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# Head in the Clouds, Feet Firmly Grounded in Physical Proof: Emphasis on the Tangible in Actions Against Internet Search Engines and Aggregators

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# Head in the Clouds, Feet Firmly Grounded in Physical Proof: *Emphasis on the Tangible in Actions Against Internet Search Engines and Aggregators*

Briehan Moran

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## **I. THE LEGAL SYSTEM AND THE EVOLVING ECONOMY: THE EXCEPTION TO THE PHRASE “SLOW AND STEADY WINS THE RACE”**

In mid October, *The New York Times* published an article musing over the prolonged attempt of Internet heavy-weight Groupon.com to go public.<sup>1</sup> Reflecting a healthy medium between the projections of both the shortsighted cynics and those eager to jump aboard the cyber space band-wagon, the article placed Groupon’s initial offering of 30 million shares at an estimated \$17 per share.<sup>2</sup> The preliminary appraisal was respectable. In fact, several experts thought the *NYT*’s projection erred towards the side of overly generous. Financial analysts predicted Groupon would be unable to navigate successfully the rocky terrain and razor sharp cliffs comprising the admittedly precarious economic landscape. However on the day of Groupon’s highly anticipated IPO debut, the company was valued at a staggering \$13 billion and the float was at 35 million shares going at \$20 each!<sup>3</sup> Surpassing most expectations, the November 4<sup>th</sup> initial public offering landed Groupon the second-highest valuation of any technology company that has gone public since Google in 2004.<sup>4</sup> Just a few months prior to Groupon’s big splash, Pandora.com was also able to raise a sufficient amount of media frenzy surrounding its initial public offering in June of 2011.<sup>5</sup> The music radio website boasts around 94 million users, but remains notorious for its widely publicized inability to operate at anything but

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<sup>1</sup> Evelyn Rusli, *Groupon Narrows Losses Ahead of Its Pitch to Investors*, New York Times, (Oct. 21, 2011), <http://dealbook.nytimes.com/2011/10/21/groupon-nears-a-profit-and-seeks-16-to-18-a-share/>.

<sup>2</sup> *Id.*

<sup>3</sup> Sarah Kessler, *Is Groupon Really Worth \$18 Billion?*, Mashable, (Nov. 4, 2011), <http://mashable.com/2011/11/04/groupon-ipo-value/>.

<sup>4</sup> *Id.*

<sup>5</sup> Leena Rao, *Pandora Opens at \$20 Per Share With a Market Cap of \$3.2 Billion*, techcrunch.com, (Jun. 15, 2011), <http://techcrunch.com/2011/06/15/pandora-opens-at-20-per-share-with-a-market-cap-of-3-2-billion/>.

a loss. Though Pandora has not turned a profit since its inception, it debuted a sizeable IPO estimated to be worth around \$2.6 billion.<sup>6</sup>

So what exactly *is it* with these websites? How are they worth such staggering amounts if they are unable to generate revenue? To pose the cliché, but increasingly relevant question: how do these companies plan to monetize? After all, they are not selling a tangible product. Pandora and Groupon do not produce anything a customer could find in a store- neatly packaged and placed on a shelf with a price tag and a one-year warranty. Where are the manufacturers and the factories? Where are the workers? Where are the warehouses packed full of products in hopeful anticipation of being this holiday season's next big ticket item? The short answer: this infrastructure is rapidly ceasing to exist.

With valuations leaving onlookers to inquire about the exact date of April Fools, the commotion surrounding the rapid growth of web and tech-based companies draws attention to a drastic transformation currently underway. Over the past few decades, a marked shift in the nature of commodities traded in the channels of commerce has occurred. The United States is no longer a country flourishing on the blood and sweat of each railroad tie laid into the ground. It is not even a country basking in the wealth formerly accompanying the permeation of mass produced goods like it was 50 years ago. Today, both the country and the economy are struggling with an international transition from a marketplace of tangible products, to one revolving around the exchange of information. Unprecedented levels of unemployment, government bailouts of financial giants and the protests of those occupying Wall Street evidence both a lurid degree of

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<sup>6</sup> *Id.*

inadaptability and an unwillingness to recognize the drastic change in market forces that has recently occurred.

The dawning of the “Information Age” introduced an era in which a multi-billion dollar marketplace of intangibles exists. In this day and age, the password to Justin Bieber’s Twitter account would likely sell on eBay for more than it cost to build the Titanic. The traditional brick and mortar business is slowly being eradicated by those focusing on access- access to information, access to customer lists, access to large numbers of consumers. Access with efficiency is perhaps the easiest characterization of new businesses capable of generating success in the current climate; this hypothesis garners support from a comparison of the growth rates of different industries. The technology and website sector continues to grow at an exponential rate, while virtually all other industries are declining or flat lining. In fact, e-commerce has been growing at an annual rate of 10% and is expected to be responsible for over 50% of retail sales in the United States by 2014.<sup>7</sup> While this is a welcome forecast for the economy, it presents major obstacles for a judicial system that has demonstrated the evolutionary capability of a tyrannosaurus rex.

Ambiguous case law coupled with an absence of statutory provisions concerning online commercial transactions attest for the legal system’s inability to recognize the occurrence of tremendous alterations to the infrastructure of the economy. Now more so than ever, the economy is not defined by national boundaries, but rather created by international players. Companies like Google and Facebook have in effect, surpassed the authority of the nation state by revolutionizing the ways in which business transactions

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<sup>7</sup> Ethan Lyon, *20 Key Stats in ecommerce and Social Media*, sparxoo.com, (Feb. 2011), <http://sparxoo.com/2011/02/02/ecommerce-social-media-stats/>.

occur. Furthermore, these large multi-national corporations are able to retain a degree of control over online commercial dealings by insulating them from judicial regulation under a veil of private ownership. Specifically, the pre-eminence of search engines as well as the emergence of aggregator websites have come to dominate the e-commerce landscape, resulting in claims from those looking to regain a lost competitive advantage.

Consider the following example: Jack, a law student, is looking to purchase a plane ticket to Florida for his winter break. Instead of looking for flights on Delta's website or JetBlue's website, he immediately begins his search at an aggregator site that pools all the possible flights from various airlines together allowing Jack to quickly and efficiently compare prices and select the best flight. This is quick and easy for Jack, but would he have gone directly to JetBlue's site had Expedia.com not been available, thus bypassing the possibility of purchasing a ticket from Delta altogether? Does Expedia.com charge the airlines a commission percentage of flights purchased through its service? Do the airlines enter into private contracts with Expedia and Orbitz, paying a premium to the aggregators in exchange for the aggregator to direct customers to their airline more frequently?

The judicial system clumsily responds to these questions and other similar claims by applying antiquated legal doctrines in an attempt to ameliorate the financial ramifications accompanying the increased use of search engines and aggregators. Most notably, trespass to chattels, misappropriation and trademark and copyright infringement claims have proved the most successful for those seeking to recoup a lost business advantage from a search engine and/or aggregator. However, these doctrines remain so heavily grounded in physical examples and evidence, they often (1) fail to address the

lost economic advantage; (2) are applied haphazardly and with liberty to depart from the original theory in order to better fit the metaphysical online context; and (3) illustrate the judicial system's inadaptability and blind reliance on tangible evidence.

