The revival of the trespass to chattels doctrine in the context of cyberspace has had unexpected and far-reaching consequences. Trespass to chattels, a doctrine developed to protect physical property, was first applied in cyberspace cases to combat spam, unwanted commercial bulk e-mail. However, recently courts have expanded the doctrine to reach activities that lie at the heart of the Internet—noncommercial e-mail and spiders, automatic programs that search the Internet. This expansion threatens basic Internet functions and exposes the flaws inherent in applying doctrines based in real and tangible property to cyberspace. This Note charts the continuing expansion of the trespass to chattels doctrine. In eBay, Inc. v. Bidder’s Edge, Inc.\(^1\) and two other cases,\(^2\) spiders searching Internet-accessible databases were held to be trespassing the database servers. In Intel Corp. v. Hamidi,\(^3\) the court enjoined sending noncommercial e-mail because it was a trespass to Intel’s e-mail servers. This rapid expansion of the trespass to chattels doctrine demonstrates the malleability of the doctrine as applied to cyberspace. This expansion has stretched the definition of “trespass” and “chattel” and has eliminated the traditional requirement of harm. The outcomes and reasoning in the most recent cases also illustrate the impropriety of a property doctrine that analogizes telecommunications devices to land and construes electronic contact as trespass to physical property.

\(^1\) 100 F. Supp. 2d 1058 (N.D. Cal. 2000).
\(^3\) 114 Cal. Rptr. 2d 244 (Ct. App. 2001).
I. BACKGROUND

A. Technical Background

1. The Internet and Spam

The Internet is an interconnected network of computer networks. The networks (domains) are connected to each other via routers and domain servers that store location information about particular networks. Each computer on the Internet has a unique numeric Internet Protocol (IP) address and usually a corresponding alphanumeric domain name. As information, such as e-mail or web pages, is routed across the Internet to its destination, the files are transmitted as small packets of data and reassembled at their destination. Files are stored and transmitted in standardized ways, based on open, technical standards, voluntarily applied.

People access information on the Internet by sending requests from their computers to servers, which are computers that accept computer requests and “serve” information. People can make any kind of information available to the rest of the world by storing computer files on Internet-accessible servers. This information may be in the form of text, graphics and other media, interactive programs, databases, or combinations of all of these.

People who wish to gain access to the Internet have a variety of options, including purchasing an account from an Internet Service Provider (ISP). ISP accounts typically include an e-mail address, a way to connect to the Internet, and a variety of services, such as web-hosting, access to news feeds, or special proprietary interfaces. To set up websites with their own domain names, individuals and organizations may purchase domain names and then either rent storage space on web host servers or set

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6. For example, 128.12.1.1 is a fictional IP address; www.whitehouse.gov is a real domain name. LearntheNet.com, Domain Names (Jan. 23, 2002), available at http://www.learnthenet.com/english/html/84domain.htm. Numerous online tutorials are available to explain in detail how the Internet works.
8. Id. at 830-32, 837-38.
9. Id. at 829.
10. Id. at 832-34.
11. For instance, Integrated Services Digital Network (ISDN), Digital Subscriber Lines (DSL), or dial-up access using telephone lines.
up their own servers. Currently, domain names are assigned by a variety of authorized commercial domain name registrars.

The explosion of access to the Internet has created new ways of communicating, and accordingly, new problems. Unsolicited e-mail, characterized as “unsolicited bulk e-mail” (UBE), “unsolicited commercial e-mail” (UCE), or, more derogatorily, “junk e-mail” or “spam,” has caused both technical and legal resistance on the part of the Internet community.

Technical resistance has most often taken the form of filters that block the particular IP addresses of spammers. Congress has considered numerous anti-spam bills over the past several years, but has failed to pass any of them. Litigation has filled the void, featuring a variety of theories, including trespass to chattels, computer fraud and abuse, and trademark law.

2. Spiders

“Spiders” are programs that search engines use to create catalogs of information about the web. Like spam, spiders affect sites indiscriminately. But unlike spam, most Internet users, including consumers and businesses, find spiders to be useful. Most search engine databases are compiled by spiders that search web-servers and index their contents.

14. Id.
19. Spiders are also known as “robots” and “crawlers.” See generally Niva Elkin-Koren, Let the Crawlers Crawl: On Virtual Gatekeepers and the Right to Exclude Indexing, 26 U. DAYTON L. REV. 179, 187 (2001) (discussing the benefits of spiders for indexing and the potential harm from trespass to chattels). See also Stephen T. Middlebrook & John Muller, Thoughts on Bots: The Emerging Law of Electronic Agents, 56 BUS. LAW. 341 (2000) (discussing the technical background of spiders and a variety of laws that currently affect or might affect spiders and Internet indexing).
Although only a small amount of the material on the Internet has been indexed, locating any information on the Internet would be an almost impossible task without search engines such as Google, Yahoo, or FindLaw. The operators of web search engines thus provide an essential service, allowing individuals to find otherwise obscure information and allowing creators of information resources to rise from obscurity. Consumers also appreciate the value-added services that may be included, such as reviews and rankings of websites, organized hierarchical indexes, caching (back-up copies stored on the search engine’s website in the event that the original server is not functioning), and comparison-shopping. Businesses indexed by spiders typically appreciate inclusion in the databases; after all, bad publicity is better than no publicity at all, and even if a site is ranked poorly, its presence in an index means that it is at least accessible to web searchers. Website operators who do not wish to avail themselves of the publicity that spiders provide may invoke the Robot Exclusion technical standard, which, like most of the standards on which the Internet is based, is open and voluntary.

B. Legal Background

1. The Classic Trespass to Chattels Action

Trespass to chattels, an old and rarely used common law tort, provides redress for unauthorized use of or intermeddling with another’s personal property. Chattel, or personal property, is defined as physical, tangible
property and is distinguished from both real property and intellectual property. "Trespass" has likewise been defined as a tangible interference with property, requiring physical contact with the property as a threshold matter. To be considered trespass, a use must be intentional, unauthorized, and substantial. A "substantial" use involves actual harm or a serious infringement of rights—an interference with the chattel which dispossesses the owner, harms the chattel, interferes with the owner's use of the chattel in a substantial way or for a substantial period of time, or causes bodily harm.

