

AD BLOCKERS, CONVENIENCE OR TRESPASS? CLICK HERE TO FIND OUT!

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I. INTRODUCTION

Imagine one of the most complex online databases in the world utilizing dozens of servers from all corners of the globe to conduct tens of thousands of real time live auctions every second.¹ Now imagine that thousands of those auctions' winning bidders will never receive what they bid on. You may think that this indicates that the system itself is flawed, but the reality is this is what happens when you use ad blocking software. The use of ad blocking software that hides advertisements from view results in a complex series of actions that causes advertisers to use server space to conduct thousands of auctions from which there can be no profit.² This inhibits the advertiser from allocating these resources in other ways and constitutes a trespass on advertisers' chattels.

Ad blockers are not an entirely new concept, but have seen an unprecedented rise in use in recent years.³ A joint report on ad blocking published by PageFair.com and Adobe found that in December 2016, over 615 million devices used some form of ad blocking software.⁴ This rapid growth in the prevalence of ad blockers warrants a discussion of the legality of the software, and whether the effects of the software on a visited website constitutes an act of trespass to chattels.⁵

Part II of this Note will discuss the basics of how a website loads, and the various mechanisms and business models of both advertisers and ad blockers. Part III will evaluate the existing legal framework for trespass to chattels cases being applied in an online setting. This Note will also discuss how those cases apply to the question of ad blocking software. Part IV will lay out how the Federal Trade Commission (FTC) should establish a universal definition for what constitutes an acceptable ad to address the concerns of users regarding the intrusiveness and disruptiveness of online advertising.

II. BACKGROUND

A. *How Websites Work*

Before we can fully analyze whether it is possible that the use of ad blockers constitutes a trespass, we must first discuss what a website is and how it works.

Merriam-Webster defines a website as “a group of World Wide Web pages usually containing hyperlinks to each other and made available

1. *Behind the Banner*, OFF. FOR CREATIVE RES., <http://o-c-r.org/behindthebanner/> (last visited Oct. 21, 2017).

2. See Lara O'Reilly, *There's a Company That's Reportedly Blocking '6.6 billion' of Google's Revenue—and Google Doesn't Seem to Care*, BUS. INSIDER (June 10, 2015) (explaining that Google suffered a huge loss due to adblockers).

3. PAGEFAIR, *THE STATE OF THE BLOCKED WEB 2017 GLOBAL ADBLOCK REPORT*, (Feb. 2017) <https://pagefair.com/downloads/2017/01/PageFair-2017-Adblock-Report.pdf> [hereinafter PAGEFAIR].

4. *Id.* at 5.

5. This Note will not explore how an action for trespass to chattels would be brought, nor who would have the proper standing to bring such action.

online.”⁶ Everyone surely has clicked on a link or opened a website. Perhaps while navigating to this Note you visited multiple websites. But have you ever thought of how a website loads?

When you click a link or type in a URL, many things happen in a very short period of time. While visiting a website may seem insignificant, the way in which a website loads has a profound impact on a claim of trespass to chattels.⁷ When someone navigates to a website, a process known as *request, response, build, render* occurs.⁸

When a user clicks a link or navigates to a specific website, it *requests* a package from the server.⁹ During this request stage, the user’s web browser sends a signal to the website’s server to request a text file.¹⁰ The server then sends a file to the individual computer (*response*).¹¹ The *response* from the server will contain a text file that describes the basic make-up of the website.¹² The user’s web browser will then read the file received and request any additional materials that it needs to display the requested website.¹³ Some files commonly requested during this period are images and videos.¹⁴ The web browser then takes the information received during the response phase to begin *building* the website on the individual’s computer.¹⁵ During the build stage, the web browser constructs the necessary pieces to construct a fully functional website, but does not actually produce a version of the website that is readable to the user.¹⁶ The web browser then uses the materials constructed during the build phase to *render* a completed website on the user’s computer.¹⁷ Once completely rendered, a large number of websites contain not only their own content, but also display content from other websites and businesses in the form of advertisements.¹⁸

6. *Website*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/Website> (last visited Oct. 21, 2017).

7. *See generally* RESTATEMENT (SECOND) OF TORTS §§ 217, 218 (AM. LAW INST. 1965). Based on the interpretation of the definition for “Trespass to Chattels” and the way a user’s ad blocker application works, a user may commit the tort at any of these stages.

8. Patrick Sexton, *How a Webpage is Loaded and Displayed*, VARVY (Oct. 26, 2015), <https://varvy.com/pagespeed/display.html>.

9. *Id.*

10. *Id.*

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.*

16. *Id.*

17. *Id.*

18. *See* Sapna Maheshwari, *Advertising’s Moral Struggle: Is Online Reach Worth the Hurt*, N.Y. TIMES (Dec. 26, 2016), <https://www.nytimes.com/2016/12/26/business/media/advertising-online-ads-fake-news-google.html> (discussing the widespread use of online advertisements, and their potential negative effect on brands).

B. *Internet Advertising*

1. *Who is Involved?*

When a website displays advertising, a small step is inserted during the *build* stage that takes less than a quarter of a second but involves dozens of sophisticated servers.¹⁹ This process is how ads are placed on a website and involves five key players.²⁰ The first of these players is the user, or consumer, who navigates to the website.²¹ The second is the publisher, or creator, of the website to which the user navigated.²² The third is the advertiser—a person or company who purchases the advertising space.²³ Often, the advertiser is a major corporation.²⁴ The fourth is an ad network.²⁵ An ad network is a third party network which publishers and advertisers can join to help simplify the process of buying and selling advertising space.²⁶ In most cases, both the publisher and advertiser will have no hand in where and what advertisements are placed on participating websites.²⁷ Instead, the ad network will use its servers to handle the buying and selling of advertisements in exchange for a portion of the proceeds.²⁸ The fifth, and most complicated of these players, is an ad marketplace or ad exchange.²⁹ Ad exchanges allow for real time auctions to take place when a user visits a website.³⁰

Throughout this Note, the Author will refer to advertisers, ad networks, and ad exchanges collectively as advertisers.