A recent poll of online shoppers reported that 47% of shoppers begin their product searches at an aggregator website.<sup>8</sup> This exponential growth of information technology *necessitates* judicial recognition and development of policies better suited to resolve business disputes, rather than ones grounded in concrete boundaries. Instead of clinging to the soot covered smokestacks of yesteryear in a last ditch effort to make antiquated principles relevant, the judicial branch may find its efforts better spent accounting for the fusion between the economy and the Internet which has transformed the traditional notion of a business transaction into one that occurs without a firm handshake.

The sections that follow take inventory of and evaluate the emergence of Internet search engines and information aggregators as they relate to the rapidly evolving diaspora of e-commerce. A (II) brief overview of the history and workings of search engines and aggregators is followed by a detailed look at the various causes of action brought against search engines and aggregators including, (III) trespass to chattels; (IV) breach of contractual obligations; (V) tortious interference with economic advantage; (VI) copyright and trademark infringement; and (VII) unfair competition and misappropriation. Each claim will be critically evaluated against the premise that the current rationale for each cause of action is unjustifiably predicated on proof of physicality and is therefore ill suited to mediate e-commerce disputes.

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<sup>8</sup> Kurt Peters, *Growth in Online Shopping Slows, But Channel Shift Continues*, Internetretailer.com, (Aug. 2003), <http://www.internetretailer.com/internet/marketing-conference/99510-state-industry.html/>.

## II. A MICRO-BLOGGING MINUTE ON SEARCH ENGINES AND AGGREGATORS

The World Wide Web became publically available in August of 1991.<sup>9</sup> It was not until 1994 that web crawler and Lycos, the first full text search engine became available. These products enabled the user to search the Internet by keyword but not by content.<sup>10</sup> Just 10 years later, the Yahoo! Search index was able to provide access to over 20 billion web documents, images, audio and video files.<sup>11</sup> Today's search engines have the capability to return results originating from a keyword, content, photographs, popularity among users and even geocoding- a process that provides information based on a user's geographic location.

More importantly however, are the effects of advertising on search results and the consequences involved when a price tag accompanies the receipt of supposedly free information. Though they remain lucrative, traditional types of advertising such as display ads have given way to paid placement and paid inclusion advertisements. Paid placement links an advertisement to a search term, while paid inclusion involves the advertiser offering the search engine provider a fee in order to have his website included on the search engine's index. Eventually these new forms of advertisement led to the emergence of meta-tags, which are basically keywords or phrases associated with a site but not visible on its content pages. The higher the cost of a meta-tag, the more favorable position bestowed upon a website within a search engine's returned results. To illustrate: Google wound up the 3<sup>rd</sup> quarter of 2011 with over \$9.72 billion in revenue, the vast

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<sup>9</sup> John Battelle, *The Search: How Google and Its Rivals Rewrote the Rules of Business and Transformed Our Culture*, 53 (2005).

<sup>10</sup> *Id.*

<sup>11</sup> Tim Mayer, *Our Blog is Growing Up- And So Has Our Index* (Aug. 8, 2005), <http://www.ysearchblog.com/archives/000172.html>

majority derived from advertising.<sup>12</sup> This is relevant because Google and similarly situated search engines enjoy an immense amount of control over the dissemination of information and along with it, the dissemination of capital.

Unlike search engines, Internet aggregators generally sift through other web pages, retrieving information to store in a database and ultimately present to a user.<sup>13</sup> These aggregators go by various names such as “bots,” “web crawlers,” and “screen scrapers,” and are capable of making thousands of database searches a minute.<sup>14</sup> While some bots rely on contractual relationships with websites, others do not and must abide by the Robot Exclusion Standard [RES] specified by the host. The RES, “establishes a voluntary process through which web masters may exclude bots from designated portions of their sites... an owner can dictate which bots may access his web site and what they may view when they visit.”<sup>15</sup> Theoretically, programmers design their robots to read a data file- “robots.txt”- and to consequently comply with the control directives it contains.<sup>16</sup> In reality, the RES represents a rather unreliable source of protection because it is extremely difficult to trace requests back to an originating IP address. An IP address may send an enormous amount of requests, which can result in detection of the robot. However, robots may avoid detection by alternating between various IP addresses.

When a computer requests information from another computer, the requesting computer submits its Internet Protocol [IP] address to the host computer, enabling the

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<sup>12</sup> *Google Made \$9.72 Billion In Revenue Last Quarter*, breakingnewsworld.net, (Oct. 21, 2011), <http://breakingnewsworld.net/2011/10/google-made-9-72-billion-in-revenue-last-quarter/>.

<sup>13</sup> Sean O’Reilly, *Nominative Fair Use and Internet Aggregators: Copyright and Trademark Challenges Posed by Bots, Web Crawlers and Screen-Scraping Technologies*, 19 Loy. Consumer L. Rev. 273 (2007).

<sup>14</sup> *Id.*

<sup>15</sup> Stephen Middlebrook & John Muller, *Thoughts on Bots: The Emerging Law of Electronic Agents*, 56 Bus. Law 341, 345 (2000).

<sup>16</sup> *Id.* at 1061.

host of the website to identify the source of incoming requests.<sup>17</sup> From that point, a proxy server acts as the gatekeeper for all incoming and outgoing data traffic. It centralizes activity in order to conserve resources.<sup>18</sup> While most hosts limit their servers to local users, if the website is for public use or is a commercial enterprise, chances are it will allow remote users to access the site. While it is possible for a proxy to block a robot from accessing its website, this is extremely risky because it is most often times accomplished through a server configuration which can entirely remove a website from search results if performed improperly.

Recursively crawling a site drastically increases the speed of searches. It also allows the aggregator site to track results and instantaneously update data.<sup>19</sup> Travelocity and Orbitz are examples of screen scraping bots that constantly update time sensitive information concerning the availability, timing and prices of air travel. Consumers appreciate aggregation sites because they consolidate the most recent data into a single platform, allowing users to compare prices and giving those hungry for a deal, the illusion of neutrality.

While aggregators are useful in promoting economic efficiency, there is of course, a downside: bots “consume the processing and storage resources of a system.”<sup>20</sup> This includes for example, the servers that facilitate the functionality of websites. Servers can suffer from loss of data, delayed response times and even a “crash” of the website if they are excessively burdened with requests from remote bots.<sup>21</sup>

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<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.* at 1062.

<sup>20</sup> *Id.* at 1061.

<sup>21</sup> *Id.*

### III. TRESPASS TO CHATTELS

The host or owners of a website may assert a cause of action against a misbehaving robot based on the ancient doctrine of trespass to chattels. Where a crawler issues such an exorbitant number of requests to a host, and in doing so incapacitates or damages the host's servers, some courts have upheld trespass to chattels actions.<sup>22</sup> However, in most situations the real concern of the complaining party is not actual damage to its web site, but rather an actual or perceived loss of competitive advantage when potential customers bypass its alluring content in favor of an aggregation site that includes prices and products from its competitors. Accordingly, this position is widely criticized due to concerns over public policy. Most notably, critics of the trespass claim's application to crawlers and search engines contend that a restriction on the capabilities of robots will hinder the free flow of information and commerce over the web.<sup>23</sup> Consumers stand to benefit from the use of aggregators because they assume the task of allocating the consumer's time and resources in the most economically efficient manner. For instance, aggregators that consolidate competitive prices in a single platform may enable a consumer to make an educated decision in a shorter amount of time. The application of the trespass doctrine to Internet aggregators leaves the court with the task of identifying instances of concrete interference with a chattel in a context predominated by property that is almost always intangible. Applying a doctrine that turns on a showing of physical disposition fails to fully realize and address the true concern- loss of competitive advantage.

