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IN REM JURISDICTION IN CYBERSPACE

Thomas R. Lee*

Abstract: "Cyberpirates" incorporating variations on famous trademarks in Internet domain names often attempt to insulate themselves from service of process by providing false and incomplete information in registration materials. Holders of prominent trademarks are often left without an effective remedy because of the logistical difficulty of identifying cyberpirates and personally serving a multitude of complaints in far-flung jurisdictions. This Article examines a potential solution to the problem, whereby the trademark holder files an in rem action against the Internet domain names themselves on the theory that domain names incorporating their famous trademarks violate the Lanham Act and are subject to cancellation and transfer to the trademark owner. Recently, however, a federal court dismissed one such in rem complaint for lack of personal jurisdiction, citing statutory and constitutional concerns. This Article examines the propriety of the in rem solution to the problem of cyberpiracy. After tracing the Supreme Court's treatment of in rem jurisdiction from Pennoyer v. Neff through Shaffer v. Heitner and to the present, the Article carefully examines the statutory and constitutional issues presented by this novel application of a longstanding procedural mechanism. Specifically, this Article examines the constitutionality of in rem jurisdiction after Shaffer and evaluates the question of where a domain name may be deemed to have its "situs" for jurisdictional purposes.

"With the rapid explosion of Web sites hawking everything from pornography to Bibles, competition for the attention of the world's estimated 147 million Web users is fierce. Site creators spare no strategy to get noticed—and trading on famous names, which are queried relentlessly by Web surfers, is a key one."¹

"Existing mechanisms for resolving conflicts between trademark owners and domain name holders are often viewed as expensive, cumbersome and ineffective. The sheer number of instances precludes many trademark owners from filing multiple suits in one or more national courts."²

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The Internet explosion of the 1990s has opened up a multitude of opportunities for enhanced communication and commerce. It also has introduced new problems. One such problem is the tension between the largely unregulated system of registering Internet domain names—the human-friendly textual addresses that permit Internet users to access Internet sites easily—and the highly regulated system that protects intellectual property rights. Because the value of a web site derives from its getting noticed, and because web surfers generally search by entering famous names, web sites are frequently established under domain names that incorporate variations on prominent trademarks and corporate names.

Existing legal mechanisms have been ineffective in resolving this problem for many reasons, including the inefficiency of filing multiple suits in numerous far-flung jurisdictions and the difficulty (sometimes the impossibility) of identifying and locating the domain-name holder for service of process. This Article analyzes this recent problem and proposes a novel application of an existing solution. If the infringing Internet domain names can be characterized as personal property within the control of a single court, the domain names themselves should be susceptible to being named as defendants in an *in rem* proceeding in that court. This proposal may provide a solution to trademark holders who otherwise might be left without a remedy because an *in rem* action may proceed without complying with the strict requirements of personal service of process that are associated with *in personam* actions.

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Part I of this Article offers background discussion on the nature of a domain name and on the dilemma faced by holders of famous trademarks whose marks are coopted by cyberpirates and incorporated into confusing domain names. Part II explains that two prominent trademark holders have filed in rem actions in response to this dilemma, naming allegedly infringing domain names as defendants; that section also explains why a recent district court decision granted a motion to dismiss on the ground that in rem decisions are not available under the Lanham Act. Part III offers background on the U.S. Supreme Court’s treatment of in rem proceedings, and Part IV analyzes the novel application of this longstanding procedural mechanism in the face of a number of objections that might be raised to it.

I. INTERNET DOMAIN NAMES: PROPERTY IN CYBERSPACE

"The Internet can be very simply described as a, or the, network of networks. That simple technical description, however, lacks the eloquence to speak of the profound ways in which the Internet is affecting the way in which we communicate with each other, the way we express ourselves, the way we learn, the way we do business and the way in which we interact culturally."

A. History and Logistics of Domain Names on the Internet

The “network of networks” began as the network of the U.S. Department of Defense (DoD). In the 1960s, DoD’s Advanced Research Projects Agency (DARPA) began funding research to develop communications networking and packet-switching technology that it used in establishing its


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own network, known as ARPANET. Subsequently, ARPANET was linked to networks established by various other government agencies, universities, and research facilities. At the heart of the burgeoning Internet was a list of numerical addresses—Internet Protocol (IP) numbers—assigned to each host participant, which enabled users to establish links with participating hosts.

DARPA managed ARPANET and the expanding network of hosts linked to it through the early 1980s. Although the Internet was used primarily for research purposes throughout this period, the task of maintaining a list of IP numbers eventually became onerous. In an effort to simplify the process of identifying the IP address of a participating host, DARPA and its contractors developed a Domain Name System (DNS), whereby a host would be assigned a “human-friendly address . . . in a form that is easy to remember or to identify” to correspond to the host’s IP number.

The DNS evolved into a domain name system composed of two domain levels: a top-level and a second-level domain. Top-level domains (TLDs) include generic TLDs (gTLDs) and country code TLDs (ccTLDs). Until recently, seven gTLDs were available: .com, .net, and .org, all of which are “open” gTLDs in that any person or entity may register names within them; and .int, .edu, .gov, and .mil, all of which are “restricted” gTLDs in that they are available for registration only to international, educational, governmental, and military entities. Hundreds of ccTLDs are available, each of which is composed of a two-letter country code derived from Standard 3166 of the International Organization for Standardization, such as .au for Australia, .br for Brazil, .ca for Canada, and .jp for Japan. Some

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8. See id. at 31,741; Hamilton, supra note 3, at 2.
10. See id.
11. WIPO Report, supra note 2, ¶ 4.
12. See id., ¶ 5; see also 63 Fed. Reg. at 31,742. For further discussion of the technical operation of the domain-name system, see generally Ellen Rony & Peter Rony, The Domain Name Handbook: High Stakes and Strategies in Cyberspace (1998).
13. See WIPO Report, supra note 2, ¶ 6. The .edu gTLD is restricted to four-year, degree-granting colleges and universities; .gov is restricted to agencies of the U.S. federal government; and .mil is restricted to the U.S. military. See id.
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ccTLDs are open; others are restricted, for example, to users domiciled within the particular country.\textsuperscript{15}

Second-level domains are the characters immediately to the left of the top-level domain. They commonly incorporate words, names, brands, or trademarks that are "easy to remember and to identify without the need to resort to the underlying IP numeric address."\textsuperscript{16} Domain names have acquired special importance as there is no satisfactory Internet equivalent to a telephone directory or directory assistance and Internet users can often guess at domain names.

The transition from ARPANET to the Internet explosion of the 1990s took an important turn in 1987, when IBM, MCI, and Merit—under an award from the National Science Foundation—developed NSFNET, a national high-speed network that "provided a 'backbone' to connect other networks serving more than 4,000 research and educational institutions throughout the country."\textsuperscript{17} A second turning point came in 1992, when the U.S. Congress authorized commercial activity on NSFNET,\textsuperscript{18} thus "facilitat[ing] connections between NSFNET and newly forming commercial network service providers" and "paving the way for today's Internet."\textsuperscript{19} The ensuing Internet explosion has been impressive. From 1990 to 1997, the number of Internet users grew from an estimated one million to about seventy million.\textsuperscript{20} From the period of 1993 to 1996, the number of Internet hosts in Europe increased by about 600%,\textsuperscript{21} while the growth in Africa and Asia was about 840%.\textsuperscript{22}

The explosive growth in Internet use created increasing demands on the management of the developing DNS after assuming responsibility for

\textsuperscript{15} See id.

\textsuperscript{16} Id. \S 10.

\textsuperscript{17} 63 Fed. Reg. at 31,742.


\textsuperscript{19} 63 Fed. Reg. at 31,742.


\textsuperscript{21} See Global Internet Project, supra note 20; WIPO Report, supra note 2, \S 2(l).

coordinating and funding the management of the nonmilitary portion of the Internet in 1991, NSF solicited proposals for the private provision of domain-name registration services.\textsuperscript{23} At the end of 1992, NSF entered into an agreement with Network Solutions, Inc. (NSI) of Herndon, Virginia, under which NSI agreed to manage the registration, coordination, and maintenance of the Internet domain-name system.\textsuperscript{24} Under its contract with NSF, NSI has registered gTLDs on a first-come, first-served basis, maintained a directory linking domain names with the IP numbers assigned to participating hosts, and maintained the authoritative database of Internet registrations.\textsuperscript{25}

Connectivity through the DNS is ensured by operation of a "root server" system composed of thirteen file servers containing extensive databases listing all domain names.\textsuperscript{26} Although the various file servers are maintained by different organizations, NSI operates and maintains the "A" root server, which "maintains the authoritative root database and replicates changes to the other root servers on a daily basis."\textsuperscript{27}

The process of registering a domain name through NSI is inexpensive, potentially anonymous, and virtually instantaneous. A registrant seeking to register a domain name under a gTLD may contact NSI via the Internet, execute an online Domain Name Registration Agreement, and secure registration of a domain name in a matter of seconds. NSI's Registration Agreement requires that the registrant provide the name of the organization or person using the domain name, an administrative contact, a technical contact, and a billing contact, and that the registrant provide the street

\begin{itemize}
\item \textsuperscript{23} See 63 Fed. Reg. at 31,742.
\item \textsuperscript{24} See id.
\item \textsuperscript{25} See id. Upon expiration of its contract with NSI, the Commerce Department entered into an agreement with the Internet Corporation for Assigned Names and Numbers (ICANN), a nonprofit entity formed by leading Internet companies, under which ICANN and Commerce would jointly design and develop procedures to transfer management of the domain-name system to the private sector and select new registrars to compete with NSI. See Rajiv Chandrasekaran, \textit{Commerce Threatens to Weaken NSI's Grip: Internet Address Manager Warned}, Wash. Post, July 10, 1999, at E1. Despite ICANN's entry on the scene, NSI's ongoing, central role in the domain-name system was assured by Commerce's agreement that NSI would retain control over key management functions such as the operation of the "A" root server or master database of domain names in the .com, .org, and .net domains. See id. Pursuant to ICANN's recommendations, five new registrars have been selected to compete with NSI and have begun to do so on a test basis; full-scale competition is on hold while Commerce and NSI negotiate over thorny issues such as the fee NSI may charge its rivals to manage addresses in the "A" root server. See id.
\item \textsuperscript{26} See 63 Fed. Reg. at 31,742.
\item \textsuperscript{27} Id.; see also Josh A. Goldfoot, Note, \textit{Antitrust Implications of Internet Administration}, 84 Va. L. Rev. 909, 915 (1998); Network Solutions, Inc., SEC Form S-1/A, at 10 (filed Sept. 25, 1997) (available at http://www.sec.gov/index.html).
\end{itemize}
address, phone number, fax number, and e-mail address for each such organization or person. 28 Although the Registration Agreement provides that the registrant “represents that . . . the registration of the selected Domain Name, to the best of the Registrant’s knowledge, does not interfere with or infringe upon the rights of any third party,” NSI permits the registration of domain names on a “first-come, first-served” basis, does not screen domain-name applications, and does not determine conflicting claims of rights to use a domain name that includes a trademark. 29 As a result, the number of domain-name registrations has skyrocketed under NSI’s watch. A recent calculation estimated that about 21,000 new domain names are registered every week. 30 Total domain-name registrations have increased from approximately 100,000 at the beginning of 1995 to over 7,000,000 at present. 31

The data overwhelmingly demonstrate that a domain name mirroring or including a corporate name or trademark is a valuable corporate asset in facilitating communication with a customer base.