2. *How Do Ad Exchanges Work?*

Whenever a user visits a publisher's web page, a unique request known as an advertising impression is created.³¹ This impression is created based on the information that the website knows about the user, such as age and browsing habits.³² This impression is then sent to the publisher's ad network to see if the impression meets any of the network's pre-sold inventory.³³ Pre-sold inventory

19. *Behind the Banner*, *supra* note 1.

20. *How Does It Work?*, NETWORK ADVERT. INITIATIVE, <https://www.networkadvertising.org/understanding-online-advertising/how-does-it-work> (last visited Oct. 21, 2017).

21. *Id.*

22. *Id.*

23. *Id.*

24. *See NAI Members*, NETWORK ADVERT. INITIATIVE, <https://www.networkadvertising.org/participating-networks> (last visited Oct. 21, 2017) (describing NAI members and the types of advertisers that the members serve).

25. *How Does It Work?*, *supra* note 20.

26. *See id.* (stating that third-party advertising companies manage ad selection and placement for the publisher and advertiser to make the process more efficient).

27. *What Is It?*, NETWORK ADVERT. INITIATIVE, <https://www.networkadvertising.org/faq> (last visited Oct. 21, 2017).

28. *See What Is It?*, *supra* note 27 (discussing how third-party ad companies make revenue for websites and applications).

29. *How Does It Work?*, *supra* note 20.

30. *Behind the Banner*, *supra* note 1.

31. *Id.*

32. *Id.*

33. *Id.*

consists of placements that are purchased at a predetermined price based on the demographics of an impression.³⁴ If an impression is not claimed by the network's pre-sold inventory, it is sent to an ad exchange.³⁵ A few of the most popular ad exchanges are Google's DoubleClick Ad Exchange and Facebook Exchange.³⁶

Once an impression reaches an ad exchange, servers that are interested in bidding on the impression will evaluate the data related to the consumer to determine if they would like to place a bid.³⁷ At this time, a live auction is held where each server is given the opportunity to place a bid to fulfill the impression.³⁸ The highest bidder wins the right to fulfill the impression and their advertisement is sent to the publisher's website to be shown to the user.³⁹ This process happens every time a user visits a website for every ad displayed, and occurs hundreds of thousand times per second across the web.⁴⁰

A significant amount of controversy exists over the information that is gathered regarding a user that is used to create an advertising impression. Commonly, advertisers use retargeting in order to better target their advertisements.⁴¹ Retargeting is a type of advertising that allows major advertisers to identify an item or service of interest to a user and repeatedly advertise the item directly to that user.⁴² Formally, this practice is called "behavioral retargeting."⁴³ This is done by installing a simple code on a website which drops an invisible cookie, or tag, on a visitor's computer which identifies their interest to other websites in the advertising network.⁴⁴ Retargeting is most commonly used to target people who have viewed an item for sale somewhere online, but have yet to purchase the item.⁴⁵ Lately though, data obtained through individuals' social media has allowed advertisers to target users based on their marital status, income levels, whether or not they own a home, and various other demographic data points.⁴⁶ By using these data points, advertisers are now able to not only advertise to users items or products they have already expressed interest in, but are able to target users based on products they may need in the future, such as home loans for a young, married individual.⁴⁷

34. *Id.*

35. *Id.*

36. *See id.* (listing DoubleClick Ad Exchange, Right Media Exchange, Facebook Exchange, and FMP Exchange as possible ad exchanges where an impression can be sent).

37. *Id.*

38. *Id.*

39. *Id.*

40. *Id.*

41. *What Is Retargeting and How Does it Work?*, RETARGETER, <https://retargeter.com/what-is-retargeting-and-how-does-it-work> (last visited Oct. 21, 2017).

42. *Id.*

43. *Id.*

44. *Id.*

45. *Id.*

46. Mary Lister, *All of Facebook's Ad Targeting Options (in One Epic Infographic)*, WORDSTREAM: BLOG (Sept. 6, 2017), <http://www.wordstream.com/blog/ws/2016/06/27/facebook-ad-targeting-options-infographic>.

47. *See About Demographic Targeting*, GOOGLE, <https://support.google.com/adwords/answer/2580383?hl=en> (last visited Oct. 21, 2017) (explaining the different demographic targeting options available to advertisers, and how they are obtained).

C. Ad Blocking Software

Ad blocking is a term used to describe a software that either prevents the downloading or displaying of materials when visiting a website.⁴⁸ Most often the materials being blocked are advertisements, but can also be media, social media widgets, or tracking software.⁴⁹ There are many different ad blocking companies on the market, the largest of which being the German company AdBlock Plus.⁵⁰

The vast majority of ad blocking software is installed by a user using an extension on their web browser.⁵¹ Ad blocking software generally operates by utilizing two methods: content denial and hiding elements.⁵² These methods can be used individually, but are often used in conjunction with each other.⁵³

1. Content Denial

When an ad blocker uses content denial as a means of preventing ads from being displayed, they are not technically blocking the ad, but rather preventing the impression from ever being sent.⁵⁴

Under this method, when a user visits a publisher's website, the ad blocker will activate during the *request* stage of the website load process.⁵⁵ During the *request* stage, the ad blocker will prevent the impression from being sent from the user's computer to the ad network.⁵⁶ Because of this, your impression is never shown on the ad exchange.

To determine whether a request should be sent from your computer, the ad blocker will first check a crowdsourced black list of various items that come from ad networks and exchanges.⁵⁷ Next, the ad blocker will scan the page for indications that the content is an advertisement.⁵⁸ This is commonly done by searching the page for the words *ad*, *advertisement*, or *sponsored*. In theory, this method will prevent the *rendering* of any material that is identified by the ad blocker.⁵⁹ However, ad blockers have introduced whitelists, which allow some advertisements to load even if identified as an ad by the ad blocker.

Whitelisting is where both users and the ad blocker can add what are deemed to be good or acceptable ads to a list that will allow them to be shown

48. Mani Gandham, *Ad Blocking: A Primer*, TECHCRUNCH (Jan. 16, 2016), <https://techcrunch.com/2016/01/16/ad-blocking-a-primer/>.

