and uses that control to maintain its dominance, then, and only then, has the essential facility doctrine come into play as an antitrust concept. Both the Clinton FTC and the Bush Justice Department have recognized this notion and included provisions in key consent decrees requiring such dominant firms as AOL/Time Warner and Microsoft to provide equal access to upstream competitors in these situations.

Most antitrust cases with any merit that have invoked the essential facilities doctrine have dealt with some aspect of infrastructure. These include the cases dismissed by *Trinko* as partaking on Section 1 principles rather than Section 2. But the only railroad bridge across the Mississippi,⁴⁴ the network of newspapers comprising the Associated Press around the time of World War II,⁴⁵ the

⁴¹ For a more complete discussion of infrastructure theory in these terms see Frischmann, *supra* note 2, and Lawrence Lessig, *Reply: Re-Marking the Progress in Frischmann*, 89 MINN. L. REV. 1031 (2005).

⁴² Frischmann, *supra* note 2, at 960.

⁴³ EPSTEIN, *supra* note 35, at 279-318. If the owner of the facility is not a competitor of the entity seeking access no antitrust liability has been imposed for the denial of access regardless of whether the facility is essential. See I AMERICAN BAR ASSOCIATION, ANTITRUST LAW DEVELOPMENTS 278 n. 278 (5th ed. 2002) (collecting cases).

⁴⁴ *United States v. Terminal Railroad Ass'n of St Louis*, 224 U.S. 383 (1912).

⁴⁵ *Associated Press v. United States*, 326 U.S. 1 (1945).

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local phone loop controlled by MCI (and Verizon),⁴⁶ the transmission lines controlled by Otter Tail Power,⁴⁷ and under extraordinary circumstances intellectual property rights,⁴⁸ all nicely fall into this notion of infrastructure in both the technical sense we use and in the colloquial every day sense of the word. Interestingly enough, it is *Aspen* (not *Trinko*) that is the hardest to justify in these terms.⁴⁹

The vast majority of infrastructural assets for which open access would be socially valuable are neither wholly regulated (presumably immune under the regulatory statute in question) nor fully deregulated (for which *Trinko* may concede some application of the essential facility for discriminatory denials by a competing monopolist). If anything, the Supreme Court has it precisely backwards. Moreover, it is hard to find any truly unregulated facility which is “essential” in the sense required by *MCI* and its progeny. Even the handful of cases treating sports stadiums as essential facilities may be better explained by virtue of the heavy public subsidization of such facilities making such facilities impossible to duplicate with purely private resources.⁵⁰ As a result, the courts have dismissed without much ado most essential facilities cases of the purely unregulated unsubsidized type on the grounds that the plaintiff could create their own alternative facility to the dominant firms.⁵¹

⁴⁶ *MCI Communications Corp. v. American Telephone & Telegraph Co.*, 708 F. 2d 1081, 1132-33 (7TH Cir.), *cert. denied*, 464 U.S. 891 (1983).

⁴⁷ *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

⁴⁸ *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG* (C418/01) [2004] E.C.R. I-5039 (ECJ); *Radio Telefis Eireann v. Commission of the European Communities* (C241/91 P) [1995] E.C.R. I-743 (ECJ).

⁴⁹ It is also additional support for Professor Fox’s conclusion in a recent article that *Trinko* is much easier and better case to impose Section 2 liability than *Aspen* itself. See Eleanor M. Fox, *If There Life in Aspen after Trinko? The Silent Revolution in Section 2 of the Sherman Act*, 73 ANTITRUST L.J. 153 (2005).

⁵⁰ HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 247 (2005).

⁵¹ *Twin Lab., Inc. v. Weider Health & Fitness*, 900 F. 2d 566 (2d Cir. 1990); *McKenzie v. Mercy Hospital*, 854 F.2d 365

Most of the good essential facility cases occur in the twilight zone of partial regulation which *Trinko* appears to have cast into the legal abyss. Take *MCI v. AT&T* which is generally credited with as the source of the modern version of the doctrine. In *MCI*, the defendant AT&T continued as the regulated monopolist of local telephone service but now confronted competition in the long distance market. AT&T denied MCI access to the local telephone system which was necessary to complete the long distance calls over MCI's microwave network. MCI was physically, legally, and practically prevented from building its own local telephone system. AT&T claimed it could not interconnect with MCI because of existing regulatory restrictions and also because of technological and system integrity concerns. The courts found all of these purported justifications to be legally or factually insufficient, and frequently pretextual, and imposed Section 2 liability in substantial part on this ground.⁵² The handful of verdicts imposing liability under this theory have similarly concerned dominant firms resisting deregulation or misusing partial deregulation in a way that the *Microsoft* court would probably characterize as unlawful monopoly maintenance but *Trinko* appears to consider good clean fun.⁵³