As commercial activities have increased on the Internet, domain names have become part of the standard communication apparatus used by businesses to identify themselves, their products and their activities. Advertisements appearing in the media now routinely include a domain name address, along with other means of identification and communication, such as the corporate name, trademark and telephone and facsimile numbers. 32


30. See WIPO Report, supra note 2, ¶ 9.

31. See id. ¶¶ 9, 45.

32. Id. ¶ 10; see also MTV Networks v. Curry, 867 F. Supp. 202, 203 n.2 (S.D.N.Y. 1994) (explaining that “domain name mirroring a corporate name may be a valuable corporate asset, as it facilitates communication with a customer base”); David M. Kelly & Christina J. Hieber, Untangling a Web of Minimum Contacts: The Internet and Personal Jurisdiction in Trademark and Unfair Competition Cases, 87 Trademark Rep. 526, 541 (1997) (“Companies place great significance on the ability to use . . . logical identifiers [such as their corporate names or trademarks] because an Internet user who wishes to find information about a particular company or product on the Internet usually attempts to locate a web site by typing ‘www.[company name or trademark].com.’”).
B. Cybersquatting and Cyberpiracy

The current process of domain-name registration creates an environment that is hospitable to two main forms of abuse. "Cybersquatting" is the "deliberate, bad faith registration as domain names of well-known and other trademarks in the hope of being able to sell the domain names to the owners of those marks."[^33] High-profile squatting on domain names like MCDONALDS.COM and MTV.COM helped to spawn a cottage industry of cybersquatting.[^34] Newsday’s Joshua Quittner’s exposé on the failure of prominent corporations to register domain names incorporating prominent trademarks included his own registration of mcdonalds.com and his seeming invitation to further squatting in his article entitled *Billions Registered: Right Now, There Are No Rules to Keep You from Owning a Bitchin’ Corporate Name as Your Own Internet Address.*[^35] Quittner’s invitation was embraced by many adherents, including the infamous cybersquatter Dennis Toeppen, who registered DELTA AIRLINES.COM, EDDIEBAUER.COM, NEIMAN-MARCUS.COM, and more than two hundred other names incorporating famous and valuable trademarks.[^36] Although some early instances of cybersquatting were challenged in the courts, the relatively unrestricted registration system described by Quittner has largely continued, as most of the challenges ended in settlement and none produced clear precedents condemning the practice.[^37] By about mid-1996, however, a few courts began issuing rulings in favor of trademark holders, including a number of cases (such as Toeppen’s) in which the plaintiff asserted claims for dilution of a famous trademark under section 43(c) of the Lanham Act.[^38]

[^33]: NSI Service Agreement, supra note 28, ¶ 23.
[^35]: See Joshua Quittner, *Billions Registered: Right Now, There Are No Rules to Keep You from Owning a Bitchin’ Corporate Name as Your Own Internet Address*, Wired, Oct. 1994, at 54.
[^37]: See International Trademark Ass'n, *The Intersection of Trademarks and Domain Names—INTA "White Paper,"* 87 Trademark Rep. 668, 682 (1997) (noting that "Kaplan, MTV, Avon and other early cases were settled before substantive rulings by the courts on the infringement claims").
[^38]: See id.; see also Minnesota Mining & Mfg. Co. v. Taylor, 21 F. Supp. 2d 1003, 1005 (D. Minn. 1998) (granting preliminary injunction against defendant's use of POST-IT.COM, POST-ITS.COM, and IPOST-IT.COM, reasoning that such use would likely dilute plaintiff's "Post-it" mark); Cardservice Int'l, Inc. v. McGee, 950 F. Supp. 737, 743 (E.D. Va. 1997) (awarding fees to plaintiff when defendant violated preliminary injunction against use of any variation of "Cardservice" on Internet and ordering defendant to delete registration of "cardservice.com" domain name); Intermatic, 947 F. Supp. at 1239, 1241 (enjoining Toeppen's registration of INTERMATIC.COM and finding that because "Toeppen's
A second form of abuse is "cyberpiracy," the practice of registering domain names that incorporate variations on famous trademarks for the purpose of "taking unfair advantage of the reputation attached to those marks." Such abuse creates the risk that "consumers may be misled about the source of the product or service offered on the Internet," or at least that consumers may initially be lured to a web site by the famous-sounding domain name. As with cybersquatting, early cases of cyberpiracy went undetected or unrestricted by formal rulings in the courts. For example, Kaplan sued its main competitor Princeton Review for having registered "kaplan.com" as a link to a web site to advertise Princeton Review's own examination preparation services and to post disparaging comments about Kaplan. The case ended in a settlement after arbitration. Landmark precedents condemning piracy of this sort—particularly in cases where the defendant used a confusing domain name as a link to a web site posting pornographic or other offensive material—were not handed down until 1996.
Unfortunately, even the clear condemnation of cyberabuse by the federal courts has done little to put an end to the practice. One reason stems from the unsurprising fact that cyberpirates engaging in the above practices are reluctant to disclose their true identity and location.\textsuperscript{45} Because the registration process is completely automated, it facilitates the cyberpirates' goal of anonymity. In order to insulate themselves from liability and to interfere with service of legal process, many registrants provide fraudulent or fictitious names and/or addresses.\textsuperscript{46} Other registrants create offshore corporations to register domain names. Still others assign their domain names to unidentifiable entities after registering them.\textsuperscript{47}

For these and other reasons, the World Intellectual Property Organization (WIPO) has recognized that "[t]he absence of reliable and accurate contact details [about domain name registrants] leads to a situation in which . . . intellectual property rights can be infringed with impunity on a highly visible public medium."\textsuperscript{48} Indeed, WIPO has deemed traditional "mechanisms for resolving conflicts between trademark owners and domain name holders" to be "ineffective," precisely because of the "sheer number of instances" of infringement of trademarks by far-flung domain-name registrants intent on concealing their identities.\textsuperscript{49} Because such mechanisms generally presuppose an \textit{in personam} lawsuit initiated by personal service of process on the defendant,\textsuperscript{50} the holder of a prominent trademark that has

\begin{itemize}
\item injunction against registration of CANDYLAND.COM as domain name for web site offering explicit adult materials and finding plaintiff's dilution claim likely to succeed on merits).
\end{itemize}

\textsuperscript{45.} See Wipo Report, supra note 2, \texttrade; ii (noting that "the collection and availability of accurate and reliable contact details of domain name registrants is an essential tool for facilitating the protection of intellectual property rights on a borderless and otherwise anonymous medium," and that "[s]uch contact details provide the principal means by which intellectual property owners can go about the process of enforcing their rights"); id. \textsection 64 ("Without accurate and reliable contact details, the task of assigning responsibility for activities on the Internet is vastly complicated."); id. \textsection 322 ("The lack of reliable contact details often is highlighted as a major obstacle in the resolution of the problem.").

\textsuperscript{46.} See id. \textsection 322 (noting that trademark holders indicate that they "often do find that the registrant's information that is provided [to NSI] is completely unreliable") (quotation omitted).

\textsuperscript{47.} See infra notes 60–61 and accompanying text.


\textsuperscript{49.} WIPO Report, supra note 2, \textsection 131.

\textsuperscript{50.} See Fed. R. Civ. P. 4(e) (authorizing plaintiff to effect service on individual "pursuant to the law of the state in which the district court is located" or "by delivering a copy of the summons and of the complaint to the individual personally or by leaving copies thereof at the individual's dwelling house or usual place of abode with some person of suitable age and discretion then residing therein"); Fed. R. Civ. P. 4(b) (authorizing plaintiff to effect service on corporation or association "in the manner prescribed for individuals . . . or by delivering a copy of the summons and of the complaint to an officer [or other agent] authorized by appointment or by law to receive service of process").
been the recurrent target of cyberpirates may find itself without the logistics or resources to protect its intellectual property from such infringement. The forthcoming addition of new gTLDs in the DNS threatens to exacerbate the problem, as an increasing array of platforms is opened for the misappropriation of variations on famous trademarks. A possible solution is proposed and analyzed in the balance of this Article.

II. THE PORSCHE AND BELL ATLANTIC SUITS

Two holders of prominent trademarks recently have attempted to effect a novel solution to this problem. In early 1999, Porsche Cars North America, Inc. and Dr. Ing. h.c.F. Porsche AG (collectively, "Porsche") filed an action in rem against 128 domain names that incorporated variations on

51. As WIPO indicated in its Final Report:

The evidence shows that the experience of the last five years in gTLDs has led to numerous instances of abusive domain name registrations and, consequently, to consumer confusion and an undermining of public trust in the Internet. It has also led to the necessity for intellectual property owners to invest substantial human and financial resources in defending their interests. . . . In view of past experience, intellectual property owners are very apprehensive about the introduction of new gTLDs and the possible repetition in the new gTLDs of that experience.

WIPO Report, supra note 2, \(\text{x-xi}\).

52. A number of alternative solutions have been offered by various parties. WIPO, for one, has proposed that the domain-name registration agreement include a proviso that "the provision of inaccurate or unreliable information by the domain-name holder, or the failure to update information," shall constitute a material breach of the agreement and a basis for cancellation, id. \(\text{\textsuperscript{119}}\), and another requiring that the registrar cancel the registration upon independent verification of a third party's assertion that the registrant breached its obligation to provide or update its contact information. See id. \(\text{\textsuperscript{123}}\). The WIPO proposal may provide some relief to victims of cyberpiracy. But it is hardly a panacea. Indeed, WIPO's "proposal" breaks little new ground, as the current NSI registration agreement already provides that NSI may terminate a customer's right to use its services if the customer's registration agreement contains false or misleading information. See NSI Service Agreement, supra note 28, \(\text{\textsuperscript{119}}\).

Even if implementation of WIPO's more specific proposal results in more faithful, consistent cancellation of registrations issued under unreliable contact information, it still will not solve the problem faced by holders of famous trademarks. After all, WIPO declined to recommend a requirement that the contact information submitted by registrants include a street address instead of a post office box, on the theory that "a street address can be as easily misrepresented as a post office box" and that a "large number of small enterprises operate their businesses with the use of a post office box." WIPO Report, supra note 2, \(\text{\textsuperscript{68}}\). WIPO's arguments are probably accurate as far as they go, but they entirely miss the significance of a reliable street address as a predicate to initiating litigation by personal service of process. Thus, even if WIPO's recommendations are executed in a faithful and timely fashion by domain-name registrars, a cyberpirate may successfully avoid personal service of process by counterfeiting registration of a domain name, while at the same time avoiding cancellation by the registrar for submission of unreliable contact information, simply by providing an accurate post office box number to the registrar.
the registered trademarks "Porsche" and "Boxster" (collectively, the "Porsche Marks"), alleging that such domain names diluted the Porsche Marks in violation of section 43(c) of the Lanham Act\(^\text{53}\) (also known as the Trademark Dilution Act) and praying that the domain names be transferred or forfeited to Porsche.\(^\text{54}\) Pursuant to Porsche’s request, NSI deposited the registry certificates for the domain names into the registry of the court.\(^\text{55}\)

According to the allegations of its Verified Complaint, Porsche encountered all of the typical cyberabuse problems noted by WIPO. The domain name PORSCHEPARTS.COM was registered by a cybersquatter who unabashedly offered the name for sale under the following advertisement:

P.S. Don’t forget, even if you have a web site address in which you have built equity, the domain: www.porscheparts.com could be a referring page to your site. This would direct worldwide traffic to your site and could be extremely valuable to you. Also, even if you sell parts for other badges, this web address would increase your porche [sic] business.\(^\text{56}\)

The names PORSCHECAR.COM, PORSCHEGIRLS.COM, and PORSCHE.COM directed unwary net surfers to web sites that offered thousands of hardcore pornographic videos, live sex, and other materials.\(^\text{57}\) Similarly, the names ALLPORSCHE.COM and CALPORSCHE.COM were linked to web sites not affiliated, sponsored, or approved by Porsche that respectively sold parts and accessories for Porsche automobiles and sold used Porsche automobiles.\(^\text{58}\)

By proceeding against the infringing domain names directly, Porsche hoped to avoid the problems associated with pursuing numerous \textit{in personam} actions against defendants who would be difficult to identify, locate, and personally serve with process.\(^\text{59}\) According to the allegations of

\begin{itemize}
  \item \(^{53}\) 15 U.S.C. § 1125(c) (1994).
  \item \(^{54}\) See Verified Complaint ¶ 1, Porsche Cars N. Am., Inc. v. PORSCHE.COM, 51 F. Supp. 2d 707 (E.D. Va. 1999) (No. Civ. A. 99-0006-A) [hereinafter Verified Complaint].
  \item \(^{55}\) See Interview with Gregory D. Phillips, Outside Trademark Counsel for Porsche Cars N. Am., Inc., in Salt Lake City, Utah (Mar. 22, 1999).
  \item \(^{56}\) Verified Complaint, \textit{supra} note 54, ¶ 22.
  \item \(^{57}\) See \textit{id.} ¶ 40.
  \item \(^{58}\) See \textit{id.} ¶¶ 44, 50.
  \item \(^{59}\) The magnitude of Porsche’s dilemma has only expanded since it filed its initial complaint. Although Porsche initially named 128 domain names that incorporated some variation on its trademarks, the current list of cyberpirates includes more than 300 such domain names. See \textit{Hearing on}
Porsche's Verified Complaint, some of the domain-name defendants (PORSCHE944.COM, PORSCHE993.COM, AND PORSCHE996.COM) were originally registered by an entity that listed a Honduras post office box as its address and that subsequently sold the names to third parties. Others of the domain-name defendants had had their registrations transferred to entities located in countries such as Iran (for example, PORSCHDEALERS.COM), or had been registered by applicants who submitted nonexistent suite numbers or other fictitious addresses in their application (for example, PORSCH.COM and PORSCHECAR.COM). On these and other bases, the district court granted Porsche's motion to proceed without providing personal service of process to the registrants of the domain names and to provide notice by first-class mail.

