New Property, New Violations?
The Law of Linking, Framing, and 'Bots

READINGS

With the move of information online, accessible by hyperlink, disputes have arisen over the propriety of linking or accessing others' web sites. In this section we'll consider the law of linking and framing, and discuss the various legal theories that have been used to try to control unwanted linking behavior on the 'net.

The Origins and Scope of the Controversies

The Dilbert "Hack Page" Controversy.

Brooke Shelby Biggs, Newspapers Struggle with Online Archives, Wired News, Feb 25 1997


Alistair Frasier, The Bozo Filter (one technical solution)

The Cases


eBay v Bidder's Edge, 100 F. Supp 2d 1058 (N.D. Cal. 2000) [pdf, 48 kb, edited]


The Commentary

In June 2000, 28 "high tech" law professors submitted a brief in favor of Bidder's Edge to the 9th Circuit, which was then hearing the appeal of the eBay v Bidder's Edge case (the case later settled). In relevant part, the professors noted:

We submit this brief out of concern that the district court's decision represents an unwarranted and dangerous extension of the ancient doctrine of trespass to chattels to control the flow of information on the Internet. The doctrine of trespass to chattels is not designed to and should not be extended to give one company ownership of
information about the price of a commercial product sold on the open market, as the
district court’s decision would effectively do. The public interest in this case weighs
overwhelmingly against the grant of an injunction. We argue first that the district
court’s ruling threatens the efficient exchange of price information on the Internet,
and also that the court’s rationale sweeps so broadly as to endanger many of the
most fundamental activities on which the Internet and electronic commerce are
based. Second, we argue that the district court erroneously substituted speculation
about possible future harm for the evidence of actual harm that trespass to chattel
law requires.

In particular, the professors noted the following concerns:

1. Allowing the trespass claim will reduce competition. That is, the ability for web
server operators to prevent the use and spread of their information (specifically
pricing information) will reduce the competition for goods online, thereby raising
costs to eCommerce participants.

2. Allowing the trespass claim will make search engines and linking illegal. If web
sites operators can choose who can (and cannot) link to them, search engines may
likely be destroyed. Additionally, this ability to block links will affect free
expression, as site operators can choose to stop links from those with messages they
dislike.

3. Allowing the trespass claim grants a quasi-IP right. The information that eBay
was trying to protect is not copyrightable, but the decision nonetheless offers legal
protection. This new IP right is ill-considered and lacks the balance inherent in
statutory IP rights.

The Exercise

Again, the class will break into six groups:

Group A: contains members of Groups 1, 2
Group B: contains member of Groups 3, 4
Group C: contains members of Groups 5, 6
Group D: contains members of Groups 7, 8
Group E: contains members of Groups 9, 10
Group F: contains members of Groups 11, 12

The groups will have time during class to meet and consider the following problem:

A major client of you firm is Yahoo!, which is -- as you know -- one of the largest providers of web
services. As such, the company has thousands of servers located throughout the world. The
General Counsel at Yahoo! forwards you the following news article, asking you to provide him
with a plan of action to address this:

"Researchers Plant Parasites Inside Servers, CNET News.com, August 29, 2001"

In particular, the general counsel wants answers to the following questions:

1. Is there a legal cause of action that Yahoo! could use to prevent this?

2. What theory would this support this claim? (i.e., contract, copyright, trademark,
trespass, etc.)

3. What arguments would you make?
4. Is Yahoo! likely to win?

5. As a policy matter, should Yahoo! lobby the Federal Government for a federal anti-cybertresspass statute? What should it look like?

Come to class ready to discuss and debate these questions (and the larger topic) in detail.
I started my Dilbert Hack Page in January 1996 because, despite a lot of e-mail to the Webmasters at United Media, the layout of their Dilbert page was really lame. I could do better, and I was pretty sure I could avoid copyright problems by linking directly to their images.

I also knew they'd eventually figure it out and write me a threatening letter. Well, they finally did. They sent notice that "United Media intellectual property cannot be used... without the express, written consent of UFS" and pointed out how they could make my life unpleasant if I didn't remove the page.

I asked a lot of laywers for their advice. I got some great feedback. I also sparked a raging debate on a law and policy mailing list. After carefully reading 160 messages of lawyers arguing about my page and the issues surrounding it, I decided to take the safe exit and remove my page.

Thanks to all my friends, colleagues, and family for supporting me and cheering me on. Thanks to all the Dilbert Hack Page readers who voiced their support for me. Many sent their opinions to United Media's executives, their lawyers, and Scott Adams himself.

Resources

Technical details
  How did the page work? What did it look like?
Correspondence with United Media
  Read the letters that got everything started.
Other interesting letters
  I received a large volume of private e-mail. As people grant me permission, I'll be posting my favorite letters.
Cyberia-L Archives
  Cyberia is a listserv dedicated to "law and policy for computer communications." Many active people on the list are practicing lawyers, so the discussions get fairly technical. Search for articles around August 1996 to read the argument over the Dilbert Hack Page.

To subscribe, send e-mail to listserv@listserv.aol.com with no subject and the message "subscribe cyberia-l" in the body by itself.

Designing a Web of Intellectual Property
  Terje Norderhaug and Juliet M. Oberding wrote a very interesting research paper on IP issues and the Web - required reading.
The Link Controversy Page
  Extensive links to legal and other resources about linking.
Hey, can I get your source code?
  Nope. If you set up another Dilbert Hack Page using my Perl script, I could potentially be liable for contributory infringement. The issue is whether my script has substantial non-infringing use. I don't want to deal with it. On the other hand, a good Perl programmer could hack it together from scratch in about an hour.

Thanks

Thanks to Scott Adams for making a comic strip relevant and entertaining enough to be worth the bother. I'll keep sending in my suggestions. Maybe I'll get a cool DNRC title.

Thanks to all my friends, colleagues, and family for supporting me and cheering me on.

Thanks to all the Dilbert Hack Page readers who voiced their support for me. Many sent their opinions to United Media's executives, their lawyers, and Scott Adams himself.
A huge thank-you-very-much goes out to Karen Coyle, Susan Evoy, Larry Hunter, Carl Page, and Al Whaley from CPSR (Computer Professionals for Social Responsibility). They introduced me to Cyberia-L, the Noderhaug and Oberding paper, and other helpful resources.

Cyberia-L has been an immensely valuable source of information. My page really struck a nerve with their community, and I deeply thank them for their wonderful discussions: Warren Agin, Rob Apgood, Dan Burk, Edward Cavazos, Linda Defendeifer, Sean Donelan, Seth Finkelstein, Mike Godwin, Jason Gull, Trotter Hardy, Bruce Hayden, Howard Knopf, Mark Lemley, Wes Morgan, David Post, William Quick, Bill Sommerfeld, Bill Stewart, Bob Stock, Eugene Volokh, Bryan Wildenthal, and others who I may have forgotten.

Dan Wallach, CS Department, Rice University
Newspapers Struggle with Online Archives
by Brooke Shelby Biggs

8:42 a.m. Feb. 25, 1997 PST

One feature ultimately distinguishes online publishing from traditional media: the link. I can send you here or here, or even here to find out more about a topic I may address in this column. That way, you can choose to find out more, get some deeper background from Packet's archives, or see what other publications or people have to say about a given issue.

But what if the information on the other end of that link doesn't want to be found, or wants to be found, but only at a price? Those questions are at the heart of a debate now raging among the newly wired denizens of the newspaper industry.

It began when The Washington Post - which has been online since June 1996 - restructured its archive and took much of it offline. David Rothman, journalist and webmaster of James Fallows' Web outpost, Fallows Central, first noticed the problem after receiving user complaints that many of the pages' links to past Washington Post articles were broken - when they clicked on the links, their browsers returned, "404 - Not Found." Rothman responded with an outraged diatribe.

The Post's copyright notice says, "You may create Web links to any URL on WashingtonPost.com, including articles." So what gives? I contacted Geneva Overholser, the paper's ombudsman. She admitted she knew absolutely nothing about the Internet, and didn't particularly care to learn. A customer service rep told me that links would be good for two weeks and then the articles would be taken offline for the foreseeable future, although plans are in the works to eventually bring online an archive dating back to 1986. He wouldn't say if future access to the archive would be fee-based, but hinted that it probably would.

That hardly sets the Post apart from all its competitors. Most notably, The Wall Street Journal offers an archive that goes back only 14 days, and it already charges subscription fees for all its content.

Rothman and several other new-media watchers argue that a free online archive is part of a news organization's responsibility to the public. The familiar ideology that "information wants to be free" inspires this camp. "It's as though they're tearing down their own newsstand," Rothman said of the Post.

Well, not exactly. If information really wanted to be free, why haven't these critics liberated millions of morning papers from the tyrannical newsstands on our city corners?

This is just a traditional newspaper organization trying to do the same thing as every other new-media organization: find a revenue model that works. In the offline world, newspaper publishers split their primary revenue sources between advertising and subscriptions. So it goes on the Web. Should online papers keep their archives free and open, and offer advertisers the opportunity to place targeted ad banners based on the subject matter of a requested article, for example? Or should they charge an access fee every time someone requests an archived article?

There are strong economic arguments for both models. Rothman favors the former, arguing that allowing other sites to maintain permanent links to past articles drives traffic to your Web site steadily, and that makes advertisers happy. Proponents of the latter model argue that they've always charged fees for back issues of their hard-copy product, so why should the Web be any different?

The Web is different because instead of collecting every newspaper delivered to our doorsteps, or pasting every interesting article into a scrapbook, information can now live on in a highly accessible place, and that accessibility should be at the heart of any newspaper's core values.

But the dilemma does not end with a battle of money vs. democratic editorial values. There are still inevitable copyright matters to consider. After all, when two Scottish rags got into it over one linking to its competitors' archives last year, the courts looked at it as a matter of copyright infringement. But that's a perverse view of this medium. Think of it: Would the Detroit Free Press complain if the Detroit News said, "Read a related article on page A14 of today's Free Press!" on its front page? Not a chance. Yet in essence, it's
the same situation, except readers are more likely to go read that related article if it's easy and free to do so, and in the offline world, that's pretty much impossible. Online, it's a natural.

While it would be inspiring to see newspapers glance up from the bottom line and just do the right thing, first they will fight to remain sustainable. I disagree that the Post or any other newspaper moving in the same direction is trying to shortchange the public. What they are doing, however unfortunately, is spending too much time chasing pennies and too little molding a strategy to become more efficient information providers using the Net's incredible storage and distribution benefits.

A better newspaper makes better profits, and the Net should be a means to that end.

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Music Licenser Shakes Down Web  
by Polly Sprenger

3:00 a.m. July 1, 1999 PDT
When The Kinks sang "You Can't Stop the Music" in 1975, they clearly weren't talking about the American Society of Composers, Artists, and Songwriters.

ASCAP, an organization that collects licensing fees for musical performances, is asking webmasters to pay for the right to link to online music, even if it is stored on another site.

Rather than pay up and deal with the hassle, the webmasters are booting the tunes, or links, off their own sites.

"They are like the mafia when it comes to music," Julian Cook, CEO of TravelFinder.com, said Tuesday. ASCAP asked him to pay a fee simply for linking to other musical sites when "all we had here was a page that had links to radio stations."

ASCAP said it appeared TravelFinder.com was hosting the musical broadcast, since Cook linked to the sites through a frame on his page. While the outside menu bar was TravelFinder's, the actual broadcasts were from elsewhere.

Cook first heard from ASCAP in January and received several more letters in March. In response, he told the organization he had not archived any music, that his site only linked to radio station sites. Last month, however, he was notified that his site could be subject to legal action.

"We have sent numerous letters to your organization offering a license agreement which would authorize public performance of musical works in the ASCAP repertory at your Web site," the letter said. "To date, your site remains unauthorized."

Cook said he felt the letter amounted to a cease-and-desist order, and he removed the music links from his site.

Under its own mandate, ASCAP doesn't have the authority to stop Cook from publishing the links without a court order. According to Chris Amenica, assistant vice president of new media and technology at ASCAP, the letter was simply an offer for a license.

"If somebody doesn't like our rates, they can take us to court and we can have a rate court proceeding. We're not saying to Mr. Cook, 'Take it down or we'll put you out of business.' All we've done is explain our position," Amenica said.

But Cook likens the offer to a protection racket, saying he didn't know that ASCAP had to justify its rates to the court.