Trinko's own discussion of the essential facilities doctrine does not lead to the result it claims. *Trinko* states that "essential facility claims should ... be denied where a state or federal

(10th Cir. 1988); Case C-7/97 Oscar Bronner GmbH KG v. Mediaprint [1998] E.C.R. I-7791; [1999] 4 C.M.L.R. 112.

⁵² The court also affirmed liability based on the sham litigation doctrine, but reversed portions of the judgment based on predatory pricing claims, and remanded for a new trial on damages based solely on that conduct found to be unlawful. 708 F.2d at 1166-69. The case subsequently settled for a fraction of the original verdict.

⁵³ United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir.), cert. denied, 534 U.S. 952 (2001). See Spencer Weber Waller, *Microsoft and Trinko: A Tale of Two Courts*, 2006 UTAH L. REV. xxx (forthcoming 2006).

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agency has effective power to compel sharing and to regulate its scope and terms.”⁵⁴ The discussion that follows hardly suggests that there was effective power in this particular case. For its actions, Verizon was subject to fines totaling \$13 million and various reporting obligations. There was (and could not be at this early procedural stage of the case) no discussion of whether this was “effective” in forcing Verizon to live up to its obligations under state and federal telecommunications law. There is every indication that it was not. Verizon was prepared to incur litigation expenses far in excess of this modest fine to avoid the one set of penalties that actually would be effective in mandating non-discriminatory access.

Let’s turn the question on its head for a moment. Putting aside antitrust, do Justice Scalia and the rest of the *Trinko* majority actually think that FCC regulation implementing the 1996 Telecommunications Act is “effective” in any normal sense of the word? Neither Congress nor most commentators think so.⁵⁵ There is nothing in the numerous past opinions of the Supreme Court on recent telecommunications issues that shows a great deal of faith in the 1996 Telecom Act, FCC regulation, or even regulation in general.

A viable essential facilities doctrine of necessity exists in the vast economic canyon between fully competitive markets and fully regulated ones. Fully regulated markets come with extensive regulatory oversight and accompanying antitrust immunities. Fully deregulated competitive markets

⁵⁴ 540 U.S. at 411, *citing* P. AREEDA & H. HOVENKAMP, *ANTITRUST LAW* p. 150 ¶ 773e (2003 Supp.).

⁵⁵ See Spencer Weber Waller, *Microsoft and Trinko: A Tale of Two Courts*, 2006 UTAH L. REV. xxx (forthcoming 2006); Michael A. Carrier, *Of Trinko, Tea Leaves, and Intellectual Property*, 31 J. CORP. L. 357, 369-70 (2006); Adam Cadeub, *Trinko and Regrounding the Refusal to Deal Doctrine*, 66 U. PITT. L. REV. 821 (2005); Andrew Gavil, *Exclusionary Distribution Strategies by Dominant Firms: Striking a Better Balance*, 72 ANTITRUST L.J. 3, 56 (2004) (criticizing dismissal of *Trinko* at pleadings stage); Philip Weiser, *The Relationship Between Antitrust and Regulation in a*

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rarely raise the issues of denial of access in the first place. Antitrust has never been particularly clever at dealing with the real world problems of the complicated twilight zone in between which grows ever larger in the continuing deregulatory era in which we live. A properly focused essential facilities doctrine is one modest tool to fill that gap.

We recognize that in some ways a judicially enforced essential facilities doctrine may be a second best solution to a comprehensive well thought-out general social policy regarding open access. However, such a general social policy is unlikely to emerge for several reasons. First, Congress is unlikely to ever tackle open access questions as a general category. This is simply not the way legislation emerges. Rather discrete examples of open access questions percolate up through the legislative process and are debated and acted upon in specific contexts – network neutrality and telecommunications regulation being recent examples. When regulatory structures are created to implement specific access regimes they rarely involve cross-disciplinary contact and learning. The federal structure of mixed state and federal regulation for many of these areas makes a consistent and comprehensive regulatory approach even more unlikely.