Following Porsche's lead, Bell Atlantic Corp., Bell Atlantic Internet Solutions, Inc., and NYNEX Corp. (collectively, "Bell Atlantic") filed a similar in rem action in the same court. Like Porsche, Bell Atlantic asserted trademark dilution and related claims directly against domain names that incorporated variations on their trademarks "Bell" and "NYNEX." Bell Atlantic also submitted a motion requesting approval to proceed on the basis of service by mail and by publication, asserting that "personal service upon the numerous shadowy holders of the deceptive names [at issue was] wholly impracticable" because the domain-name registrants had "supplied either false addresses or only a post office box when they registered their names." After Porsche submitted notice to the registrants of the allegedly infringing domain names, the registrant of two of the domain names (the moving domain names) appeared and filed a motion to dismiss Porsche's complaint. In support of the motion, the moving domain names argued (1) that the district court lacked subject-matter jurisdiction because the moving domain names were not in actual use; and (2) that the district court


60. See Verified Complaint, supra note 54, ¶ 17.

61. See id.

lacked jurisdiction under the Trademark Dilution Act to entertain an in rem action.\textsuperscript{63}

Judge Cacheris of the Eastern District of Virginia rejected the first argument, but adopted the second. In a memorandum opinion, the \textit{Porsche Cars} court first rejected the moving domain names' subject-matter jurisdiction argument, holding that Porsche's claims were ripe given that "the mere act of registration [of the domain names] creates an immediate injury by preventing Porsche from utilizing those domain names itself in order to channel consumers to its own web site."\textsuperscript{64} But although the court upheld subject-matter jurisdiction, it held that it lacked "personal jurisdiction over the domain names at issue because the Trademark Dilution Act does not permit in rem proceedings."\textsuperscript{65} In so concluding, the \textit{Porsche Cars} court reasoned that Federal Rule of Civil Procedure 4(n) authorized in rem jurisdiction "only if the Trademark Dilution Act under which Porsche has sued can be read to permit in rem actions that name the allegedly offending marks at issue without suing the persons who use them."\textsuperscript{66}

Because the Trademark Dilution Act specifies remedies "against another 'person's' commercial use" of a trademark "without including 'marks' within [its] definition" of "person," the \textit{Porsche Cars} court concluded that in rem proceedings were not available under the Act.\textsuperscript{67} Finally, the court suggested that its construction of the statute might be necessary to avoid a constitutional defect, in that entertaining an in rem proceeding under these circumstances might violate due process.\textsuperscript{68}

III. \textit{IN REM} JURISDICTION IN HISTORICAL PERSPECTIVE

An evaluation of the applicability of in rem jurisdiction to domain names in cyberspace requires a clear understanding of the historical origins of such proceedings. The discussion below traces the history of in rem jurisdiction under the U.S. Supreme Court's evolving jurisprudence of territorial jurisdiction.

\textsuperscript{63} \textit{See} Porsche Cars N. Am., Inc. v. PORSCH.COM, 51 F. Supp. 2d 707, 710 (E.D. Va. 1999).
\textsuperscript{64} \textit{Id.}
\textsuperscript{65} \textit{Id. at} 711.
\textsuperscript{66} \textit{Id. at} 711-12.
\textsuperscript{67} \textit{Id. at} 712.
\textsuperscript{68} \textit{See id.}
A. First Principles: Pennoyer v. Neff

Before the revolution inaugurated by the U.S. Supreme Court's decision in *International Shoe Co. v. Washington*, the extent of a court's territorial jurisdiction over a controversy hinged primarily on the situs of persons or property within the forum state. A first-year law student's introduction to civil procedure usually involves a confrontation with the following "two well-established principles of public law" as explained in *Pennoyer v. Neff*:

One of these principles is, that every State possesses exclusive jurisdiction and sovereignty over persons and property within its territory. As a consequence, every State has the power to determine for itself the civil status and capacities of its inhabitants... and also to regulate the manner and conditions upon which property situated within such territory, both personal and real, may be acquired, enjoyed, and transferred. The other principle of public law referred to follows from the one mentioned; that is, that no State can exercise direct jurisdiction and authority over persons or property without its territory.

The *Pennoyer* construct, borrowed from international law conceptions of sovereignty, constitutionalized the longstanding dichotomy between actions *in personam* and actions *in rem*.

Under *Pennoyer*, a court could establish territorial power in *personam* through the issuance of personal service of process on the defendant while...
the defendant was present within the forum State. An in rem proceeding, on the other hand, involved the exercise of control over property found within the forum State. In either case, the court was deemed to have territorial jurisdiction over the dispute by virtue of its control over the person or property found within its borders. 75

Pennoyer also noted the distinction between true in rem proceedings and quasi in rem proceedings—or, in the words of Justice Field, actions "in the nature of a proceeding in rem." 76 Under the traditional terminology, a true in rem action is one in which the plaintiff asks the court to "determine[] all claims that anyone, whether named in the action or not, has to the property or thing in question." 77 The effect of a true in rem judgment is to establish title to the property in question and to foreclose any future claims to it. 78 Examples of true in rem proceedings include admiralty libel actions and land title registration suits. 79

Quasi in rem actions are of two types. Type I quasi in rem actions differ from true in rem actions only in that the plaintiff asserts an interest in the property as against specifically identified individuals and the judgment affects the rights of those individuals, not the claims of "all the world." 80 Examples include actions to quiet title or to foreclose liens. In practice, type I quasi in rem actions are practically identical to true in rem proceedings; the Restatement (Second) of Conflict of Laws abandons the distinction entirely. 81 Type II quasi in rem actions, by contrast, do not involve pre-existing interests in or claims to the property at all. Instead, the plaintiff in a type II action seeks to establish an interest in the defendant’s property as a basis for exercising jurisdiction over the defendant when in personam jurisdiction is unavailable. 82 Such actions are sometimes referred to as attachment proceedings, as the plaintiff typically initiates a type II action by

75. Justice Holmes concisely captured the Pennoyer principle of territoriality in explaining that "[t]he foundation of jurisdiction is physical power," McDonald v. Mabee, 243 U.S. 90, 91 (1917). For a comprehensive discussion of the evolution of the Supreme Court’s doctrine of territorial jurisdiction during the middle part of the twentieth century, see generally Kurland, supra note 72.

76. 95 U.S. at 733.

77. 16 James Wm. Moore et al., Moore’s Federal Practice ¶ 108.70[1] (3d ed. 1999); see also Restatement (Second) of Judgments § 6 cmt. a (1982).

78. See 16 Moore et al., supra note 77, ¶ 108.70[1].

79. See id.

80. Id.

81. See Restatement (Second) of Conflict of Laws § 66 cmt. a (1971).

82. See 16 Moore et al., supra note 77, ¶ 108.70[2]; see also Restatement (Second) of Conflict of Laws § 66 cmt. a; Restatement (Second) of Judgments § 6 cmt. a.
attaching a defendant’s property in an attempt to satisfy an unrelated claim that the defendant owes the plaintiff money.

Pennoyer further clarified the form of notice required under the Due Process Clause, indicating that the notice requirement turned in large measure on the in personam or in rem nature of the proceeding. In in personam actions, “where the entire object of the action is to determine the personal rights and obligations of the defendants,” Pennoyer held that personal service of process on a defendant within the forum State was required—“[p]rocess sent to him out of the State, and process published within it” were deemed “equally unavailing in proceedings to establish his personal liability.” In in rem actions, by contrast, Pennoyer acknowledged that “substituted service” in the form of notice by publication may be permitted where “property in the State is brought under the control of the court” at the outset of the litigation. This latter requirement was fatal to the court’s jurisdiction in Pennoyer, because the plaintiff had not attached the defendant’s property at the commencement of the action.

B. Beyond Pennoyer: Territorial Jurisdiction in Transition

Pennoyer’s territoriality framework remained relatively intact as long as “the average person’s mobility was limited and territorial notions did not represent too great an impediment on a plaintiff’s ability to institute his action.” As “the United States became a mobile, industrialized society,” however, Pennoyer’s territoriality approach came under increasing pressure and “courts were forced to deviate from its principles and adjust them to the changing times.”

84. Id. at 733.
85. See id. at 733–34.
87. Id.; see also Burnham v. Superior Court, 495 U.S. 604, 617 (1990) (Scalia, J., announcing the judgment of the Court) (“In the late 19th and early 20th centuries, changes in the technology of transportation and communication, and the tremendous growth of interstate business activity, led to an inevitable relaxation of the strict limits on state jurisdiction’ over nonresident individuals and corporations.”) (quoting Hanson v. Denckla, 357 U.S. 235, 260 (1958) (Black, J., dissenting)); Burk, Federalism in Cyberspace, supra note 4, at 1107 (arguing that “[t]he personal jurisdiction problems posed by virtual commerce and Internet telepresence are in many ways the culmination of a long evolution of legal doctrine occasioned by changing technology”); Kurland, supra note 72, at 573 (asserting that “[t]he rapid development of transportation and communication in this country demanded a
Initially, the courts retained the basic framework of *Pennoyer* but recognized an increasing number of substitutes for a defendant's presence within the forum State. A defendant not served or holding property within a state was deemed subject to suit, for example, on the basis of an individual defendant's domicile in the forum State; or on the ground that a corporate defendant had a constructive presence within the State; or on the constructive notion that a defendant may be deemed to have impliedly consented to suit within the State by engaging in certain activity.

Eventually, the U.S. Supreme Court determined that the "fictive" adjustments that it had made to the law of territorial jurisdiction under *Pennoyer* were inadequate. Accordingly, beginning with the watershed case of *International Shoe Co. v. Washington*, the Court began to abandon the notion that territorial jurisdiction necessarily depends on the presence of the defendant or its property within the territory of the forum state. In *in personam* actions, *International Shoe* held that a defendant's litigation-related "minimum contacts" may take the place of physical presence as the basis for jurisdiction:

Historically the jurisdiction of courts to render judgment *in personam* is grounded on their de facto power over the defendant's person. Hence his presence within the territorial jurisdiction of a court was prerequisite to its rendition of a judgment personally binding on him. But now that the *capias ad respondendum* has given way to personal service of summons or other form of notice, due process requires only that in order to subject a defendant to a judgment *in personam*, if he be not present within the territory of the forum, he have certain

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90. See Henry L. Doherty & Co. v. Goodman, 294 U.S. 623 (1935) (upholding constitutionality of state statute authorizing jurisdiction over nonresident defendants selling securities within state); Hess v. Pawloski, 274 U.S. 352 (1927) (upholding constitutionality of state statute providing that nonresident motorist using its highways is deemed to have appointed state official as his agent to receive service of process); St. Clair v. Cox, 106 U.S. 350 (1882) (upholding constitutionality of requirement that foreign corporations be deemed to have consented to service of process within state as condition of doing business there).
92. 326 U.S. 310 (1945).
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minimum contacts with it such that the maintenance of the suit does not offend "traditional notions of fair play and substantial justice." 93

Under the minimum-contacts test that has developed since International Shoe, a court may exercise jurisdiction over a defendant not served within the forum State so long as the defendant has "purposefully availed itself of the privilege of conducting activities within the forum State," such that the defendant "should reasonably anticipate being haled into court there." 94 The Court has also recognized a distinction between "specific" and "general" jurisdiction, holding that even "isolated and sporadic" contacts may be sufficient to sustain jurisdiction where the plaintiff’s claim arises out of such contacts, but that more "continuous and systematic" contacts are necessary to uphold jurisdiction where the plaintiff’s claim is unrelated to the defendant’s contacts. 95 Finally, the Court has indicated that the extent of the contacts necessary to satisfy due process may vary depending on considerations such as the convenience of the forum for resolution of the parties’ dispute and the forum State’s interest in protecting its citizens. 96

For present purposes, the most significant application of the International Shoe formulation came in the 1977 decision of Shaffer v. Heitner. 97 Shaffer was a shareholder derivative suit against a corporation’s directors alleging that the directors had violated their fiduciary duties to the corporation. 98 In initiating this action, the plaintiff shareholders followed a Delaware statute that authorized a quasi in rem jurisdiction upon sequestration of an out-of-state defendant’s property within the state. 99 Because Delaware law adopted the unusual conclusion that the situs of a Delaware corporation’s stock was Delaware (regardless of the situs of the stock certificate or its holder), plaintiffs attempted to use the constructive sequestration of the stock as a mechanism to compel the absent defendants to appear in a suit to determine their personal rights and obligations. 100 The Shaffer Court held that this application of quasi in rem jurisdiction failed under International Shoe.
Delaware courts could not exercise jurisdiction over the suit because
defendants’ sole contact with the State (ownership of stock in a Delaware
corporation) was unrelated to the lawsuit.101

In arriving at this conclusion, Justice Marshall’s opinion for the Court
announced a sweeping dictum: “[T]hat all assertions of state-court
jurisdiction must be evaluated according to the standards set forth in
International Shoe and its progeny.”102 The Shaffer dictum apparently was
at the heart of the Porsche Cars court’s concern as to the constitutionality of
an in rem proceeding under the Lanham Act. The validity of this concern is
evaluated in detail below.