"It's a mafia-type shakedown," Cook fumed, saying that the original letter said ASCAP had had to "reluctantly file its first copyright infringement lawsuit against a major Web site operator who refused to enter into an ASCAP license agreement and did not obtain the proper authorization."

The group operates under a 1950 antitrust consent decree, which states that if ASCAP and prospective licensees can't agree on a license fee, a reasonable fee will be set by the federal courts.

The group has been chastised before for bullying tactics, with one case filed in New York under the Racketeer Influenced and Corrupt Organizations Act for mailing brochures to potential licensees "containing false and misleading statements of fact."

In 1996, ASCAP came under critical fire for mailing 6,000 letters to summer camps across the country, insisting that they pay licensing fees for songs sung or performed in a public forum. The media at the time painted a picture of Girl Scouts silenced around their campfires, unable to sing popular tunes.
The group has had a longtime face-off with restaurants across the country for forcing them to pay licensing fees to have TVs and radios turned on for diners.

A 1993 article in Restaurant Business Magazine cited similar tactics in ASCAP's licensing efforts for that industry.

"The state restaurant associations have long advised their members to pay the few hundred dollars in licensing fees rather than risk a lawsuit or fines that could easily cost thousands. Alone, fines for copyright infringement range from US$500 to $10,000," the magazine reported.

"We're not saying we're taking everyone and their brother to court," Amenica said. "We try to settle these things amicably so there isn't that need or expense on both sides."

But like small restaurant owners, most Web sites could not afford a $10,000 lawsuit, Cook said.

Amenica said ASCAP has been successful in requiring retail outlets that play a radio in their shops to pay the licensing fee, and doesn't see why Web outlets should be any different.

"It hasn't been tested yet [in the courts], but when you look at who benefits from the performance, it's the same thing as a retail establishment," Amenica said. "All we're looking for is a fair value for exploitation of our members' rights."

Cook argues that links to music stored elsewhere on the Net shouldn't make a Web site liable for fees, but Amenica said that the issue is cloudier than that.

"Linking does present certain issues, no doubt about it," he said, adding that the group is currently pursuing only sites whose musical links appear to be local to the site, even if those links actually lead to a different server.

"If [the links] take you off a particular Web site, right now we're not pursuing that at all," Amenica said.

Related Wired Links:

Winradio Gives Low-Fi Tech a New Face
10.Mar.98

Rock 'n' Roll Radar
11.Dec.98

Log on, Tune in, Buy Now
11.May.99

Republican Slams Microradio Plan
11.Feb.99

Tunes from Outer Space
20.Nov.98

Like A Streaming Stone
2.Nov.98

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A BOZO FILTER for a Web page

There is no such thing as bad publicity

or so the common (commercially-driven) adage goes.
Yet, for some of us, an adage is not equivalent to a truism.

Introduction

The Web is so open that information made available to one group is immediately available to all, independent of its relevance to the broader community. And while few of us would choose to limit the access to information to those who are honestly interested, it remains that there are visitors who range from the uncouth to the predatory. Like the politician who occasionally experiences an unwelcome endorsement, there will be pages which receive visitors through unwelcome links. I will leave it to your imagination as to what sort of pages you might not appreciate posting links to your page.

The BOZO FILTER was created for the victims of such predatory pages. It enables you to specify a list of URLs from which you do not wish to receive visits. It is implemented in JavaScript and so only works against browsers which understand that language, but as that represents a growing number of the browsers, the filter should be fairly effective.

Demonstration

I created a page, called filter, which has a bozo filter installed which prevents this present page (which servers as the bozo page) from branching to it. You are kicked back here (with a message telling you what is happening), if you try to branch from here to the page, filter.

On the other hand, the page filter does not block the page called friend. So you can branch to filter from the page friend.

Try it and see the difference.

Implementation

It is easy to implement. Copy the script below and past it onto your own page. It should be placed between the line which says

```html
</title>
```

and the one which says

```html
</head>
```

Then edit the following lines:

1. the one which specifies the number of URL bozos you wish to block,
2. the ones specifying the (absolute) URLs themselves, e.g., `bozo[1] = "http:// ..."`.
Add as many as you wish (incrementing the number), but make sure the total number is the same as the `numb` variable.

The Script

The script to be copied and pasted follows:

```html
<script language="JavaScript">

// this BOZO filter was created by Alistair B. Fraser: abfl@psu.edu
// Copyright is retained by Alistair B. Fraser, but you are free to use it to repel predators

var caller = document.referrer     // this discovers the calling page
var msg1 = "The BOZO FILTER intercepted a request from\n\n"  // these form the
var msg2 = "\n\nand DENIED ACCESS."                          // message in the
                                // alert window

if (caller=="") {
    msg1 = "The BOZO FILTER intercepted a request which did not come from a page, "
    msg2 = "and DENIED ACCESS. \n\nYou must branch to here from a recognizable page." 
}

var numb =5         // set value to the number of bozos listed below

function Bozo(numb) {
    for (var i =1;  i <= numb; i++) {
        this[i] = i
    }
}

bozo = new Bozo(numb)

// List the URLs of as many bozos as you wish following
// the format of those shown immediately below.
// The (1st) empty URL blocks attempts to circumvent the filter by
// accessing the page through the Open Location dialogue box.
bozo[1] ="";

for (var i in bozo) {
    if (bozo[i] == caller){
        alert("\n\n" +msg1 + bozo[i] + msg2); //delete line to remove alert dialogue
        history.back();
        break;
    }
}

</script>
```
TICKETMASTER CORP. v. TICKETS.COM, INC.

Case No. CV99-7654-HLH (BQRx)

UNITED STATES DISTRICT COURT FOR THE CENTRAL DISTRICT OF CALIFORNIA

2000 U.S. Dist. LEXIS 12987

August 10, 2000, Decided

August 10, 2000, Filed; August 11, 2000, Entered

HARRY L. HUPP

CIVIL MINUTES -- GENERAL

PROCEEDINGS: PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION

ORDER (also, if applicable, findings and memorandum opinion):

This motion was argued and submitted on 7/31/00, at which time the court took it under submission to consider certain of the points made in oral argument. It is now decided as follows. The tentative ruling previously issued should be disregarded.

The motion of Ticketmaster Corporation and Ticketmaster Online-Search, Inc. (hereafter collectively Ticketmaster or TM) for preliminary injunction against Tickets.Com, Inc. (hereafter T.Com) is denied.

This matter has taken some significant turns since the matter was last here on the motion to dismiss on March 27, 2000. Some of those differences affect consideration of the motion for preliminary injunction. One significant difference is that since the motion to dismiss, TM devised technical methods of blocking direct access by "deep hyperlinking" to TM interior event pages. Thus, at the present time, when T.Com hyperlinks to TM, the reference is to [*3] the TM home page, where the public accessing TM by internet normally starts. However, this may soon change, as discussed below, because TM has now lost the technical means of preventing deep hyperlinking directly to the event web pages. A second major change is a legal development in the form of decision by Judge Whyte of the Northern District in eBay, Inc. v. Bidder's Edge 100 F. Supp. 2d 1058. This has caused a revamping of the TM trespass theory to attempt to meet the circumstances which led Judge Whyte to issue a preliminary injunction in the eBay case. A third change which the court considers irrelevant to the items to be considered on this motion for preliminary injunction is the filing of an anti-trust counterclaim by T.Com, accompanied by a flurry of documents (mostly press releases) apparently designed to show that TM has been gobbling up competitors and has generally been giving T.Com a competitive hard time in operating at a profit. While these may become important issues at the anti-trust phase of the case, they do not affect the copyright, Lanham Act, or unfair competition issues presented on this injunction motion.

The facts governing this preliminary [*4] 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.)

The essential facts are that TM operates the largest ticket brokerage business in the country. It has exclusive arrangements to sell the tickets for many of the largest entertainment and athletic events in the country. It sells these tickets through a network of about 2900 retail ticket windows, over the telephone, and through the internet. The internet business is the focus of this case. TM maintains a "home" page (www.ticketmaster.Com) and has a separate "event" page for each separate event. The typical internet customer accesses the home page and [*5] is directed by a series of directories to the particular event page which lists in standardized fashion the basic information about the event (time, place, date,
price, seating choices if relevant, and directions on how to order tickets by telephone or directly by interactive internet, presumably using credit cards and how to take delivery -- UPS, will-call, etc.). The internet business is an increasingly large portion of TM business; the latest figures show about 3,000,000 "hits" a day on the TM home page. TM has a large number of interior event pages which change with additions or modifications of about 35,000 pages per day. This is managed by a set of computers which assign each interior web page a unique electronic address (called a URL) which facilitates the user to reach the precise page for the event in which the user is interested. Aside from the revenue in selling tickets, TM also receives revenue from advertisers who pay based on the number of hits on the page where the advertisement is carried (this is apparently true both of the home page and the event page, since the examples attached show advertisements on both types of pages). The home and event pages carry TM logos, [*6] so that the customer cannot be confused by the business entity with which he or she is dealing. The home page contains a statement that the user agrees to the "terms and conditions" of use. One can scroll down to the terms and conditions, which provide, among other things, that use binds one to the terms and conditions, that any use is for the personal use of the user, and that no commercial use can be made of the information provided. However, unlike certain other interactive internet programs (see eBay for an example), the user is not required to check an "I agree" box before proceeding to the interior web page wherein is located the information about the particular event in which he or she is interested.

T.Com operates in very different fashion. They do, indeed, have certain events in which they directly sell tickets, although very small in number compared to TM. However, their main business appears to operate as a clearing house to provide information as to where tickets to any event may be obtained. Thus, T.Com collects information on as many events as it can, providing its "customer" information on where the tickets may be purchased, whether from T.Com or another source. [*7] Where T.Com can sell the tickets itself, it does in a manner similar to TM (phone or internet). However, it also provides information on other sources from which tickets may be purchased. It maintains its own form of event page for each event, listing the basic information (price, date, time, etc.). For the vast number of TM events that it lists, it has a statement that tickets may only be purchased from another ticket broker (not naming TM), and provides a box to check which at the present time will take the user directly by hyperlink to the TM home web page. (At the time of the motion to dismiss, the hyperlink took the user directly to the interior web page of TM for the event in question. In the interim, TM found the technical means of preventing this, so the user is now referred directly to the TM home web page where he may start wending his way through the directories to the proper interior web page. However at oral argument, counsel inform the court that the technical method of blocking deep hyperlink reference directly to the TM event page is no longer applicable. T.com states that it may soon again start referring users directly to the TM event page by the use of deep hyperlinking. [*8] Any ticket sale is made by TM. The proceeds are not shared by T.Com. T.Com also provides references and a telephone number or hyperlink to brokers who sell the tickets, some of which are auction sellers and some of which are "premium" ticket brokers, pejoratively known as "scalpers." T.Com makes money from advertisers, both on its home page and event page and from whatever ticket business in has of its own. The record does not reveal if it also makes a commission on sales by brokers to whom it refers customers, but not, of course, from TM.

The vast amount of information provided by T.Com on TM events comes from TM's computers, monitored by T.Com's computers. Since TM's computer information is open to the public, it is also available to T.Com. However, T.Com does not obtain the information in the same way as does the public (that is, by opening up an interior web page and reading the information off the screen), but rather by a sophisticated computer method of monitoring the thousands of interior TM web pages electronically by the use of a mysterious (to the court) devices know as a "webcrawlers" or "spiders"). The T.Com computers enter the TM computers electronically through the [*9] home page and make note of the URL's (electronic addresses) of the interior web pages. They then methodically extract the electronic information from the event page (containing the URL (electronic address of the event web page) price, time, date, place, etc.) and copy it temporarily (for 10-15 seconds) on its own computers. The T.Com programs then extract the purely factual information from the copied TM web pages and place the factual information in the T.Com format on its own web pages, using its own method of expression and format for its own web pages. Except for the URL (discussed below), the copied TM web page (or, rather, the electronic signals which, if projected on the screen, would make up what the viewer sees on the screen) are then discarded and not used or retained for any other purpose. Thus, the viewer of the T.Com event web pages sees only the T.Com version of the facts. The source of the facts are, of course, the TM event web pages.