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<sup>22</sup> *Id.* See also *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393 (2d Cir. 2004).

<sup>23</sup> Brief of Amici Curie in Support of Bidder's Edge, Inc., Appellant, Supporting Reversal (June 2, 2000), Bidder's Edge, Inc., No. 00-15995 (9<sup>th</sup> Cir.), available at <http://www.law.berkeley.edu/institutes/belt/pubs/lemley/bedgeami.pdf>.

### **A. What is a Trespass?**

The Restatement Second of Torts reads, “A trespass to chattel may be committed by intentionally... using or intermeddling with a chattel in the possession of another, where the chattel is impaired to its condition, quality or value.”<sup>24</sup> To satisfy a claim for trespass to chattels, the website host must show a tangible interference with his site occurring over a substantial amount of time. Furthermore, the Restatement emphasizes that the interference must be intentional and it must *materially* affect the interest.<sup>25</sup>

### **B. eBay v. Bidder’s Edge**

The leading case involving robots under a theory of trespass to chattels is *eBay v. Bidder’s Edge*. Bidder’s Edge, an auction aggregation website employing a crawler to access eBay’s time sensitive auction information, sent over 100,000 queries to eBay’s servers each day.<sup>26</sup> As the Court in *eBay* explained, “In order to prevail on a claim for trespass based on accessing a computer system, the plaintiff must establish: (1) the defendant intentionally and without authorization interfered with the plaintiff’s possessory interest in the computer system; and (2) the defendant’s unauthorized use of the system proximately resulted in damage to plaintiff.”<sup>27</sup> The Court distinguished between reputational harm, which it defined as “misrepresentation regarding the info that Bidder’s Edge obtains through the use of these automated query programs,”<sup>28</sup> and system harm, which encompasses the recognizable burden on the actual computer system.

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<sup>24</sup> Restatement (Second) of Torts § 217 (1977).

<sup>25</sup> *Id.* § 218 cmt. E (1977).

<sup>26</sup> *eBay, Inc.*, 100 F. Supp.2d at 1063.

<sup>27</sup> *Id.* at 1070.

<sup>28</sup> *Id.* at 1064.

The Court held the electronic signals Bidder's Edge sent to retrieve eBay's data evidenced tangible system harm.<sup>29</sup> The holding prevailed despite evidence suggesting Bidder's Edge was responsible for only 1% of eBay's server traffic. Furthermore, eBay was granted an injunction even though it had failed to establish any loss of revenue.<sup>30</sup> The Court conceded the harm was unsubstantial and would not amount to trespass or conversion in a tangible, real-life setting.<sup>31</sup> Instead, the Court focused on the repetitive nature of the electronic requests issued by Bidder's Edge, using time rather than impact to bolster its reasoning. The Court relied in its decision on an analogy: "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."<sup>32</sup>

But the analogy is flawed. Contrary to the Court's characterization, there are not a limited number of seats subject to theft by intruders and interlopers. There was no evidence that buyers and sellers on eBay were in any way impeded in communicating, advertising or closing sales. The lack of evidence sufficient to sustain a traditional trespass action- namely, evidence of substantial tangible disposition of property- led the court to rely on its creativity. In essence, *eBay* tried to force an antiquated theory grounded in physical realities on a fact pattern occurring entirely in cyber space. In doing

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<sup>29</sup> *Id.* at 1069.

<sup>30</sup> *Id.* at 1070.

<sup>31</sup> *Id.* at 1067.

<sup>32</sup> *Id.*

so, the court misconstrued and so failed to address the heart of the dispute: whether Bidder's Edge was adversely affecting eBay's business.

The potential "physical" damage to servers is immaterial when considered in light of the case as a whole. Granted, the Court also posited an alternative ground for its holding, based on fears that if the crawler continued 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 loss."<sup>33</sup> While the Court addresses a valid concern regarding the impact of continued activity in the aggregate, it expands upon and morphs the well-established theory of trespass to fit its needs. A traditional trespass to chattels claim has yet to be sustained on a theory of future harm resulting from several trespassers. Rather than twisting the logic behind the trespass doctrine to make an exception, the judiciary would be in a better position to issue consistent, logical opinions based upon statutorily enacted business regulations of e-commerce.

### **C. Ticketmaster: Forget the Money, Protect the Server?**

In 2003, a claim arose in the District Court of California between the industry leader in event and ticket sales, Ticketmaster Corp., and Tickets.com, Inc.- an aggregation website that extracted factual information such as event times, prices, and locations from Ticketmaster's website via a crawler.<sup>34</sup> The crawler discarded the trademark identification and logos associated with Ticketmaster before reorganizing the retrieved data in the format used on its site.<sup>35</sup> Ticketmaster pursued a trespass to chattels action, claiming that the electronic signals employed by the robot while copying the

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<sup>33</sup> *Id.*

<sup>34</sup> *Ticketmaster Corp., v. Tickets.com, Inc.*, 2003 WL 21406289, 2 (C.D.Cal. 2003).

<sup>35</sup> *Id.*

relevant information were burdening its system.<sup>36</sup> The decision turned on the requirement of, “some tangible interference with the use or operation of the computer being invaded... and *actual* dispossession of the chattel for substantial time.”<sup>37</sup> The court found both the value of information obtained by the spider and the vast amount of time and resources Ticketmaster spent trying to thwart the spider immaterial.<sup>38</sup>

The bright line approach taken by the Court in *Ticketmaster* most effectively exposes the illogical reasoning behind the application of the trespass to chattels doctrine to web crawlers. Finding the presence of physical evidence determinative of the trespass claim, the Court ignores the *actual* issue that Ticketmaster presents for adjudication. The dispute is not over Tickets.com trespassing or damaging Ticketmaster’s servers; the dispute is over the aggregator controlling the influx and nature of Ticketmaster’s online customers. In an earlier memo denying Ticketmaster a preliminary injunction, actions for both trespass to chattels and unjust enrichment were dismissed on the basis that the robot was permitted to enter the site to copy factual information.<sup>39</sup> As to the latter unjust enrichment claim, the following explanation is offered: “It is hard to see how this could be [Tickets.com was unjustly enriched] since Tickets is not selling the tickets or participating in the proceeds.”<sup>40</sup>

Perhaps the judge in the initial hearing did not possess the foresight to understand how aggregators would come to control the flow of online customers. Simply because the aggregator is not selling the product in dispute or deriving proceeds in connection with it

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<sup>36</sup> *Id.* at 4.

<sup>37</sup> *Id.* at 3.

<sup>38</sup> *Id.*

<sup>39</sup> *Ticketmaster Corp. v. Tickets.Com, Inc.*, CV 99-7654 HLH(BQRX), 2000 WL 525390 (C.D. Cal. Mar. 27, 2000).

<sup>40</sup> *Id.*

does not render its impact harmless. Whether the aggregator is gaining a financial benefit from its immediate activity should be considered independently from whether its behavior materially disadvantages the host website. The Court in *Ticketmaster* errs in manipulating the theory behind a civil action in tort, illogically extending it to a dispute grounded in business and agency relationships.

In the 1970's, databases were stored on mainframe computers, which were often kept isolated in rooms with special climate controls.<sup>41</sup> Four decades of technological development including the advent of cloud computing eliminates any justification supporting a trespass to chattels claim against a web crawler.