Trespassers may assert several defenses, including a privilege to use public utilities. Consent of the owner is also a defense to trespass to chattels, although the owner can revoke consent or limit it as to time, place, or other conditions. Even if the owner has consented (granted a license), licensees acting outside the scope of limited consent may bear liability for trespass to chattels.

roots as trespass to land, the two actions have diverged significantly in modern law. KEETON, supra, at 85-86.


34. "'Intermeddling' means intentionally bringing about a physical contact with the chattel." RESTATEMENT (SECOND) OF TORTS § 217 cmt. e. Although dispossession is listed in § 217 as one of the two ways of committing trespass ("A trespass to a chattel may be committed by intentionally (a) dispossessing another of the chattel, or (b) using or intermeddling with a chattel in the possession of another["], dispossessions have typically been handled under the tort action of conversion. See infra Part I.B.2.

35. RESTATEMENT (SECOND) OF TORTS § 217. See also id. § 217 cmt. b (discussing the level of intentionality required).

36. Id. §§ 218, 252 (Consent of Person Seeking Recovery).

37. Id. § 218.

38. Id. § 218; KEETON, supra note 32.

39. RESTATEMENT (SECOND) OF TORTS § 259 (Privilege to Use Facilities of Public Utility).

40. Id. §§ 218 cmt. b, 252, 892A (Effect of Consent).

41. Id. §§ 252 cmt. c, 254 cmt. a.

42. Id. §§ 256 (Use Exceeding Consent), 252 cmt. c. Note that in the Internet context, "permission" and "consent" are generally granted through a "clickwrap" mechanism, which is itself controversial. In "clickwrap" agreements, users are presented with a screen of conditions and a clickable "I agree" button. Users may or may not actually read the agreements and have no opportunity to modify terms or participate in any of the traditional negotiations that form the background of contract law. These contracts of adhesion have nonetheless been held enforceable in many cases. See generally Pamela Samuelson & Kurt Opsahl, How Tensions between Intellectual Property Policy and UCITA are Likely to be Resolved, 570 PLI/PAT 741 (1999); Pamela Samuelson, Intellectual Property and Contract Law for the Information Age: Foreword to a Symposium, 87 CALIF. L.
The remedies awarded for trespass to chattels have included both damages and injunctive relief. Typically, injunctive relief is available for ongoing trespasses.\textsuperscript{43} Recovery for intermeddling has been limited to the actual harm or damage suffered.\textsuperscript{44} Nominal damages are available for actual dispossession,\textsuperscript{45} but not for de minimis harms caused by intermeddling.\textsuperscript{46} Trespass to chattels does not protect the inviolability of the chattel—it only protects against actual harm to the chattel.\textsuperscript{47} This rationale makes it

\textsuperscript{43} Restatement (Second) of Torts §§ 219-220 (discussing a trespasser's liability to those who are entitled to immediate possession and those who are entitled to future possession).

\textsuperscript{44} Id. § 218 cmt. e.

\textsuperscript{45} Id. § 218 cmt. d; Keeton, supra note 32, at 87.

\textsuperscript{46} By analogy to trespass to land there might be a technical tort [where the defendant merely interferes without doing any harm]; and it has been contended that there is a real necessity for nominal damages to protect property from intermeddlers. Such scanty authority as there is, however, has considered that the dignitary interest in the inviolability of chattels, unlike that as to land, is not sufficiently important to require any greater defense than the privilege of using reasonable force when necessary to protect them. Accordingly it has been held that nominal damages will not be awarded, and that in the absence of any actual damage the action will not lie.

\textsuperscript{47} By contrast, trespasses to land that cause no harm may be remedied by nominal damages. Keeton, supra note 32, § 13 (Trespass to Land).

\textsuperscript{48} Where someone is committing a trespass to another's chattel, while it may not be actionable because it does no harm to the chattel or to any other legally protected interest of the possessor, [it] affords the possessor a privilege to use force to defend his interest in its exclusive possession.

Restatement (Second) of Torts § 217 cmt. a.

The interest of a possessor of a chattel in its inviolability, unlike the similar interest of a possessor of land, is not given legal protection by an action for nominal damages for harmless intermeddlings with the chattel. In order that an actor who interferes with another's chattel may be liable, his conduct must affect some other and more important interest of the possessor. Therefore, one who intentionally intermeddles with another's chattel is subject to liability only if his intermeddling is harmful to the possessor's materially valuable interest in the physical condition, quality, or value of the chattel, or if the possessor is deprived of the use of the chattel for a substantial time, or some other legally protected interest of the possessor is affected as stated in Clause (c). Sufficient legal protection of the possessor's interest in the mere invio-
clear that trespass to chattels does not apply to all situations in which there is use of another's chattel. Where there is no legal remedy, the owner of a chattel has a privilege to use reasonable force to protect her chattel.48

2. Trespass to Chattels Distinguished from Related Common Law Theories

Trespass to chattels is frequently confused with related common law theories, such as trespass to land, conversion, and nuisance. Recent applications of the trespass to chattels doctrine in cyberspace have liberally borrowed from the related theory of trespass to land, adding to the confusion.49 Trespass to land, a common law tort, provides redress for any unauthorized interference with "real property" or land.50 As with trespass to chattels, the interference must be unauthorized and involve physical contact with the property.51 However, in contrast with trespass to chattels, trespass to land can be committed unintentionally and can involve little or no harm to the land.52 The rationale for providing more protection for owners of land is that ownership of land creates an interest in inviolability of the land. The owner's best interests are served by inviolability—preventing any incursions, no matter how harmless, because in the real property context any minor contact could ultimately result in a grant of a license or easement.53 Traditionally, trespass to land required physical contact, but some cases have allowed recovery for intangibles, such as sound waves, microscopic particles, dust, and smoke.54 Most courts, however, have traditionally treated those kinds of intangible interference under nuisance law, since nuisance law allows a balancing of interests.55