Now, to approach analysis of these facts from the standpoint of a preliminary injunction: The primary star in the copyright sky for this case is that purely factual information may not be copyrighted. (Feist Publications
T.Com's own computer programs strips the signals of the basic facts, and then discards the copied electronic signals of TM as of no further use (except for the URL, discussed below). What prevents the issuance of a preliminary injunction on these facts is the "fair use" doctrine as recognized by the Ninth Circuit in *Connectix Corp. v. Apple Computer, Inc.* 293 F.3d 596 (9th, 2000) and certain prior cases. Connectix holds that copying for reverse engineering to obtain non-protectable information is permitted by the fair use doctrine in certain circumstances (see also *Acuff-Rose Music, Inc. v. Duke Ellington Co.* 510 U.S. 569, 127 L. Ed. 2d 500, 114 S. Ct. 1164). Reverse engineering to get at unprotected functional elements is not the same process as used here but the analogy seems [*13*] to apply. The copy is not used competitively. It is destroyed after its limited function is done. It is used only to facilitate obtaining non-protectable data—here the basic factual data. It may not be the only way of obtaining that data (i.e., a thousand scriveners with pencil and paper could do the job given time), but it is the most efficient way, not held to be an impediment in Connectix. TM makes the point that copying the URL (the electronic address to the web pages) which is not destroyed, but retained and used, is copying protected material. The court doubts that the material is protectable because the URL appears to contain functional and factual elements only and not original material. It appears likely to the court that plaintiff's odds on prevailing on the fair use doctrine at trial are sufficiently low that a preliminary injunction should not be granted even with the presumption of irreparable injury which goes with copyright infringement.

The other point dealing with copyright is the so-called "hot news" exception. As a basic exception to the rule that factual information is not protectable, an exception developed in the case of competing news organizations selling [*14*] news to customers (newspapers) in competition with one another. Certain protections were allowed to prevent wholesale thievery of news by one organization from another. Here, it is suggested that at least some of the event news is "hot"—that is, the event is sold out within hours or minutes of the tickets becoming available. This exception is not made out here. Even if such a hot event occurs (the court is informally informed that this is not rare) in a TM controlled event, the reference for ticket sales will be to TM, who sells the tickets in any event. Second, there is no showing that this situation occurs often enough to be of commercial significance. Accordingly, a preliminary injunction will not be issued on the copyright aspects of the case. There could be a difference at trial, and the difference could depend on the necessity of downloading the TM electronic signals onto the T.Com computers for purposes of extracting the unprotected factual information.
The trespass aspects of the case have taken on new significance in the light of Judge Whyte's opinion in eBay on May 24, which was immediately followed by a deluge of additional papers in this court. It must be said that [*15] the trespass question presented and decided in eBay bore no resemblance to the trespass question considered by this court on the motion to dismiss last March. What this court decided (at least, what it thought it decided) was that the taking of factual information from a public source was not a trespass, and if taking the information from a publically available computer was a state law trespass, it fell afoul of the preemption aspects of the Copyright Act. However, no question of invasion of the computer by spiders, and possible consequent damage to the computer was presented to this court—at least no such question was decided. So, defendant's argument that it has already been decided and is law of the case and plaintiff's argument that the court can always reconsider a wrong decision have no place—it is a new one to this court. The court is impressed by the original and resourceful thinking of Judge Whyte; it is always difficult to attempt to apply established law to brand new facts with other established policies tugging and pulling one in various directions. Not only that, the court agrees with much of what Judge Whyte says. The computer is a piece of tangible personal property. [*16] It is operated by mysterious electronic impulses which did not exist when the law of trespass to chattels was developed, but the principles should not be too different. If the electronic impulses can do damage to the computer or to its function in a comparable way to taking a hammer to a piece of machinery, then it is no stretch to recognize that damage as trespass to chattels and provide a legal remedy for it. Judge Whyte in eBay found the damage in the occupation of a portion of the capacity of the computer to handle routine business and conjectured that approval of that use would bring many more parasitic like copies of the defendant feeding the computer to a clogged level upon the information expensively developed by eBay, the net result likely being severe damage to the function of the computer and thus the business of eBay. Thus, the injunction was issued to prevent the use of the spiders by the defendant in that case. It is noted that the harm to the equipment foreseen was to its intended function, not the physical characteristics of the computer. A basic element of trespass to chattels must be physical harm to the chattel (not present here) or some obstruction of its basic [*17] function (in the court's opinion not sufficiently shown here). TM has presented statistics showing an estimate of the number of hits by T.Com spiders in its own computers and has presented rough comparisons with the total use of the computers by all users of the computers. The comparative use by T.Com appears very small and there is no showing that the use interferes to any extent with the regular business of TM. If it did, an injunction might well issue, but should not with a showing of lack of harm or foreseeable harm. Nor here is the spectrum of dozens or more parasites joining the fray, the cumulative total of which could affect the operation of TM's business. Further, the showing here is that the effect of T.Com's taking of factual data from TM is not to operate in direct competition with TM—it is not selling the data or the tickets. While TM sees some detriment in T.Com's operation (possibly in the loss of advertising revenue), there is also a beneficial effect in the referral of customers looking for tickets to TM events directly to TM. (In fact, other companies, who presumably pay a fee, are allowed to refer customers directly to the internal web pages of TM, presumably leading [*18] to sale of TM tickets despite hypothetical loss of advertising revenue by not going through the TM home web page.) Accordingly, while the trespass theory has some merit, there is insufficient proof of its elements in this case to justify a preliminary injunction. Further, there appears to be a lack of irreparable injury (required for this theory).

The remaining contentions may be disposed of with fewer words.

The contract theory lacks sufficient proof of agreement by defendant to be taken seriously as a ground for preliminary injunction. Besides, a preliminary injunction to prevent a breach of contract is an almost unheard of thing, being the equivalent of specific enforcement by preliminary injunction. There is insufficient irreparable injury to even consider such a proposition.

The various Lanham Act theories lack sufficient facts to support them. T.Com does not pass itself off as TM. In fact, it carefully says that it cannot sell the tickets but will refer the buyer to another broker (here, read TM) who can. The customer ends up on the TM home web page filed with TM logos. The customer is unlikely to be misled. The customer ends up on the TM home web page filed with TM logos. The customer is unlikely to be misled. Neither is there evidence of reverse palming off. T.Com in no way [*19] pretends that it is TM or acting for it. The false advertising claim is supported by a few mistakes in phone numbers, etc., which appear to be stray errors. This is not worth an injunction.

The other claims appear to have no basis worthy of an injunction. Preliminary injunction denied.
EBAY, INC., Plaintiff, vs. BIDDER'S EDGE, INC., Defendant.

NO. C-99-21200 RMW

UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA

100 F. Supp. 2d 1058; 2000 U.S. Dist. LEXIS 7287; 54 U.S.P.Q.2D (BNA) 1798

May 23, 2000, Decided

May 24, 2000, Filed

RONALD M. WHYTE, United States District Judge.

ORDER GRANTING PRELIMINARY INJUNCTION

[Docket Nos. 6, 12]

Plaintiff eBay, Inc.'s ("eBay") motion for preliminary injunction was heard by the court on April 14, 2000. The court has read the moving and responding papers and heard the argument of counsel. For the reasons set forth below, the court preliminarily enjoins defendant Bidder's Edge, Inc. ("BE") from accessing eBay's computer systems by use of any automated querying program without eBay's written authorization.

I. BACKGROUND

eBay is an Internet-based, person-to-person trading site. (Jordan Decl. P 3.) eBay offers sellers the ability to list items for sale and prospective buyers the ability to search those listings and bid on items. (Id.) The seller can set the terms and conditions of the auction. (Id.) The item is sold to the highest bidder. (Id.) The transaction is consummated directly between the buyer and seller without eBay's involvement. (Id.) A potential purchaser looking for a particular item can access the eBay site and perform a key word search for relevant auctions and bidding status. (Id.) eBay has also created category listings which identify items in over 2500 categories, such as antiques, computers, and dolls. (Id.) Users may browse these category listing pages to identify items of interest. (Id.)

Users of the eBay site must register and agree to the eBay User Agreement. (Id. P 4.) Users agree to the seven page User Agreement by clicking on an "I Accept" button located at the end of the User Agreement. (Id. Ex. D.) The current version of the User Agreement prohibits the use of "any robot, spider, other automatic device, or manual process to monitor or copy our web pages or the content contained herein without our prior expressed written permission." (Id.) It is not clear that the version of the User Agreement in effect at the time BE began searching the eBay site prohibited such activity, or that BE ever agreed to comply with the User Agreement.

eBay currently has over 7 million registered users. (Jordan Decl. P 4.) Over 400,000 new items are added to the site every day. (Id.) Every minute, 600 bids are placed on almost 3 million items. (Id.) Users currently perform, on average, 10 million searches per day on eBay's database. Bidding for and sales of items are continuously ongoing in millions of separate auctions. (Id.)

A software robot is a computer program which operates across the Internet to perform searching, copying and retrieving functions on the web sites of others. (Maynor Decl. P 3; Johnson-Laird Decl. P 15.) A software robot is capable of executing thousands of instructions per minute, far in excess of what a human can accomplish. (Maynor Decl. P 3) Robots consume the processing and storage resources of a system, making that portion of the system's capacity unavailable to the system owner or other users. (Id.) Consumption of sufficient system resources will slow the processing of the overall system and can overload the system such that it will malfunction or "crash." (Id.) A severe malfunction can cause a loss of data and an interruption in services. (Id.)

n2 Programs that recursively query other computers over the Internet in order to obtain a significant amount of information are referred to
in the pleadings by various names, including software robots, robots, spiders and web crawlers.

The eBay site employs "robot exclusion headers." (Id. P 5.) A robot exclusion header is a message, sent to computers programmed to detect and respond to such headers, that eBay does not permit unauthorized robotic activity. (Id.) Programmers who wish to comply with the Robot Exclusion Standard design their robots to read a particular data file, "robots.txt," and to comply with the control directives it contains. (Johnson-Laird Decl. P 20.)

To enable computers to communicate with each other over the Internet, each is assigned a unique Internet Protocol ("IP") address. (Maynor Decl. P 6.) When a computer requests information from another computer over the Internet, the requesting computer must offer its IP address to the responding computer in order to allow a response to be sent. (Id.) These IP addresses allow the identification of the source of incoming requests. (Id.) eBay identifies robotic activity on its site by monitoring the number of incoming requests from each particular IP address. (Id. P 7.) Once eBay identifies an IP address believed to be involved in robotic activity, an investigation is conducted in order to determine if the activity is legitimate or authorized. (Id. P 8.) If an investigation reveals unauthorized robotic activity, eBay may attempt to ignore ("block") any further requests from that IP address. (Id.) Attempts to block requests from particular IP addresses are not always successful. (Id. P 9; Johnson-Laird Decl. P 27.)

Organizations often install "proxy server" software on their computers. (Johnson-Laird Decl. P 12.) Proxy server software acts as a focal point for outgoing Internet requests. (Id.) Proxy servers conserve system resources by directing all outgoing and incoming data traffic through a centralized portal. (Id.) Typically, organizations limit the use of their proxy servers to local users. (Id.) However, some organizations, either as a public service or because of a failure to properly protect their proxy server through the use of a "firewall," allow their proxy servers to be accessed by remote users. (Id. P 13.) Outgoing requests from remote users can be routed through such unprotected proxy servers and appear to originate from the proxy server. (Id.) Incoming responses are then received by the proxy server and routed to the remote user. (Id.) Information requests sent through such proxy servers cannot easily be traced back to the originating IP address and can be used to circumvent attempts to block queries from the originating IP address. (Id. P 14.) Blocking queries from innocent third party proxy servers is both inefficient, because it creates an endless game of hide-and-seek, and potentially counterproductive, as it runs a substantial risk of blocking requests from legitimate, desirable users who use that proxy server. (Id. P 22.)

BE is a company with 22 employees that was founded in 1997. (Carney Decl. P 2.) The BE web site debuted in November 1998. (Id. P 3.) BE does not host auctions. (Id. P 2.) BE is an auction aggregation site designed to offer on-line auction buyers the ability to search for items across numerous on-line auctions without having to search each host site individually. (Id.) As of March 2000, the BE web site contained information on more than five million items being auctioned on more than one hundred auction sites. (Id. P 3.) BE also provides its users with additional auction-related services and information. (Id. P 2.) The [*1062] information available on the BE site is contained in a database of information that BE compiles through access to various auction sites such as eBay. (Id. P 4.) When a user enters a search for a particular item at BE, BE searches its database and generates a list of every item in the database responsive to the search, organized by auction closing date and time. (Id. P 5.) Rather than going to each host auction site one at a time, a user who goes to BE may conduct a single search to obtain information about that item on every auction site tracked by BE. (Id. P 6.) It is important to include information regarding eBay auctions on the BE site because eBay is by far the biggest consumer to consumer on-line auction site. (Id.)