IV. IN REM JURISDICTION OVER DOMAIN NAMES: AN OLD
SOLUTION TO A NEW PROBLEM?

In at least one important sense, the traditional mechanism of an in rem
proceeding seems well suited to the problem of trademark cyberpiracy. The
availability of substitute service has long been recognized as one of the
principal advantages of a proceeding in rem. Actions involving decedents’
estates, bankruptcy, quiet title, and other in rem suits have traditionally been
thought to “require proceedings that can close the door conclusively on all
future disputation” even where the interested parties cannot be
identified.103 “The traditional device of foreclosing the absentee is notice by
publication”:104

Parties cannot thus, by their seclusion from the means of information,
claim exemption from the laws that control human affairs, and set up a
right to open up all the transactions of the past. The world must move
on.105

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101. See id. at 213–15.
102. Id. at 212. In reaching this conclusion, Justice Marshall noted that although International

Shoe had effected a revolution in the law of in personam jurisdiction, “[n]o equally dramatic change
has[ed] occurred” in the law of in rem jurisdiction. Id. at 205. Justice Marshall clearly saw Shaffer as a
platform for expanding the change begun with International Shoe, and his overbroad dictum sought to
ensure that the breadth of the change effected by the decision would be as “dramatic” as possible.
103. Hazard, Jr., supra note 74, at 287.
104. Id.
105. Case of Broderick’s Will, 88 U.S. (21 Wall.) 503, 519 (1874); see also Jack H. Friedenthal et al.,

Civil Procedure 116 (3d ed. 1999) (noting that quasi in rem jurisdiction “afforded relatively immobile
creditors some procedural protections against abscending debtors and allowed a state’s courts to provide
relief to resident plaintiffs against nonresident tortfeasors without violating another state’s territorial
sovereignty through direct assertions of in personam jurisdiction over its residents”).
Trademark holders today increasingly find themselves victimized by cyberpirates who seek, "by their seclusion from the means of information," to exempt themselves "from the laws that control human affairs." An action in rem was the traditional response to this sort of dilemma, and such a response should also be appropriate today. Three possible objections to this approach are examined here: (1) the Porsche Cars court's assertion that in rem jurisdiction is somehow inconsistent with the language of the Lanham Act; (2) the concern (not raised expressly by the Porsche Cars court) that a domain name may not have its "situs" within the judicial district where the suit is filed; and (3) the district court's suggestion in Porsche Cars that this application of in rem jurisdiction might violate due process.

A. In Rem Jurisdiction in Federal Court: What Is the Source of Statutory Authority?

The Porsche Cars court's decision to dismiss Porsche's in rem action was premised on the conclusion that such proceedings require specific authorization in the substantive statute governing the parties' claims—here, the trademark-dilution provisions of the Lanham Act. Specifically, the Porsche Cars court held that "Rule 4(n)(1) applies only if the Trademark Dilution Act under which Porsche has sued can be read to permit in rem actions that name the allegedly offending marks at issue without suing the persons who use them." While recognizing that the Trademark Dilution Act "does not expressly preclude in rem lawsuits," the court nevertheless dismissed Porsche's complaint in this action on the ground that the "language [of the statute] speaks strongly in favor of allowing in personam actions alone." The Porsche Cars court's analysis misconstrues the very nature of in rem jurisdiction. A proceeding in rem is not an anomalous action requiring special statutory authorization to overcome some sort of disfavored status. Rather, the designation "in rem" is one of two longstanding bases on which a court traditionally has acquired territorial jurisdiction over a dispute. As the Fourth Circuit explained in R.M.S. Titanic, Inc. v. Haver, actions based on both the "in personam" and "in rem" designations "are grounded

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107. Id. at 712.
108. 171 F.3d 943 (4th Cir. 1999).
on the principle that ‘every State possesses exclusive jurisdiction and sovereignty over persons and property within its territory.’ 109

Federal courts have a long history of exercising in rem jurisdiction over cases in admiralty110 and condemnation proceedings.111 In 1875, the federal courts’ power to exercise in rem jurisdiction was expanded by a statute authorizing jurisdiction over actions “to enforce any lien upon or claim to, or to remove any incumbrance or lien or cloud upon the title to, real or personal property within the district,”112 so long as the defendant could not be served within the forum State. Although the statute (now codified at 28 U.S.C. § 1655) does not establish subject-matter jurisdiction in federal court, it does provide for venue in the district in which the property is situated and it expressly allows service by publication if personal service is impracticable.113

The Porsche Cars court should not have been surprised to find that the Lanham Act generally “speaks only of remedies against ‘persons’ who commit trademark dilution,”114 or that “a mark itself logically cannot be made to pay damages.”115 Nor should the court have read the substantive provisions of the Lanham Act to preclude the procedural tool of an in rem proceeding to enforce the terms of the statute. The substantive laws generally (whether in the form of property, tort, contract, or any of an endless list of statutory provisions) prescribe the rights of persons in property without identifying a specific right against such property. Whether under the Lanham Act or under any other statute or common law defining substantive rights, the rights of persons in property are defined vis-à-vis other persons.

The fact that property cannot be made to pay damages to plaintiffs is a general truism, not a peculiarity of the Lanham Act that should be taken as a rejection of in rem jurisdiction. For example, a party’s claim to certain real

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109. Id. at 957 (quoting Pennoyer v. Neff, 95 U.S. 714, 722 (1877)).
115. Id.
property may arise under the common law of contracts if the party has entered into an agreement for the purchase of that property. Although the party's claim in the event of breach would certainly be a claim to the real property, the remedy prescribed by contract law would arise against the breaching party, not against the property itself.

The truism that property cannot be made to pay damages should not preclude persons from invoking the longstanding tool of an in rem proceeding in vindicating their substantive rights in property. As the Supreme Court noted in Shaffer, the in rem notion of "jurisdiction over a thing" has long been understood as merely an "elliptical way of referring to jurisdiction over the interests of persons in a thing." Thus, courts have never embraced the requirement adopted by the Porsche Cars court: that the substantive law governing the dispute expressly recognize a specific right against property.

Contrary to the Porsche Cars court's conclusion, federal statutory and decisional law do authorize in rem jurisdiction over actions asserting claims to Internet domain names as violative of the Lanham Act. In focusing exclusively on the language of the Lanham Act (and in implicitly requiring an express authorization for an in rem proceeding in the substantive statute at issue), the Porsche Cars court missed the clear import of Federal Rule of Civil Procedure 4(n)(1). As the Advisory Committee Notes make clear, Rule 4(n)(1) was designed to incorporate the requirements of 28 U.S.C. § 1655 or similar provisions bearing on seizures or liens.\(^\text{7}\)

1. In Rem Jurisdiction Under § 1655

A requirement of an independent authorization for an in rem suit in the substantive law governing the parties is inconsistent with the plain language of the statute, which provides an unqualified authorization for in rem jurisdiction over any "action in a district court to enforce any lien upon or claim to... real or personal property within the district, where any defendant can not be served within the State, or does not voluntarily appear."\(^\text{118}\) The Porsche Cars court failed to consider the plaintiff's claim


\(^{117}\) See Fed. R. Civ. P. 4 advisory committee's notes; see also 16 Moore et al., supra note 77, ¶ 4.120[1] (noting that Rule 4(n)(1) "was intended to incorporate the provisions of 28 U.S.C. § 1655").

that § 1655 serves as a basis for its in rem action. The statute does not limit itself to state-law claims in diversity or to specific claims under federal statutes that expressly authorize remedies against property. By the clear terms of the statute, any claim to property within the district is eligible for the in rem procedures specified.

Other courts have uniformly interpreted § 1655 in a manner more consistent with the statute’s plain language. The in rem provisions of § 1655 have been applied in a broad range of cases involving numerous different kinds of claims, without any suggestion that its application required some affirmative authorization in the substantive law. The claims to which § 1655 has been deemed applicable include a variety of state law claims in diversity jurisdiction, such as actions to cancel certain stock allegedly issued illegally to third parties and actions to quiet title or to remove a cloud on the title to property located within the district. Courts have also applied § 1655 to claims under federal statutes, including actions to enjoin the enforcement of tax liens against the plaintiff’s property, actions seeking to impose a trust on property held by the Federal Housing Administration under the National Housing Act, actions initiating involuntary bankruptcy proceedings, and actions under the federal interpleader statute. Although the federal interpleader statute does not itself sanction the use of in rem procedures such as constructive service of process, the courts in the interpleader cases nevertheless have found that application of the plain language of § 1655 is necessary to preclude parties from undermining the “basic policies underlying interpleader” by “evading personal service.” Thus, so long as “the terms of the lien enforcement

119. See Verified Complaint, supra note 54, ¶ 28.
120. See 14 Wright & Miller, supra note 86, § 3635 (describing broad range of cases to which § 1655 has been applied); see also supra notes 103–04.
121. See McQuillen v. National Cash Register, 112 F.2d 877, 882 (4th Cir. 1940).
127. Estate of Swan, 441 F.2d at 1085; see also Garmaise, 519 F. Supp. at 687 (concluding that use of § 1655 is necessary to “‘afford relief to stakeholders in situations in which [interpleader] would be unavailable due to circumstances beyond their control,’” and to “‘prevent a claimant from evading
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statute [§ 1655] have been met,”128 courts have approved the use of § 1655 in interpleader actions.29

Rather than limiting § 1655 suits to cases where the substantive law independently authorizes in rem actions, courts generally have foreclosed the statute’s terms only where the relief sought by the plaintiff “would bind the defendant beyond the property in dispute and therefore would be in personam.”130 Thus, § 1655 has been found unavailable in suits where the plaintiff seeks a personal judgment of money damages against the defendant,131 but it is clearly applicable in “actions in rem against the [property] itself alleged to have been illegally issued by and to certain of the defendants.”132

Indeed, requiring supplemental, substantive authorization for in rem jurisdiction would eviscerate the broad application of § 1655. Under the Porsche Cars court’s construction, a district court could entertain an action under § 1655 only after determining that the action is authorized by the substantive law governing the rights of the parties. Thus, before a court could hear an action under § 1655 to cancel plaintiff’s stock unlawfully issued by a corporation to a third party,133 it would have to find an affirmative grant of authority in the applicable state corporate laws. And before it could entertain an interpleader proceeding or an action to enjoin the enforcement of tax liens against a plaintiff’s property, it would have to


129. See Hollywood Youths, 246 F.2d at 400 (rejecting argument that certain provisions of § 1655 have “no relevance to bankruptcy cases,” and finding that “it must be assumed that the whole statute was intended to apply in the absence of . . . a conflict or an express exception”).

130. 14 Wright & Miller, supra note 86, § 3635.

131. See id.; see also Fabian v. Kennedy, 333 F. Supp. 1001, 1006 (N.D. W. Va. 1971) (holding that claim for damages under executory contract for assignment of minerals is in personam and is not cognizable under § 1655 where defendant “had no obligation to assign to plaintiff any interest in or title to . . . [the] minerals, unless and until . . . [a] condition precedent was met,” and thus “plaintiff had no basis for an action to require specific performance to compel assignment of title or interest” but only “an action of a personal nature” for recovery of damages for breach of contract).


133. The court in McQuillen v. National Cash Register, 13 F. Supp. 53 (D. Md. 1935), assumed jurisdiction under § 1655 in just such a case without inquiring into whether the applicable state statutes granted such authority.
determine that the federal interpleader and tax statutes authorize an in rem proceeding under those circumstances. As noted above, the courts have never interpreted § 1655 in that way, and the Porsche Cars court’s attempt at a fundamental overhaul in the longstanding interpretation of the statute should be reversed.

2. In Rem Jurisdiction and Limitations on Federal Power

The Porsche Cars court’s interpretation of § 1655 also undermines a well-settled canon of construction of the powers of the federal courts. In Porter v. Warner Holding Co.,134 the Supreme Court held:

Unless otherwise provided by statute, all the inherent equitable powers of the District Court are available for the proper and complete exercise of [its] jurisdiction. . . . Moreover, the comprehensiveness of this equitable jurisdiction is not to be denied or limited in the absence of a clear and valid legislative command. Unless a statute in so many words, or by a necessary and inescapable inference, restricts the court’s jurisdiction in equity, the full scope of that jurisdiction is to be recognized and applied. “The great principles of equity, securing complete justice, should not be yielded to light inferences, or doubtful construction.”135

This canon of construction of federal judicial power embodied in Porter has also been applied to proceedings under the Lanham Act. In Steele v. Bulova Watch Co.,136 for example, the Supreme Court indicated that the Lanham Act should be liberally construed to effectuate its important goals and to “confer[] broad jurisdictional powers upon the courts of the United States.”137 Although nothing in the Lanham Act expressly authorized the federal courts to exercise extraterritorial jurisdiction over a defendant’s allegedly infringing activities in Mexico, the Steele Court nevertheless held that the federal courts should be deemed to have jurisdiction over the assembly of counterfeit watches in Mexico.138 In so holding, the Steele Court relied on the Lanham Act’s expressed intent to broadly “regulate

134. 328 U.S. 395 (1946).
135. Id. at 398 (quoting Brown v. Swann, 35 U.S. (10 Pet.) 497, 503 (1836)) (upholding district court’s authority to order restitution of rents collected by landlord in excess of maximums established under Emergency Price Control Act of 1942, despite statute’s failure to authorize such relief).
137. Id. at 283.
138. See id. at 287.
commerce within the control of Congress by making actionable the deceptive and misleading use of marks in such commerce."\textsuperscript{139} and on the statutory directive that federal courts act ""according to the principles of equity[.]" to prevent the violation of any [trademark] registrant's rights."\textsuperscript{140}

The Ninth Circuit applied a similar approach in \textit{Reebok International, Ltd. v. Marnatech Enterprises, Inc.}\textsuperscript{141} Because ""it is essential that the trial courts carefully fashion remedies which will take all the economic incentive out of trademark infringement,""\textsuperscript{142} the \textit{Reebok} court held that upholding the trial court's ""inherent power"" to issue an order freezing defendant's assets was necessary ""to ensure the availability"" of ""ancillary relief necessary to accomplish complete justice.""\textsuperscript{143} Although the remedy sought by the plaintiff was not expressly provided by statute, the \textit{Reebok} court followed \textit{Steele} in sustaining such power as necessary to ensure trademark protection under the Lanham Act.