The common law tort of private nuisance provides redress for non trespassory interferences with land.56 Intangible interferences with property rights, such as gasses, noxious fumes, electromagnetic interference, and blocking of light and air, have generally been handled under nuisance doc-

48. Id. §§ 218 cmt. e, 77 (describing the defense of possession by force).
49. See Burk, supra note 33.
50. KEETON, supra note 32, § 13.
51. Id.
52. Actions for harmless trespasses to land are awarded nominal damages. See generally KEETON, supra note 32, §§ 13, 14, at 87.
54. See Burk, supra note 33, at 33-34.
55. Id. at 33.
56. See RESTATEMENT (SECOND) OF TORTS §§ 821D, 822.
Nuisance doctrine employs a balancing test—weighing the harms and benefits to the owner, the tortfeasor, and the public interest. Typically the liability is assigned on the basis of both efficiency and fairness, and the parties are able to bargain around injunctions and damages awards.\(^\text{58}\)

A third relevant tort, conversion, involves a major interference with chattel or the owner's rights in it.\(^\text{59}\) Conversion usually involves an actual dispossession—physically taking a tangible item of property from the owner.\(^\text{60}\) In conversion, the dispossession is so serious that it results in a "forced judicial sale"—the defendant must pay the owner for the value of the chattel.\(^\text{61}\) Conversion, therefore, is a more serious infringement than trespass to chattels, which has been frequently identified as "the little brother of conversion."\(^\text{62}\) Actual dispossession of the chattel would give rise to actions for both conversion and trespass to chattels, although conversion has been by far the more commonly applied legal theory under those circumstances.\(^\text{63}\)

3. **The Emergence of Cyberspace Trespass to Chattels**

In 1996, a California appellate court established in *Thrifty-Tel, Inc. v. Bezenek*\(^\text{64}\) that electrons and electronic signals are sufficiently physical and tangible to constitute trespass to chattels.\(^\text{65}\) In *Thrifty-Tel*, a telephone operator sued the families of two minors who used a computer to hack into

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57. See id.; Burk, supra note 33.


61. *Keeton, supra* note 32, § 15 (Conversion). This serious interference with the owner's rights and the subsequent forced judicial sale are the hallmarks of conversion. *Id.*

62. *Id.*

63. See RESTATEMENT (SECOND) OF TORTS §§ 217-218, and *Keeton, supra* note 32.

64. 54 Cal. Rptr. 2d 468 (Ct. App. 1996) The court found that computer-generated signals used to access a telephone system were sufficiently tangible. See Burk, supra note 33, for an analysis of this case, which discusses the court's flawed analysis and reliance on inappropriate precedents. See infra (discussing the current uses of this doctrine in cyberspace cases).

65. See also *Hacking is Trespass, Not Conversion, California Court Rules*, 13 No. 8 COMPUTER LAW. 31 (1996).
TRESPASS TO CHATTELS

The court in Thrifty-Tel found that the presence of electronic signals constituted trespass to chattels. The court relied principally on unusual cases that treated intangible interferences in real property (land) as trespasses. Intangible interferences are more commonly treated under the nuisance doctrine, not trespass to land. Thrifty-Tel's treatment of intangible interferences as trespass to chattels pushed the boundary of nuisance-like behavior, from trespass to land to trespass to chattels.

The reconfigured trespass to chattels doctrine was first applied to the Internet in a spam case, CompuServe, Inc. v. Cyber Promotions, Inc., in which CompuServe, an ISP, sued Cyber Promotions for spamming CompuServe account-holders. CompuServe followed Thrifty-Tel in finding that electronic "touches" constituted a sufficient trespass to meet the requirements for trespass to chattels. This was despite the fact that the very same electronic "touches" were not only permitted by CompuServe, but they were the exact kind of uses that comprised any ISP's principal service—receipt and delivery of e-mail to account-holders who paid for that service. CompuServe transformed these electronic touches, which form the basis of all communications on the Internet, into trespasses any time the owner of a server withdraws her permission from a particular sender. The defenses that Cyber Promotions raised—a First Amendment right to communicate to users and access to CompuServe as a public utility—were dismissed by the court with slim analysis.

The court in CompuServe also loosened the requirement of harm in the trespass to chattels doctrine, granting an injunction without requiring CompuServe to show actual harm to the chattel. Instead, the court broke

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66. The minors used computers to connect to Thrifty-Tel's telephone system. They then ran programs to try to determine codes to make long-distance calls. Thrifty-Tel, 54 Cal. Rptr. 2d at 470-71.
67. Id. at 468.
69. Id.
70. Id. at 1021.
71. Id. at 1025-28.
72. Id. at 1025. The test for the public utility defense is that the service is essential to society, and that the provider occupies a monopolistic or oligopolistic position in the marketplace. Id. The court did not accept Cyber Promotion's defense that CompuServe was a public utility. Instead the court found that e-mail is not essential to society and that CompuServe did not occupy a monopolistic or oligopolistic position in the marketplace. Id.
74. See supra Part I.B.1 (discussing the elements of trespass to chattels).
the chain between the trespass and the harm, allowing indirect harms to CompuServe’s business interests—reputation, customer goodwill, and employee time—to count as harms to the chattel (the server).\textsuperscript{75}

Several similar spam cases have followed suit.\textsuperscript{76} These cases have largely adopted the reasoning in \textit{CompuServe}, with very little additional analysis. Spam cases have until recently comprised the majority of the cyberspace trespass cases, and trespass to chattels has provided litigants with a way of dealing with the problem of unsolicited commercial bulk e-mail. There are still unanswered questions about the implications of cyberspace trespass to chattels and the elimination of the public utility and First Amendment defenses to trespass to chattels.\textsuperscript{77}

\section*{II. CASE SUMMARIES: TRESPASS TO CHATTELS IN CYBERSPACE}

The following cases chart the evolution of the cyber-trespass doctrine, stretching the traditional requirements of harm, trespass, and even the definition of a chattel. The most recent cases have stretched the trespass to chattels doctrine beyond spam to include spidering, the core computer operation that underlies web search engines. In 2000, three district court cases considered the extension of the trespass to chattels doctrine to protect against alleged interference by spiders, computer programs that search servers.\textsuperscript{78} A fourth case used trespass to chattels to enjoin an individual from sending e-mail to Intel employees’ work e-mail accounts.\textsuperscript{79}

\begin{footnotes}
\item[75] \textit{CompuServe}, 962 F. Supp. at 1027. The court did not address the indirect nature of these harms, glossing over the facts that (a) the servers themselves never experienced any loss of functionality, downtime, or any other harm; and (b) it was questionable whether users had any reasonable expectation that CompuServe would prevent third-party spam.