On June 16, 1997, over a year before the BE web site debuted, Peter Leeds n3 wrote an email in response to an email from Kimbo Mundy, co-founder of BE. (Ritchey Decl. Ex 6.) Mundy's email said, "I think the magazines may be overrating sites' ability to block. The early agent experiments, like Arthur Anderson's BargainFinder were careful to check the robots.txt file on every site and desist if asked." (Id.) n3 It is unclear who Peter Leeds is, except that his email address at the time was <peter@biddersedge.com>. ENDFN [*9]

In early 1998, eBay gave BE permission to include information regarding eBay-hosted auctions for Beanie Babies and Furbies in the BE database. (Id. P 7.) In early 1999, BE added to the number of person-to-person auction sites it covered and started covering a broader range of items hosted by those sites, including eBay. (Id.)
On April 24, 1999, eBay verbally approved BE to crawl the eBay web site for a period of 90 days. The parties contemplated that during this period they would reach a formal licensing agreement. They were unable to do so.

It appears that the primary dispute was over the method BE uses to search the eBay database. eBay wanted BE to conduct a search of the eBay system only when the BE system was queried by a BE user. This reduces the load on the eBay system and increases the accuracy of the BE data. BE wanted to recursively crawl the eBay system to compile its own auction database. This increases the speed of BE searches and allows BE to track the auctions generally and automatically update its users when activity occurs in particular auctions, categories of auctions, or when new items are added.

In late August or early September 1999, eBay requested by telephone that BE cease posting eBay auction listings on its site. BE agreed to do so. In October 1999, BE learned that other auction aggregations sites were including information regarding eBay auctions. On November 2, 1999, BE issued a press release indicating that it had resumed including eBay auction listings on its site. On November 9, 1999, eBay sent BE a letter reasserting that BE's activities were unauthorized, insisting that BE cease accessing the eBay site, alleging that BE's activities constituted a civil trespass and offering to license BE's activities.

Approximately 69% of the auction items contained in the BE database are from auctions hosted on eBay. BE estimates that it would lose one-third of its users if it ceased to cover the eBay auctions.

The parties agree that BE accessed the eBay site approximately 100,000 times a day. eBay alleges that BE activity constituted up to 1.53% of the number of requests received by eBay, and up to 1.11% of the total data transferred by eBay. However, eBay does not move, either independently or
alternatively, for injunctive relief that is limited to restricting how BE can use data taken from the eBay site.

n6 The bulk of eBay's moving papers and declarations address the alleged misuse of the eBay mark and the information BE obtains from the eBay computers. The court does not address the facts specific to these claims, nor the merits of these claims. Even if eBay were able to establish a likelihood of success on the merits as to these causes of action, such a showing would only support injunctive relief addressing BE's use of the eBay mark and BE's use of the eBay auction listings (the appropriate relief for which would appear to be a disclaimer regarding the lack of affiliation between eBay and BE and explicitly alerting customers to the limited scope of BE's information). Such a showing would not be sufficient to enjoin BE from accessing eBay's computer systems, which is the only relief eBay appears to request.

III. ANALYSIS

A. Balance of Harm

eBay asserts that it will suffer four types of irreparable harm if preliminary injunctive relief is not granted: (1) lost capacity of its computer systems resulting from BE's use of automated agents; (2) damage to eBay's reputation and goodwill caused by BE's misleading postings; (3) dilution of the eBay mark; and (4) BE's unjust enrichment. n7 (Mot. at 23:18-25.)

n7 eBay does not appear to offer any support for the proposition that unjust enrichment is an independent cause of action, let alone an independently adequate basis for preliminary injunctive relief.

As noted above, eBay does not seek an injunction that is tailored to independently address the manner in which BE uses the information it obtains from eBay. n8 Even without accessing eBay's computer systems by robot, BE could inflict reputational harm by misrepresenting the contents of eBay's auction database or by misusing eBay's trademark. Moreover, allowing frequent and complete recursive searching of eBay's database (which would presumably exacerbate the system harm), requiring appropriate disclaimers regarding the accuracy of BE's listings, or limiting BE's use of the eBay mark would all reduce or eliminate the possibility of reputational harm, without requiring the drastic remedy of enjoining BE from accessing eBay's database. n9 Since eBay does not move independently or alternatively for injunctive relief tailored toward the alleged reputational harm, the court does not include the alleged reputational harm in the balance of harm analysis, nor does the court address the merits of the causes of action based on the alleged reputational harm in the likelihood of success analysis.

According to eBay, the load on its servers resulting from BE's web crawlers represents between 1.11% and 1.53% of the total load on eBay's listing servers. eBay alleges both economic loss from BE's current activities and potential harm resulting [*1065] from the total crawling of BE and others. In alleging economic harm, eBay's argument is that eBay has expended considerable time, effort and money to create its computer system, and that BE should have to pay for the portion of eBay's system BE uses. eBay attributes a pro rata portion of the costs of maintaining its entire system to the BE activity. However, eBay does not indicate that these expenses are incrementally incurred because of BE's activities, nor that any particular service disruption can be attributed to BE's activities. n10 eBay provides no support for the proposition that the pro rata costs of obtaining an item represent the appropriate measure of damages [**18] for unauthorized use. In contrast, California law appears settled that the appropriate measure of damages is the actual harm inflicted by the conduct:
Where the conduct complained of does not amount to a substantial interference with possession or the right thereto, but consists of intermeddling with or use of or damages to the personal property, the owner has a cause of action for trespass or case, and may recover only the actual damages suffered by reason of the impairment of the property or the loss of its use.

Zaslow v. Kroenert, 29 Cal. 2d 541, 551, 176 P.2d 1 (1946). Moreover, even if BE is inflicting incremental maintenance costs on eBay, potentially calculable monetary damages are not generally a proper foundation for a preliminary injunction. See e.g., Sampson v. Murray, 415 U.S. 61, 90, 39 L. Ed. 2d 166, 94 S. Ct. 937 (1974). Nor does eBay appear to have made the required showing that this is the type of extraordinary case in which monetary damages may support equitable relief. See In re Estate of Ferdinand Marcos, Human Rights Litigation, 25 F.3d 1467, 1480 (9th Cir. 1994) (“a district court has authority [**19] to issue a preliminary injunction where the plaintiffs can establish that money damages will be an inadequate remedy due to impending insolvency of the defendant or that defendant has engaged in a pattern of secreting or dissipating assets to avoid judgment.”).

n10 This case was filed on December 10, 1999. BE decommissioned a number of its servers in mid-December 1999. (See Mundy Depo. at 75:12-14.) Reformattting the hard drives resulted in the destruction of the server logs that may have indicated the actual duration of access to eBay's system. (See id. at 74:17-24.) eBay argues this should support an adverse inference against BE because eBay is unable to correlate BE's access to eBay's system with service disruptions. BE responds that these actions were a result of hardware failures unrelated to the litigation. The court agrees that these actions may support an inference that the information BE destroyed was prejudicial. However, final resolution of the fact-dependent questions regarding the circumstances under which this information was destroyed requires a more complete record. Accordingly, eBay is not entitled to a conclusive presumption of harm at this juncture in the proceedings, and eBay's motion to strike all evidence submitted by BE relating to a lack of harm is denied.

[**20]

Ebay's allegations of harm are based, in part, on the argument that BE's activities should be thought of as equivalent to sending in an army of 100,000 robots a day to check the prices in a competitor's store. This analogy, while graphic, appears inappropriate. Although an admittedly formalistic distinction, unauthorized robot intruders into a "brick and mortar" n11 store would be committing a trespass to real property. There does not appear to be any doubt that the appropriate remedy for an ongoing trespass to business premises would be a preliminary injunction. See e.g., State v. Carriker, 5 Ohio App. 2d 255, 214 N.E.2d 809, 811-12 (Ohio App. 1964) (interpreting Ohio criminal trespass law to cover a business invitee who, with no intention of [*1066] making a purchase, uses the business premises of another for his own gain after his invitation has been revoked); General Petroleum Corp. v. Beilby, 213 Cal. 601, 605, 2 P.2d 797 (1931). More importantly, for the analogy to be accurate, the robots would have to make up less than two out of every one-hundred customers in the store, the robots would not interfere with the customers' shopping experience, nor would [**21] the robots even be seen by the customers. Under such circumstances, there is a legitimate claim that the robots would not pose any threat of irreparable harm. However, eBay's right to injunctive relief is also based upon a much stronger argument.

n11 The phrase "brick and mortar" is often used to designate a traditional business when contrasting it with a predominantly, or entirely, on-line business. The phrase appears to refer to the historical reliance on conducting commerce within the context of a physical space made from materials such as brick and mortar, as opposed to the modern trend toward conducting commerce in a cyberspace made from computers programs.

If BE's activity is allowed to continue unchecked, it would encourage other auction aggregators to engage in similar recursive searching of the eBay system such that eBay would suffer irreparable harm from reduced system performance, system unavailability, or data losses. (See Spafford Decl. P 32; n12 Parker Decl. P 19; n13 Johnson-Laird Decl. P [**22] 85. n14) BE does not appear to seriously contest that reduced system performance, system unavailability or data loss would inflict irreparable harm on eBay consisting of lost profits and lost customer goodwill. Harm resulting from lost profits and lost customer goodwill is irreparable because it is neither easily calculable, nor easily compensable and is therefore an appropriate basis for injunctive relief. See, e.g., People of State of California ex rel. Van De Kamp v. Tahoe Reg'l Planning Agency, 766 F.2d 1316, 1319 (9th Cir. 1985). Where, as here, the denial of preliminary
In the patent infringement context, the Federal Circuit has held that a preliminary injunction may be based, at least in part, on the harm that would occur if a preliminary injunction were denied and infringers were thereby encouraged to infringe a patent during the course of the litigation. See Atlas Powder Co. v. Ireco Chemicals, 773 F.2d 1230, 1233 (Fed. Cir. 1985). In the absence of preliminary injunctive relief, "infringers could become compulsory licensees for as long as the litigation lasts." Id. The Federal Circuit's reasoning is persuasive. "The very nature of the patent right is the right to exclude others. See Kaiser Aetna v. United States, 444 U.S. 164, 176, 62 L. Ed. 2d 332, 100 S. Ct. 383 (1979) (characterizing "the right to exclude others" as "one of the most essential sticks in the bundle of rights that are commonly characterized [*1067] as property"). If preliminary injunctive relief against an ongoing trespass to chattels were unavailable, a trespasser could take a compulsory license to use another's personal property for as long as the trespasser could perpetuate the litigation.

BE correctly observes that there is a dearth of authority supporting a preliminary injunction based on an ongoing trespass to chattels. In contrast, it is black letter law in California that an injunction is an appropriate [*25] remedy for a continuing trespass to real property. See Allred v. Harris, 14 Cal. App. 4th 1386, 1390 (1993) (citing 5 B.E. Witkin, Summary of California Law, Torts 605 (9th ed. 1988)). If eBay were a brick and mortar auction house with limited seating capacity, eBay would appear to be entitled to reserve those seats for potential bidders, to refuse entrance to individuals (or robots) with no intention of bidding on any of the items, and to seek preliminary injunctive relief against non-customer trespassers eBay was physically unable to exclude. The analytic difficulty is that a wrongdoer can commit an ongoing trespass of a computer system that is more akin to the traditional notion of a trespass to real property, than the traditional notion of a trespass to chattels, because even though it is ongoing, it will probably never amount to a conversion.

The court concludes that under the circumstances present here, BE's ongoing violation of eBay's fundamental property right to exclude others from its computer system potentially causes sufficient irreparable harm to support a preliminary injunction.

n12 "If 30 or 40 companies spring into existence using similar business models, what will be the total load and impact on eBay's servers?"

n13 "One crawler may currently use 1% of eBay's resources. What if hundred of users used similar crawlers?"

n14 "Given that Bidder's Edge can be seen to have imposed a load of 1.53 % on eBay's listing servers, simple arithmetic and economies reveal how only a few more such companies deploying rude robots [that do not respect the Robot Exclusion Standard] would be required before eBay would be brought to its knees by what would be then a debilitating load." [*23]

n15 As discussed below, eBay has established a strong likelihood of success on the merits of the trespass claim, and is therefore entitled to preliminary injunctive relief because it has established the possibility of irreparable harm. Accordingly, the court does not reach the issue of whether the threat of increased activity would be sufficient to support preliminary injunctive relief where the plaintiff has not made as strong of a showing of likelihood of success on the merits.