#### **IV. BREACH OF CONTRACT AND AGENCY RELATIONSHIPS**

When a robot exceeds the scope of the website's terms and conditions, the host may have a claim for breach of contractual duties. While the RES contains computer code dictating the limitations to a robot's access, the terms and conditions of a website are generally binding on all users- humans and bots alike. Most terms-of-use agreements compliment a site's RES by enumerating the permissible ways in which data retrieved by a crawler can be used *after* the crawler leaves the site as opposed to restricting its access while on the site.

Contract law has dubbed the provisions within these agreements "click-wrap" and "browse-wrap" terms. Click-wrap terms require a user to scroll through its mandates and either initial them or click on a button that indicates acceptance in order to gain access to the site or application.<sup>42</sup> On the other hand, "browse-wrap terms" involve information

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<sup>41</sup> Jane Kuafman Winn & James R. Wrathall, *Who Owns the Customer? The Emerging Law of Commercial Transactions in Electronic Customer Data*, 56 Bus. Law. 213, 230 (2000).

<sup>42</sup> *Specht v. Netscape Communications Corp.*, 306 F.3d 17, 22 (2d Cir. 2002).

made available on websites for users to access, but not to download.<sup>43</sup> The primary difference between click and browse-wrap agreements is that the latter does not require an affirmative action on the part of the user. In other words, browse-wrap terms may be enforceable without clicking, “I agree.”

Notwithstanding the reality that most Internet users spend about as much time reviewing these terms as it takes them to click the accept button, they are often pivotal in leveraging a website’s claims against both ordinary users and robots. Web crawlers are considered users and must adhere to a site’s terms and conditions just as if the bot were a student accessing the site from his laptop at home. Although creating a somewhat sticky situation for those employing web crawlers, the application of standard contract and agency theory suggests the Courts may be pointing the finger at the wrong party.

#### **A. Uniform Electronic Transactions Act & E-SIGN**

The objective underlying the Uniform Electronic Transactions Act [UETA] is to facilitate the growth and efficiency of automated contracts.<sup>44</sup> Of particular interest is the act’s provision providing for the formation of a contract through an automated transaction, “with an electronic agent or on both sides, even if no human being reviewed the results of the agent’s actions.”<sup>45</sup> The act enables one to be bound by the actions of an electronic agent, regardless of whether the party receives notice of the results of the agent’s conduct. Implicating such sweeping liability raises the question, what is an electronic agent?

Written in support of the UETA before its adoption by 47 states and the District of Columbia, E-SIGN is an act containing two very important provisions that clarify the

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<sup>43</sup> *Id.*

<sup>44</sup> Stephen Middlebrook & John Muller, *supra*, note 12, at 349.

<sup>45</sup> *Id.*

ambiguities involved in identifying electronic agents.<sup>46</sup> The act defines an agent as, “something that acts without review or action by an individual at the time of the action or response.”<sup>47</sup> The second provision is similar to the UETA, authorizing an electronic agent to enter in contracts:

A contract or other record relating to a transaction in or affecting interstate or foreign commerce may not be denied legal effect, validity or enforceability solely because its formation, creation or delivery involved the action of one or more electronic agents so long as the action of any such electronic agent is attributable to the person to be bound.<sup>48</sup>

Presume, as do virtually all courts, a robot’s ability to enter into automated contracts on behalf of those operating them. Where questions of law are removed, as they are here, it naturally follows that most disputes turn on issues of fact. In most cases, issues of fact arise over whether or not the robot *actually* agreed to these terms.

### **B. Instances of Breaching Bots: Ticketmaster and Verio**

Claims involving click-wrap and browse-wrap agreements continue to appear with increasing frequency. Recent decisions lean towards implicating the injured party’s “obligation to read.” What if the party (or robot) cannot read? Or better yet, can a court hold a web crawler liable for failing to notice a website’s terms of use?

The Court in *Ticketmaster* answered in the affirmative, holding that a notice of Ticketmaster’s terms located at the bottom of its home page was sufficient to place Tickets.com under a contractual duty to abide by the provisions.<sup>49</sup> The notice stipulated that anyone proceeding past the initial splash page was subject to Ticketmaster’s terms

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<sup>46</sup> *Id.* at 351.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *Ticketmaster Corp.*, 2003 WL 21406289 at 2.

and conditions prohibiting the commercial use of any information obtained from its site.<sup>50</sup> The Court explained a contract is formed when a user continues past a website's initial page, exploring interior subsequent pages with knowledge of the conditions accepted by doing so.<sup>51</sup> In some instances, presumptive knowledge can supplant actual knowledge. This caveat implicates the party (presumably versed in the industry and aware of the obstacles confronting robots) operating the crawler.

A year later, the decision in *Register.com v. Verio* offered a similar rationale for binding a web crawler to the conditions of a site absent an affirmative act of acceptance. In *Verio*, a spider sent queries to Register.com's servers, which returned the data requested almost instantaneously.<sup>52</sup> After receiving the data, Verio subsequently received a message from Register outlining its terms of use and prohibiting robot access to its database of customer contact information.<sup>53</sup> Verio contended that although it was in clear violation of Register's conditions, it could not be held liable for breach of contract because it received notice of the conditions *after* receipt of the data; therefore, Verio claimed that its crawler did not accept the terms and could not enter into a contractual relationship.

The Court discarded this argument, finding Verio bound to Register's terms despite a lack of explicit acceptance of said terms by the robot.<sup>54</sup> The decision describes a situation, in which a boy removes an apple off of a roadside fruit stand and takes a bite only to realize- his teeth deeply gorged in the apple's core- a sign indicating their price.<sup>55</sup>

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<sup>50</sup> *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> *Register.com, Inc.*, 356 F.3d at 401.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.* at 403.

<sup>55</sup> *Id.*

If the boy continues to eat an apple each day thereafter and refuses to pay because each time, he failed to notice the price on the sign until after he had already consumed the apple, he would be liable to the vendor for breach of contract. The Second Restatement of Contracts explains, “Silence and inaction operate as an acceptance where an offerree takes the benefit of offered services with reasonable opportunity to reject them and reason to know that they were offered with the expectation of compensation.”<sup>56</sup>

While *Verio* is convincing mostly due to the theories behind contract law, it demonstrates that some courts are willing to hold robots responsible for a site’s terms and conditions even if the robot did not agree to them. Similar to the decision in *Ticketmaster*, which found notice sufficient to be contractually binding without a robot’s acceptance, the Court treats Register’s terms as browse-wrap agreements, finding the crawler liable absent an affirmative indication of acceptance. A court will likely find the existence of a contract without express authorization where: (1) the user has adequate notice of the existence of proposed terms; (2) has a meaningful opportunity to review the terms; (3) has adequate notice that a specified action manifests assent to the terms; and (4) the user takes the latter action.<sup>57</sup>

The outcomes of *Verio* and *Ticketmaster* reflect the judiciary’s expectation that those conducting business in the online community are aware of and adhere to industry standards. The prevalence of terms-of-use agreements has led many courts to presume knowledge of these agreements on behalf of online commercial entities. It may initially seem counter-intuitive to hold an individual or an entity responsible for the actions of a robot. After all, these crawlers are not exactly malicious reincarnations akin to Mary

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<sup>56</sup> Restatement (Second) of Contracts § 69(1)(a) (1981).

<sup>57</sup> *Register.com, Inc.*, 356 F.3d.

Shelley's Frankenstein; they collect and neatly organize information. However, the information belongs to the host.