\item[77] For a discussion of state legislative approaches to the problem, see Kelin, supra note 15, at Part II.B.


\item[79] Intel Corp. v. Hamidi, 114 Cal. Rptr. 2d 244 (Ct. App. 2001).
\end{footnotes}
A. eBay, Inc. v. Bidder's Edge, Inc.\textsuperscript{80}

The most famous of these cases, \textit{eBay v. Bidder's Edge}, out of the Northern District of California, featured a lengthy and thoughtful analysis of the harms requirement of the trespass to chattels action.\textsuperscript{81} eBay was a dispute between two auction companies: eBay, the largest and most successful Internet auction website,\textsuperscript{82} and Bidder's Edge, an auction aggregator that gathered data from the various auction websites, compiled it in its own database, and then provided the data on demand as a personalized consumer guide to auctions for a particular item.\textsuperscript{83} The dispute was about access to and use of data stored and organized by eBay.\textsuperscript{84} eBay sought to control the method of searching that the spiders used, arguing that some methods should not be used because they are more computation-intensive than others.\textsuperscript{85} eBay successfully negotiated around spidering methods with several auction aggregators but was not able to come to an agreement with Bidder's Edge.\textsuperscript{86} eBay then sued Bidder's Edge in the Northern District of California, and on the basis of trespass to chattels, obtained a permanent

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{80} 100 F. Supp. 2d 1058 (N.D. Cal. 2000).
\item\textsuperscript{81} Id.
\item\textsuperscript{82} See Elkin-Koren, \textit{supra} note 19, at 181-182. As in many industries, this one successful business created both many competitors and many spin-off industries. In the online auction industry, one spin-off industry was “aggregators”—businesses that aggregate selected data from a variety of online auction websites and present it to the aggregator’s customer in some convenient, value-added format. See Id. for a discussion of the economics of spidering.
\item\textsuperscript{83} eBay, 100 F. Supp. 2d 1058. After losing, Bidder's Edge appealed, then settled, then finally went out of business. Clare Saliba, \textit{Target of eBay Lawsuit Shutting Down}, E-COMMERCE TIMES, Feb. 16, 2001, \textit{available at} http://www.newsfactor.com/perl/story/7585.html. Bidder’s Edge was not alone in providing this value-added service; other companies such as AuctionWatch performed similar services. Elizabeth Clampet, \textit{eBay vs. Auction Aggregators: A Freedom Fight?} E-COMMERCE NEWS, Feb. 11, 2000, \textit{available at} http://www.internetnews.com/ec-news/article/0,,4_302591,00.html.
\item\textsuperscript{84} eBay, 100 F. Supp. 2d at 1060-62.
\item\textsuperscript{85} Id. at 1062. For example, eBay wanted spiders to query the eBay database on-the-fly when a user requested information. Aggregators, such as Bidder's Edge, often prefer to search \textit{in advance} of any particular user queries and to compile the data on their own servers. From the web-surfer’s perspective, the on-the-fly method provides the most current information, while the in-advance method provides a fast retrieval of data and perhaps some value-added information sorting services that are not possible with on-the-fly calculations. The original vendor profits from any sale that transpires, regardless of the search method; however, the consumer may determine from the aggregator’s comparative information that particular vendors’ sales are not in their best interest.
\item\textsuperscript{86} Id. at 1067.
\end{enumerate}
\end{footnotesize}
injunction against Bidder's Edge's spider activity. Although eBay alleged several specific instances of harm, the evidence undercut those harms and the court did not allow them. Instead, the eBay court held that a potential harm was sufficiently substantial to meet the requirements for trespass to chattels.

B. TicketMaster Corp. v. Tickets.com, Inc.

At roughly the same time as the eBay suit was in litigation, TicketMaster, a large retailer of events tickets, sued Tickets.com in the Central District of California. Tickets.com used a spider to gather event locations and times from TicketMaster and other ticket vendors. Tickets.com then reformatted the data and stored it in its own database along with links to all available vendors, including both TicketMaster and Tickets.com. TicketMaster took issue with both the spidering and the linking, and

87. Id. Although it was appealed, the case was ultimately settled—so there was no appellate review of eBay, or, indeed, of any of the three spidering cases.
88. Id. at 1068.
89. Id. The potential harm was found in the (unproven) possibility that other data aggregators would also search eBay's website, and that taken as a group they would burden eBay's servers. For more detail on eBay, see generally Aaron Xavier Fellmeth, Cyber Trespass Comes of Age: eBay, Inc. v. Bidder's Edge, Inc., 19 No. 2 INTELL. PROP. L. NEWSL. 8; Lisa M. Ferri & Robert G. Gibbons, Forgive Us Our Virtual Trespasses: The 'eBay' Ruling, June 27, 2000, N.Y.L.J. 1 col. 1.
90. No. 99-07654, 2000 WL 525390 (C.D. Cal., Mar. 27, 2000); No. 99-07654, 2000 WL 1887522 (C.D. Cal. Aug. 10, 2000), aff'd 2 Fed. Appx. 741 (9th Cir. 2001). There were two opinions issued on the motion for preliminary injunction. The first opinion, in March, denied the preliminary injunction, granting a motion to dismiss as to the trespass to chattels claim. The court primarily analyzed the copyright claim, and found a triable issue although it did find evidence of harm sufficient to grant an injunction. In its August 2000 opinion, the court reconsidered the issue in light of eBay but affirmed its March decision. Although both opinions were published, the court noted in its August 10, 2000, decision, that

[the facts governing this preliminary injunction motion have partly been stated in the minute order of March 27 and will not all be repeated here. (In this respect, the court does not intend this to be a published opinion, but rather a minute order announcing a result, and as a result has not written for publication with the usual citation of excess authorities and other attention to grammatical or literary detail. In addition, no pronouncements of legal significance are intended; those come from the Court of Appeals. While the court cannot prevent publication, such is not done with the permission or desire of the court—and also with the hope that any typos are corrected.)]