In the patent infringement context, the Federal Circuit has held that a preliminary injunction may be based, at least in part, on the harm that would occur if a preliminary injunction were denied and infringers were thereby encouraged to infringe a patent during the course of the litigation. See Atlas Powder Co. v. Ireco Chemicals, 773 F.2d 1230, 1233 (Fed. Cir. 1985). In the absence of preliminary injunctive relief, "infringers could become compulsory licensees for as long as the litigation lasts." Id. The Federal Circuit's reasoning is persuasive. "The very nature of the patent right is the right to exclude others. See Kaiser Aetna v. United States, 444 U.S. 164, 176, 62 L. Ed. 2d 332, 100 S. Ct. 383 (1979) (characterizing "the right to exclude others" as "one of the most essential sticks in the bundle of rights that are commonly characterized [*1067] as property"). If preliminary injunctive relief against an ongoing trespass to chattels were unavailable, a trespasser could take a compulsory license to use another's personal property for as long as the trespasser could perpetuate the litigation.

n16 As other courts have noted, applying traditional legal principles to the Internet can be troublesome. See ImOn, Inc. v. ImaginOn, Inc., 90 F. Supp. 2d 345, 350, 2000 WL 310373, at *1 (S.D.N.Y. 2000) ("Both parties are suppliers of 'services or products' on the Internet which, as I recognize and grapple with hereafter, is one of the most fluid, rapidly developing, and virtually daily changing areas of commerce that the law has had to focus upon and endeavor to apply established principles to.")
licenses to engage in the complained of activity such that it may be reasonable to expect that invasion of the right can be recompensed with a royalty rather than with an injunction, or by evidence that a party has unduly delayed in bringing suit, thereby negating the idea of irreparability. See Polymer Technologies, Inc. v. Bridwell, 103 F.3d 970, 974 (Fed. Cir. 1996) (discussing presumption of irreparable harm in patent infringement context). BE alleges that eBay has both engaged in a pattern of licensing aggregators to crawl its site as well as delayed in seeking relief. For the reasons set forth below, the court finds that neither eBay's limited licensing activities nor its delay in seeking injunctive relief while it attempted to resolve the matter without judicial intervention are sufficient to rebut the possibility of irreparable harm.

If eBay's irreparable harm claim were premised solely on the potential harm caused by BE's current crawling activities, evidence [**27] that eBay had licensed others to crawl the eBay site would suggest that BE's activity would not result in irreparable harm to eBay. However, the gravamen of the alleged irreparable harm is that if eBay is allowed to continue to crawl the eBay site, it may encourage frequent and unregulated crawling to the point that eBay's system will be irreparably harmed. There is no evidence that eBay has indiscriminately licensed all comers. Rather, it appears that eBay has carefully chosen to permit crawling by a limited number of aggregation sites that agree to abide by the terms of eBay's licensing agreement. "The existence of such a [limited] license, unlike a general license offered to all comers, does not demonstrate a decision to relinquish all control over the distribution of the product [*1068] in exchange for a readily computable fee." Ty, Inc. v. GMA Accessories, Inc., 132 F.3d 1167, 1173 (7th Cir. 1997) (discussing presumption of irreparable harm in copyright infringement context). eBay's licensing activities appear directed toward limiting the amount and nature of crawling activity on the eBay site. Such licensing does not support the inference that carte blanche crawling [**28] of the eBay site would pose no threat of irreparable harm.

eBay first learned of BE in late 1997 or early 1998 when BE sought to retain the same public relations firm used by eBay. (See Ploen Decl. Ex. 1.) This motion was filed on January 18, 2000. An unexplained delay of two years would certainly raise serious doubts as the irreparability of any alleged harm. See Playboy Enters., Inc. v. Netscape Communications Corp., 55 F. Supp. 2d 1070, 1090 (C.D. Cal. 1999) (noting that delay of as little as 60 days to three months has been held sufficient to rebut the presumption of irreparable harm). Here, the circumstances establish that any delay resulted from eBay's good faith efforts to resolve this dispute without judicial intervention and do not rebut a finding of the possibility of irreparable harm.

In April 1999, eBay agreed to allow BE to crawl the eBay site for 90 days while the parties negotiated a license. In late August or early September 1999, after the parties had failed to negotiate a license, eBay requested that BE stop crawling the eBay site, and BE complied. It was not until November 2, 1999, that BE issued a press release indicating that it had resumed including [**29] eBay auction listings on its site. In response, on November 9, 1999, eBay sent BE a letter again informing BE that its activities were unauthorized and again offering to license BE's activities. n17 After eBay and BE were again unable to agree on licensing terms, eBay attempted to block BE from accessing the eBay site. By the end of November 1999, despite blocking more than 150 IP addresses, it became apparent that eBay was unable to prevent BE's crawling of the eBay system via rotating proxy servers. Having failed in its attempt at self-help, eBay filed this suit on December 10, 1999, and filed this motion five weeks later. The fact that eBay's primary concern is the threat from the likely increase in crawling activity that would result if BE is allowed to continue its unauthorized conduct, combined with eBay's repeated attempts to resolve this dispute without judicial intervention, and BE's continuing attempts to thwart eBay's protection of its property, convinces the court that eBay's delay in seeking preliminary relief was justified.

n17 Because BE was expressly notified that its conduct was unauthorized, it does not matter whether BE ever agreed to a version of the eBay User Agreement that prohibited robotic activity.

[**30]

BE argues that even if eBay will be irreparably harmed if a preliminary injunction is not granted, BE will suffer greater irreparable harm if an injunction is granted. According to BE, lack of access to eBay's database will result in a two-thirds decrease in the items listed on BE, and a one-eighth reduction in the value of BE, from $80 million to $70 million. (Sweeny Decl. PP 42, 43.) Although the potential harm to BE does not appear insignificant, BE does not appear to have suffered any irreparable harm during the period it voluntarily ceased crawling the eBay site. Barring BE from automatically querying eBay's site does not prevent BE from maintaining an aggregation site including information from eBay's site. Any potential economic harm is appropriately addressed through the posting of an adequate bond.
Moreover, it appears that any harm alleged to result from being forced to cease an ongoing trespass may not be legally cognizable. In the copyright infringement context, once a plaintiff has established a strong likelihood of success on the merits, any harm to the defendant [*1069] that results from the defendant being preliminarily enjoined from continuing to infringe is legally [*33] irrelevant. See Triad Sys. Corp. v. Southeastern Exp. Co., 64 F.3d 1330, 1338 (9th Cir. 1995) (defendant "cannot complain of the harm that will befall it when properly forced to desist from its infringing activities."). The Ninth Circuit has held it to be reversible error for a district court to even consider "the fact that an injunction would be devastating to [defendant's] business" once the plaintiff has made a strong showing of likely success on the merits of a copyright infringement claim. Cadence Design Sys., Inc. v. Avant! Corp., 125 F.3d 824, 830 (9th Cir. 1997). The reasoning in these cases appears to be that a defendant who builds a business model based upon a clear violation of the property rights of the plaintiff cannot defeat a preliminary injunction by claiming the business will be harmed if the defendant is forced to respect those property rights. See Concrete Mach. Co., Inc. v. Classic Lawn Ornaments, Inc., 843 F.2d 600, 613 (1st Cir. 1988) ("If a strong likelihood of success is demonstrated, then the court should issue the injunction even if the defendant will incur the relatively greater burden; a probable infringer [*32] simply should not be allowed to continue to profit from its continuing illegality at the copyright owner's expense."). The Federal Circuit has crafted a similar rule with respect to patent infringement. See Windsurfing Intl Inc. v. AMF, Inc., 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986) ("One who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected."). Accordingly, the court concludes that eBay has demonstrated at least a possibility of suffering irreparable system harm and that BE has not established a balance of hardships weighing in its favor.

B. Likelihood of Success

As noted above, eBay moves for a preliminary injunction on all nine of its causes of action. These nine causes of action correspond to eight legal theories: (1) trespass to chattels, (2) false advertising under the Lanham Act, 15 U.S.C. β 1125(a), (3) federal and state trademark dilution, (4) violation of the Computer Fraud and Abuse Act, 18 U.S.C. β 1030, (5) unfair competition, (6) misappropriation, (7) interference with prospective [*33] economic advantage and (8) unjust enrichment. The court finds that eBay has established a sufficient likelihood of prevailing on the trespass claim to support the requested injunctive relief. Since the court finds eBay is entitled to the relief requested based on its trespass claim, the court does not address the merits of the remaining claims or BE's arguments that many of these other state law causes of action are preempted by federal copyright law. The court first addresses the merits of the trespass claim, then BE's arguments regarding copyright preemption of the trespass claim, and finally the public interest.

I. Trespass

Trespass to chattels "lies where an intentional interference with the possession of personal property has proximately cause[d] injury." Thrifty-Tel v. Bezenek, 46 Cal. App. 4th 1559, 1566 (1996). Trespass to chattels "although seldom employed as a tort theory in California" was recently applied to cover the unauthorized use of long distance telephone lines. Id. Specifically, the court noted "the electronic signals generated by the [defendants'] activities were sufficiently tangible to support a trespass cause of action." Id. [*34] at n.6. Thus, it appears likely that the electronic signals sent by BE to retrieve information from eBay's computer system are also sufficiently tangible to support a trespass cause of action.

In order to prevail on a claim for trespass based on accessing a computer system, the plaintiff must establish: (1) defendant intentionally and without authorization [*1070] interfered with plaintiff's possessory interest in the computer system; and (2) defendant's unauthorized use proximately resulted in damage to plaintiff. See Thrifty-Tel, 46 Cal. App. 4th at 1566; see also Itano v. Colonial Yacht Anchorage, 267 Cal. App. 2d 84, 90, 72 Cal. Rptr. 823 (1968) ("When conduct complained of consists of intermeddling with personal property the owner has a cause of action for trespass or case, and may recover only the actual damages suffered by reason of the impairment of the property or the loss of its use.").) (quoting Zaslow v. Kroenert, 29 Cal. 2d 541, 550, 176 P.2d 1 (1946)). Here, eBay has presented evidence sufficient to establish a strong likelihood of proving both prongs and ultimately prevailing on the merits of its trespass claim.

a. BE's [*35] Unauthorized Interference

eBay argues that BE's use was unauthorized and intentional. eBay is correct. BE does not dispute that it employed an automated computer program to connect with and search eBay's electronic database. BE admits that, because other auction aggregators were including eBay's auctions in their listing, it continued to "crawl" eBay's web site even after eBay demanded BE terminate such activity.
BE argues that it cannot trespass eBay's web site because the site is publicly accessible. BE's argument is unconvincing. eBay's servers are private property, conditional access to which eBay grants the public. eBay does not generally permit the type of automated access made by BE. In fact, eBay explicitly notifies automated visitors that their access is not permitted. "In general, California does recognize a trespass claim where the defendant exceeds the scope of the consent." Baugh v. CBS, Inc., 828 F. Supp. 745, 756 (N.D. Cal. 1993).

Even if BE's web crawlers were authorized to make individual queries of eBay's system, BE's web crawlers exceeded the scope of any such consent when they began acting like robots by making repeated queries. See City of Amsterdam v. Daniel Goldfreyer, Ltd., 882 F. Supp. 1273, 1281 [*36] (E.D. N.Y. 1995) ("One who uses a chattel with the consent of another is subject to liability in trespass for any harm to the chattel which is caused by or occurs in the course of any use exceeding the consent, even though such use is not a conversion."). Moreover, eBay repeatedly and explicitly notified BE that its use of eBay's computer system was unauthorized. The entire reason BE directed its queries through proxy servers was to evade eBay's attempts to stop this unauthorized access. The court concludes that BE's activity is sufficiently outside of the scope of the use permitted by eBay that it is unauthorized for the purposes of establishing a trespass. See Civic Western Corp. v. Zillah Industries, Inc., 66 Cal. App. 3d 1, 17, 135 Cal. Rptr. 915 (1977) ("It seems clear, however, that a trespass may occur if the party, entering pursuant to a limited consent, ... proceeds to exceed those limits ..."). (discussing trespass to real property).

eBay argues that BE interfered with eBay's possessory interest in its computer system. Although eBay appears unlikely to be able to show a substantial interference at this time, such a showing is not required. Conduct that does [*37] not amount to a substantial interference with possession, but which consists of intermeddling with or use of another's personal property, is sufficient to establish a cause of action for trespass to chattel. See Thrifty-Tel, 46 Cal. App. 4th at 1567 (distinguishing the tort from conversion). Although the court admits some uncertainty as to the precise level of possessory interference required to constitute an intermeddling, there does not appear to be any dispute that eBay can show that BE's conduct amounts to use of eBay's computer systems. Accordingly, eBay has made a strong showing that it is likely to prevail on the merits of its assertion that BE's use of eBay's computer system was an unauthorized [*1071] and intentional interference with eBay's possessory interest.

b. Damage to eBay's Computer System

A trespasser is liable when the trespass diminishes the condition, quality or value of personal property. See CompuServe, Inc. v. Cyber Promotions, 962 F. Supp. 1015 (S.D. Ohio 1997). The quality or value of personal property may be "diminished even though it is not physically damaged by defendant's conduct." Id. at 1022. The Restatement [*38] offers the following explanation for the harm requirement:

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 .... Sufficient legal protection of the possessor's interest in the mere inviolability of his chattel is afforded by his privilege to use reasonable force to protect his possession against even harmless interference.