More importantly, we do not live in a regulatory age. Quite the opposite. Deregulation is the spirit of the age with most deregulatory impulses relying in part on competitive markets and the role of antitrust as a substitute for traditional regulation. This is frequently an improvement on traditional utility regulation but one cannot argue in good faith for both deregulation and the disabling of the courts from enforcing antitrust rules that were part of the argument for deregulation

Deregulatory Era, 50 ANTITRUST BULLETIN 549 (2005) (arguing for analysis of whether regulatory alternative would prevent anticompetitive behavior).

in the first place.

The very nature of courts as generalist institutions may be a strength and not a detriment in guaranteeing open access in appropriate cases. Judges (at least federal judges with life tenure) may have individual predilections and biases, but they are institutionally protected from the kind of concerns that have spawned the capture theory and public choice literature analyzing the tendency of legislatures and regulatory agencies to favor the interests of concentrated organized minorities with a great deal at stake over the more diffuse less intense interests of the general public, even if the unorganized masses hold a greater aggregate stake in a dispute. At the same time, they are less likely to be subject to the tyranny of the majority, an equally important consideration in institutional decision.

The question of the correct rule for requiring open access is partially intertwined with the question of which institution (legislatures, regulators, courts, elections, markets, or other social arrangements) should enforce the rule.⁵⁶ However, infrastructure theory can help whichever institution ends up being assigned the task of deciding questions of access and liability for refusals to grant access by dominant firms, the only setting which implicates competition policy.

⁵⁶ See *infra* Section VI.

V. WATCHING THE EUROPEAN UNION GET IT RIGHT

The European Union has in fact done a better job than the US in recognizing the importance of infrastructure theory in deciding questions of open access in its regulatory and competition policy.

The essential facilities doctrine has been adopted by both the European Commission and the Courts. It is one form of an abuse of a dominant position that is barred by Article 82 of the Treaty of European Union. It has been applied to a variety of infrastructure type settings and has proved particularly useful in conjunction with Article 86 of the EU Treaty, a provision unique to the EU applying the competition rules to public sector restraints.⁵⁷

In the easy cases, the European Commission and the courts have imposed liability (often using the essential facilities doctrine by name) when the operator of a port or harbor uses its control of that facility to discriminate against a competitor for ferry service or shipping services by denying access to needed berths.⁵⁸ The European court quite properly refused to require the leading newspaper in Austria to make its delivery network available to smaller competitor that was legally and practically speaking free to create its own network.⁵⁹ In the harder cases involving overly broad intellectual property rights, the court left open the possibility of liability in extraordinary

⁵⁷ In contrast, United States antitrust principles generally do not apply to restraints on competition imposed by federal, state or local governments. For arguments that the EU approach is superior see Spencer Weber Waller, *Bringing Globalism Home: Lessons from Antitrust and Beyond*, 32 LOY. U. CHI. L.J. 113, 118-124 (2000); Diane P. Wood, *United States Antitrust Law in the Global Market*, 1 IND. J. GLOBAL LEG. STUD. 409 (1994).

⁵⁸ *Sea Containers Ltd v. Stena Sealink Ports*, 1994 O.J. L 15/8 Port of Rodby, 1994 OJ L 55/52; *Eurotunnel*, 1994 OJ L 354/66. See generally II JAMES ATWOOD, KINGMAN BREWSTER, & SPENCER WEBER WALLER, ANTITRUST AND AMERICAN BUSINESS ABROAD §16.4 (1997 & annual supp.).

⁵⁹ Case C-7/97 *Oscar Bronner GmbH KG v. Mediaprint* [1998] E.C.R. I-7791; [1999] 4 C.M.L.R. 112.

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circumstances.⁶⁰ Here too, all the cases with any merit appear to fall into the zone of partial regulation where *Trinko*, if translated into holding and precedent, would eliminate. While the EU cases are often dry and undertheorized, they seem to instinctively understand the value of the essential facilities doctrine when applied to infrastructural assets, and have both applied the doctrine and refrained from doing so in a sensible administrable way, pointing a better way for the United States to reclaim a theory of liability that it pioneered yet has disdained more recently.