49. *Id.*

50. Ian C. Butler, *The Ethical and Legal Implications of Ad-Blocking Software*, 49 CONN. L. REV. 689, 692 (2016).

51. Gandham, *supra* note 48.

52. Rhana Cassidy, *A How To Guide to Ad Blocking*, ADBLOCK: BLOG, (Mar 6, 2017) <https://blog.getadblock.com/a-how-to-guide-to-ad-blocking-be452ed5ed6f>.

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.*

57. Gandham, *supra* note 48.

58. *Id.*

59. *Id.*

despite ad blockers.⁶⁰ The ability to be added to the whitelist is completely free to roughly 90% of advertisers, but the top 10% largest advertisers are required to pay a fee to be added to the whitelist.⁶¹ Though the exact fee charged is not known to the public, it is rumored to be as high as thirty percent of the advertiser's ad revenue.⁶² To be added to the whitelist, even as a paying advertiser, the ads must meet all of the design criteria of the whitelist.⁶³ Design criteria can vary, but Adblock Plus has named this service as part of its Acceptable Ads Initiative as a means of encouraging the production of less intrusive ads.⁶⁴

In response to the use of content denial by ad blockers, publishers have established ways of disguising advertisements, the most prominent of which is disguising the advertisement code as content, or embedding the advertisement directly into the content.⁶⁵ By doing this, ad blockers are unable to block the request being sent to the server because to do so would block the content that the user is attempting to see.⁶⁶ When a publisher successfully disguises an impression, the ad blocker will be unable to block the impression from being sent to the ad network.

2. *Hiding Elements*

When an ad blocker is unable to block the impression from being sent, they often utilize element hiding. Hiding elements is necessary because some requests are impossible to block,⁶⁷ as doing so would result in core content of the website the user is attempting to visit being blocked.⁶⁸ This is especially the case when publishers begin to embed the ads directly into videos and images.

When this method is used, the ad blocker works by interrupting the *render* stage rather than the *request* stage of a website's loading process. Though this difference may seem small, it is actually very significant. Since the impression is sent to the ad network, the ad network will forward the impression to the ad exchange.⁶⁹ This means that an auction will be held for the ad space on the publisher's web site, but no ad is able to be displayed.⁷⁰ After the auction is completed, the winning bidders' material is sent to the user's computer.⁷¹ It is

60. Lara O'Reilly, *Google, Microsoft, and Amazon are Paying Adblock Plus Huge Fees to Get Their Ads Unblocked*, BUS. INSIDER (Feb. 3, 2015, 6:57 AM), <http://www.businessinsider.com/google-microsoft-amazon-taboola-pay-adblock-plus-to-stop-blocking-their-ads-2015-2>.

61. *Id.*

62. *Id.*

63. *Allowing Acceptable Ads in Adblock Plus*, ADBLOCK PLUS, <https://adblockplus.org/acceptable-ads> (last visited Oct. 21, 2017) [hereinafter ADBLOCK PLUS].

64. *Id.*

65. Cassidy, *supra* note 52.

66. *Id.*

67. *Id.*

68. *Id.*

69. *Behind the Banner*, *supra* note 1.

70. *Id.*

71. *Id.*

at this point in the process that the ad blocker prevents the advertisement from displaying.⁷²

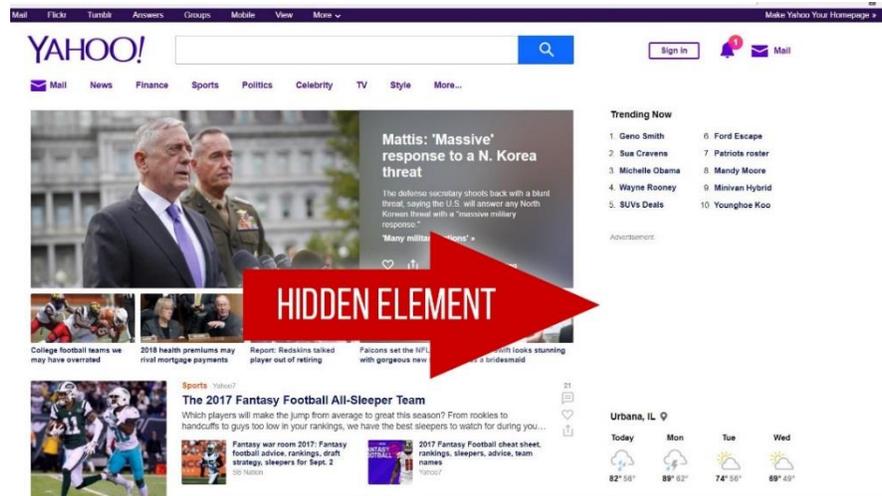


Figure 1: Yahoo.com Home Page demonstrating a hidden element resulting from the use of an Ad blocker.

Although the auction takes place and the winner does send the advertisement to the user's computer, the vast majority of ad networks do not charge the advertiser for ads not actually seen by the user.⁷³ However, hiding elements results in the use of dozens of servers on both the ad networks and the ad exchanges⁷⁴ as they conduct an auction for an impression that will not be displayed.

D. Effects of Using Ad Blockers

1. Scale of Ad Blocking Usage

Ad blocking software is not new, with the first version being introduced nearly two decades ago.⁷⁵ However, in recent years ad blocker usage has experienced unbelievable growth.⁷⁶ In January 2010, there were only twenty-one million devices using ad blocking software.⁷⁷ A recent report shows that

72. *Id.*

73. Brad Bender, *Enhancing the Google Display Network with New Innovations*, GOOGLE ADWORDS (Sept. 30, 2015), <https://adwords.googleblog.com/2015/09/Enhancing-the-google-display-network.html>.

74. *Behind the Banner*, *supra* note 1.

75. See Wladimir Palant, *A Not So Short History of Ad Block*, ADBLOCK PLUS, <http://web.archive.org/web/20061109142754/http://adblockplus.org/en/history> (last visited Oct. 21, 2017) (providing a brief history of the early development of the AdBlock Plus software from its initial development in 2002 until 2006 told by the Co-Founder of AdBlock Plus).