TicketMaster, 2000 WL 1887522 at 1.
92. Id.
93. Id.
sought an injunction based on trespass to chattels and copyright infringement.\footnote{Id. In TicketMaster, as in many of these cases, the plaintiffs allege many causes of action to see which will stick; only those relevant to the present discussion are listed.}  
The court issued two decisions contrary to eBay, finding that Tickets.com’s spidering did not constitute trespass to chattels. In the first decision, the court held that "the taking of factual information from a public source was not a trespass," and even if it were, the Copyright Act preempted that claim.\footnote{Id. at 4 (restating the holding from the March decision). The court effectively analyzed the trespass to chattels claim as essentially an attempt to protect TicketMaster’s factual data. TicketMaster, 2000 WL 525390 at 4. Factual data is generally unprotectable. \textit{Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.}, 499 U.S. 340 (1991) (holding that collections of fact cannot be protected by copyright).}  The court noted that it was difficult to see how "entering a publicly available website could be called a trespass, since all are invited to enter."\footnote{TicketMaster, 2000 WL 525390 at 4.}  
The court reconsidered the matter in a second decision issued shortly after eBay.\footnote{TicketMaster, 2000 WL 1887522.}  In the second decision, the court reiterated its reasoning from the first decision, finding no irreparable injury for either the copyright or the trespass to chattels claims. The court attempted to distinguish TicketMaster from eBay on the facts of the cases, noting that TicketMaster had shown no physical harm to the computer, insufficient evidence of obstruction of the computer’s basic function, and no foreseeable harm.\footnote{Id. at 4.}  Although the TicketMaster court was careful not to directly contradict eBay, the reasoning in TicketMaster is nonetheless perfectly applicable to eBay. TicketMaster is, to date, the only cyberspace trespass to chattels case in which a property owner has been unsuccessful on the merits of the claim, albeit only on a preliminary injunction motion as of yet.\footnote{All other spam cases that have been decided against property owners involved third-party contractors or other technicalities. \textit{See, e.g.}, Seidl v. Greentree Mortgage, 30 F. Supp. 2d 1292 (D. Colo. 1998).}  

\section{C. Register.com, Inc. v. Verio, Inc.\footnote{126 F. Supp. 2d 238 (S.D.N.Y. 2000).}}

Also in 2000, Register.com sued Verio in the Southern District of New York for spidering its Internet-accessible database.\footnote{Id. at 242-43.}  Register.com, an ISP, maintained a database of domain name registrants.\footnote{Id.}
accessible to the general public on the Internet. Verio used a spider to scan the database for recent registrants and their contact information. Verio then used that information to send targeted sales pitches for its own ISP and web-hosting services, which were in direct competition with some of the same services offered by Register.com. The court found that Register.com’s terms of service did not forbid spiders, but that the lawsuit had put Verio on notice that its spiders were unwanted. As in eBay, the plaintiff alleged several specific harms that were “thoroughly undercut” by the evidence. Nonetheless the court, relying largely on eBay and CompuServe, found that “evidence of a mere possessory interference is sufficient to demonstrate the quantum of harm necessary to establish a claim for trespass to chattels.”

D. Intel Corp. v. Hamidi

Intel Corp. v. Hamidi differs from the other cyberspace trespass to chattels cases in that the defendant, Hamidi, had no commercial interest at stake; Intel alleged no harm to the actual server that Hamidi allegedly trespassed; and the actual trespass was minor in comparison to the spam or spider cases. In 1999, Intel sued to enjoin Hamidi, a former employee, from sending unsolicited e-mail to current Intel employees at their work e-mail accounts. A California superior court judge found that Hamidi trespassed Intel’s server by sending up to six e-mails to thirty thousand Intel employees over a three-year period of time, and permanently enjoined Hamidi from sending e-mail to employees’ Intel e-mail accounts.

Hamidi appealed, supported by several public interest group amici, but in December 2001, a California court of appeal affirmed the lower

103. Id. at 242.
104. Id. at 243.
105. Id.
106. Id. at 249.
107. Id. See also Mike Tonsing, A Tale of Two Cyberian Robots, 48-Apr. FED. LAW. 12 (2001) (comparing eBay with Register.com).
108. Register.com, 126 F. Supp. 2d at 250.
109. 114 Cal. Rptr. 2d 244 (Ct. App. 2001).
111. The Electronic Frontier Foundation (EFF) and the American Civil Liberties Union (ACLU), Northern California, each filed an amicus brief. In the interim, Hamidi delivered his messages directly to Intel headquarters, using a horse and buggy to make the point that the Superior Court’s view of modern communications technologies made no sense in the modern age. See http://www.intelhamidi.com/seconddelivery.htm (last visited, Feb. 8, 2002); E. Gaura, E-Mail Delivered by Horse Mail, S.F. CHRON. (Sep. 29, 1999), B-2.
court decision.\footnote{112} The appellate court acknowledged that there was insufficient harm to award even nominal damages,\footnote{113} but determined that since Intel was seeking an injunction and not damages, Intel did not need to demonstrate any harm to the chattel\footnote{114}—the mere fact that “the intrusion occur[red] supports a claim for trespass to chattels.”\footnote{115} Although the court held that no showing of harm was necessary to award an injunction, the court nevertheless repeatedly cited the alleged harm to Intel’s business interests caused by employees reading Hamidi’s e-mails.\footnote{116} The court also based the injunction on the ongoing nature of the “trespass.” The court cited several cyberspace trespass to chattels cases to support its point that negligible harms and indirect harms could support an injunction.\footnote{117}