VI. IT'S JUST NOT THAT HARD

Professor Hovenkamp and other critics ultimately fall back on questions of administrability as the final reason for jettisoning the essential facilities doctrine. According to them, either Type I errors will overwhelm Type II errors and procompetitive behavior will be unduly deterred or the courts will be forced to act as a regulator setting price and other terms of access that they are ill equipped to do. Better then to do nothing and let the market correct what it can or defer to more expert regulators.

While this is a superficially appealing set of arguments, they ultimately are not persuasive. There is no reason to think that deciding the average essential facilities antitrust case is beyond the capacity of the average federal judge. For example, in *Trinko*, the basic question of whether Verizon was, or was not providing access to its competitors on terms less favorable than it did its own local customers is a straight forward question of discrimination amounting to roughly: Is X being treated less favorably than Y? Where are the Type I errors haunting the system? Where are the courts

⁶⁰ IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG (C418/01) [2004] E.C.R. I-5039 (ECJ).

acting as regulators beyond their institutional capacities under this doctrine?⁶¹

This is a basic binary type of verdict that federal and state courts decide on a daily basis in both statutory and common law cases of civil rights, employment discrimination, common carrier duties, licensing decisions, school segregation, prison conditions, access to health care, and numerous other areas of the law. These are a dime-a-dozen type of decisions that are a far cry of the polycentric multi-variate balancing type of cases that legal theory predict that courts are comparatively poorer at deciding.⁶² If one concludes the courts cannot handle this kind of dispute then most of the federal docket should be discarded in favor of some other institutional dispute resolution mechanism.⁶³

The courts have proved themselves quite adept at making these sorts of decisions in right to

⁶¹ The task of a court deciding an essential facilities case pales in comparison to courts administering complex consent decrees in the antitrust area including the government antitrust litigation against AT&T which resulted in a modified final judgment (“MFJ”) administered by Judge Harold Greene over a twelve year period which he functioned as a “one man Federal Telephony Commission.” STUART MINOR BENJAMIN, DOUGLAS GARY LICHTMAN & HOWARD A. SHELANISKI, TELECOMMUNICATIONS LAW AND POLICY 681 (2001); Jim Chen, *Titanic Telecommunications*, 25 Sw. U. L. REV. 535, 536 (1996)(MFJ defined the terms by which telecommunications law over the next twelve years). See generally PETER W. HUBER, MICHAEL K. KELLOGG & JOHN THORNE, FEDERAL TELECOMMUNICATIONS LAW 4.4.3.2-4.4.4 (2d. ed. 1999)(summarizing Judge Greene’s administration of the MFJ).

⁶² Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 394-404 (1978). Professor Fuller’s article was published posthumously. An unpublished version was in circulation as early as the 1950s and was included in the tentative 1958 edition of Hart & Sack’s THE LEGAL PROCESS, itself not officially published until the 1990s.

⁶³ NEIL K. KOMESAR, LAW’S LIMIT: THE ROLE OF COURTS, THE RULE OF LAW AND THE SUPPLY AND DEMAND OF RIGHTS (2001); NEIL K. KOMESAR, IMPERFECT ALTERNATIVES: CHOOSING INSTITUTIONS IN LAW, ECONOMICS, AND PUBLIC POLICY (1994). Professor Komesar’s theory of comparative institutional analysis examines the effect of large numbers of affected persons and complexity on the ability of courts, markets, political processes, and informal communities to decide issues free from either majoritarian or minoritarian biases. His central insight that all of these institutions degrade as decision makers as numbers and complexity grows requiring difficult choices among less than perfect alternatives, rather than merely as analysis of the supposed flaws of any one decision making institution.

Our argument is not that Professor Komesar’s analysis necessarily points toward a hard and fast assignment of essential facilities disputes to the judiciary, but rather that essential facilities cases are similar enough to a broad class of disputes routinely assigned to the courts and the case has not been made that either the market or the political process is in any way superior to the judiciary handling such disputes. Moreover, reassigning this broad category of claims of less favorable treatment away from the courts would be socially and politically intolerable.

access antitrust cases, whether called essential facilities cases or not. The *Trinko* court acknowledged that the courts have adequately handled such disputes under the rubric of Section 1 of the Sherman Act.⁶⁴ When the essential facilities doctrine has been explicitly used by the lower courts, they have been equally adept at sorting out the meritorious cases from the frivolous cases where a competitor could reasonably duplicate the facility in question but simply preferred not to go to the trouble and expense. For example *MCI* distinguished between access to intra-city networks and inter-city networks in which MCI was free to build its own facilities and was not given access to AT&T's existing competitive facilities.⁶⁵ The quick rejection of most essential facilities claims at the pleading or summary judgment stage suggests, if anything, that the courts are doing just fine at separating the wheat from the chaff in this area. What *Trinko* did is hold that, in most circumstances, federal courts will never even get the chance to do what they have been doing quite well for decades because of a theoretical concern for false positives in the context of a case that did not even raise a credible fear of such an outcome.