76. PAGEFAIR, *supra* note 3.

77. *Id.* at 5.

number has ballooned to over six hundred million devices, or 11% of the global Internet population, as of December 2016.⁷⁸ This is a result of ad blocking software experiencing year over year growth of over 30%, including over one hundred and forty-two million new devices over the last twelve months.⁷⁹ In the United States alone, over fifty-two million devices, or 18% of all devices, run ad blocker software.⁸⁰

2. *Monetary Impact of Ad Blocking Software*

In 2017, for the first time ever, online advertising will exceed the amount spent on television advertising.⁸¹ It is projected that in 2017, over two hundred billion dollars will be spent on online advertising.⁸² Although ad blocking has a direct financial impact on advertisers by preventing users from seeing their advertisements, there are other ways that ad blockers indirectly cost advertisers a substantial amount of money.⁸³ Amongst these concerns is the use of whitelists by ad blockers.⁸⁴ For instance, although having ads placed on Adblock Plus's whitelist is free for roughly 90% of advertisers, advertisers that are deemed to be large companies are required to pay a substantial sum to be added to the whitelist,⁸⁵ creating very real financial damages. These fees are often not public, but are reported to be up to 30% of companies' total ad revenue to be placed on the whitelist.⁸⁶

However, the financial losses are very real. It is reported that Google lost an estimated \$887 million in revenue due to ad blocking in 2012.⁸⁷ It is estimated that this has grown to over six billion dollars in 2014,⁸⁸ equaling 10% of Google's total revenue.⁸⁹ The rise in ad blockers has cost publishers worldwide an estimated twenty-two billion dollars in 2015.⁹⁰ This number represents 10% of all online advertising, and is expected to continue to grow.⁹¹ Research by the business information company, Informa, estimates that ad

78. *Id.* at 4.

79. *Id.* at 5.

80. *Id.* at 9.

81. *Internet Advertising Expenditure to Exceed US \$200bn This Year*, ZENITH MEDIA, <https://www.zenithmedia.com/internet-advertising-expenditure-to-exceed-us200bn-this-year/> (last visited Oct. 20, 2017).

82. *Id.*

83. See generally O'Reilly, *supra* note 60 (discussing how Adblock financially burdens advertisers).

84. *Id.*

85. *Id.*

86. *Id.*

87. Laura Stampler, *Google Saved an Estimated \$887 Million By Paying Adblock Plus To Show Its Ads*, BUS. INSIDER (Aug. 2, 2013, 11:02 AM), <http://www.businessinsider.com/google-saved-an-estimated-887-million-by-paying-adblock-plus-to-show-its-ads-2013-8>.

88. Lara O'Reilly, *There's a Company That's Reportedly Blocking '\$6.6 Billion' of Google's Revenue—and Google Doesn't Seem to Care*, BUS. INSIDER (June 10, 2015, 7:26 AM), <http://www.businessinsider.com/pagefair-predicts-google-is-losing-66-billion-in-revenue-to-ad-blockers-2015-6>.

89. Press Release, Alphabet Inc., *Alphabet Announces Fourth Quarter and Fiscal Year 2016 Results* (Jan. 26, 2017) https://abc.xyz/investor/news/earnings/2016/Q4_alphabet_earnings/.

90. Jessica Davies, *Uh-oh: Ad Blocking Forecast to Cost \$35 Billion by 2020*, DIGIDAY (June 7, 2016), <http://digiday.com/uk/uh-oh-ad-blocking-forecast-cost-35-billion-2020/>.

91. *Id.*

blocking will result in a loss of over thirty-five billion dollars in advertising worldwide in 2020.⁹²

3. *Benefits of Ad Blocking Software*

There are many benefits derived from the use of ad blocking. One reason often given for the use of ad blockers is that poorly made ads present a risk to a person's personal computer.⁹³ The risk presented to users from malicious or poorly made advertising cannot be understated. In fact, over one hundred twenty-eight million people were potentially exposed to malware on the popular website DailyMotion⁹⁴ when an advertisement was accidentally allowed to be displayed on the website that contained malware with the potential to unveil private information of the users. Malware is a term used when describing malicious software.⁹⁵ Malware is often designed with the sole purpose of infiltrating one's computer to obtain personal information.⁹⁶

Many also point to ad blockers' ability to provide a cleaner product to users, allowing them to determine what content they see.⁹⁷ For instance, Adblock Plus seeks to provide a less disruptive experience to users by utilizing an acceptable ad criteria.⁹⁸ In order to achieve this result, the acceptable ad criteria does not allow placement of ads in the primary content of a website as it deems these ads as highly disruptive.⁹⁹

E. *Response to Ad Blockers*

No one knows the exact reason for the rapid rise, but there are many theories. Some claim that it has been caused by the rise in the use of tracking and retargeting software.¹⁰⁰ Others attribute the success of ad blockers to consumers simply being annoyed by animated and intrusive ads.¹⁰¹ One thing is clear: more and more Internet users see ad blockers as a valuable tool.¹⁰²

92. *Id.*

93. See Violet Blue, *You Say Advertising, I Say Block That Malware*, ENGADGET (Jan. 8, 2016), <https://www.engadget.com/2016/01/08/you-say-advertising-i-say-block-that-malware/> (stating that malware in advertising is a growing epidemic that is largely ignored).

94. *Id.*

95. *Malware*, NORTON BY SYMANTEC, <http://www.pctools.com/security-news/what-is-malware/> (last visited Oct. 20, 2017).

96. *Id.*

97. Kavi Gupta, *Three Reasons Why Ad Blocking Will Benefit Everyone*, FORBES (Oct. 21, 2015, 7:30 AM), <http://www.forbes.com/sites/kavigupta/2015/10/21/three-reasons-why-ad-blocking-will-benefit-everyone/>.

98. ADBLOCK PLUS, *supra* note 63.

99. *Id.*

100. Doc Searls, *Ad Blockers and the Next Chapter of the Internet*, HARV. BUS. REV. (Nov. 6, 2015), <https://hbr.org/2015/11/ad-blockers-and-the-next-chapter-of-the-internet>.