The \textit{Porsche Cars} court's construction of the Trademark Dilution Act turned the interpretive canon dictated by \textit{Porter, Steele, and Reebok} on its head. Instead of asking whether \textit{in rem} jurisdiction was expressly authorized by the Trademark Dilution Act, the \textit{Porsche Cars} court should have started with the very different premise under \textit{Porter} that ""[u]nless a statute in so many words, or by a necessary and inescapable inference, restricts the court's jurisdiction in equity, the full scope of [federal court] jurisdiction is to be recognized and applied.""\textsuperscript{144} As the \textit{Porsche Cars} court itself acknowledged, nothing in the Trademark Dilution Act affirmatively rejects the availability of \textit{in rem} jurisdiction.\textsuperscript{145} That concession alone

\begin{itemize}
\item \textsuperscript{139} \textit{Id.} at 283 (quoting 15 U.S.C. § 1127).
\item \textsuperscript{140} \textit{Id.} at 284 (quoting 15 U.S.C. § 1116); \textit{see also} 15 U.S.C. § 1116(a) (1994) (""The several courts vested with jurisdiction of civil actions arising under this chapter shall have power to grant injunctions, according to the principles of equity and upon such terms as the court may deem reasonable, to prevent the violation of any right of the registrant of a mark."). Planned Parenthood Fed'n of Am., Inc. v. Bucci, 42 U.S.P.Q.2d (BNA) 1430, 1432 (S.D.N.Y. 1997), \textit{aff'd}, 152 F.3d 920 (2d Cir. 1997) (enjoining misappropriation of domain name ""WWW.PLANNEDPARENTHOOD.COM"" and holding that ""jurisdictional predicate of the Lanham Act is broad and has a sweeping reach").
\item \textsuperscript{141} 970 F.2d 552 (9th Cir. 1992).
\item \textsuperscript{142} \textit{Id.} at 559 (quoting \textit{Playboy Enter. v. Baccarat Clothing Co.}, 692 F.2d 1272, 1275 (9th Cir. 1982)).
\item \textsuperscript{143} \textit{Id.} at 560 (quoting FTC v. H.N. Singer, Inc., 668 F.2d 1107, 1113 (9th Cir. 1982)).
\item \textsuperscript{144} \textit{Porter v. Warner Holding Co.}, 328 U.S. 395, 398 (1946).
\item \textsuperscript{145} \textit{See} \textit{Porsche Cars N. Am., Inc. v. FORSCH.COM}, 51 F. Supp. 2d 707, 712 (E.D. Va. 1999) (recognizing that nothing in Lanham Act ""expressly preclude[s] \textit{in rem} lawsuits").
\end{itemize}
should have been sufficient to sustain the applicability of § 1655 under the Porter canon of construction.

The Porsche Cars court could—and should—have gone further. A liberal construction of the courts’ broad jurisdictional powers to fashion remedies under the Lanham Act would have enabled the court to conclude that in rem jurisdiction is crucial to a trademark holder’s right to protection against dilution by cyberpirates. As WIPO and others have recognized, the traditional mechanism of filing a series of in personam suits against the far-flung multitude of pirates that have misappropriated famous marks like Porsche’s into their domain names falls far short of rendering such conduct unprofitable and of accomplishing “complete justice.”\textsuperscript{146} The traditional in personam approach also fails to advance the statutory directive that the district court act “according to the principles of equity and upon such terms as the court may deem reasonable” in order to “prevent the violation of any right of the registrant of a mark.”\textsuperscript{147} In rem jurisdiction is essential to assuring the full protection intended by Congress under the Lanham Act, and the application of § 1655 should be sustained.

3. In Rem Jurisdiction Under the 1999 Lanham Act Amendments

Although the Porsche Cars court’s premise is faulty, it still would not sustain the decision reached below. Even assuming arguendo that in rem jurisdiction might have been inconsistent with earlier versions of the Lanham Act, recent amendments to the statute clearly erase any lingering doubt. In direct response to the district court’s ruling, Porsche and other prominent trademark holders urged Congress to clarify that in rem jurisdiction is appropriate in trademark actions against cybersquatters. These efforts culminated in the “Anticybersquatting Consumer Protection Act,” which was signed into law by President Clinton on November 29, 1999.\textsuperscript{148} The enacted provisions amend the Lanham Act to clarify that the owner of a trademark may assert a claim for trademark infringement or dilution against a cybersquatter and expressly provide in rem jurisdiction.\textsuperscript{149}

\footnotesize{146. See supra notes 48–50 and accompanying text.  
149. The statute reads:  
The owner of a mark may file an in rem civil action against a domain name in the judicial district in which the domain name registrar . . . is located if–}
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The Joint Statement Conference Report that was issued in connection with these amendments explains that the above in rem provision “attempts to respond to the problems faced by trademark holders in attempting to effect personal service of process on cyberpirates.”\(^{150}\) Specifically, the in rem provision responds to the concern that cyberpirates often register domain names under false names and addresses and often either refuse to acknowledge the legitimate demands of a trademark holder to stop using an infringing domain name, or simply respond to an initial demand and then ignore later efforts to secure compliance of the cyberpirates.\(^{151}\)

The *Porsche Cars* court’s decision obviously could not be reached under these newly enacted amendments. Although the court’s call for an independent in rem authorization in the Lanham Act was baseless, Congress has now heeded the call and thoroughly undermined the court’s foundation for its conclusion. Indeed, the recent amendments apply retroactively to this case, as the Act specifies that the above-quoted provision applies “to all domain names registered before, on, or after the date of the enactment of this Act.”\(^{152}\) Moreover, the Act clarifies that its express recognition of in rem jurisdiction is “in addition” to any in rem jurisdiction that “otherwise exists,”\(^{153}\) thus preserving the existence of in rem jurisdiction under 28 U.S.C. § 1655. Accordingly, in rem jurisdiction should be deemed proper under § 1655 or, in the alternative, under the 1999 amendments to the Lanham Act.

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1. the domain name violates any right of the owner of a mark registered in the Patent and Trademark Office . . . ; and
2. the court finds that the owner—
   1. is not able to obtain in personam jurisdiction over a person who would have been a defendant in a civil action under paragraph (1); or
   2. through due diligence was not able to find a person who would have been a defendant in a civil action under paragraph (1) by—
      1. sending a notice of the alleged violation and intent to proceed under this paragraph to the registrant of the domain name at the postal and e-mail address provided by the registrant to the registrar; and
      2. publishing notice of the action as the court may direct promptly after filing the action.

151. *See id.*
B. In Rem Jurisdiction and the Situs of Intangible Property: Do Domain Names Have Their Situs Within the Eastern District of Virginia?

In rem jurisdiction has long required that the res or property at issue have its situs within the district of the court exercising power over it.\textsuperscript{154} \textit{Pennoyer} itself reinforced that view in acknowledging state courts’ power over “property situated within its limits.”\textsuperscript{155} Section 1655 incorporates this same prerequisite in empowering the federal courts to entertain actions to enforce a “claim” to “personal property within the district.”\textsuperscript{156}

The situs requirement presents no analytical difficulty where the res is real estate or tangible personal property, but courts and commentators historically have noted that “the problem becomes far more complex” when intangible property is involved:\textsuperscript{157}

The type of personal property known to the law as intangible has long been a source of confusion and uncertainty as reflected by the judicial decisions and opinions of commentators and text book writers. Since the beginning of the present century this confusion seems to have become even worse confounded, and now has reached the point where almost any theory can find some support in judicial decision or legal comment.\textsuperscript{158}

Courts and commentators have also noted that the situs of intangible property may depend on the legal context in which the situs question arises.\textsuperscript{159}

The analytical confusion noted by the above commentators has never been resolved as to all forms of intangible property in all legal contexts. But at least one overarching principle has dominated the case law as to situs of


\textsuperscript{155} Pennoyer v. Neff, 95 U.S. 714, 723 (1877).


\textsuperscript{157} Andrews, supra note 154, at 241.

\textsuperscript{158} William M. Simmons, \textit{Conflict of Laws and Constitutional Law in Respect to Intangibles}, 26 Cal. L. Rev. 91, 91 (1938).

\textsuperscript{159} See 14 Wright & Miller, supra note 86, § 3633 (noting that situs of intangible property “may depend upon the nature of the intangible and the context in which the question of its situs has arisen”); see also Andrews, supra note 154, at 272.
intangibles under § 1655, and that principle strongly supports the conclusion that domain names registered through NSI have their situs in the Eastern District of Virginia. The federal courts have pragmatically approached the issue of whether property is within the district under § 1655. The Supreme Court's and lower courts' treatment of this issue can be encompassed within and explained by the proposition that intangible property has its situs within a district if it is within the control and dominion of an entity that is itself found within that district.

1. The Situs of Intangibles Under § 1655: Property Controlled by an Entity Within the District.

Cases that have found intangible property to have its situs within the forum district have done so on the ground that an entity within the district has effective control or dominion over the property. A landmark decision under the predecessor to § 1655 was Jellenik v. Huron Copper Mining Co., in which the Court held that stock in a corporation domiciled in a certain district is personal property having its situs in that district. Plaintiffs in Jellenik filed suit in federal court in Michigan alleging that they were the rightful owners of certain shares of stock in a Michigan corporation and that certificates for those shares were improperly and unlawfully held by Massachusetts citizens. Specifically, plaintiffs complained that the corporation's directors (Massachusetts citizens) had fraudulently sold their shares "to themselves individually or to their fellow conspirators for a mere pittance," and demanded a judgment in the form of an order decreeing "that the pretended sale... was a nullity" and that "any cloud upon the title of such stock of the plaintiffs... be removed." Plaintiffs proceeded under the predecessor to § 1655 on the basis that they sought to "remove an incumbrance or cloud upon the title to certain shares of the stock of a Michigan corporation." The trial court dismissed the action, concluding that "the shares of stock in question are not personal

160. See 14 Wright & Miller, supra note 86, § 3633.
161. 177 U.S. 1 (1899).
162. See id. at 2.
163. See id. at 10.
164. Id. at 5.
165. Id. at 7.
166. Id. at 10.
property within the district within the purview of the statute of the United States authorizing the bringing in by publication of notice to non-resident defendants who assert some right or claim to the property which is the subject of the suit.'\textsuperscript{167}

In reversing the trial court, the \textit{Jellenik} Court expressly rejected the formalistic notion that only "tangible personal property" in the "actual manual possession of some person" is subject to \textit{in rem} jurisdiction under the predecessor to § 1655.\textsuperscript{168} Instead, the \textit{Jellenik} Court adopted an approach that indicates that situs under § 1655 hinges on whether the property in question is under the control of some person that is subject to the court's jurisdiction.\textsuperscript{169}

Under \textit{Jellenik}, the situs of a stockholder's intangible property interest in corporate stock is the domicile of the corporation. The Court's analysis is straightforward and pragmatic: because the corporation itself has its habitation or domicile within the forum State and is subject personally to the jurisdiction of the court, an order canceling certificates held by the nonresident holders of the stock certificates and decreeing that plaintiffs are the true owners of such stock is properly enforceable within the district.

The pragmatic analysis derived in \textit{Jellenik} has found broad consensus since it was handed down.\textsuperscript{170} In analyzing the situs of an intangible property

\begin{itemize}
  \item \textsuperscript{167} Id. (quoting \textit{Jellenik} v. Huron Copper Mining Co., 82 F. 778, 779 (W.D. Mich. 1897)).
  \item \textsuperscript{168} Id. at 14.
  \item \textsuperscript{169} See id. at 13–14. The \textit{Jellenik} court stated:
    \begin{quote}
    [W]e are of [the] opinion that [the stock] is within Michigan for the purposes of a suit brought there against the Company—such shareholders being made parties to the suit—to determine whether the stock is rightfully held by them. The certificates are only evidence of the ownership of the shares, and the interest represented by the shares is held by the Company for the benefit of the true owner. As the habitation or domicile of the Company is and must be in the State that created it, the property represented by its certificates of stock may be deemed to be held by the Company within the State whose creature it is, whenever it is sought by suit to determine who is its real owner.
    