A breach of contract claim offers a preferable theory by which to allocate liability to an aggregator than the theory underlying trespass claims. The contract claim is better suited to redress economic wrongs suffered by the host because it claims as the private exclusive material of the host, information wrongfully obtained on its website. As a result, public policy concerns exists over whether a website may claim as private, exclusive material what it posts on the Internet and the effects this could have on the free flow of information and e-commerce. On the other hand, the UETA and E-Sign provide the much-needed statutory departure from physical evidence, enabling robots to enter into contracts in the absence of both a written signature and an affirmative acceptance of an electronic contract.

## **V. TORTIOUS INTERFERENCE WITH PROSPECTIVE ECONOMIC ADVANTAGE**

A prima facie case for a civil tort action of interference with potential economic advantage requires a showing of the following elements: (1) "the existence of a specific prospective economic relationship between the plaintiff and some third party with a probability of future economic benefit; (2) the defendant's knowledge of the probability of such a future economic relationship; (3) the defendant's intentional acts to disturb that relationship; (4) proof of actual interference with that relationship; and (5) damages the defendant's intentional acts proximately caused."<sup>58</sup>

Website hosts assert this cause of action on the basis that the robot or search

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<sup>58</sup> Heidi S. Padawaer, *Google This: Search Engine Results Weave a Web for Trademark Infringement Actions on the Internet*, 81 Wash. U. L.Q. 1099, 1115 (2003).

engine wrongfully interferes with the host's economic relationship with its customers by exposing them to the options or price comparisons of competitors. However, this claim rarely ever succeeds because the crux of the action depends on proof of an *actual* interference between the host's website and specific customers. Hosts rarely satisfy this element because "mere hope of a future relationship"<sup>59</sup> between the host and a customer is insufficient. Furthermore, the host must present evidence of malicious intent to disadvantage his business. Though a tortious interference claim may survive summary judgment, this element usually hammers a nail through the heart of its success.

In *Southwest Airlines Co. v. Farechase, Inc.*, the plaintiff airline pursued a claim for tortious interference against a software application that aggregated flight prices for its users, occasionally diverting customers to the website of competitor airlines where they purchased cheaper flights.<sup>60</sup> A preliminary motion to dismiss Southwest's claim was not granted because, "there was a reasonable probability that customers who purchased [their] tickets on defendant's application would have entered into a contractual relationship directly with Southwest"; that some prospective relationships do not form because defendant wrongfully diverts customers to other airlines; and that defendant's acts impair Southwest's marketing efforts."<sup>61</sup> It is important to recall that *Southwest* was responding to a motion for summary judgment of the tortious interference with economic advantage claim. Due to the lower standard of requisite probability necessary, tortious interference claims that survive summary judgment are generally dismissed upon resolution of the case.

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<sup>59</sup> *Id.* at 1116.

<sup>60</sup> *Southwest Airlines Co. v. Farechase, Inc.*, 318 F. Supp. 2d 435, 442 (N.D. Tex. 2004).

<sup>61</sup> *Id.*

To illustrate the flip side of tortious interference with economic advantage, consider a case appearing in Maryland’s District Court between a host website and two competitors who infiltrated the plaintiff’s hotel website, embedding a hyperlink which allowed customers to deep link from the host’s website to its competitor’s sites where the customers could book alternative hotel and travel accommodations.<sup>62</sup> The Court in *Fare Deals Ltd., v. World Choice Travel.com, Inc.* dismissed the tortious interference claim at trial due to lack of any malicious intent to harm the owner's business relationships.<sup>63</sup> Unlike the summary judgment standard, to impose liability upon an entity for tortious interference with economic advantage, the plaintiff must offer proof of the alleged tortfeasor’s *intentional malicious* act. Though this cause of action reaches the core of most disputes involving aggregators, attempting to provide remedy for the unjustified loss of competitive advantage, the scienter requirement precludes its success in most cases. Admittedly, there exists a practical argument that a competitor intends to maliciously harm a business it competes with by diverting its customers. However, host plaintiffs are generally unable to prove that those employing the robots are doing so for any other reason but for the benefit of their own business.

## VI. INTELLECTUAL PROPERTY CLAIMS

Article I, section 8 of the U.S. Constitution grants Congress the power, “to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and

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<sup>62</sup> *Fare Deals Ltd. v. World Choice Travel.Com, Inc.*, 180 F. Supp. 2d 678 (D. Md. 2001).

<sup>63</sup> *Id.*

Discoveries.”<sup>64</sup> To this end, intellectual property legislation balances the protection of the rights and incentive belonging to authors and inventors with the public access to facts and information. The terms trademark and copyright are often thrown around interchangeably to describe a right in property that is not tangible, but they are legally distinguishable by what each aims to protect. Copyright protects the expression or content of a person’s idea, while a trademark identifies the source from which a product or service originates. A trademark describes something rather than being the thing described; for example, a company logo.

Facts and raw data such as ticket price are not trade secrets nor are they copyrighted.<sup>65</sup> However in some cases, even text alone, without the use of trademarked logos, can create sufficient confusion for the customer. While copyright law is generally a creature for federal courts to tame, trademark claims are subject to state laws as well as the federal Lanham Trademark Act.

## **A. Copyright Infringement**

### **i. Misappropriation**

Misappropriation is the common law recourse for instances of copyright infringement. It arises in situations where the defendant unfairly procures factual material belonging to a competitor, and uses the material to compete with the plaintiff.<sup>66</sup> State laws providing for copyright claims are preempted by federal law if the material or type of work protected normally falls under copyright law and the rights asserted under state law are equivalent to those protected by federal law.<sup>67</sup>

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<sup>64</sup> U.S. CONST. art. I, § 8, cl. 8.

<sup>65</sup> Sean O’Reilly, *supra*, note 10, at 277.

<sup>66</sup> Jane Kuafman Winn & James R. Wrathall, *supra*, note 42, at 241.

<sup>67</sup> *Id.* at 242.

a. Hot News Claims: *International News Service v. Associated Press*

Very few copyright claims survive federal preemption. However, a narrow line of cases known as “hot news” misappropriation claims occasionally manage to skirt preemption by satisfying a five-pronged test for subject matter.<sup>68</sup> A misappropriation claim will survive federal preemption where the plaintiff offers evidence of the following: (1) “the time-sensitive nature of the factual information; (2) free riding by the defendant; (3) a threat to the very existence of the product or service offered by the plaintiff; (4) the plaintiff generates or collects the information at some cost or expense; and (5) the defendant's use of the information is in direct competition with the product or service offered by the plaintiff.”<sup>69</sup> Due to the immediacy of the harm posed, hot news misappropriation claims are the exception, rather than the rule for copyright claims.

The cause of action for misappropriation of “hot news” finds its origins in *International News Service v. Associated Press*<sup>70</sup> a decision that pre-dates *Erie*. Although *Erie* may render the federal common law hot news claims non-binding in federal court, several states still recognize the cause of action. *International News* holds that breaking or hot news is the “quasi-property” of a news gathering organization because news gathering carries with it, “the expenditure of labor, skill, and money.”<sup>71</sup> The Court found that allowing one news agency to appropriate and profit from the work of another would “render publication profitless, or so little profitable as in effect to cut

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<sup>68</sup> *Id.* at 243.

<sup>69</sup> *Id.*

<sup>70</sup> *International News Service v. Associated Press*, 248 U.S. 215 (1918).