101. See generally Daniel G. Goldstein et al., *The Cost of Annoying Ads*, 13 ACM SIGECOM EXCHANGES 47 (2014), http://www.sigecom.org/exchanges/volume_13/2/GOLDSTEIN.pdf (asserting that more intrusive ads have significantly lower conversion rates).

102. PAGEFAIR, *supra* note 3.

This conflict between advertisers and ad blockers has given birth to a whole new industry of ad reinsertion companies.¹⁰³ Ad reinsertion is a relatively new concept, and has not been implemented by many companies.¹⁰⁴ However, new companies have begun to form that focus on developing ad reinsertion software for companies.¹⁰⁵ Although the use of ad reinsertion has been controversial,¹⁰⁶ it has proven to be effective. Ad reinsertion is a relatively simple method in which the code for the ad is integrated into the core code of the website.¹⁰⁷ By doing this, ad blocking software is unable to differentiate between the content on the website and its advertisements.¹⁰⁸ This allows a number of ads to pass by ad blockers undetected.¹⁰⁹ One of the primary reasons that ad reinsertion has proven to be effective is that attempts to block reinserted ads will often also block content desired by the user,¹¹⁰ such as portions of the article.

Recently, Facebook utilized ad reinsertion as a means of combating the use of ad blockers on their website.¹¹¹ In response, Adblock Plus has continually tried to find an effective way to block ads on the social media giant Facebook,¹¹² but every time they have managed to successfully do so, Facebook has simply modified their code preventing further ad blocking.¹¹³ This eventually came to a head when Adblock Plus released a new workaround that not only blocked ads but hid and deleted legitimate social media posts of Facebook users.¹¹⁴ This prompted Facebook to release another workaround, completely modifying its code,¹¹⁵ and prompting them to issue a statement stating that ad blocking companies are “punishing people,” and that ad blockers are “blunt instruments.”¹¹⁶ Other major publishers have also clashed with ad blockers. Ad blockers have been removed from the Google Play store for “intervening in the services of another.”¹¹⁷ This has caused significant levels of conflict between publishers and the ad blocking industry, with Adblock Plus recently being barred from attending the biggest online advertising convention.¹¹⁸

103. Jack Marshall, *The Rise of the Anti-Ad Blockers*, WALL ST. J. (June 13, 2016, 4:04 AM), <https://www.wsj.com/articles/the-rise-of-the-anti-ad-blockers-1465805039>.

104. *Id.*

105. *Id.*

106. Joe Barone, *Ad Reinsertion: For Better or Worse?*, INTERACTIVE ADVERT. BUREAU (June 10, 2016), <https://www.iab.com/news/ad-reinsertion-for-better-or-worse/>.

107. Marshall, *supra* note 103.

108. *Id.*

109. *Id.*

110. Josh Constine, *Facebook Rolls out Code to Nullify Adblock Plus' Workaround Again*, TECHCRUNCH (Aug. 11, 2016), <https://techcrunch.com/2016/08/11/friendblock/>.

111. *Id.*

112. *Id.*

113. *Id.*

114. *Id.*

115. *Id.*

116. *Id.*

117. Graham Templeton, *AdBlock Blocked by Ad Industry, as Tensions Set in*, EXTREMETECH (Jan. 20, 2016, 10:13 AM), <https://www.extremetech.com/Internet/221503-adblock-blocked-by-ad-industry-as-tensions-and-reality-set-in>.

118. *Id.*

In response to ad blockers, many publishers have turned to sponsored posts.¹¹⁹ A sponsored post is when a publisher writes an article or blog post discussing a specific product and is compensated by the owner of the product. This type of content can often make the material less entertaining.¹²⁰ Publishers may also decide to switch to subscription based programs to ensure revenue streams, which the majority of Internet users do not want to happen.¹²¹

Additionally, ad blockers may cause publishers to implement paywalls in order to ensure revenue streams, therefore barring many casual readers from the content.¹²² A paywall is “a system in which access to all or part of program. . . stops people who have not paid a subscription from using a website.”¹²³ For example, the *Washington Post* first implemented its paywall in 2013.¹²⁴ Although the *Washington Post* has not directly stated that this is a result of revenue losses due to decreases in advertising income,¹²⁵ it is not hard to imagine a connection. For better or worse, Internet users have quickly determined ways around these pay walls.¹²⁶

III. ANALYSIS

A. Existing Legal Framework

The common law theory of trespass to chattels is fairly well defined, and is encapsulated in the Restatement Second of Torts: “[a] trespass to a chattel may be committed by intentionally (a) dispossessing another of the chattel, or (b) using or intermeddling with a chattel in the possession of another.”¹²⁷ With regards to potential liability for trespass to chattels the Restatement states that one is liable:

“only if, (a) he dispossesses the other of the chattel, or (b) the chattel is impaired as to its condition, quality, or value, or (c) the possessor is deprived of the use of the chattel for a substantial time, or (d) bodily harm is caused to the possessor, or harm is caused to some person or thing in which the possessor has a legally protected interest.”¹²⁸

119. Mike Shields, *Ad Blocking Threat Is Real, But Publishers Aren't Panicking*, WALL ST. J. (Jan. 15, 2016, 6:00 AM), <http://www.wsj.com/articles/ad-blocking-threat-is-real-but-publishers-arent-panicking-1452855600>.

120. *Id.*

121. *Id.*

122. *Id.*

123. *Paywall*, CAMBRIDGE UNIV. PRESS, <http://dictionary.cambridge.org/us/dictionary/english/paywall> (last visited Oct. 21, 2017).

124. Steven Mufson, *Washington Post to Phase in a Paid Online Subscription Model*, WASH. POST (June 5, 2013), https://www.washingtonpost.com/business/economy/washington-post-to-phase-in-a-paid-online-subscription-model/2013/06/05/d2e1bce4-cdd4-11e2-8845-d970ccb04497_story.html?hpid=z2&tid=a_inl&utm_term=.81dfba3c2dba.