    It is suggested that the requirement in the act of 1875 that a copy of the order of publication "shall be served on such absent defendant or defendants, if practicable, wherever found, and also upon the person or persons in possession or charge of said property, if any there be," is inapplicable here, because no one in Michigan is alleged in the bill to have \textit{possession} of the shares in question. But the bill does show that the property represented by the certificates of shares is held by a Michigan corporation which being subject personally to the jurisdiction of the court may be required by a final decree in a suit brought under the act of March 3, 1875 to cancel such certificates held by persons outside of the State and regard the plaintiffs as the real owners of the property interest represented by them.
    
    \textit{Id}.
    \end{quote}
  \item \textsuperscript{170} See Andrews, supra note 154, at 264 (citing cases holding that situs of stock is domicile of corporation and asserting that "stock should be given a situs at the place where the courts can most
interest in an insurance policy, for example, federal courts consistently have held that such property has its situs in the district where the obligor may be found. As in the cases involving situs of stock, the courts here reject the argument that the insurance policies themselves constitute the res for purposes of the statute and focus instead on the practical question of whether the court may acquire effective control over the res.

This same pragmatic approach has found similar application in cases addressing the situs of intangible rights to payment by creditors or financial institutions. Although the Supreme Court has acknowledged that the situs of such property is somewhat artificial, it consistently has held that the property is located within the district where the debtor or financial institution may be found. In reaching this conclusion, the Supreme Court again underscored the pragmatic nature of the situs analysis under § 1655:

[W]hatever of substance there is must be with the debtor. He and he only has something in his hands. That something is the res, and gives character to the action as one in the nature of a proceeding in rem. . . . Of course, the debt is the property of the creditor, and because it is, the law seeks to subject it, as it does other property, to the payment of his creditors. If it can be done in any other way than by process against and jurisdiction of his debtor, that way does not occur to us.

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172. See Brody, 213 F. Supp. at 908 (holding that “in a non-negotiable policy the instrument itself is not the vital thing . . . . Interests in a non-negotiable insurance policy, like interests in any contract, are incorporeal choses in action. When a court has jurisdiction over the obligor, that is, the insurance company, it has power effectively to deal with the obligation.”), aff’d sub nom. Equitable Life Assurance, 331 F.2d at 34 (stating that “the phrase ‘personal property’ in section 1655” must be given “broad meaning” and that situs of insurance policy is in district where court can “obtain[] in personam jurisdiction of the obligor”).


174. Id. (emphasis in original); see also Pennington v. Fourth Nat'l Bank, 243 U.S. 269 (1917) (finding that indebtedness from bank deposits has its situs in district where bank is situated); Goodman v. Niblack, 102 U.S. 556 (1880) (holding that for purposes of predecessor to § 1655, trust fund had its situs in district where trust administrator was subject to personal service of process); First Charter Land Corp. v. Fitzgerald, 643 F.2d 1011 (4th Cir. 1981) (upholding action under § 1655 to establish plaintiff’s interest in certain notes secured by deeds of trust that had previously been assigned to defendant, and
2. The Situs of Domain-Name Registrations Under the Pragmatic Approach

The pragmatic approach outlined above easily supports the conclusion that a registrant's property interest in a domain name registered through NSI has its situs in the Eastern District of Virginia.175 As with corporate stock, insurance policies, and debt, the property right created by a domain-name registration cannot be brought within the actual manual possession of the court. But that is not the issue under §1655. Instead, the court should simply ask whether the property represented by the domain-name registration is held or controlled by an entity that is found within the forum State. If the domain-name registration is held by such an entity, the property itself is also within the forum State, as the entity that holds it may be subject to an order resolving competing interests in the property.

NSI is found within the Eastern District of Virginia in that it has its principal place of business in Herndon, Virginia. Moreover, NSI holds or controls the domain-name registrations in the same sense in which an issuing corporation holds stock, an insurance company holds an insurance policy, or a financial institution holds an account or fund. Because NSI is found within the Eastern District of Virginia, the court for that district may issue a decree requiring NSI to cancel the domain-name registrations at issue and to “regard the plaintiffs as the real owners of the property interest represented by them.”176 The Lanham Act authorizes the courts to enjoin

noting that federal courts' “jurisdictional authority” under §1655 derives from “the authority to adjudicate property interests,” and not necessarily from “the fortuity of having actual possession of a res”) (emphasis in original); Omaha Nat'l Bank v. Federal Reserve Bank, 26 F.2d 884 (8th Cir. 1928) (upholding suit to enforce equitable title and claim to credit on deposit in Omaha bank branch under predecessor to § 1655 and holding that such credit had its situs in Omaha).

175. Presumably, a domain name registered in coming months and years through a competing registrar may have its situs in the district in which those other registrars are located. So long as the competing registrar maintains control over the domain name in the same sense in which NSI currently controls them, there is no reason why the analysis presented herein would not assign the situs of a domain name to the district in which the registrar is located. When those other registrars begin to confront the problem of cyberpiracy addressed herein, future in rem actions in those districts may present an opportunity for other courts outside of the Eastern District of Virginia to address the issues decided by the Porsche Cars court.

176. Jellenik v. Huron Copper Mining Co., 177 U.S. 1, 13–14 (1899). The remedy sought by Porsche is not without precedent. In Worldsport Networks Ltd. v. Arinternet S.A., No. CIV. A. 99-CV-616, 1999 WL 269719 (E.D. Pa. Apr. 28, 1999), the Eastern District of Pennsylvania granted an injunction directing NSI to remove defendants' registration of the domain name WORLDSPORTS.COM and requiring NSI to register such domain name to plaintiff. Moreover, an injunction transferring the registration of an infringing domain name to its only rightful owner may be the only effective way for the court to fulfill its statutory duty to act “according to the principles of equity and upon such terms as
even innocent complicity in a party's infringement of a trademark. Moreover, NSI expressly agrees in its domain-name dispute policy that upon the filing of a civil action related to the registration and use of the domain name, NSI will "deposit control of the domain name into the registry of the court," and that it will "abide by those provisions of temporary or final court orders . . . directing the disposition of the domain name."178

A functional understanding of the operation of the DNS reinforces the conclusion that domain names have their situs within the Eastern District of Virginia.179 The DNS is hierarchical. When an Internet surfer attempts to contact a web site associated with a certain domain name (for example, PORSCHE.COM), he submits the name through his Internet Service Provider (ISP)—the bottom rung on the DNS hierarchy. ISPs, in turn, depend on the information in databases maintained in any of a number of root servers operated by various governmental, educational, and business entities.180 Finally, the "A" root server maintained by NSI stands at the top of the DNS hierarchy. By updating the various other root servers on a daily basis, the "A" root server ensures that NSI retains control over the function and value of an assigned domain name.181

Thus, by altering the database in the "A" root server, NSI is able to cancel a domain-name registration when a registrant breaches its agreement with NSI (say, by failing to pay its registration fee) or when a court decrees that a certain registration violates a plaintiff's intellectual property rights in a trademark.182 Because NSI updates the "A" root server on a daily basis, other root servers and ultimately ISPs rely on NSI for the authoritative

the court may deem reasonable" in order to "prevent the violation of any right of the registrant of a mark." 15 U.S.C. § 1116(a) (1994).


178. Domain Name Dispute Policy, supra note 29, ¶ 10(b)--(c).

179. The facts that "[t]he Net enables transactions between people who do not know, and in many cases cannot know, each other's physical location," and that "there is no necessary connection between an Internet address and a physical jurisdiction" of a host computer, Johnson & Post, supra note 4, at 1371, need not alter this conclusion. The issue presented concerns the situs of the property represented by the Internet domain name, not the situs of web surfers or host computers.

180. See supra notes 26--27 and accompanying text.

181. See supra notes 26--27 and accompanying text.

182. See NSI Service Agreement, supra note 28, ¶ E.
database of domain names. When NSI alters the “A” root server, its alterations trickle down the DNS hierarchy and have a very real effect on the functionality and value of a domain name. In this sense, domain-name registrations have their situs in the district in which the registrar is found in the same sense that stock has its situs in the district where the issuing corporation has its domicile, that insurance policies have their situs in the district where the obligor insurance company is found, and that funds or rights to payment have their situs in the district where the debtor financial institution is found.\textsuperscript{183}

3. Situs of Intangibles Revisited: Patent and Trademark Cases

A series of lower court cases suggest that patent rights may not have any situs at all and thus may not be subject to an \textit{in rem} proceeding under

\begin{itemize}
\item The question of situs of intangibles under \textit{Pennoyer} has been sometimes controversial. The controversy has been especially prominent in the context of the situs of a creditor’s interest in a debt. \textit{Compare} Harris v. Balk, 198 U.S. 215 (1905) (upholding \textit{quasi in rem} type II jurisdiction over defendant creditor’s interest in debt and holding that debt has its situs wherever debtor may be found), with Rush v. Savuch, 444 U.S. 520 (1980) (striking down, for lack of “minimum contacts,” unusual \textit{quasi in rem} procedure under Minnesota law that purported to authorize exercise of jurisdiction over defendant insured on basis of “attachment” of insurer’s contractual obligation to defend and indemnify insured, and contending that conclusion that situs of “‘debt follows the debtor’” is simply conclusion “that intangible property has no actual situs, and a debt may be sued on wherever there is jurisdiction over the debtor”).

If the situs of a debt follows the debtor wherever he or she may travel, then \textit{quasi in rem} type II jurisdiction may be available “in a forum with which neither [the defendant] nor his activities had any logical connection.” 4 Wright & Miller, supra note 86, § 1071. \textit{See generally} Joseph Henry Beale, The Exercise of Jurisdiction \textit{In Rem} to Compel Payment of a Debt, 27 Harv. L. Rev. 107 (1913) (criticizing Harris v. Balk). Although this concern may have resonance as to some forms of intangible property, it should not interfere with the conclusion that a domain name has its situs in the district where the registrar is located. Unlike a transient debtor, a domain-name registrar will generally have a fixed situs (so long as situs is defined by physical presence of the registrar and its computer server, and not by the jurisdiction(s) in which it may be susceptible to personal jurisdiction), so that the fairness concerns noted above will not materialize. Moreover, it is worth repeating that the \textit{in rem} jurisdiction at issue here arises directly out of the registrant’s purposeful contact with the registrar.

The conclusion that a domain name has its situs within the Eastern District of Virginia finds further support in the 1999 amendments to the Lanham Act, which provide:

In an \textit{in rem} action under this paragraph, a domain name shall be deemed to have its situs in the district in which—

\begin{itemize}
\item the domain name registrar, registry, or other domain name authority that registered or assigned the domain name is located; or
\item documents sufficient to establish control and authority regarding the disposition of the registration and use of the domain name are deposited with the court.
\end{itemize}

§ 1655. On closer analysis, however, such decisions merely reinforce the pragmatic approach outlined above and sustain the conclusion that domain-name registrations are properly understood as being located within the Eastern District of Virginia.

The seminal patent case is *Non-Magnetic Watch Co. v. Association Horlogere Suisse of Geneve.* In that case, plaintiff sought to invoke the predecessor of § 1655 to initiate a type 1 *quasi in rem* proceeding to remove a cloud on the title of certain patents. Because the defendant Swiss corporation was not present or doing business within the forum State, plaintiff sought to invoke the federal statute as authority to proceed on the basis of service by publication. Although the *Non-Magnetic Watch* court acknowledged that plaintiff’s suit sought to settle competing claims to the title to the patent itself, it concluded that the statute was not applicable in cases involving intangible property like patent rights:

The various cases which were cited by the complainant’s counsel interpreting this section are concerned either with real property, or with such tangible personal property as was susceptible of reduction to actual possession. I cannot satisfy myself that the section covers (or was intended to cover) such incorporeal and intangible property as a patent-right, possession of which must of necessity be ideal, not actual, and which cannot be seized or sold under an execution.