Restatement (Second) of Torts § 218 cmt. e (1977).

eBay is likely to be able to demonstrate that BE's activities have diminished the [*39] quality or value of eBay's computer systems. BE's activities consume at least a portion of plaintiff's bandwidth and server capacity. Although there is some dispute as to the percentage of queries on eBay's site for which BE is responsible, BE admits that it sends some 80,000 to 100,000 requests to plaintiff's computer systems per day. (Ritchey Decl. Ex. 3 at 391:11-12.) Although eBay does not claim that this consumption has led to any physical damage to eBay's computer system, nor does eBay provide any evidence to support the claim that it may have lost revenues or customers based on this use, n18 eBay's claim is that BE's use is appropriating eBay's personal property by using valuable bandwidth and capacity, and necessarily compromising eBay's ability to use that capacity for its own purposes. See CompuServe, 962 F. Supp. at 1022 ("any value [plaintiff] realizes from its computer equipment is wholly derived from the extent to which that equipment can serve its subscriber base.").

n18 Plaintiff believes that it may have experienced system failures and a decrease in system performance during the times that
defendant was searching its system, however, it is unable to produce any correlation between its outages and defendant's activities. Plaintiff contends that it would likely be able to produce such a correlation but for defendant's alleged destruction of logs that recorded the details of its robotic search activities.

[**40]

BE argues that its searches represent a negligible load on plaintiff's computer systems, and do not rise to the level of impairment to the condition or value of eBay's computer system required to constitute a trespass. However, it is undisputed that eBay's server and its capacity are personal property, and that BE's searches use a portion of this property. Even if, as BE argues, its searches use only a small amount of eBay's computer system capacity, BE has nonetheless deprived eBay of the ability to use that portion of its personal property for its own purposes. The law recognizes no such right to use another's personal property. Accordingly, BE's actions appear to have caused injury to eBay and appear likely to continue to cause injury to eBay. If the court were to hold otherwise, it would likely encourage other auction aggregators to crawl the eBay site, potentially to the point of denying effective access to eBay's customers. If preliminary [*1072] injunctive relief were denied, and other aggregators began to crawl the eBay site, there appears to be little doubt that the load on eBay's computer system would qualify as a substantial impairment of condition or value. California law does [*41] not require eBay to wait for such a disaster before applying to this court for relief. The court concludes that eBay has made a strong showing that it is likely to prevail on the merits of its trespass claim, and that there is at least a possibility that it will suffer irreparable harm if preliminary injunctive relief is not granted. eBay is therefore entitled to preliminary injunctive relief.

2. Copyright Preemption

BE argues that the trespass claim, along with eBay's other state law causes of action, "is similar to eBay's originally filed but now dismissed copyright infringement claim, and each is based on eBay's assertion that Bidder's Edge copies eBay's auction listings, a right within federal copyright law." Opp'n at 8:10-12. BE is factually incorrect to the extent it argues that the trespass claim arises out of what BE does with the information it gathers by accessing eBay's computer system, rather than the mere fact that BE accesses and uses that system without authorization.

A state law cause of action is preempted by the Copyright Act if, (1) the rights asserted under state law are "equivalent" to those protected by the Copyright Act, and (2) the work involved falls [*42] within the "subject matter" of the Copyright Act as set forth in 17 U.S.C. ß ß 102 and 103. Kodadek v. MTV Networks, Inc., 152 F.3d 1209, 1212 (9th Cir. 1998). "In order not to be equivalent, the right under state law must have an extra element that changes the nature of the action so that it is qualitatively different from a copyright infringement claim." Xerox Corp. v. Apple Computer, Inc., 734 F. Supp. 1542, 1550 (N.D. Cal. 1990). Here, eBay asserts a right not to have BE use its computer systems without authorization. The right to exclude others from using physical personal property is not equivalent to any rights protected by copyright and therefore constitutes an extra element that makes trespass qualitatively different from a copyright infringement claim. But see, Ticketmaster Corp. v. Tickets.com, Inc., 2000 U.S. Dist. LEXIS 4553, No. CV-99-7654 (C.D. Cal. 2000) (dismissing trespass claim based on unauthorized Internet information aggregation as preempted by copyright law).

3. Public Interest

The traditional equitable criteria for determining whether an injunction should issue include whether the public [*43] interest favors granting the injunction. American Motorcyclist Ass'n v. Watt, 714 F.2d 962, 965 (9th Cir. 1983). The parties submit a variety of declarations asserting that the Internet will cease to function if, according to eBay, personal and intellectual property rights are not respected, or, according to BE, if information published on the Internet cannot be universally accessed and used. Although the court suspects that the Internet will not only survive, but continue to grow and develop regardless of the outcome of this litigation, the court also recognizes that it is poorly suited to determine what balance between encouraging the exchange of information, and preserving economic incentives to create, will maximize the public good. Particularly on the limited record available at the preliminary injunction stage, the court is unable to determine whether the general public interest factors in favor of or against a preliminary injunction.

BE makes the more specific allegation that granting a preliminary injunction in favor of eBay will harm the public interest because eBay is alleged to have engaged in anticompetitive behavior in violation of federal antitrust law. [*44] The Ninth Circuit has noted that in evaluating whether to issue a preliminary injunction, the district court is under no obligation to consider the merits [*1073] of any antitrust counterclaims once the plaintiff has demonstrated a likelihood of success on the merits.
See Triad Sys. Corp. v. Southeastern Exp. Co., 64 F.3d 1330, 1336 n.13 (9th Cir. 1995) (discussing claim of copyright infringement). Although anticompetitive behavior may be appropriately considered in the context of a preliminary injunction based on trademark infringement, where misuse is an affirmative defense, see Helene Curtis Indus. v. Church & Dwight Co., 560 F.2d 1325 (7th Cir. 1977), it does not appear to be appropriately considered here, because there is no equivalent affirmative defense to trespass to chattels. Accordingly, the court concludes the public interest does not weigh against granting a preliminary injunction.

IV. ORDER

Bidder's Edge, its officers, agents, servants, employees, attorneys and those in active concert or participation with them who receive actual notice of this order by personal service or otherwise, are hereby enjoined pending the trial of this matter, from using any automated query program, robot, web crawler or other similar device, without written authorization, to access eBay's computer systems or networks, for the purpose of copying any part of eBay's auction database. As a condition of the preliminary injunction, eBay is ordered to post a bond in the amount of $2,000,000 to secure payment of any damages sustained by defendant if it is later found to have been wrongfully enjoined. This order shall take effect 10 days from the date on which it is filed.

Nothing in this order precludes BE from utilizing information obtained from eBay's site other than by automated query program, robot, web crawler or similar device. The court denies eBay's request for a preliminary injunction barring access to its site based upon BE's alleged trademark infringement, trademark dilution and other claims. This denial is without prejudice to an application for an injunction limiting or conditioning the use of any information obtained on the theory that BE's use violates some protected right of eBay.


RONALD M. WHYTE
United States District Judge
Introduction

Plaintiff Register.com, a registrar of Internet domain names, moves for a preliminary injunction against the defendant, Verio, Inc. ("Verio"), a provider of Internet services. Register.com relies on claims under Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a); the Computer Fraud and Abuse Act of 1986, 18 U.S.C. § 1030, as amended; as well as trespass to chattels and breach of contract under the common law of the State of New York. In essence Register.com seeks an injunction barring Verio from using automated software processes to access and collect the registrant contact information contained in its WHOIS database and from using any of that information, however accessed, for mass marketing purposes.

I. Findings of Fact

The Parties

Plaintiff Register.com is one of over fifty domain name registrars for customers who wish to register a name in the .com, .net, and .org top-level domains. As a registrar it contracts with these second-level domain ("SLD") name holders and a registry, collecting registration data about the SLD holder and a registry, collecting registration data about the SLD holder and submitting zone file information for entry in the registry database. In addition to its domain name registration services, Register.com offers to its customers, both directly and through its more than 450 co-branded and private label partners, a variety of other related services, such as (i) web site creation tools; (ii) web site hosting; (iii) electronic mail; (iv) domain name hosting; (v) domain name forwarding, and (vi) real-time domain name management. Register.com has invested over $15 million dollars in equipment, software, service fees, and human resources in designing, developing, and maintaining its website and the computer systems necessary to host Register.com's Internet-based services. (See Gardos Decl. P6). It has also spent in excess of $25 million on advertising and brand promotion in the year 2000 alone, including through print, radio, and television media. (See Mornell Decl. P31).

In order to give its customers control over their receipt of commercial solicitations, Register.com provides them with the opportunity to "opt-in" during the domain name registration process to receiving sales and marketing communications from Register.com or its co-brand or private label partners. Customers who do not opt-in to such communications are not solicited by Register.com or its co-brands. Significantly, Register.com's co-brand and private label partners have contracted with Register.com for the right to have their services featured on the www.register.com website. (See Mornell Decl. P18).

Defendant Verio is one of the largest operators of web sites for businesses and a leading provider of comprehensive Internet services. Although not a registrar of domain names, Verio directly competes with Register.com and its partners to provide registration services and a variety of other Internet services including website hosting and development. Verio recently made a multimillion dollar investment in its computer system and facilities for its expanded force of telephone sales associates in its efforts to "provide recent domain name registration customers with the services they need, at the time they need them." (Eden Decl. P31).

The WHOIS database

To become an accredited domain name registrar for the .com, .net, and .org domains, all registrars, including Register.com are required to enter into a registrar Accreditation Agreement ("Agreement") with the Internet Corporation for Assigned Names and Numbers ("ICANN"). n1 Under that Agreement, Register.com, as well as all other registrars, is required to provide an on-line, interactive WHOIS database. This database contains the names and contact information--
postal address, telephone number, electronic mail address and in some cases facsimile number—for customers who register domain names through the registrar. The Agreement also requires Register.com to make the database freely accessible to the public via its web page and through an independent access port called port 43. These query-based channels of access to the WHOIS database allow the user to collect registrant contact information for one domain name at a time by entering the domain name into the provided search engine. n2

n1 ICANN was created in 1998 to assume the U.S. Government's responsibilities for the management of the Internet Domain Name System ("DNS"). It is a private, not-for-profit corporation initiated by the Department of Commerce to privatize the Domain Name System in a manner that increases competition and facilitates international participation in its management. (See Ex. B to McPherson Decl.). Network Solutions, Inc. ("NSI") formerly enjoyed a monopoly as the only domain name registrar. NSI still operates and maintains the top-level domain name servers and zone files which enable the other registrars to access the DNS and to transmit domain name registration information for the .com, .net, and .org top level domain names to the System.

n2 The Agreement also obligates Register.com to provide third parties with bulk access to the same WHOIS data pursuant to a license agreement. The bulk access license entitles the licensee to receive weekly--in one transmission--an electronic copy of the same WHOIS information that is provided continuously through Register.com's web page and its access port 43. The Agreement allows Register.com to charge a $ 10,000 yearly fee for the license. Register.com has imposed the same mass marketing prohibition on the use the bulk license data. (See Eden Depo. at 34).

In providing query-based public access to registration data as required by Sections II.F.1 and II.F.4, Registrar shall [**6] not impose terms and conditions on use of the data provided except as permitted by ICANN-adopted policy. Unless and until ICANN adopts a different policy, Registrar shall permit us of data it provides in response to queries for any lawful purposes except to: (a) allow, enable, or otherwise support the transmission of mass unsolicited, commercial advertising or solicitations via e-mail (spam); or (b) enable high volume, automated, electronic processes that apply to Registrar (or its systems).