III. DISCUSSION

A. Filling Regulatory and Doctrinal Gaps

Courts revived trespass to chattels to craft quick and expeditious remedies for irritations like spam.\footnote{118} The negative consequences of the new form of the doctrine were at first overshadowed by its apparently positive impact—dealing with spammers was no small accomplishment. Congress has failed to pass spam legislation for several years running,\footnote{119} but the courts successfully used trespass to chattels to step in and fill this regulatory gap.\footnote{120} While Internet users and courts alike approve of results that curtail spam, the use of trespass to chattels is not a substitute for a

\footnote{112} Intel Corp. v. Hamidi, 114 Cal. Rptr. 2d 244 (Ct. App. 2001).
\footnote{113} Id. at 249.
\footnote{114} Id. at 249-50.
\footnote{115} Id. at 249. The court cited Register.com as support for this proposition. Id.
\footnote{116} Id.
\footnote{117} Id. (relying on, among others, Register.com, Hotmail, and CompuServe).
\footnote{118} In addition to the cases we have already seen, one can imagine other situations in which trespass to chattels might lie for computer damage. See, e.g., Burk, supra note 33, at 34, 35-36. For instance, A uses B's computer without permission and actually damages it; or A hacks into B’s system in some way that is not covered by the Computer Fraud & Abuse Act. Id.
\footnote{119} See supra note 17 and accompanying text.
\footnote{120} On the other hand, it is not at all clear that this gap needed to be filled. Although the court in CompuServe noted that spam, if unchecked, could destroy the Internet, spam has remained largely unchecked, and the Internet arguably has not been destroyed as a result. CompuServe, Inc. v. Cyber Promotions, Inc., 962 F. Supp. 1015, 1028 (S.D. Ohio 1997).
properly crafted legislative response to spam, which would consider the public interest and the rights of all parties.\textsuperscript{121}

The shortcomings inherent in using trespass to chattels to remedy cyberspace issues have become more obvious now that courts have started using the doctrine to regulate spiders. Since spiders are essential to the Internet, there are substantial benefits to the public from spider activity. In \textit{TicketMaster} and \textit{eBay}, for instance, the spiders arguably provided a useful service to the public by aggregating data from multiple services and providing cost-comparison information to consumers.\textsuperscript{122}

In addition to its benefits, spider activity also produces few detrimental effects to the public or the property owner. The harms recited in \textit{eBay}, \textit{Register.com}, and \textit{TicketMaster} have all been vague and attenuated, or even disproved.\textsuperscript{123} And while it is certainly conceivable that a spider might overburden or even crash a server, theories other than trespass to chattels already provide remedies for nuisance-like behavior, even on the Internet.\textsuperscript{124} Furthermore, there is no apparent plague of troublesome spider activity, for which trespass to chattels might provide a useful remedy.\textsuperscript{125}

\begin{itemize}
\item \textsuperscript{121} For instance, spam regulations implicate First Amendment rights. While \textit{Cyber Promotions} examined the First Amendment question, its analysis seems out of date and the issue could in any case profit from a thorough legislative examination. State legislatures have weighed in on this question. See Kelin, supra note 15 (discussing state legislative responses and ultimately recommending that federal legislation is needed). It is also worth noting that in many situations, legislation has been spurred by courts refusing to stretch laws and doctrines too far. See, \textit{e.g.}, \textit{U.S. v. LaMacchia}, 871 F. Supp. 535 (D. Mass. 1994). The \textit{LaMacchia} court’s refusal to find the defendant guilty of wire fraud prompted Congress to pass the “No Electronic Theft Act.” H.R. REP. NO. 105-339, at 3-5 (1997). In this respect, the use of trespass to chattels in the spam cases may actually have delayed an effective legislative response to spam by providing an easy, if problematic, solution for ISPs.
\item \textsuperscript{122} Brief of Amici Curiae [28 law professors] In Support of Bidder’s Edge, Inc., Appellant, Supporting Reversal, No. 00-15995 (Jun. 22, 2000), available at http://www.jurist.law.pitt.edu/amicus/biddersedge_v_ebay.pdf. The amicus brief was submitted for Bidder’s Edge’s appeal to the Ninth Circuit, before eBay and Bidder’s Edge settled.
\item \textsuperscript{123} This was also true to some extent in the spam cases. See infra Part III.B.3.
\item \textsuperscript{124} See Burk, supra note 33, at 53, for a discussion of why trespass to chattels is inappropriate for the Internet and comparing it to other theories. Burk specifically proposes a theory of cyber nuisance. \textit{Id.}
\item \textsuperscript{125} In fact, the Restatement specifically notes that not all interference with chattel property is actionable. “Use of force”—private action, in other words—is the appropriate remedy for interferences that are not legally actionable. See supra note 47 and accompanying text. A variety of technical means are available on the Internet as private action against spiders, spammers and others: IP blocking, use of the afore-mentioned robots.txt standard, programming servers to prioritize particular types of uses, allowing users to
By using trespass to chattels to curtail spider activity, courts have created a new form of property protection for property owners. This property protection affords a back-door form of intellectual property protection for databases and collections of facts that would not otherwise be protected by copyright. Although some businesses might welcome legal protection for databases, it is not the place of courts to create such a protection.

B. Doctrinal Evolution

1. Novel Chattels

Cyberspace trespass to chattels cases have assumed that computers, electronic networks, and computer processing power are chattels. While computers are undoubtedly chattels, it is questionable whether electronic

easily deploy spam-filters, and even simple methods such as establishing password-access to databases. Part of the complaint in eBay, Register.com, and the spam cases has been that the technical means employed (IP blocking and use of robots.txt) have failed. This is par for the course with Internet technology—a constant race. Having to constantly deploy new technical methods for keeping ahead, however, should not be considered the sort of harm for which court remedies are in order. Moreover, the existence of alternative technical means that were not explored by the courts or attempted by the property owners renders problematic the granting of relief on the grounds that all available technical means failed.


networks and computer processing power also qualify as chattel.\textsuperscript{128} Although it may make sense to consider the processing power of one's chattel as some form of personal property,\textsuperscript{129} it is unclear what sorts of protection this property requires, especially since the function of this personal property is to be part of a network accessible to the public. Computer owners may want to ensure that the processing power is available for their own purposes, that it functions fully, and that there is no risk of anybody else making property claims on that processing power.\textsuperscript{130} The trespass to chattels doctrine, designed to ensure that a single, indivisible piece of tangible property is available to its owner, might not be suitable in this situation.\textsuperscript{131} Furthermore, if processing power and network connection are a form of chattel, what effect does allowing the public access to the chattel via the Internet have on the owner's rights?\textsuperscript{132} And what rights does the public have as a result? The courts have not examined these questions.