125. *Id.*

126. *How to Get Around the New York Times and Washington Post Paywalls Without Really Trying*, AGUPIEWARE, (Apr. 8, 2016), <http://blog.agupieware.com/2016/04/how-to-get-around-new-york-times-and.html>.

127. RESTATEMENT (SECOND) OF TORTS § 217 (AM. LAW INST. 1965).

128. RESTATEMENT (SECOND) OF TORTS § 218 (AM. LAW INST. 1965).

This Note will focus on whether the chattel is impaired as to its condition, quality, or value.

At the earliest cases at common law, trespass usually required a physical touching of another's chattel.¹²⁹ However, modern rules have recognized that indirect actions are enough to constitute a trespass, with things as seemingly minor as dust particles drifting onto another's property giving rise to a claim of trespass.¹³⁰ Likewise, courts have almost entirely discarded the requirement that the trespass be tangible by allowing claims related to substances ranging from microscopic particles,¹³¹ to smoke,¹³² and even to electronic pulses.¹³³

Courts have applied this standard in the context of websites by relying on a two-prong system.¹³⁴ The first prong, dealing with permission, requires that the defendant must have intentionally and without permission affected the plaintiff's possessory interest in their computer system.¹³⁵ The second prong, dealing with damage caused, requires that the "unauthorized use proximately resulted in damage to plaintiff."¹³⁶

When applying the first prong of trespass to chattels to digital matters, the Restatement has supplied a standard most often utilized by the courts. The Restatement states that one who uses a chattel with permission is still liable for a trespass to the chattel which results from actions exceeding the permission granted.¹³⁷

With respect to the second prong of trespass to chattels, a trespass can be liable when he only diminishes the condition or quality.¹³⁸ Furthermore, personal property can be diminished even if it is not "physically damaged by defendant's conduct."¹³⁹

1. *International Courts*

In June 2016, one of the first major decisions regarding the use of ad blockers and the business model of most ad blocking companies was handed down in the German case *Axel Springer v. Eyo*.¹⁴⁰ The issue before the court focused on German unfair competition laws and the use of a whitelist by

129. *Roberts v. Permanente Corp.*, 188 Cal. App. 2d 526, 529 (1st Dist. 1961); *see also* *Wilson v. Interlake Steel Co.*, 32 Cal. 3d 229, 232 (1982) (explaining how the rule for trespass to chattels has evolved).

130. *Roberts*, 188 Cal. App. 2d at 529.

131. *Bradley v. Am. Smelting & Ref. Co.*, 709 P.2d 782, 788 (Wash. 1985) (en banc).

132. *Ream v. Keen*, 838 P.2d 1073, 1075 (Or. 1992) (en banc).

133. *Thrifty-Tel, Inc. v. Bezenek*, 54 Cal. Rptr. 2d 468, 472 (1996).

134. *eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058, 1070 (N.D. Cal. 2000).

135. *See id.* (stating "the plaintiff must establish . . . (1) the defendant intentionally and without authorization interfered with plaintiff's possessory interest in the computer system. . . .") (citing *Thrifty-Tel*, 54 Cal. Rptr. 2d at 472).

136. *Id.*

137. *See* RESTATEMENT (SECOND) OF TORTS § 256 (AM. LAW. INST. 1965) (stating "[o]ne 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.").

138. *eBay, Inc.*, 100 F. Supp. 2d at 1071.

139. *Id.*

140. Lara O'Reilly, *Adblock Plus' Revenue Model was Just Ruled Illegal by a German Court*, BUS. INSIDER (June 24, 2016, 7:18 AM), <http://www.businessinsider.com/r-german-court-hands-springer-partial-victory-in-ad-blocking-case-2016-6> [hereinafter *German Court*].

Adblock Plus.¹⁴¹ German unfair competition law generally states that “competitors must advertise their products and services on the market in a way that does not unreasonably influence the customers’ independent judgement and free choice”¹⁴² and that these “provisions prohibit practices that influence customers without actually misleading them.”¹⁴³ The German court determined that the requirement that certain advertisers must pay to be placed on the whitelist was a violation of the country’s unfair competition laws.¹⁴⁴ Additionally, the issue of permission was also not addressed in the decision.¹⁴⁵

Ultimately, the case was decided on a law that does not exist in the United States.¹⁴⁶ Because of this, the case is of limited value when analyzing a claim of trespass to chattels involving the use of ad blockers in the United States. However, the ruling relied on several factors that overlap with the two prongs of the common law doctrine of trespass to chattels, such as the requirement that the affected party suffer some damage.¹⁴⁷

Thus far, U.S. courts have failed to directly address the issue of ad blockers, but there are several cases involving trespass online that can serve as guide posts for future cases.

2. *eBay, Inc. v. Bidder’s Edge, Inc.*¹⁴⁸

eBay is a prominent Internet-based business that facilitates person-to-person trading and allows individuals to set their own terms and conditions for various auctions which other users may bid on.¹⁴⁹ Bidder’s Edge (BE) is an auction aggregation website that is designed to compile data from millions of related auctions to display to its users the best possible deals.¹⁵⁰ To obtain this information, BE utilized a computer program to “crawl” eBay and various other websites.¹⁵¹ While crawling these websites, the software would perform thousands of searches per minute and retrieve data to be compiled on BE’s website.¹⁵² The act of crawling a website consumes the resources of the system being crawled upon, making them unavailable to other users, and slowing the overall processing speed of the entire system.¹⁵³

In April 1999, eBay verbally gave BE permission to crawl their website for 90 days with the intention of entering a long-term licensing agreement.

141. *Id.*

142. Jan Peter Heidenreich, *The New German Act Against Unfair Competition*, GER. L. ARCHIVE (2005), <http://germanlawarchive.iuscomp.org/?p=349#sdfnote3sym>.

143. *Id.*

144. *German Court*, *supra* note 140.

145. *Id.*

146. Heidenreich, *supra* note 142.

147. *eBay, Inc. v. Bidder’s Edge, Inc.*, 100 F. Supp. 2d 1058, 1070 (N.D. Cal. 2000); Heidenreich, *supra* note 142.