<sup>71</sup> *Id.* at 236.

off the service by rendering the cost prohibitive in comparison with the return.”<sup>72</sup> In short, appropriation of another’s hot news “is endeavoring to reap what it has not sown.”<sup>73</sup>

b. Taking a Swat at *Flyonthewall.com*

The hot news cause of action is particularly appealing to those looking to file a claim against a search engine or an aggregator. Unlike the alternative causes of action, misappropriation departs from the over-extended requirement of physical evidence of injury. In addition, this doctrine requires little to no manipulation of its original elements in order to address the financial injury most often suffered by the plaintiff asserting a claim against an aggregator or a search engine. In fact, the notoriously elusive element of a hot news misappropriation claim- evidence of the time sensitive nature of the factual information- may be leniently construed to warrant satisfaction in e-commerce cases where the temporary crash of website lasting only five seconds can destroy a business. Within the invisible channels of the World Wide Web, information exchanges hands even quicker than the mind can process it, rendering hot news claims an ideal alternative for those in need of immediate relief.

So long as the plaintiff brings a hot news action in a jurisdiction permitting its adjudication, the claim will not be pre-empted by federal legislation. *Barclays Capital Inc. v. Theflyonthewall.com* featured an aggregator website that sold subscriptions to customers granting them access to compilations of Barclay’s equity research reports.<sup>74</sup> The Court upheld a hot news misappropriation claim, entitling Barclays to an immediate injunction prohibiting Flyonthewall.com from appropriating any further economic

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<sup>72</sup> *Id.* at 241.

<sup>73</sup> *Id.*

<sup>74</sup> *Barclays Capital Inc. v. theflyonthewall.com*, 700 F.Supp.2d 310 (2011).

advantage.<sup>75</sup> While Barclays expended substantial funds and resources to produce the equity reports, which were sold to investors at a hefty price, Flyonthewall.com did not perform equity research of its own. In fact, Flyonthewall.com did not undertake any original reporting or analysis sufficient to generate an independent opinion.<sup>76</sup> The website's headlines consisted entirely of regurgitations of Barclay's recommendations and those of other investment institutions.<sup>77</sup> Similar to the reasoning employed in *eBay*, Barclays was not required to show the existence of actual harm; the New York District Court awarded an injunction on the premise that the potential for long term aggregated conduct of a similar nature was sufficient to cause Barclays irreparable harm.<sup>78</sup>

The hot news misappropriation theory may receive a 21<sup>st</sup> century face life if courts continue to support its application to actions implicating search engines and aggregators. The level of immediacy inherent in e-commerce coupled with an absence of physical requirements, introduces hot news claims as one of the more coherent courses of action available. Although the opportunity to employ a hot news claim depends on the jurisdiction in which the claim is filed, misappropriation claims currently provide Courts with a comprehensive standard for effectively adjudicating actions against aggregators.

ii. The Copyright Act and the Digital Millennium Copyright Act

The Copyright Act expressly covers nine categories of works, including “compilations.”<sup>79</sup> A compilation proceeds from, “the process of selecting, bringing together, organizing, and arranging previously existing material of all kinds, regardless of whether the individual items in the material have been or ever could have been subject to

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<sup>75</sup> *Id.*

<sup>76</sup> *Id.* at 337.

<sup>77</sup> *Id.*

<sup>78</sup> *Id.* at 342.

<sup>79</sup> 17 U.S.C. § 103 (1994).

copyright.”<sup>80</sup> The act does not offer protection for previously existing material included in the copyrighted compilation as a whole. To demonstrate, consider the following hypothetical: a disc jockey electronically mixes songs from The Beatles *White Album* with tracks off of Jay-Z’s *Black Album*. The DJ has a copyright interest in the compilation of the *Grey Album*. He does not have a copyrighted interest in the portions of “Imagine” and “Dirt Off Your Shoulder” that are not mixed together.

The Copyright Act defines copies as, “material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.”<sup>81</sup> To qualify as “fixed,” the work must be in a tangible medium of expression, its embodiment, “sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.” This section of the act is particularly relevant to cases in which electronic signals sent to servers by crawlers rest temporarily on the data, avoiding a download of the copyrighted material but still managing to retrieve a copy of the information.

In response to mounting criticism of the limitations placed on web crawlers and aggregators, Congress amended section 512(d) of the act to limit liability for applications offering any of the following services: (1) “transitory digital network communications; (2) system caching; (3) information residing on systems or networks at the direction of users; and (4) information location tools.”<sup>82</sup> Furthermore, the amendment states that a

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<sup>80</sup> *Id.*

<sup>81</sup> *Id.* § 101.

<sup>82</sup> *Id.* § 512(d).

provider qualifying for protection may not be liable for monetary relief.<sup>83</sup> Search engines received the amendments with open arms, the potential risk of financial liability lessened for the time being. Robots on the other hand, are absent from the list of those included in the Millennium Act, although they too benefitted from a general relaxation of judiciary rulings.

Finally, section 107 of the Copyright Act indicates the four factors to be applied in determining if the use of copyrighted work is “fair.”<sup>84</sup> Section 107 provides a defense for search engines and web crawlers redistributing copyrighted information that would otherwise be halted by an injunction if they can demonstrate that use of the material was “transformative.” In determining whether an electronic agent’s use of copyright material is fair, the Court must consider the following: (1) the purpose of use of copyrighted material; (2) the nature of the copyrighted work; (3) the amount and substantiality of the copyrighted work used in proportion to the copyrighted work as a whole; and (4) the effect of the use on the copyrighted work’s fair market value.<sup>85</sup>

a. *Ticketmaster*: Stick to the Facts

Revisiting the *Ticketmaster* decision provides a basis for the application of Section 107 to aggregator cases. In *Ticketmaster*, the Court applied the four-factor fair use analysis to an infringement claim, concluding the electronic signals sent by Tickets.com’s robot should be not prohibited from temporarily copying factual information. First assessing the use of the information, the Court found Tickets.com obtained a benefit from the data obtained. Thus, commercial use of the information

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<sup>83</sup> *Id.* § 512(j).

<sup>84</sup> *Id.* § 107.

<sup>85</sup> *Id.*

weighed in favor of Ticketmaster.<sup>86</sup> Next however, signals from the robot which temporarily rested on Ticketmaster's system while copying factual information was deemed permissible because raw facts are not subject to copyright protection under section 101 of the Copyright Act.<sup>87</sup> "What is protected is the manner or mode of expression of those facts."<sup>88</sup> Since the data copied by the spider did not qualify for copyright protection, the third and fourth prongs of analysis were immaterial.

b. Transformative Trans-Media in *Kelly v. Arriba*

Section 107's four-factor fair use test yields unsatisfactory results due to the Copyright Act's emphasis on concrete evidence; namely, its requirement of "material copies"<sup>89</sup> to be "fixed" in tangible mediums of expression.<sup>90</sup> Emphasizing physicality prevents the court from reaching a resolution that addressed the actual dispute. It is apparent that claims against aggregators very rarely prioritize any disposition of real property, but rather are asserted to acquire control over business relationships. Courts attach an inordinate significance to the transformative factor, aggrandizing its importance to the unforeseen detriment of the plaintiff. The permissibility of copyrighted work is directly proportional to extent of the work's transformative nature. Support for this contention is based on the erroneous assumption that a new or transformative type of business is less likely to adversely impact the original owner of the copyrighted work. In reality, search engines and web crawlers are using their transformative nature to ascend to level of control superseding online retailers and merchants- a process which will ultimately erode the latter's business.

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<sup>86</sup> *Ticketmaster Corp.*, 2003 WL 21406289 at 5.