In the decades following the decision in *Non-Magnetic Watch,* courts have consistently—though not quite unanimously—adopted its basic holding. For the most part, courts have cited *Non-Magnetic Watch* and its

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184. 44 F. 6 (S.D.N.Y. 1890).
185. See id. at 6.
186. See id.
187. Id. at 6–7.
188. Two dissenting views are expressed in the holding in *Burpee v. Guggenheim,* 226 F. 214 (W.D. Wash. 1915), and in the dicta in *Armstrong v. De Forest,* 13 F.2d 438 (2d Cir. 1926). In *Burpee,* the district court upheld, with unfortunately minimal analysis and without a cite to *Non-Magnetic Watch* or its progeny, a suit to quiet title to certain machines for making paper bottles and patents for those machines. Relying on a patent treatise, the *Burpee* court held that “[a] court of equity has jurisdiction to remove a cloud from the title to a patent, where that cloud consists in an express or implied assertion of adverse ownership or encumbrance” 226 F. at 220 (quotation omitted). *Armstrong* suggests that the property "embodied in a patent" owned by a company doing business in Delaware is "legally situated in the district of Delaware." 13 F.2d at 441.
progeny without pausing to engage in any independent analysis.\textsuperscript{189} When courts occasionally mention an analytical basis for their conclusion, they usually reiterate the reasoning of \textit{Non-Magnetic Watch}: that patent rights are intangible and cannot be seized or sold under an execution.\textsuperscript{190}

Despite the apparent similarity between a patent right and an Internet domain name, the above cases do not defeat the applicability of \$ 1655 to proceedings like the \textit{Porsche} and \textit{Bell Atlantic} actions. First, the analysis (if one can charitably call it that) of the above opinions is questionable on the merits. If the idea of limiting \$ 1655 to cases involving tangible property capable of being physically seized had any currency at the time that \textit{Non-Magnetic Watch} was handed down, such an approach was rejected by the time the Supreme Court decided \textit{Jellenik}. \textit{Jellenik} expressly rejected the notion that only “tangible personal property” in the “actual manual possession of some person” is subject to \textit{in rem} jurisdiction under the predecessor to \$ 1655.\textsuperscript{191} By adopting the \textit{Non-Magnetic Watch} holding without examining its consistency with \textit{Jellenik} and other decisions cited above, courts have failed to appreciate the inadequacy of its primary rationale.

As noted above, the inherent fact that intangible property may not be physically seized has never been a barrier to the invocation of the \textit{in rem} procedures of \$ 1655. Like patent rights, intangible property in the form of corporate stock, insurance policies, and rights to payment cannot be physically seized and executed by the courts, but courts consistently find that such property has its situs within the district where the party controlling such property may be found. Thus, if courts had applied the pragmatic approach of \textit{Jellenik} and its progeny instead of blindly adopting the \textit{Non-Magnetic Watch} line of cases, they would have come to the conclusion that property rights in a patent are subject to \$ 1655 and have their situs within the district where the patentee is located.

Indeed, at least one court has so held,\textsuperscript{192} another has suggested this approach in dicta,\textsuperscript{193} and a prominent treatise has concluded that the \textit{Non-}


\textsuperscript{190} See \textit{Standard Gas}, 224 F. at 992 (asserting that patent is not “such property as the court can seize and act upon as was intended by this law”); see also \textit{Standard Stoker}, 46 F.2d at 681 (reasoning that “patent does not give to the patentee anything more than an intangible property interest, namely, the right to exclude others from the use of the patent”).

\textsuperscript{191} \textit{Jellenick} v. Huron Copper Mining Co., 177 U.S. 1, 14 (1899).

\textsuperscript{192} See \textit{Burpee}, 226 F. at 220.
Magnetic Watch line of cases is “questionable” on the merits and that the situs of patent rights “should be wherever the patentee may be located.”

This approach is properly consistent with the Jellenik line of cases in that the patentee has control over the patent right and is subject to an order of the court directing that the patentee’s interest be canceled and transferred to another party.

Second, even assuming arguendo that patent rights are not a proper subject of a § 1655 proceeding, Internet domain-name registrations are easily distinguishable and more obviously susceptible to resolution in an in rem action. The primary objection to subjecting a patent right to an in rem proceeding is the practical concern that an interest in a patent may not be effectively “seized or sold” by execution, particularly where “by successive partial assignments” of the right to use the patent “various assignees might have relative rights in a number of jurisdictions.”

In cases of multiple assignments, the patent cannot be said to have a definite situs in the district where the patentee resides, and thus a definitive resolution of competing claims to the patent may not be resolved by a simple order directed at the patentee.

A similar objection has been raised against the application of § 1655 to an action to quiet title in a trademark. In Sterling Consulting Corp. v. The Indian Motorcycle Trademark (the sole decision analyzing this question), the district court suggested that the “nature of trademark rights does not lend itself to any sort of definitive in rem declaration” because “a person does not own a mark per se, and competing rights to a trademark depend on the nature of each party’s use, such as market, locality, type of goods, and related factors.” Although the Sterling Consulting court’s conclusion seems overbroad, its concern would arise in cases in which a party seeks a .

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193. See Armstrong, 13 F.2d at 441 (suggesting, without holding, that situs of patent right is in state where patent holder is located).
194. 14 Wright & Miller, supra note 86, § 3633.
196. See id.
198. Id.
199. One can imagine a suit in which the dispute is purely over ownership to a registered mark—for example, one arising out of a disagreement as to the meaning or enforceability of an assignment of a trademark registration. In such a case, the dispute clearly would lend itself to a definitive in rem declaration as to which of the competing claimants has per se ownership in the registration. Under those circumstances, the objection raised by the Sterling Consulting court would disappear, and presumably
declaration of a right to use a certain mark under certain circumstances.\textsuperscript{200} Because a party’s right to use a particular mark will depend largely on whether such use is likely to cause confusion with another trademark\textsuperscript{201} and because such confusion depends on a wide range of factors such as the degree of similarity between the competing marks, the extent of competition between the party and the users of other marks, and many other factors,\textsuperscript{202} the Sterling Consulting court may have a point in suggesting that such a claim does not lend itself to a definitive \textit{in rem} declaration. A district court might not be able to confer the exclusive right to use of “United” as a trademark, for example, because multiple uses of “United” in noncompetitive geographic areas or marketing channels could coexist without any likelihood of confusion.\textsuperscript{203} For that reason, even the holder of a federal registration in “United” likely would have to confront infringing users of “United” on a case-by-case basis instead of in a proceeding \textit{in rem}.

Even if the above objections may carry some weight in the context of patents and trademarks, they have no application in Internet domain-name cases like the Porsche and Bell Atlantic suits. In contrast to the right to use a particular trademark, the right to use an Internet domain name clearly does not depend on a multi-factored inquiry into the nature of competing uses. It depends only on registration through NSI. One, and only one, person or entity may use a particular domain name. Peaceful coexistence of the noncompetitive, nonconfusing uses of the trademark “United” may be possible, but only one party can use UNITED.COM as a domain name.

A domain name registered through NSI is controlled uniquely by NSI. There should be no concern that an order directed at NSI would effectively resolve any competing claims to a particular domain name by canceling the registration and/or transferring it to the plaintiff. Thus, unlike the trademark action noted above, Porsche’s \textit{in rem} action involves a claim to the domain

\begin{itemize}
\item For that reason, even the holder of a federal registration in “United” likely would have to confront infringing users of “United” on a case-by-case basis instead of in a proceeding \textit{in rem}.
\item There should be no concern that an order directed at NSI would effectively resolve any competing claims to a particular domain name by canceling the registration and/or transferring it to the plaintiff. Thus, unlike the trademark action noted above, Porsche’s \textit{in rem} action involves a claim to the domain
\end{itemize}
In Rem Jurisdiction in Cyberspace

names that easily lends itself to a definitive declaration as to Porsche's right in the domain names. Although a person may not own a trademark per se, per se ownership is the very essence of an Internet domain name—only one person can be the registrant of any particular domain name.

C. In Rem Jurisdiction and Due Process

The Porsche Cars court's final objection to accepting in rem jurisdiction over this case was its suggestion that such jurisdiction "might violate due process" and thus could "needlessly call the constitutionality of the [Lanham Act] into doubt."\(^{204}\) Specifically, the Porsche Cars court asserted that "courts generally cannot exercise in rem jurisdiction to adjudicate the status of property unless the Due Process Clause would have permitted in personam jurisdiction over those who have an interest in the res."\(^{205}\) Despite this initial premise, the court stopped short of actually concluding that accepting jurisdiction under these circumstances would violate due process, preferring instead to warn that it "might" do so.\(^{206}\) Two issues are inherent in the constitutional concern expressed by the Porsche Cars court, each of which is evaluated below: (1) whether International Shoe and its progeny call into question the traditional exercise of in rem jurisdiction; and (2) whether the exercise of in rem jurisdiction over Internet domain names is consistent with due process.

1. In Rem Jurisdiction After International Shoe and Shaffer

In the wake of International Shoe and Shaffer, some commentators prematurely concluded that Pennoyer's territoriality framework was "eligible for oblivion."\(^{207}\) For some, "the minimum-contacts principle" was seen as "provid[ing] an adequate general theory of state-court jurisdiction," so much so that "[w]e can release Pennoyer's grip on our minds."\(^{208}\)


\(^{205}\) Id. (citing Shaffer v. Heitner, 433 U.S. 186, 207 (1977)).

\(^{206}\) See id.

\(^{207}\) Hazard, Jr., supra note 74, at 281.

\(^{208}\) Id. at 288; see also Atkinson v. Superior Court, 316 P.2d 960, 964–65 (1957) (refusing to analyze in rem proceeding in terms of situs of intangible property and holding that all jurisdictional problems should be approached from minimum-contacts perspective); Paul D. Carrington, The Modern Utility of Quasi in Rem Jurisdiction, 76 Harv. L. Rev. 303 (1963).
These claims of Pennoyer's demise were greatly (or at least somewhat) exaggerated. The doctrinal innovation initiated by International Shoe need not be seen as a wholesale abandonment of the territoriality framework of Pennoyer. Indeed, the Supreme Court's more recent decision in Burnham v. Superior Court suggests that International Shoe and its progeny are best understood as supplementing rather than replacing Pennoyer's principles of territoriality. Under the modern minimum-contacts framework, in other words, the presence of a defendant (or of a piece of property) within the forum State is not necessary to a court's exercise of territorial jurisdiction, but it may continue to be a sufficient condition of such power.

In Burnham, the Court upheld jurisdiction over a defendant served with process while temporarily within a state for activities unrelated to the suit. The defendant in Burnham was a New Jersey resident who had traveled to California to conduct business and to visit his children who had been brought there by his estranged wife. Because the defendant's contacts with California were unrelated to the divorce suit with which he was served while in the state, defendant argued that he lacked the requisite minimum contacts with California to sustain the exercise of general jurisdiction. Although no majority opinion emerged in Burnham, the lead opinions strongly suggest that traditional conceptions of presence may continue to provide a sufficient basis for territorial jurisdiction—even if presence is not necessary under International Shoe.

Justice Scalia announced the judgment of the Court and authored an opinion joined by two Justices in full and one Justice in part. In Justice Scalia's view, the minimum-contacts test was applicable only when the traditional "physical presence" requirement had not been met. Physical presence alone, in Justice Scalia's view, constitutes a sufficient basis for the exercise of territorial jurisdiction because this basis for jurisdiction is "[a]mong the most firmly established principles of personal jurisdiction in American tradition." Thus, Justice Scalia expressly rejected defendant's proposition, "that a defendant's presence in the forum is not only

210. See id. at 618.
211. See 4 Wright & Miller, supra note 86, § 1073 ("The effect of Burnham was to preserve the physical presence principle of Pennoyer v. Neff.").
212. See Burnham, 495 U.S. at 608.
213. See id.
214. Id. at 610–11 (demonstrating that "English common-law practice...sometimes allowed 'transitory' actions, arising out of events outside the country, to be maintained against seemingly nonresident defendants who were present in England").
unnecessary to validate novel, nontraditional assertions of jurisdiction, but is itself no longer sufficient to establish jurisdiction."215 In other words, Justice Scalia concluded that "jurisdiction based on physical presence alone constitutes due process because it is one of the continuing traditions of our legal system that define the due process standard of 'traditional notions of fair play and substantial justice.'"216

In upholding jurisdiction based on physical presence alone, Justice Scalia was faced with the apparently contradictory dictum in *Shaffer v. Heitner* that "all assertions of state-court jurisdiction must be evaluated according to the standards set forth in *International Shoe* and its progeny."217 Justice Scalia conceded that the "basic approach" of his opinion in *Burnham* deviated from the framework set forth in *Shaffer* in that his opinion "conducted no independent inquiry into the desirability or fairness of the prevailing in-state service rule" on the rationale that "its validation is its pedigree," whereas "*Shaffer* did conduct such an independent inquiry."218 But Justice Scalia pointed out that the *Shaffer* dictum was just that,219 and that "*Shaffer*, like *International Shoe*, involved jurisdiction over an absent defendant, and it stands for nothing more than the proposition that when the 'minimum contact' that is a substitute for physical presence consists of property ownership it must, like other minimum contacts, be related to the litigation."220

Justice Scalia’s opinion in *Burnham* seemed to go out of its way to leave room under *Shaffer* for the traditional exercise of true *in rem* jurisdiction. In an attempt to reconcile the methodology of *Shaffer* with his own approach, Justice Scalia noted that *Shaffer* involved a form of *quasi in rem* jurisdiction that was then "engaged in by only a very small minority of the States."221 Specifically, Justice Scalia noted that, in contrast to the exercise of *in personam* jurisdiction against a defendant served with process within the
forum state, "Shaffer may have involved a unique state procedure in one respect: . . . Delaware was the only State that treated the place of incorporation as the situs of corporate stock when both owner and custodian were elsewhere." 222 Thus, although Justice Scalia was willing to accept Shaffer’s evaluation of the fairness of the "perpetuation of ancient forms" where such forms were "engaged in by only a very small minority of the States," he maintained that historical acceptance was conclusive where "a jurisdictional principle is both firmly approved by tradition and still favored." 223 "[A] doctrine of personal jurisdiction that dates back to the adoption of the Fourteenth Amendment and is still generally observed," in other words, "unquestionably" satisfies the due process standard in Justice Scalia’s view. 224

Justice Scalia’s methodology in Burnham strongly supports the continuing viability of in rem jurisdiction in the International Shoe era. Pennoyer itself confirmed that the "established principles of personal jurisdiction in American tradition" 225 included in personam jurisdiction over a defendant served with process within the forum State and in rem jurisdiction over property found in the forum State. And although the demand for in rem jurisdiction undoubtedly has waned as the minimum-contacts test has broadened the basis for in personam jurisdiction, there is no indication that states are abandoning their longstanding authorization of in rem proceedings. 226 If Justice Scalia’s approach in Burnham is applied to an in rem proceeding, the longstanding historical pedigree of in rem jurisdiction "unquestionably" validates it under the Due Process Clause.