148. This Note will use the legal framework provided by case law in the United States Court of Appeals for the Ninth Circuit as it is the circuit with the most developed case law regarding the relevant subject matter.

149. *eBay, Inc.*, 100 F. Supp. 2d at 1060.

150. *Id.* at 1061.

151. *Id.* at 1062.

152. *Id.* at 1061–62.

153. *Id.* at 1061.

However, the companies were unable to reach an agreement.¹⁵⁴ In September 1999, eBay requested that BE stop crawling their website.¹⁵⁵ Although BE initially agreed to stop, they eventually continued to crawl eBay without consent, accessing the website an estimated one hundred thousand times a day.¹⁵⁶ The court granted eBay an injunction because based on the evidence presented, it was likely that eBay would be able to prove both prongs of the trespass to chattels claim and succeed in its claim.¹⁵⁷ This decision ultimately stated that the electronic signals created when BE crawled eBay's servers were sufficiently tangible to support a trespass cause of action.¹⁵⁸ The Court reached this conclusion by determining that BE's appropriation of eBay's personal property prevented eBay from utilizing those resources themselves, and has thus diminished the property's value.¹⁵⁹

The Ninth Circuit in eBay relied heavily on the decision of *Thrifty-Tel v. Bezenek* when reaching its conclusion.¹⁶⁰ In *Thrifty-Tel*, the court determined that trespass to chattels could be applied when unauthorized long distance calls were made without the company's consent.¹⁶¹

3. *Ticketmaster v. Tickets.com*

By contrast, the Ninth Circuit reached a contrary conclusion in *Ticketmaster v. Tickets.com*.¹⁶² Ticketmaster is the largest ticket broker in the United States, and operates a website on which visitors can directly purchase tickets for thousands of events across the country.¹⁶³ In terms of the overall business model, Ticketmaster operates in a very similar manner as eBay. Likewise, Tickets.com serves a very similar function to that of Bidder's Edge. Tickets.com sells very few tickets directly, but rather the vast majority of its business is obtained by gathering data from other websites and directing its visitors to those websites, often times Ticketmaster, to purchase tickets.¹⁶⁴ To obtain the data necessary for Tickets.com to provide the information to their customers, they utilized a robot or spider software, which crawled Ticketmaster's website and reproduced the information on its own website.¹⁶⁵ A robot or spider software is a simple computer program that is programmed to continuously visit specific websites to retrieve information for the owner of the

154. *Id.* at 1062.

155. *Id.*

156. *Id.* at 1062–63.

157. *Id.* at 1070, 1073.

158. *Id.* at 1069.

159. *Id.* at 1071–72.

160. *Id.* at 1069, 1070.

161. *Thrifty-Tel, Inc. v. Bezenek*, 54 Cal. Rptr. 2d 468, 472 (1996).

162. *Ticketmaster Corp. v. Tickets.com, Inc.*, No. 99CV7654, 2000 WL 1887522, *1, *4 (C.D. Cal. Aug. 10, 2000), *aff'd*, 2 F. App'x 741 (9th Cir. 2001).

163. *Id.* at *1.

164. *Id.* at *2.

165. *Id.*

software.¹⁶⁶ The court ultimately concluded that this case differed from that of the *eBay* case, and that no harm came to Ticketmaster's chattel.¹⁶⁷

This decision is seemingly impossible to reconcile with the court's ruling in *eBay*, as the crawling software utilized by Tickets.com was virtually identical to the software used by Bidder's Edge.¹⁶⁸ Ultimately, this conflict may have stemmed from the court's lack of understanding of the technical elements at work, evidenced by the court stating the software "is operated by mysterious electronic impulses."¹⁶⁹ However, the court did expertly illustrate one fact when considering computers and trespass, stating that although computers "did not exist when the law of trespass to chattels was developed, . . . the principles should not be too different."¹⁷⁰

4. *Register.com v. Verio*

In another case paralleling the court's ruling in *eBay* in another jurisdiction, the court in *Register.com v. Verio* found that the use of crawling software to crawl another's website to obtain data provided a valid claim of trespass to chattels.¹⁷¹ There, Register.com operated as a domain provider but also offered other services such as website development.¹⁷² It was in this field that Verio directly competed with Register.com.¹⁷³ In order to obtain data regarding those who had registered domains with Register.com, Verio would crawl Register.com's WHOIS data, and then contact these customers directly via email.¹⁷⁴ WHOIS is an Internet protocol used in queries to obtain information regarding the registration of a domain name, name servers, creation date, expiration date, and the contact information for the registered domain holder.¹⁷⁵ Register.com proceeded to demand that Verio cease using the WHOIS information obtained from Register.com, and although Verio ceased the use of the information in email solicitations, it continued to use the data for direct mailing and telephone solicitations.¹⁷⁶ In a similar fashion as the court in *eBay*, the court found that Register.com had a valid claim of trespass to chattels as Verio's use of crawling software to crawl their website created a risk of harm to Register.com's property.¹⁷⁷ This is because allowing Verio to continue its activities would make it "highly probable" that other Internet service providers

166. Margaret Rouse, *Definition: Spider*, TECHTARGET, <http://whatis.techtarget.com/definition/spider> (last updated Apr. 2005).

167. Ticketmaster Corp., 2000 WL 1887522, at *4.

168. Compare Ticketmaster Corp., 2000 WL 1887522, at *4, with *eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058, 1070 (N.D. Cal. 2000).

169. Ticketmaster Corp., 2000 WL 1887522, at *4.

170. *Id.*

171. *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393, 404 (2d Cir 2004).

172. *Id.* at 396.

173. *Id.*

174. *Id.*

175. About Whois, ICANN, <https://www.icann.org/resources/pages/what-2013-03-22-en> (last visited Oct. 21, 2017).

176. *Register.com, Inc.*, 356 F.3d 393 at 397.

177. *Id.* at 404.

would devise similar programs to access Register's data, and that the system would be overtaxed and would crash."¹⁷⁸

Ultimately a widespread determination by the courts that electronic signals received by a system are sufficiently tangible to support a claim of trespass to chattels¹⁷⁹ indicates that the predominant question in trespass cases involving the Internet is the scale of the trespass.