Finally, the question of whose chattel is being trespassed has not been adequately addressed. In CompuServe and the spam cases, it seems apparent that the harm, if any, is actually suffered by the individual users, who rent access to the ISP's processing power and disk space for their e-mail accounts. To the extent that spammers are trespassing, they are in some sense trespassing against the individual users' disk space or time, and not against the ISPs.

2. Novel Trespasses

The new cyberspace trespass to chattels has married the doctrines of trespass to land and trespass to chattels, blurring the traditional boundaries between them. The land formulation of trespass is a strict formulation,

\begin{itemize}
\item \textsuperscript{128} Chattel property traditionally has been material items or living property (\textit{e.g.}, animals) that can be physically damaged, injured, or physically taken away. \textit{See} KEETON, supra note 32, at 84-86.
\item \textsuperscript{129} \textit{See} Melvin Albritton, Swatting Spiders: An Analysis of Spider Activity on the Internet, 3 TUL. J. TECH. & INTELL. PROP. 137, 148-52 (2001) (arguing that computer processing power should be treated as a form of chattel).
\item \textsuperscript{130} For instance, computer owners would want to be able to prevent members of the public from establishing easements on their property.
\item \textsuperscript{131} Computer processing power is inherently divisible, and computers used as servers are designed to facilitate multiple tasks and multiple processes.
\item \textsuperscript{132} Placing a traditional chattel, such as a horse, in the position of the cyber-chattel sheds some light on the theoretical inconsistencies. If the owner were generally using the horse to give rides to any and all comers, would taking a ride under a false name be considered a trespass? It makes more sense for deceptive horseback riders, and deceptive spiders, to be held liable for the real problem—the false and misleading identification information that prevents property owners from effectively employing technical means of self-help.
\end{itemize}
with no harm requirement, that protects the owner's interest in inviolability. Traditionally, trespass to chattels required an actual physical trespass, and intangible impacts have not generally qualified as trespass to chattels. However, beginning with Thrifty-Tel's recognition of electronic signals as a trespass, courts have eliminated the requirement for a physical trespass and recognized intangibles—electrons—as adequate to support a trespass to chattels claim. The elimination of the requirement for a physical trespass blurs the boundary between trespass to chattels and trespass to land, and it also blurs the boundary between trespass to land and nuisance. As doctrinal boundaries blur, the historic balances between owners' interests and the public interest have shifted in favor of the owners.

3. Novel Harms

As the cyberspace trespass to chattels doctrine has evolved, the requirement for harm has virtually disappeared, allowing vague, attenuated and indirect harms. While the chattel that was allegedly trespassed in each case was the server—the actual computer—the harms alleged and considered have rarely been harms actually suffered by the server. In eBay, the court rejected all of the alleged harms and instead found a potential harm by aggregating the effect of multiple actors. In the more recent Intel decision, the court effectively ruled that third-party harm constituted harm to the chattel. In stretching trespass to chattels, courts have allowed various novel and indirect harms, including loss of corporate goodwill, alleged psychological distress suffered from reading e-mail, and the time wasted by employees—surely a novel form of property in the twentieth century. The actual harm that spam or spiders cause servers has rarely

133. See supra Part I.B.
134. Id.
135. See, e.g., Intel v. Hamidi, 114 Cal. Rptr. 2d 244 (Ct. App. 2001). Throughout the decision, the majority cites to cases dealing with trespass to land, ignoring the traditional distinctions between the actions. Id.
136. See Burk, supra note 33.
137. eBay, Inc. v. Bidder's Edge, Inc., 100 F. Supp. 2d 1058, 1067 (N.D. Cal 2000). And, as some commentators have noted, the harm was not only potential, it was speculative—it's questionable whether the market would support dozens of Internet auction site aggregators in the real world. See Elkin-Koren, supra note 19, at 204.
139. This was true in the spam cases generally. See supra Part I.B.3.
140. Intel, 114 Cal. Rptr. 2d at 250.
141. See id. and the spam cases generally.
been calculated.\textsuperscript{142} This may be because the harm to servers is difficult to measure; or, if measured, would seem insignificant or slight. Where use of available computer resources has been actually alleged, the use has rarely been found sufficient to constitute "harm."\textsuperscript{143} Courts' recognition of these indirect and speculative harms has removed an important limit on the doctrine—a connection between the alleged harm and the remedy imposed.

However, even in those situations in which there is an actual, direct harm alleged—e.g., excessive use of server resources—trespass to chattels is not well tailored to address the harm.\textsuperscript{144} The reconfigured trespass to chattels—stripped of its harm requirement—is a strict formulation of a property right. In the realm of communications and network technologies this strict formulation creates absurd results. As the dissent in \textit{Intel} points out,

\begin{quote}
Under \textit{Intel}'s theory, even lovers' quarrels could turn into trespass suits by reason of the receipt of unsolicited letters or calls from the jilted lover. Imagine what happens after the angry lover tells her fiancé not to call again and violently hangs up the phone. Fifteen minutes later the phone rings. Her fiancé wishing to make up? No, trespass to chattel.\textsuperscript{145}
\end{quote}

By misconstruing what is fundamentally a communications technology as real property or even chattel property, courts have granted owners of

\textsuperscript{142} Of the dozen cases so far, the harm to the server has been calculated by the court in two: \textit{Am. Online, Inc. v. Christian Bros.}, Dec. 16, 1999, N.Y.L.J. 35 col. 2 (S.D.N.Y. 1999), and \textit{CompuServe}, 962 F. Supp. 1015. Although the eBay plaintiffs and defendants helpfully tried to calculate it for the court, the court did not allow those harms, finding the numbers too questionable.