Trinko further instructs us to be wary of adjudicating liability where no adequate remedy can be implemented by the courts. This is a fair concern, but again one for which the courts have proved up to the challenge. It is also not clear whether *Trinko* itself raised any serious concern in this regard, certainly not in its request for damages. *MCI* and *Aspen* were also routine damage cases, albeit treble damage ones because of the antitrust claims involved.

The mere fact that an injunction may be involved doesn't change the picture. Most essential

⁶⁴ 540 U.S. at 410 n.3.

⁶⁵ 708 F.2d at 1147-50.

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facilities cases involve a defendant who either favors one competitor over another or provides more favorable access to its upstream or downstream affiliate than it does for its competitor. The injunctive remedy is a straightforward injunction to provide non-discriminatory access.⁶⁶

In most cases, the court does not have to formulate the terms of access. They already exist, either by reason of some regulatory decree by the appropriate government agency or the existing internal standards of the vertically integrated monopolist. The question for the courts is not whether the access standards are correct in some cosmic sense. It is rather whether the competitor is being treated less favorably or unlawfully denied access at all. This may or may not be a complicated fact question, but it is by no means beyond the skill set of the average jury or federal court to formulate jury instructions and ensure that the verdict is supported by the record.⁶⁷ Just imagine the outcry if *Trinko's* logic was imported to justify abstention by the federal courts from adjudicating racial or employment discrimination cases because of a fear of false positives and a need to defer to other enforcement regimes.

One can imagine where problems at the remedy stage in antitrust or other kinds of cases are so massive that a court might be reluctant to adjudicate liability, but it is by no means clear that it

⁶⁶ 540 U.S. at 410 n.3.

⁶⁷ What appears to really underlie much of the critique here is a discomfort with juries deciding complex economic questions. HOVENKAMP, *THE ANTITRUST ENTERPRISE*, *supra* note 16, at 61-63, 7-91, 307-08. While this too is debatable, such criticism is really a separate argument and foreclosed for the time being by precedent. *Berkey Photo, Inc. v. Eastman Kodak*, 444 U.S. 1093 (1980) (Justices Rehnquist & Powell dissenting from the denial of certiorari) (“Kodak is entitled as a matter of constitutional right under the Seventh Amendment to demand a jury trial in a case such as this...”); *In re Financial Securities Litigation*, 609 F.2d 411, 432 (9th Cir. 1979), *cert. denied*, 446 U.S. 929 (1980) (rejecting complexity exception to Seventh Amendment). If the real objection is one of jury, rather than judicial competence, then one intermediate solution would be to characterize the question of the existence of an essential facility as a question of law or a mixed question of law and fact and assigning it to the judge. See generally Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 *NW. U. L. REV.* 1769 (2003).

has a right to refrain from doing so. In such a worse case scenario, the court could issue a declaratory judgment or a decision on liability and leave the decision as to remedy for another day.⁶⁸

In the alternative, the court could proceed to a verdict, and, if the plaintiff prevailed, require a series of alternative dispute resolution proceedings for the parties to craft acceptable private solutions.⁶⁹

The final remedy would, of course, be a contempt proceeding, as is the case with any defendant who has willfully violated the terms of an injunction. The history of contempt proceedings in general and in antitrust, including the *Microsoft* litigation, suggests that this is a high hurdle rarely attempted and even less frequently imposed by the court.⁷⁰ Here, the high standard of proof inherently protects a defendant and society at large from Type I errors and would be limited to only the most drastic, and provable, situations that fall within the historic powers of the judicial system.

If traditional regulation is needed in a particular case, then let the regulators regulate. What is needed is creativity. Even the late Professor Areeda, generally a critic of the essential facilities doctrine, conceded that “remedies may be practical ... when a regulatory agency already exist to control the terms of dealing.”⁷¹ For example, Phillip Weiser has suggested that if a federal court

⁶⁸ This is precisely what the Second Circuit did in *Alcoa*. 148 F.2d at 445-48.