(Ex. E to McPherson Decl.) (emphasis added).

Originally Register.com's terms and conditions for users of its WHOIS database were substantially the same. In April 2000, however, Register.com implemented the following more restrictive terms of use governing its WHOIS database:

By submitting a WHOIS query, you agree that you will use this data only for lawful purposes and that, under no circumstances will you use this data to: (1) allow, enable, or otherwise support the transmission of mass unsolicited, commercial advertising or solicitations via direct mail, electronic mail, or by telephone; or (2) enable high volume, automated, electronic processes that [**7] apply to Register.com (or its systems). The compilation, repackaging, dissemination or other use of this data is expressly prohibited without the prior [*243] written consent of Register.com. Register.com reserves the right to modify these terms at any time. By submitting this query, you agree to abide by these terms. (Ex. 27 to Pl.'s Sept. 8, 2000 Motion) (emphasis added).

n3 ICANN in its amicus submission dated September 22, 2000 through Louis Touton, its General Counsel, stated that:

To the extent that Register.com is using this legend to restrict otherwise lawful use of the data for mass unsolicited, commercial advertising or solicitations by direct mail or telephone (and not just by electronic mail), it is ICANN's position that Registrar.com (sic) has failed to comply with the promise it made in Section II.F.5 of the Registrar Accreditation Agreement.

(ICANN Amicus Br. at 11).

Verio's Project Henhouse

In late 1999, to better target their marketing and sales efforts toward customers in need [**8] of web
hosting services and to reach those customers more quickly, Verio developed an automated software program or "robot." \(^n4\) With its search robot, Verio accessed the WHOIS database maintained by the accredited registrars, including Register.com, and collected the contact information of customers who had recently registered a domain name. Then, despite the marketing prohibitions in Register.com's terms of use, Verio utilized this data in a marketing initiative known as Project Henhouse and began to contact and solicit Register.com's customers, within the first several days after their registration, by e-mail, regular mail, and telephone.

\(^n4\) Before the development of its search robot, Verio relied primarily on banner and print ads, and briefly on predictive dialing in its marketing efforts. Under the predictive dialing approach, Verio purchased potential customer leads, then contacted those leads by telephone, using a computer dialer and connecting the call to a telemarketer when a potential customer answered. (See Ayers Depo. at 33-34, 75-76).

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Verio's Search Robots

In general, the process worked as follows: First, each day Verio downloaded, in compressed format, a list of all currently registered domain names, of all registrars, ending in .com, .net, and .org. That list or database is maintained by Network Solutions, Inc. ("NSI") and is published on 13 different "root zone" servers. The registry list is updated twice daily and provides the domain name, the sponsoring registrar, and the nameservers for all registered names. Using a computer program, Verio then compared the newly downloaded NSI registry with the NSI registry it downloaded a day earlier in order to isolate the domain names that had been registered in the last day and the names that had been removed. After downloading the list of new domain names, only then was a search robot used to query the NSI database to extract the name of the accredited registrar of each new name. \(^n5\) That search robot then automatically made successive queries to the various registrars' WHOIS databases, via the port 43 access channels, to harvest the relevant contact information for each new domain name registered. (See Eden Depo. at 26-30; Eden Decl. PP36-38). Once retrieved, \(^n10\) the WHOIS data was deposited into an information database maintained by Verio. The resulting database of sales leads was then provided to Verio's telemarketing staff.

\(^n5\) Although Register.com and ICANN have also criticized Verio's use of its search robot to collect the registrar names from NSI's computer system (see ICANN Amicus Br. at 15), that issue is not before the Court.

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Marketing History

Beginning in January, 2000, Register.com learned that Verio was e-mailing its customers to solicit business. Register.com through its Director of Strategic Initiatives Lauren Gaviser complained to Eric Eden, Director of Sales and Channel Operations of Verio, citing an e-mail received by a customer which identified Verio as the sender but stated "by now you [\(*244\)] should have received an email from us confirming the registration of your domain name(s) ... you have taken the first step towards having your own website ... the next step is to set up a hosting account ..." (Ex. 4 to Pl.'s Sept. 8, 2000 Motion). Gaviser advised [\(*11\)] Eden that the e-mail had misled the customer into thinking that Verio had an affiliation with or sponsorship from Register.com. (See Ex. 5 to Pl.'s Sept. 8, 2000 Motion). Eden replied that "our intention is not to mislead people. The e-mail that was sent resulted from a system problem." Id. He promised to correct it.

Register.com continued to get complaints about e-mail and telephone solicitations by Verio from its customers and co-brand partners through January. In March 2000 Gaviser again contacted Eden to complain that Register.com was still receiving numerous complaints, including that a number of telephone messages similar to the following were left with Register.com customers: "This is [name of telemarketer] calling from Verio regarding the registration of [customer's domain name]. Please contact me at your earliest convenience." (Ex. 44 to Pl.'s Sept. 8, 2000 Motion).

On May 5, 2000 Register.com's lawyers wrote to Verio's General Counsel requesting that Verio immediately cease and desist from this marketing conduct. Register.com complained generally that the use of its mark as well as the timing of the solicitations was harming its good will and specifically warned [\(*12\)] Verio that it was violating the terms of use it had agreed to in submitting its WHOIS queries by sending "mass unsolicited, commercial advertising or solicitations via e-mail (spam)." (Ex. E to McPherson Decl.).

On May 9, 2000 Verio, through an Associate Counsel, communicated that it had stopped using the Register.com mark or any other similar mark or phrase which would lead to confusion and had ceased accessing the WHOIS database for the purpose of marketing
through e-mail. (See Ex. 7 to Pl.'s Sept. 8, 2000 Motion). In an effort to confirm settlement of the dispute, Register.com's lawyers sent Verio a terms letter for it to sign and acknowledge. In that letter Register.com specifically required Verio to cease use of the WHOIS database for not just e-mail marketing, but also direct mail and telemarketing. Verio refused to sign and although it ceased e-mail solicitation, it continued to use the WHOIS contact information for telemarketing purposes into July 2000. (See Ex. 14 to Pl.'s Sept. 8, 2000 Motion, Ayers Depo. at 36).

Accordingly, Register.com commenced this lawsuit and moved for a temporary restraining order and preliminary injunction on August 3, 2000. On August 4, 2000, Verio [**13] sought expedited discovery and agreed on August 9, 2000 to enter into a stipulated temporary restraining order with Register.com which prevents it from accessing Register.com's WHOIS database by using a search robot and prevents Verio from using any data obtained from Register.com to solicit Register.com's customers. Prior to the Court's September 15, 2000 hearing, the Court asked ICANN to submit an amicus curiae brief outlining its position with respect to the parties' dispute. The Court granted the parties' request to respond to ICANN's brief, which responses were received on September 28, 2000.

II. Discussion

This dispute centers on both Verio's end use of the WHOIS data and its use of the automated search robot. While Register.com acknowledges its obligation to provide public access to its customers' contact information, it has developed "terms of use" which prohibit third parties, such as Verio, from using the contact information for any mass marketing purpose - whether by e-mail, regular mail or telephone. Register.com also argues that the use of automated software to access the WHOIS database violates its terms of use and harms its computer systems.

[**245] Verio admits both [**14] the use of the WHOIS data for marketing purposes and the use of the search robot. Verio also concedes that its end use of the information violates the marketing restriction imposed by Register.com, but argues that this restriction should not be enforced because--at a minimum--direct mail and telephone marketing are permissible uses under the terms of the Accreditation Agreement Register.com signed with ICANA. n6 Verio argues that by imposing these impermissible antimarketing restrictions Register.com is in breach of that Agreement. Verio also argues that the use of the robot is not prohibited by Register.com's terms of use and claims that Register.com has not proven that the robot causes any harm, let alone irreparable harm, to Register.com's computer systems.

n6 Verio contests Register.com's assertion that its particular use of e-mail to solicit Register.com's customers constitutes the "spamming" that is prohibited by the ICANN agreement. The Court need not determine whether Verio's e-mails constitute "spam" because it is Register.com's terms of use, rather than ICANN's, that are at issue here. Register.com's terms do not specifically prohibit "spam", but rather simply prohibit the use of WHOIS data for mass, unsolicited e-mail. Verio's e-mails clearly violate Register.com's terms of use. Verio's unsolicited e-mail solicitations are "mass" by any definition of the term. Even though the e-mails are not sent simultaneously with one mouse click, as Verio argues, they are sent in massive quantities over a short period of time, and thus fit the definition of "mass" e-mails.

[**15]

III. Standard For Injunctive Relief

In order to obtain a preliminary injunction, a plaintiff must demonstrate both (1) that it will suffer irreparable harm if the motion is not granted and (2) either (a) a likelihood that it will succeed on the merits of the action or (b) a sufficiently serious question going to the merits of the litigation and the balance of hardships tipping decidedly in plaintiff's favor. See L. & J.G. Stickley, Inc. v. Canal Dover Furniture Co., 79 F.3d 258, 261-62 (2d Cir. 1996).

The purpose of a preliminary injunction is to keep the parties, while the suit is pending, as much as possible in the respective positions they occupied when the suit began and to preserve the Court's ability to render a meaningful decision after a trial on the merits. See WarnerVision Entertainment v. Empire of Carolina, Inc., 101 F.3d 259, 261-62 (2d Cir. 1996). A preliminary injunction is an extraordinary and drastic measure that should not be routinely granted, see Mazurek v. Armstrong, 520 U.S. 968, 138 L. Ed. 2d 162, 117 S. Ct. 1865 (1997), because it is "one of the most drastic tools in the arsenal of judicial remedies." Hanson Trust PLC v. SCM Corp., 774 F.2d 47, 60 (2d Cir. 1985). [**16] The granting of a preliminary injunction is within the equitable discretion of the trial judge. Societe Comptoir De L'Industrie Cotonnieres Etablissements Boussac v. Alexander's Dep't Stores, Inc., 299 F.2d 33 (2d Cir. 1962).

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B. [**27] Trespass To Chattels

Register.com argues that Verio's use of an automated software robot to search the "WHOIS" database constitutes trespass to chattels. Register.com states that it has made its computer [*249] system available on the Internet, and that "Verio has used 'software automation' to flood that computer system with traffic in order to retrieve the contact information of Register.com customers for the purpose of solicitation in knowing violation of Register.com's posted policies and terms of use.” (Pl.'s Mem. of Law at 36.)

The standard for trespass to chattels in New York is based upon the standard set forth in the Restatement of Torts:

One who uses a chattel with the consent of another is subject to liability in trespass for any harm to the chattel which is caused by or occurs in the course of any use exceeding the consent, even though such use is not a conversion.

*City of Amsterdam v. Goldreyer, Ltd., 882 F. Supp. 1273 (E.D.N.Y. 1995)* (citing Restatement (Second) of Torts, § 256 (1965)).

As an initial matter, the Court does not believe that Register.com's terms of use forbid the particular use of the search robot at issue here. Register.com's [**28] posted policies and terms of use require a party who seeks access to its WHOIS database to agree that it will not "use this data to ... enable high volume, automated, electronic processes that apply to Register.com (or its systems)." Register.com argues that use of a search robot is prohibited by that term of use. The Court disagrees.

The terms state that under no circumstances may one "use this data [the WHOIS data] to ... enable high volume, automated, electronic processes that apply to Register.com." The temporal aspect of this term is important because it only bars future automated processes. Although Verio uses an automated process to collect the WHOIS data, it does not then use the collected data to enable an automated process that applies to Register.com's systems. Once Verio's software robot secures the WHOIS information from Register.com's systems, it has completed its automated process with respect to Register.com's systems. The robot does not then use that WHOIS data to "enable high volume, automated, electronic processes that apply to Register.com (or its systems)," it simply deposits the data into a database.

However, despite the fact that Register.com's [**29] terms of use may not specifically forbid this use of a search robot by Verio and such use does not therefore constitute a breach of contract, it is clear since at least the date this lawsuit was filed that Register.com does not consent to Verio's use of a search robot, and Verio is on notice that its search robot is unwelcome. (Pl.'s V.C. P36)

Accordingly, Verio's future use of a search robot to access the database exceeds the scope of Register.com's consent, and Verio is liable for any harm to the chattel (Register.com's computer systems) caused by that unauthorized access. See *Compuserve*, 962 F. Supp. at 1024 (holding that defendants' continued use after CompuServe notified defendants that it no longer consented to the use of its proprietary computer equipment was a trespass) (citing Restatement (Second) of Torts § 252 and 892A(5)).