On the other hand, Justice Scalia’s opinion in Burnham failed to garner majority support. Justice White joined the initial parts of Justice Scalia’s opinion and wrote separately to express his view that

[t]he rule allowing jurisdiction to be obtained over a nonresident by personal service in the forum State, without more, has been and is so widely accepted throughout this country that I could not possibly strike it down, either on its face or as applied in this case, on the

222. Id. at 622 n.4 (citing Shaffer v. Heitner, 433 U.S. 186, 218 (1977) (Stevens, J., concurring)).
223. Id. at 622.
224. Id.
225. Id. at 610.
226. In fact, Federal Rule of Civil Procedure 4(n) expressly acknowledges the availability of in rem proceedings in federal court, either under the terms of 28 U.S.C. § 1655, or under the terms of state procedures that would apply in the courts of the state where the federal court is sitting. See supra notes 129–33 and accompanying text.
ground that it denies due process of law guaranteed by the Fourteenth Amendment.\textsuperscript{227}

Justice Stevens expressed a similar sentiment in suggesting that “the historical evidence and consensus identified by Justice Scalia” combined with other factors to “demonstrate that this is, indeed, a very easy case.”\textsuperscript{228} Justices White and Stevens stopped short, however, of giving unequivocal support for the proposition that the historical pedigree of the exercise of transitory jurisdiction was conclusive evidence of its constitutionality. Both suggested that the Court may have the authority under the Due Process Clause to examine even traditionally accepted jurisdictional procedures but that there had been no sufficient showing of arbitrariness and unfairness under the circumstances of this case. In so concluding, Justices White and Stevens each seemed anxious to throw a bone both to Justice Scalia and to Justice Brennan, who (joined by three other Justices) concurred in the judgment and concluded that although “history is an important factor in establishing whether a jurisdictional rule satisfies due process requirements,” it is not “the only factor such that all traditional rules of jurisdiction are, \textit{ipso facto}, forever constitutional.”\textsuperscript{229}

2. \textit{Due Process and In Rem Jurisdiction over Internet Domain Names}

Whether or not Justice Scalia’s historical presumption ultimately prevails, however, it seems clear that the exercise of true \textit{in rem} jurisdiction satisfies the demands of due process. Indeed, the constitutional doubt raised by the \textit{Porsche Cars} court is resolved in the very opinion that the court cites for its concern. Thus, while the Supreme Court in \textit{Shaffer} generally suggested that the minimum-contacts test applicable in \textit{in personam} proceedings would also apply in some proceedings \textit{quasi in rem}, the Court went on to identify several “circumstances in which [the] presence of property alone might support... jurisdiction consistently with the requirements of due process.”\textsuperscript{230} \textit{Shaffer} expressly held that such circumstances include cases where “claims to the property itself are the source of the underlying controversy between the plaintiff and the

\begin{footnotes}
\item[227] \textit{Burnham}, 495 U.S. at 628 (White, J., concurring in part).
\item[228] \textit{Id.} at 640 (Stevens, J., concurring).
\item[229] \textit{Id.} at 629 (Brennan, J., concurring) (emphasis in original).
\end{footnotes}
Thus, Shaffer itself seems to acknowledge that true in rem proceedings and type I quasi in rem proceedings, both of which involve preexisting claims to the property that is the subject res of the lawsuit, have an independent constitutional basis even in the International Shoe regime.

Since Shaffer, numerous courts have exercised in rem jurisdiction in cases in which the plaintiff seeks resolution of competing claims to the property that is the subject res of the dispute. Where the property is found within the forum state and other prerequisites to in rem jurisdiction are satisfied, courts have routinely (if not unanimously) exercised jurisdiction over competing claims to the property without any hint of a due process problem.

Moreover, even a straightforward application of the minimum-contacts test would sustain the same result. A domain-name registrant's contacts with Virginia are significant and constitute the core of the trademark holder's claim under the Trademark Dilution Act: the registrant diluted the holder's trademarks by voluntarily reaching out to register the domain names through NSI in Herndon, Virginia. Due process is clearly satisfied where, as here, the plaintiff's claim asserts an interest in the defendant's property that is situated

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232. One important, contemporaneous commentary on Shaffer acknowledged that Shaffer would not likely affect true in rem or type I quasi in rem proceedings:

As Justice Marshall's opinion observed, the application of the International Shoe test to in rem and quasi in rem type-I actions is not likely to produce any dramatic changes. The Court contemplated serious consequences, however, for the second type of quasi in rem action, in which the attached property is unrelated to the plaintiff's cause of action.


233. See, e.g., R.M.S. Titanic, Inc. v. Haver, 171 F.3d 943, 957 (4th Cir. 1999) (holding that "personal jurisdiction need not be exercised in a pure in rem proceeding because, in the simplest of terms, a piece of property and not a person serves as the defendant," and that "[i]n rem actions only require that a party seeking an interest in a res bring the res into the custody of the court and provide reasonable, public notice of its intention to enable others to appear in the action to claim an interest in the res"); United States v. Four Parcels of Real Property, 893 F.2d 1245, 1249 (11th Cir. 1990) (holding that presence of property that is subject of dispute is sufficient contact to support jurisdiction in government forfeiture action); Chapman v. Vande Bunte, 604 F. Supp. 714, 716-17 (E.D.N.C. 1985) ("In a true in rem proceeding, in order to subject property to a judgment in rem, due process requires only that the property itself have certain minimum contacts with the territory of the forum such that maintenance of the proceeding affecting that property, as opposed to a resolution of a dispute between parties concerning an interest therein, does not offend traditional notions of fair play and substantial justice."); 16 Moore et al., supra note 77, ¶ 108.80[2][a] ("Presence of property within the forum state, by itself, generally will be a sufficient basis for jurisdiction in actions to determine interests in that property."); 4 Wright & Miller, supra note 86, § 1072 (noting that presence of property within state is itself sufficient contact to satisfy due process "when the property within the state is itself the subject matter of a dispute," and that "the Shaffer opinion suggests that the Court had no intention to disturb the assertion of jurisdiction in in rem or quasi-in rem actions of this type").
within the district and where the defendant’s contact with the forum state is the crucial basis for plaintiff’s claim.\textsuperscript{234}

Courts and commentators have expressed concerns as to whether the mere operation of an Internet web site is sufficient to sustain a finding that the site operator purposefully directed its activity at “any random state in which a cyberspace message may be read.”\textsuperscript{235} But this concern need not be extended to the \textit{in rem} context at issue here. The purposeful nature of the contact of registration stems not from a passive knowledge of activity by a third party, but from an affirmative act of registration.\textsuperscript{236} And although a liberal conception of purposeful availment based only on knowledge of widespread use would threaten to subject anyone who maintains an Internet presence to jurisdiction essentially anywhere, such boundless jurisdiction would not be the result of the approach proposed here. Instead, a domain-name registrant would be subject to suits to quiet title to the name in the district in which the name was registered and controlled.

For these reasons, the district court’s concern in the \textit{Porsche Cars} case for avoiding constitutionally suspect constructions should have dictated a result opposite to the one it reached. By suggesting that invocation of \textit{in rem} jurisdiction “might” violate due process, the \textit{Porsche Cars} court has called into question the constitutionality of 28 U.S.C. § 1655—the statute that is properly applicable to the jurisdictional question at issue. If a federal court lacks jurisdiction to resolve the parties’ competing claims to a piece of personal property that is located within its district, then § 1655 is a nullity and

\textsuperscript{234} See \textit{Long v. Baldt}, 464 F. Supp. 269, 273–74 (D.S.C. 1979) (“The fact that the property situated in South Carolina figures prominently in a major part of the alleged mismanagement comprising this cause of action argues strongly for approval of personal jurisdiction on the basis of these contacts alone.”).

\textsuperscript{235} \textit{Counts & Martin}, supra note 4, at 1129–30; see also \textit{McDonough v. Fallon McElligott Inc.}, 40 U.S.P.Q.2d (BNA) 1826, 1828 (S.D. Cal. 1996) (“Because the Web enables easy world-wide access, allowing computer interaction via the Web to supply sufficient contacts to establish jurisdiction would eviscerate the personal jurisdiction requirement as it currently exists; the Court is not willing to take this step. Thus, the fact that [defendant] has a Web site used by Californians cannot establish jurisdiction by itself.”); \textit{ Burk, Federalism in Cyberspace}, supra note 4, at 1115–16 (arguing that such liberal formulation of purposeful availment renders criterion a “sham” and threatens to “dictate that users might ‘reasonably anticipate’ defending a lawsuit essentially anywhere”).

\textsuperscript{236} The conclusion that the registrant acted purposefully and should reasonably have anticipated being haled into court in the Eastern District of Virginia finds further support in the fact that each registrant enters into a contract with NSI that provides that the registrant consents to the “exclusive . . . jurisdiction and venue of the United States District Court for the Eastern District of Virginia, Alexandria Division.” \textit{NSI Service Agreement}, supra note 28, ¶ W.
void under the Due Process Clause.\textsuperscript{237} As noted in detail above, however, courts have entertained a broad range of different actions under this statute over the course of many decades, without any inkling that \textit{in rem} jurisdiction over claims to property within the district raises due process concerns. The constitutional cloud that the \textit{Porsche Cars} court has placed over § 1655 should be removed to bring this case in line with decades of settled precedent by rejecting any due process challenge to the statute.

\textbf{CONCLUSION}

Technological innovation has played a prominent role in the evolution of American law of territorial jurisdiction. Although the territoriality framework of \textit{Pennoyer v. Neff} was thought appropriate “for the age of the ‘horse and buggy’ or even for the age of the ‘iron horse,’” one important commentary declared that it “could not serve the era of the airplane, the radio, and the telephone.”\textsuperscript{238} Thus, for years the \textit{Pennoyer} construct in general and the notion of \textit{in rem} jurisdiction in particular were thought to have outlived their usefulness and to have been superseded by the minimum-contacts framework introduced by \textit{International Shoe}.

The close of the twentieth century has seen the next great technological innovation as the computer age finds itself quickened by the Internet

\textsuperscript{237} The district court’s concern that some domain-name registrants might “object to having their interests adjudicated in absentia,” \textit{Porsche Cars N. Am., Inc. v. PORSCH.COM}, 51 F. Supp. 2d 707, 713 (E.D. Va. 1999), is similarly beside the point. For one thing, the fact that Porsche has proceeded \textit{in rem} does not necessarily presuppose any particular form of notice (such as notice by publication), much less that the registrants’ interests in the domain names will be resolved in their absence. More fundamentally, the form of notice to be provided to the domain-name registrants is simply irrelevant to whether an \textit{in rem} proceeding is legally available. If and when a registrant raises an objection to the form of notice provided, the sufficiency of notice may be evaluated by the district court. Until such objection is raised, it would be premature to an \textit{in rem} action on the ground that some registrant may eventually raise an objection to the form of notice.

\textsuperscript{238} Kurland, \textit{supra} note 72, at 573.
revolution. Once again, principles of territorial jurisdiction have been stretched by the increased globalization effected by new technology. But this time, at least one of the problems introduced by this technological innovation can be effectively addressed simply by reviving the *in rem* component of *Pennoyer*. If competing claims to an Internet domain name may be resolved by an *in rem* proceeding in the district in which the domain name is registered, then the constructive service provisions generally available *in rem* may protect trademark holders against infringement and dilution by cyberpirates who attempt to evade service of process by hiding their identity and location. In this sense, *Pennoyer* may not have served "the era of the airplane, the radio, and the telephone," but it may have an important role to play in the age of the Internet.