<sup>87</sup> 17 U.S.C. § 101 (1994).

<sup>88</sup> *Ticketmaster Corp.*, 2003 WL 21406289 at 4.

<sup>89</sup> *Id.* § 101.

<sup>90</sup> *Id.*

Ruling on a prima facie case of copyright infringement, the Court in *Kelly v. Arriba* found the search engine employed by Arriba to operate within contours of the fair use doctrine in so far as it reproduced and displayed thumbnail images.<sup>91</sup> Arriba's engine operated by first downloading images from the Internet onto its server. Then, the crawler used the images to generate small, lower-resolution thumbnails of the pictures.<sup>92</sup> Finally, the search engine deleted the pictures and provided a link to the original site from which the picture was derived surrounded by the Arriba banner and advertising.<sup>93</sup>

In applying the first factor of the fair use test, the Court found the commercial nature of Arriba's site to weigh only slightly against a finding of fair use because Arriba did not use the images to directly promote its site, nor did to attempt to gain a profit by selling the images.<sup>94</sup> The decision delineated between the "distinct" uses for which each website desired the images as follows: "improving access to information on the Internet versus artistic expression."<sup>95</sup> The nature of the copyrighted data retrieved by the search engine was irrelevant to a ruling concerning the thumbnails because the very nature of an image compels inclusion of entire picture in a copy.<sup>96</sup> The Court approved exact replications of the copyrighted work in thumbnails, but it declined to rule on the in-line linking to the full size images.<sup>97</sup>

Rather than replacing the host's original use of the pictures, the Court said the search engine created an entirely new use while simultaneously attracting users to the plaintiff's site. Apparently, the Court felt the robot's transformative utilization of the

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<sup>91</sup> *Kelly v. Arriba Soft Corp.*, 336 F.3d 811 (9<sup>th</sup> Cir. 2003).

<sup>92</sup> *Id.* at 815.

<sup>93</sup> *Id.* at 816.

<sup>94</sup> *Id.* at 818.

<sup>95</sup> *Id.* at 819.

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

pictures benefitted the plaintiff rather than infringing upon his copyright.<sup>98</sup> The Court may be correct in its assertion at the time it rendered the opinion, but its decision reflects a lack of foresight. It is uncontested that at the time of the decision, Arriba directed online traffic to the defendant's site. However, what if Arriba begins to direct users to other photography sites, who would have otherwise, arrived at the plaintiff's? Or decides to charge the plaintiff a commission for each person it directs to his website? Surely it is not unreasonable to predict that Arriba may eventually charge a fee for favorable placement of the plaintiff's site in its search result. Exaggerated reliance upon the transformative factor of analysis could eventually have the effect of rendering the Copyright Act's protections useless. Permitting a search engine to control access to and distribution of one's copyrighted work could potentially result in the owner's loss of dominion and control over the work. Eventually, the owner's formerly exclusive property right will instead, be subject to the discretion of the search engine. Though the Court claimed, "a transformative work is less likely to have an adverse impact on the market of the original than a work that merely supersedes the copyrighted work,"<sup>99</sup> it is precisely the transformative nature that will adversely impact the owner of the copyrighted work.

*c. Perfect 10 and Cartoon Network: Search Engine Safety on Home Base*

The decision in *Perfect10, Inc., v. Amazon.com, Inc.*, follows precariously in the footsteps of the *Arriba* line of thought, though the former delivers a lengthy explanation justifying the requirement of concrete evidence. Perfect10.com- a pornographic website- filed a copyright infringement claim against Google for allowing its search engine to copy Perfect 10's pictures and reproduce them as thumbnails in Google's image search

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<sup>98</sup> *Id.* at 820-821.

<sup>99</sup> *Id.*

results.<sup>100</sup> Sustaining Perfect 10's claim over the thumbnail reproductions, the Court alternatively concluded that the links to the larger pictures provided by the search engine were permissible due to an absence of prolonged physical contact between Google's HTML code and the copyrighted material.<sup>101</sup> The court rationalized this explanation as follows: Google did not copy Perfect 10's large images, but rather communicated where to find that copy in HTML instructions given to an individual user's browser.<sup>102</sup> Therefore it is not the HTML instructions, or by extension Google, causing the infringing images to appear on a user's screen; the instructions merely provide an address. The browser belonging to the individual using Google engages the computer storing the infringing image. The court's decision turns on this interaction- when an individual user deploys his or her browser- and not the actions of the crawler, to allocate responsibility for infringement of Perfect 10's material.

Similarly, a recent case between C.S. Holdings Inc.- a digital video recording company- and Cartoon Network, resulted in a decision based primarily on the nature and duration of an electronic agent's physical contact with copyrighted material.<sup>103</sup> The Court held, "copyrighted television programs and movies in data buffers used to allow customers to record programming on a digital video recorder (DVR) system at a remote location did not last for period of more than transitory duration, and therefore were not "fixed," as required to qualify as a "copy" under the Copyright Act, where no bit of data

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<sup>100</sup> *Perfect 10 Inc., v. Amazon.com, Inc.*, 508 F.3d 1146 (9<sup>th</sup> Cir. 2009).

<sup>101</sup> *Id.*

<sup>102</sup> *Id.* at 1161.

<sup>103</sup> *Cartoon Network LP, LLLP v. CSC Holdings Inc.*, 536 F.3d 121 (2<sup>nd</sup> Cir. 2008).

remained in any buffer for more than 1.2 seconds, and each bit of data was rapidly and automatically overwritten as soon as it was processed.”<sup>104</sup>

The decisions in both *Perfect 10* and *Cartoon Network* demonstrate the inability of the doctrine of copyright infringement to address the loss of competitive advantage involved in claims against electronic robots. A copyright infringement claim depends entirely upon concrete tangible proof. In focusing on the amount of time the DVR technology spent in contact with the copyrighted material, the Court in *Cartoon Network* ignores the fact that the reproduction of Cartoon Network’s shows is causing them to lose revenue. This result seems unfair considering the network expended all the time, money and resources necessary to produce its shows; the network also expended the all the time, money and resources necessary to obtain a copyright for their contents. It does not logically follow that one should look to the level of efficiency of the technology employed to obtain the benefits deriving from the copyrighted work in determining whether or not an infringement occurs. An identical line of reasoning exposes the error in the *Perfect 10* Court’s logic. Whether or not Google receives a substantial benefit from the appropriation of the website’s copyrighted material should be determinative, not a technicality involving the exact physical location of the copyrighted material in relation to lines of computer code.

## **VII. TRADEMARK INFRINGEMENT AND UNFAIR COMPETITION**

The purpose of trademark law is to prevent producers from free-riding on their rivals' mark,<sup>105</sup> and to identify the source of services and products.<sup>106</sup> Trademark infringement is largely a state claim, finding support in the common law trade secret

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<sup>104</sup> *Id.* at 130.

<sup>105</sup> *New Kids on the Block v. News America Puc. Inc.*, 971 F.2d 302, 306 (9<sup>th</sup> Cir. 2005).

<sup>106</sup> *Id.* at 305

doctrine as well. The doctrine generally protects, “valuable, confidential business information from misappropriation where the holder takes reasonable measures to maintain its secrecy.”<sup>107</sup> The common law trade secret doctrine provides an alternative to the federal cause of action for those looking to combat the retrieval queries of robots. Most often however, this approach is discarded due to an absence of reasonable measures taken to maintain the business information’s secrecy. Most sites subject to queries from spiders permit remote access, which exposes its database and eliminates the chance to apply the common law trade secret doctrine.