Having established that Verio's access to its WHOIS database by robot is unauthorized, Register.com must next demonstrate that Verio's unauthorized access caused harm to its chattels, namely its computer system. To that end, Robert Gardos, Register.com's Vice President for Technology, submitted a declaration estimating that Verio's [**30] searching of Register.com's WHOIS database has resulted in a diminishment of 2.3% of Register.com's system resources. (See Gardos Decl. P32.) However, during discovery, the basis for Gardos' estimations of the impact Verio's search robot had on Register.com's computer systems was thoroughly undercut. Gardos admitted in his deposition that he had taken measurements of neither the capacity of Register.com's computer systems nor the portion of that capacity which was consumed by Verio's search robots. Furthermore, when describing how he arrived [**250] at his conclusion that Verio's search robots occupied a certain percentage of Register.com's systems capacity, Mr. Gardos testified that the numbers he used were "all rough estimates." (Gardos Depo. at 76).

Although Register.com's evidence of any burden or harm to its computer system caused by the successive queries performed by search robots is imprecise, evidence of mere possessory interference is sufficient to demonstrate the quantum of harm necessary to establish a claim for trespass to chattels. "A trespasser is liable when the trespass diminishes the condition, quality, or value of personal property." Ebay, Inc. v. Bidder's Edge, Inc., 100 F. Supp. 2d 1058, 1071 (N.D. Cal 2000) [**31] (citing Compuserve, 962 F. Supp. at 1022). "The quality or value of personal property may be diminished even though it is not physically damaged by defendant's conduct." Id. Though it does correctly dispute the trustworthiness and accuracy of Mr. Gardos' calculations, Verio does not dispute that its search robot occupies some of Register.com's systems capacity.

Although Register.com was unable to directly measure the amount by which its systems capacity was
reduced, the record evidence is sufficient to establish the possessory interference necessary to establish a trespass to chattels claim. As the eBay Court wrote:

BE argues that its searches present a negligible load on plaintiff's computer systems, and do not rise to the level of impairment to the condition or value of eBay's computer system required to constitute a trespass. However, it is undisputed that eBay's server and its capacity are personal property, and that BE's searches use a portion of this property. Even if, as BE argues, its searches only use a small amount of eBay's computer system capacity, BE has nonetheless deprived eBay of the ability to use that portion of its personal property [**32] for its own purposes. The law recognizes no such right to use another's personal property. Accordingly, BE's actions appear to have caused injury to eBay and appear likely to continue to cause injury to eBay.

(100 F. Supp. 2d at 1071.) (emphasis added).

Furthermore, Gardos also noted in his declaration "if the strain on Register.com's resources generated by Verio's searches becomes large enough, it could cause Register.com's computer systems to malfunction or crash" and "I believe that if Verio's searching of Register.com's WHOIS database were determined to be lawful, then every purveyor of Internet-based services would engage in similar conduct." (Gardos Decl. PP33, 34). Gardos' concerns are supported by Verio's testimony that it sees no need to place a limit on the number of other companies that should be allowed to harvest data from Register.com's computers. (See Ayers Depo. at 71). Furthermore, Verio's own internal documents reveal that Verio was aware that its robotic queries could slow the response times of the registrars' databases and even overload them. (See Ex. 29 & to Pl.'s Sept. 8, 2000 Motion). Because of that possibility, Verio contemplated [**33] cloaking the origin of its queries by using a process called IP aliasing. (See id.; see also Ex. 64 to Pl.'s Sept. 8, 2000 Motion).

Accordingly, Register.com's evidence that Verio's search robots have presented and will continue to present an unwelcome interference with, and a risk of interruption to, its computer system and servers is sufficient to demonstrate a likelihood of success on the merits of its trespass to chattels claim.

There is no adequate remedy at law for an ongoing trespass and without an injunction the victim of such a trespass will be irreparably harmed. The eBay court specifically held that eBay was entitled to preliminary injunctive relief based on the claim that if such relief were denied, other companies would be encouraged to deploy search robots against eBay's servers and would further diminish eBay's server capacity [**251] to the point of denying effective access to eBay's customers. See id. at 1071-72.

The same reasoning applies here. Register.com, through Mr. Gardos, has expressed the fear that its servers will be flooded by search robots deployed by competitors in the absence of injunctive relief. Register.com has therefore demonstrated [**34] both a likelihood of success on the merits of its trespass to chattels claim and the existence of irreparable harm, and is entitled to a preliminary injunction against Verio based upon that claim.

C. Computer Fraud And Abuse Act ßß 1030(a)(2)(C) and (a)(5)(C)

The issue of the scope of Verio's authorization to access the WHOIS database is also central to the Court's analysis of Register.com's claims that Verio is violating two discrete provisions of the Computer Fraud and Abuse Act ("CFAA"), 18 U.S.C. ß 1030 et seq. n10

n10 Remedies under this criminal code provision include injunctive relief under 18 U.S.C. ß 1030(g).

Register.com claims both that the use of software robots to harvest customer information from its WHOIS database in violation of its terms of use violates 18 U.S.C. ßß 1030(a)(2)(C) and (a)(5)(C), and that using the harvested information in violation of Register.com's policy forbidding the use of WHOIS data for marketing [**35] also violates those sections. That is, that both Verio's method of accessing the WHOIS data and Verio's end uses of the data violate the CFAA.

1. Verio's Use of Search Robots

Both ß ß 1030(a)(2)(C) and (a)(5)(C) require that the plaintiff prove that the defendant's access to its computer system was unauthorized, or in the case of ß 1030 (a)(2)(C) that it was unauthorized or exceeded authorized access. However, although each section requires proof of some degree of unauthorized access, each addresses a different type of harm. Section 1030(a)(2)(C) requires Register.com to prove that Verio intentionally accessed its computers without authorization and thereby obtained information. Section 1030(a)(5)(C) requires Register.com to show that Verio intentionally accessed its computer without authorization and thereby caused damage.

As discussed more fully in the context of the trespass to chattels claim, because Register.com objects
to Verio’s use of search robots they represent an unauthorized access to the WHOIS database.

The type of harm that Register.com alleges is caused by the search robots, including diminished server capacity and potential system shutdowns, is better [**36] analyzed under § 1030(a)(5)(C), which specifically addresses damages to the computer system. Pursuant to the pertinent part n11 of § 1030(e)(8), "the term 'damage' means any impairment to the integrity or availability of data, a program, a system, or information that (A) causes loss aggregating at least $ 5000 in value during any 1-year period to one or more individuals."

n11 None of the other provisions of § 1030(e)(8) are relevant to this case. Section 1030(e)(8)(B) covers impairment or modification of data or systems affecting "the medical examination, diagnosis, treatment, or care of one or more individuals;" § 1030(e)(8)(C) covers impairment or modification of data or systems causing "physical injury to any person," and § 1030(e)(8)(D) covers impairment or modification of data or systems which "threatens public health or safety."

On this record Register.com has demonstrated that Verio's unauthorized use of search robots to harvest registrant contact information from Register.com' WHOIS database has diminished [*37] server capacity, however slightly, and could diminish response time, which could impair the availability of data to clients trying to get registrant contact information. Moreover, Register.com has raised the possibility that if Verio's robotic queries of Register.com's WHOIS database were determined [*252] to be lawful, then other vendors of Internet services would engage in similar conduct. This Court finds that it is highly probable that other Internet service vendors would also use robots to obtain this potential customer information were it to be permitted. The use of the robot allows a marketer to reach a potential client within the first several days of the domain name registration, an optimal time to solicit the customer for other services. In contrast, if instead of using a search robot the service vendor obtains registrant contact information pursuant to a bulk license, the vendor must wait to receive the information on a weekly basis. As Eric Eden, the director of operation Henhouse wrote in an e-mail to a Verio employee "consistent testing has found that the faster we approach someone after they register a domain name, the more likely we are to sell them hosting." (Ex. 40 to Pl. [*38] 's Sept. 8, 2000 Motion).

If the strain on Register.com's resources generated by robotic searches becomes large enough, it could cause Register.com's computer systems to malfunction or crash. Such a crash would satisfy § 1030(a)(5)(C)'s threshold requirement that a plaintiff demonstrate $ 5000 in economic damages n12 resulting from the violation, both because of costs relating to repair and lost data and also because of lost good will based on adverse customer reactions.

n12 Register.com relies upon lost revenue from Verio's exploitation of the WHOIS data for marketing purposes to constitute the damages required under § 1030(a)(5)(C). Although lost good will or business could provide the loss figure required under § 1030(a)(5)(C), it could only do so if it resulted from the impairment or unavailability of data or systems. The good will losses cited by Register.com are not the result of the harm addressed by § 1030(a)(5)(C). How Verio uses the WHOIS data, once extracted, has no bearing on whether Verio has impaired the availability or integrity of Register.com's data or computer systems in extracting it. Accordingly, because violating an anti-marketing restriction on the end use of data harms neither the data nor the computer and therefore does not cause the type of harm that § 1030(a)(5)(C) addresses, the specific good will damages cited by Register.com cannot satisfy its burden under § 1030(a)(5)(C).

[*39] A potential harm which cannot be addressed by a legal or equitable remedy following a trial, such as the loss of customers that might result from a system shutdown or slowed response times complained of here, constitutes an irreparable injury. See Instant Air Freight Co. v. C.F. Air Freight, Inc., 882 F.2d 797, 799-800 (3rd Cir. 1989); Cyber Promotions, Inc. v. Apex Global Info. Servs., 1997 U.S. Dist. LEXIS 15344 at *7 (E.D. Pa. Sept. 30, 1997). A showing that a plaintiff may suffer a substantial loss of business if relief is not granted meets the standards for interim relief. See Doran v. Salem Inn, 422 U.S. 922, 45 L. Ed. 2d 648, 95 S. Ct. 2561 (1975).

Because Register.com has demonstrated that Verio's access to its WHOIS database by means of an automated search robot is unauthorized and caused or could cause $ 5000 in damages by impairing the availability of data or the availability of its computer systems, Register.com has established both irreparable harm and a likelihood of success on the merits of its claim that Verio's use of the search robot violated § 1030(a)(5)(C) of the Computer
Fraud And Abuse Act. Register.com is [**40] therefore entitled to injunctive relief based upon this claim.

* * *

V. Injunction

For the foregoing reasons and pursuant to Fed. R. Civ. P. 65, it is hereby ORDERED, that pending a final decision on the merits of plaintiff's claims, defendant Verio Inc., its officers, agents, servants, employees, successors and assigns, all persons acting in concert or participation with Verio, and/or acting on its behalf or at its direction (collectively, "Verio"), are enjoined from engaging in the following activities:

* * *

3. Accessing Register.com's computers and computer networks in any manner, including, but not limited to, by software programs performing multiple, automated, successive queries, provided [**49] that nothing in this Order shall prohibit Verio from accessing Register.com's WHOIS database in accordance with the terms and conditions thereof . . .
Researchers plant "parasites" inside servers
By Reuters
August 29, 2001, 3:00 p.m. PT

Uncovering a relatively benign vulnerability in the Internet, researchers have tricked Web servers around the world into solving math problems without permission in a practice known as "parasitic computing."

Unlike intruders who exploit flaws to gain direct access to machines, the University of Notre Dame computer scientists created a virtual computer by using the fundamental components of the Internet's infrastructure, according to a report in Nature, released Thursday.

Each problem was broken down into smaller pieces that were evaluated by servers in North America, Europe and Asia. The results from each were used to reach a solution.

The process works a lot like distributed computing, which draws huge amounts of processing power from multiple Internet-connected computers for such tasks as searching for alien life and cracking encryption keys.

In parasitic computing, however, the work is performed without the server owner's knowledge or permission.

The parasitic computing probably did not break any laws.

Still, the approach raises ethical questions, said Vincent Freeh, a Notre Dame computer-science professor and co-author of the report. "When you're on the road, do you use a McDonald's restroom without buying a hamburger?" he said. "That's the ethics of what we're dealing with."

The research was primarily an academic exercise and not a particularly good way to solve problems. For one, sending out data over the Internet requires more work than the simple problems solved in the experiment.

"In no case did we say it could be efficiently exploited," Freeh said.

Scott Blake, director of security strategy at BindView, a network-security company, agreed it is unlikely the technique will be exploited because the system is simply too inefficient.

"We don't think anyone should think their computer is going to be used for nefarious purposes," Blake said. "This is entirely theoretical. I'm not convinced there is going to be a practical application of it."

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