\textsuperscript{143} See, e.g., \textit{eBay}, where the court found that the harms actually alleged by eBay were "flawed." \textit{eBay, Inc. v. Bidder's Edge, Inc.}, 100 F. Supp. 2d 1058, 1063 (N.D. Cal 2000). As discussed supra the court found harm in a potential harm rather than in the harms actually alleged.

\textsuperscript{144} The question of what an appropriate remedy might be is not addressed in this Note. However, the first step would be to define the interests of the relevant parties—communicators on the Internet and owners of Internet-accessible servers. Assuming that some kinds of actions could be harmful, there might be several approaches. At least one commentator has suggested nuisance might be more appropriate than trespass to chattels. \textit{See} \textit{Burk}, supra note 33, at 52-54. Other options include some of the legislation recently tailored to address telecommunications-specific situations, such as spam faxes and spam with false header information. \textit{See}, e.g., \textit{Kelin}, supra note 15.

\textsuperscript{145} \textit{Intel v. Hamidi}, 114 Cal. Rptr. 2d 244, 262 (Ct. App. 2001) (Kolkey, J., dissenting). This dissent is not the only place where these concerns have been raised. \textit{See also} \textit{Burk}, supra note 33, at 34, 35-36 (raising the specter of other uses of telecommunications devices being the subject of trespass to chattels claims—for instance, the electric company and commercial advertisers on televisions and radios).
publicly-accessible Internet servers an absolute right to exclude that does not apply to any other communications medium (e.g., televisions and telephones). An owner merely has to withdraw permission for a use to be deemed harmful and trespassory and therefore subject to injunction and even damages. By removing the harm requirement from trespass to chattels, courts have created an absolute property right, akin to trespass to land, but without the limiting doctrines and balances of real property law.  

4. **No Limiting Elements**

By uprooting trespass to chattels from all its traditional restraints, the doctrine has become completely malleable, able to fit any and all situations. With trespasses as they have now been defined, and without a harm requirement, it would be difficult to conceive of anything that might not constitute a trespass; trespass is effectively defined purely at the owner's will and can encompass almost any kind of act.

C. **Underlying Assumptions of Cyberspace Trespass to Chattels**

While courts have preferred to work within the familiar realm of property law, the extent to which "property" is a proper fit for the communications that take place on the Internet should be given more thorough consideration in the courts. Some of the underlying assumptions displayed in the cyberspace trespass to chattels cases highlight the difficulties in treating Internet communications devices as purely property.

First and most obviously is the assumption held by the property owners and most of the courts: that property ownership is absolute. This assumption, in cyberspace, fails to distinguish between the **real property or land**, and **personal property or chattel**. By applying, without discussion,
the stricter form of property protection traditionally granted to land, courts avoid analysis of both the rationales behind the strict property protection given to land, and the carefully crafted policy compromises that have modified those strict property protections.\footnote{See O'Rourke, supra note 21 (discussing whether “property” and “trespass to chattels” are the appropriate analogies for cyberspace).}

Second, courts coping with new technologies and new forms of communications on the Internet often apply ill-fitting analogies from common law. Property owners alleging trespass to chattels have encouraged the view that telecommunications devices—such as computers connected to the Internet—are best analogized to real property. In contrast, the alleged trespassers have viewed Internet servers as better analogized to telecommunications devices such as telephones and televisions and argued that property owners, by connecting their servers to the Internet, have necessarily opened themselves up to certain kinds of interactions.\footnote{See, e.g., Intel v. Hamidi amicus briefs from Electronic Frontier Foundation, at 27, and American Civil Liberties Union, Northern California, on the Face Intel website, available at http://www.faceintel.com/ (last visited Feb. 8, 2002), and http://www.intelhamidi.com (last visited Feb. 8, 2002); Am. Online, Inc. v. Cyber Promotions, Inc., 948 F. Supp. 436, 442 (E.D. Pa. 1996) (in a second opinion, the court denied Cyber Promotions' motion for reconsideration); and also the spidering cases discussed supra Parts II.A.-C.}

Courts have been persuaded by the analogy to land, perhaps because popular metaphors such as the “information superhighway” underlie their thinking. But the Internet is not a highway or even a private road, and the problems inherent in treating telecommunications devices as land are beginning to make themselves felt.\footnote{See Intel v. Hamidi, 114 Cal. Rptr. 2d 244, 258-265 (Ct. App. 2001) (Kolkey, J., dissenting).} The sense that communications devices, as used in communications, are not equivalent to traditional private property is arguably the working assumption for many Internet users. Many Internet users share the sense that the Internet is a cooperative venture and fear the walling off of portions of the Internet or sense that it is unfair to take advantage of the Internet’s benefits in a one-sided manner—taking the good without contributing, or taking the good without also taking the bad.\footnote{See Burk, supra note 33, at 48. Although not finding these arguments persuasive, Judge Whyte acknowledged these fears briefly in eBay, noting that both sides argue as if they must win or it will be the end of the Internet. eBay, Inc. v. Bidder's Edge, Inc., 100 F. Supp. 2d 1058, 1072 (N.D. Cal 2000).}

Finally, courts seem to have operated under the assumption that for every problem there lies a legal remedy. Spam is an annoyance, and courts have—perhaps rightly—felt that something should be done about it. Com-
plaints about spammers, troublemakers, and perceived “free-riders” have appealed to courts’ sense of fair play. Courts have responded to a sense of urgency in these cases, issuing preliminary and permanent injunctions despite harms that were vague, indirect, tenuous, or completely nonexistent.

IV. CONCLUSION

Trespass to chattels has met some of the stopgap needs of ISPs and generated some intriguing scholarship on the theory of property. However, it is not the right legal approach for dealing with the problems caused by non-permissive communications. Relaxing the doctrine of trespass to chattels from its traditional restraints has created a completely malleable doctrine that poses a real threat to the fundamental activities underlying the Internet. The spidering and noncommercial e-mail cases which have pushed the use of trespass to chattels doctrine beyond spam—*Intel, eBay, TicketMaster, and Register.com*—demonstrate some of the risks in the application of trespass to chattels to cyberspace. Courts considering cyberspace cases should be cautious when applying trespass to chattels and should consider more appropriate common law or statutory remedies.