#### **A. Federal Trademark and Unfair Competition Acts**

The Lanham Trademark Act is a federal statute meant to supplement the causes in state action for trademark infringement. According to Lanham, “Trademark is limited to property right in a particular word, phrase or symbol.”<sup>108</sup> Competitors may use a rival’s trademark in advertising and other channels of communication if use is not false or misleading.<sup>109</sup> For those seeking a cause of action, section 1114 prohibits unfair competition, or the unauthorized use in commerce of registered marks.<sup>110</sup> The fair-use defense available is outlined rather roughly as, “forbidding the trademark registrant to appropriate a descriptive terms for exclusive use and prevent others from accurately describing the characteristics of their goods.”<sup>111</sup>

#### **B. Nominative Fair Use Doctrine**

The fair use doctrine is bifurcated into two lines of thought. Classic fair use occurs, “where the defendant uses the plaintiff’s mark to describe the defendant’s

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<sup>107</sup> Jane Kuafman Winn & James R. Wrahall, *supra*, note 42, at 243.

<sup>108</sup> 15 U.S.C.A. § 1051 et seq.

<sup>109</sup> *Id.*

<sup>110</sup> *Id.* § 1114.

<sup>111</sup> *Id.* § 1115(b)(4).

product.”<sup>112</sup> To the contrary, nominative fair use occurs, “when the alleged infringer uses the [trademark holder’s] product even if the alleged infringer’s ultimate goal is to describe his own product.” Courts have recognized situations in which there is no substitute for the use of a trademark, for example- Scotch tape.<sup>113</sup>

The trouble is this doctrine is a judicially constructed and created concept, meaning there is an absence of statutory authority to lend guidance or clarification to the theory’s ambiguities.<sup>114</sup> Furthermore, less than half of the federal circuits have encountered the doctrine and a circuit split exists as to the manner of its application.<sup>115</sup>

#### i. Ninth Circuit Standard

Under the “nominative fair use” test adopted by the Court of Appeals for the Ninth Circuit, a defendant must prove: (1) that the product or service in question is one not readily identifiable without use of the trademark; (2) that only so much of the mark or marks is used as is reasonably necessary to identify the product or service; and (3) that the user did nothing that would, in conjunction with the mark, suggest sponsorship or endorsement by the trademark holder.<sup>116</sup> In the Ninth Circuit, if these elements are proven, the use is “fair” and defendant will prevail.

#### ii. Third Circuit Standard

The Third Circuit first determines whether the plaintiff can show that confusion is likely due to the defendant's use of plaintiff's mark/information (in which case, the burden shifts to the defendant to show that its nominative use of plaintiff's mark,

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<sup>112</sup> *Century 21 Real Estate Corp., v. Lendingtree, Inc.*, 425 F.3d 211, 214.

<sup>113</sup> Sean O’Reilly, *supra*, note 10, at 282.

<sup>114</sup> Sara A. Johnson, *Century 21 Real Estate Corp. v. Lendingtree, Inc.: Making a Big Deal Out of Nominative Use*, 8 Tul. J. Tech. & Intell. Prop. 207, 215 (2006).

<sup>115</sup> *Id.* at 216.

<sup>116</sup> *New Kids on the Block v. News American Pub. Inc.*, 971 F.2d 302 (9<sup>th</sup> Cir. 1992)

information, or both is nonetheless fair). If this confusion test is satisfied, the court then asks (1) whether the use of the plaintiff's mark is necessary to describe (A) the plaintiff's product or service and (B) the defendant's product or service; (2) whether only so much of the plaintiff's mark is used as is necessary to describe plaintiff's products or services; and (3) whether the defendant's conduct or language reflect the true and accurate relationship between the plaintiff and defendant's products or services.<sup>117</sup>

### **C. TMs and Ticketmaster**

Claims against aggregators and search engines arise when material or information has been compiled in a manner that leads a user to believe the aggregator or search engine is in some way connected with the trademark. If a court encounters this situation, it may elect to evaluate the infringement claim with the

Revisiting *Ticketmaster Corp. v. Tickets.com, Inc.* provides for an illustration of trademark doctrine application to allegedly infringing aggregator. Applying the 9<sup>th</sup> Circuit standard, the California District Court found no infringement existed because although Tickets.com framed the information in their window, each hyper-link was clearly labeled as directing the user to Ticketmaster's site reducing any consumer confusion that may have existed.<sup>118</sup> Furthermore, the aggregator would, "extract the factual info (event date, time, tickets prices and URL) and discard the rest, which consisted of TM identification, logos, ads, and other information which TX did intend to use."<sup>119</sup> Thus, Ticketmaster's sale of the tickets could not be referenced without use of its trademark; however, the court found the aggregator's use to be fair use because it only utilized the trademark to the extent necessary and pursued measures to reduce consumer

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<sup>117</sup> *Century 21 Real Estate Corp. v. Lendingtree Inc.*, 425 F. 3d 211 (3<sup>rd</sup> Cir. 2005).

<sup>118</sup> *Ticketmaster Corp.*, 2003 WL 21406289 at 6.

<sup>119</sup> *Id.*

confusion by clearly marking the hyperlinks and indicating to the user that they would be re-directed to Ticketmaster's website.

Although the Ninth Circuit standard applied to *Ticketmaster*, courts who encounter a Third Circuit standard because the consumer confusion preliminary assessment favors the aggregators and search engines. They may receive the benefit of application of the Third Circuit standard due to the beneficial services aggregators and search engines provide for consumers and the consequent public policy tenets supporting their continued use. Also, the Supreme Court has indicated that a degree of consumer confusion is compatible with fair use, suggesting an inclination towards applying the Third Circuit standard. Where an aggregator involves a trademark, infringement doctrine provides a satisfactory course of recovery because it targets the conducts effect on consumers and thus addresses the consequences of the electronic agent's conduct relating to loss of competitive advantage. Rather than focusing on how long a search engine or crawler physically copied or made contact with a trademark, the court looks to circumstantial evidence- for example, the framing of the trademark or hyper link- to determine whether the electronic agent appropriated benefits exclusively under the control of the trademark holder.

## **VII. CONCLUSION**

Today, both the country and the economy are struggling with an international transition from a marketplace of tangible products, to one revolving around the exchange of information. The dawning of the "Information Age" introduced an era in which a multi-billion dollar marketplace of intangibles exists; however, legislation cannot keep up as it attempts to apply old methods rooted in the tangible. Ambiguous case law coupled

with an absence of statutory provisions concerning online commercial transactions attest for the legal system's inability to recognize the occurrence of tremendous alterations to the infrastructure of the economy. Now more so than ever, the economy is not defined by national boundaries, but rather created by international players. Companies like Google and Facebook have in effect, surpassed the authority of the nation state by revolutionizing the ways in which business transactions occur. A legal study of these transactions is particularly relevant as legislation such as Stop Online Piracy Act aim to allow the U.S. Department of Justice, as well as copyright holders, to seek court orders against websites accused of enabling or facilitating copyright infringement. Whether SOPA is the legislation to regulate e-commerce remains to be seen, but the current application of actions with physical requirements is clearly insufficient. The judiciary lags behind the economy in its current adjudication of claims relating to search engines and web crawlers as it struggles to apply antiquated doctrines that fail to substantiate the business and financial disadvantages that lay at the heart of e-commerce disputes.