⁶⁹ While hardly ideal, even the private monitoring structure in the Microsoft consent decree and numerous consent decrees in the merger area impose relief far more regulatory in nature than the relief sought by the *Trinko* plaintiffs or in the typical essential facilities case. See Andrew Gavil & Harry First, *Re(framing) Windows: The Durable Meaning of the Microsoft Litigation*, 2006 UTAH L. REV. xx (forthcoming) for description of technical compliance process.

⁷⁰ *United States v. Microsoft Corp.*, 147 F.3d 935 (D.C. Cir. 1998)(granting writ of mandamus dissolving injunction and appointment of special master arising out of alternative remedy following denial of contempt citation for alleged violation of antitrust consent decree).

⁷¹ Areeda, *Essential Facilities*, *supra* note 17, at 853.

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needs resources and expertise beyond its capabilities it should enlist state and federal regulators as special masters to implement judicial decrees.⁷² The branches of government are separate but not hermetically sealed. Critics and the *Trinko* Court may prefer to defer to the market, but fail to make the case that their ideological preferences reflects the general case rather than the special case, that their solution in fact minimizes Type I rather than Type II errors, and that other solutions cannot bridge the gap when it is truly hopeless for a court to proceed from an institutional perspective with what would otherwise be a meritorious antitrust case.

VIII. CONCLUSION: RELYING ON ANTITRUST TO GET IT RIGHT

In our introduction, we noted that the debate over the merits of private control over various types of resources is ongoing in many different areas of the law, from intellectual property to communications law. Many of these areas depend heavily upon antitrust law to regulate and sustain competition in the relevant industries. That is, competitive markets are a foundational component or input into the systems that these other areas of the law regulate.⁷³

A common refrain in these debates is that government regulation is unnecessary to ensure desirable public access to infrastructural resources because either (i) private parties will provide such access voluntarily because it will be in their interest to do so (on a theory that infrastructure providers will recognize when open access increases the social value of their infrastructure and will

⁷² Philip J. Weiser, *The Relationship of Antitrust and Regulation in a Deregulatory Era*, 50 ANTITRUST BULL. 549 (2005); Philip J. Weiser, *Goldwasser, The Telecom Act, and Reflections on Antitrust Remedies*, 55 ADMIN. L. REV. 1 (2003).

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attempt to internalize complementary efficiencies)⁷⁴ or (ii) antitrust law will provide a sufficient means for regulating the exclusionary conduct of infrastructure providers. Both of these justifications are raised frequently in the network neutrality debate, for example.⁷⁵ Putting aside the first justification, which is of some but nonetheless limited utility, we believe the frequent reliance on the second justification makes it even more important that antitrust law get it right.

Revitalizing the essential facilities doctrine is more than just preventing well meaning critics from throwing out the baby with the bath water or preventing more self-interested parties from jettisoning another legal barrier to anticompetitive rent seeking barriers.⁷⁶ We offer instead an economically based model that suggests that for certain carefully defined types of infrastructure, society as a whole benefits from a regime of open access. Our theory would both expand and contract the traditional essential facilities doctrine in antitrust law. But more importantly, it would reconnect the more narrow debates in antitrust to a broader set of debates about the nature of property and open access and provide for a regime that better mediates the tension between two very different visions for law and society.

⁷³ For example, intellectual property laws strike a balance between access and exclusion with significant reliance on the premise that competitive markets are the baseline from which some deviation is needed.

⁷⁴ See Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85 (2004).

⁷⁵ See, e.g., Christopher Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1 (2005); see also Robert D. Atkinson and Philip J. Weiser, *A 'Third Way' on Network Neutrality*, Information Technology and Innovation Foundation, at <http://www.innovationpolicy.org/pdf/netneutrality.pdf>; (calling for the FCC to police exclusionary conduct by networks through an antitrust-like approach); Philip J. Weiser, *Toward A Next Generation Regulatory Regime*, 35 LOY. U. CHI. L.J. 41 (2003) (same).

⁷⁶ See e.g. John Thorne, *A Categorical Rule Limiting Section 2 of the Sherman Act*, 72 U. CHI. L. REV. 289 (2005) (Deputy General Counsel of Verizon applauding result in *Trinko* litigation).