B. Analyzing Ad Blocker Software Under the Existing Framework

1. Scope of Permission

Significant problems also exist as to whether ad blockers exceed the permission granted by a website's owner to the visitor to alter the site. There are two problems created by the use of ad blocking software. First, although the user is given permission to use a publisher's website by the publisher, does the use of ad blocking software exceed that permission? Second, has any permission been granted by either the advertiser, ad network, or ad exchanges that allow the user to prevent the winner of the ad exchange auction from rendering their content?

When attempting to determine whether a user exceeds the permission granted to them by a publisher, we must first determine what permission was granted to the user. The easiest way to determine this is to look at a publisher's terms of service. If the publisher's terms of service clearly state that the user may not use ad blocking software on their website, then the user would clearly be exceeding the scope of permission by utilizing an ad blocker.¹⁸⁰ The problem lies in the fact that it is unlikely that a publisher's terms of service would explicitly point to the use of ad blockers.¹⁸¹ It is more likely that the terms of service would include language that prohibits the use of software that interferes with the proper use of the service.¹⁸² This presents the obvious question of whether the use of ad blockers actually interferes with the use of the service. This is likely the case in situation when ad blockers block the rendering of core content, such as when attempting to block articles on Facebook. If the ad blocker has not blocked any core content, then it is unlikely that the user has exceeded the publisher's terms of service.

When determining whether a user exceeds the permission granted by an advertiser, ad network, or ad exchange (collectively, "advertisers"), we must

178. *Id.*

179. *See, e.g., eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058, 1070 (N.D. Cal. 2000) (stating that the use of unauthorized robot software to crawl a website is sufficient for a claim of trespass to chattels); *see Am. Online, Inc. v. IMS*, 24 F. Supp. 2d 548, 550 (E.D. Va. 1998) (determining that the sending of 60 million unauthorized emails constituted a trespass to chattels via electronic signals); *see also CompuServe, Inc. v. Cyber Promotions, Inc.*, 962 F. Supp. 1015, 1022 (S.D. Ohio 1997) (finding that the sending of unsolicited emails was sufficiently tangible for a claim of trespass).

180. *See generally Terms of Service*, WASH. POST (July 1, 2014), https://www.washingtonpost.com/terms-of-service/2011/11/18/gIQALdiYiN_story.html?utm_term=.0ea36ffe004f (explaining the repercussions of violating the terms of service).

181. *Id.*

182. *Id.*

first determine if any permission has been granted at all. When a user first visits a site, they have no interaction at all with the advertiser until their web browser sends their impression to the advertiser's server.¹⁸³ If the user's web browser is using an ad blocker utilizing the content denial method, then the user never has an interaction with the advertiser.¹⁸⁴ Because of this, there is no permission exchanged between the user and the advertisers as the advertiser server never interacts with the user's web browser.¹⁸⁵ However, if the user's impression is sent to the advertiser's server, then the user may be exceeding the scope of permission.

When the impression is sent to the advertiser's server, this triggers a complex chain of events that results in the use of dozens of servers.¹⁸⁶ When this happens, advertisers are forced to utilize resources in order to fulfill the user's impression. Once the impression is fulfilled, it is the expectation of the advertiser that the utilization of their servers will result in their advertisement being displayed on the user's computer. If, however, the user is using an ad blocker that uses the element hiding method, the advertisers' content will not be displayed but instead only a blank space will show.¹⁸⁷

In this situation, we may have to turn to the publisher's terms of service to determine whether the user has exceeded the permission granted. When an ad blocker utilizes element hiding, it likely would exceed terms of service that prevent the user from using software that prevents the service.¹⁸⁸ This is because the use of ad blockers would prevent the publisher from completing their obligations to the advertisers to deliver advertisement content to users following a fulfilled impression.¹⁸⁹ If there are no terms of service to turn to, in several instances courts have indicated that there need not be any affirmative statement that a behavior is not allowed, and that a lack of permission is sufficient.¹⁹⁰ Therefore, when an ad blocker utilizes element hiding they are exceeding the permission granted by both the publisher and advertisers.

2. Damages

The financial costs of ad blockers are significant, and will likely increase dramatically in the coming years.¹⁹¹ Any claim of trespass to chattels must demonstrate that the use of ad blocking software has diminished the condition or quality of personal property.¹⁹² This

183. *Behind the Banner*, *supra* note 1.

184. Cassidy, *supra* note 52.

185. *Behind the Banner*, *supra* note 1.

186. *Id.*

187. Cassidy, *supra* note 52.

188. *See id.* (explaining how element hiding removes ad requests that cannot be blocked).

189. *Id.*

190. *See Sotelo v. DirectRevenue, LLC*, 384 F. Supp. 2d 1219, 1228 (N.D. Ill. 2005) (stating that spyware downloaded without permission was sufficient to support a claim of trespass to chattels); *see Sagebrush Res., LLC v. Peterson*, 841 N.W.2d 705, 711 (N.D. 2014) (stating that an activist entering a plaintiff's property without permission was enough to support a claim of trespass to chattels); *see Jamgotchian v. Slender*, 89 Cal. Rptr. 3d 122, 133 (Ct. App. 2009) (stating that retrieving a race horse without permission, exceeded permission granted).

191. Davies, *supra* note 90.

192. *eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058, 1070 (N.D. Cal. 2000).

requirement can be met even if the chattel is not damaged, but merely diminished.¹⁹³ Additionally, personal property can be diminished by simply allocating a portion of resources in a manner that inhibits the owner from using those resources.¹⁹⁴

When ad blocking software is solely using content denial as a means of blocking advertisements, any showing of damages will have to stem from the financial damages caused.¹⁹⁵ This will make it significantly harder to demonstrate that the chattel is diminished as courts have traditionally been reluctant to rely solely on financial damages.¹⁹⁶ This is because when using the content denial method, no impression is ever sent to the ad networks server.¹⁹⁷ Because of this, the ad networks servers have not been diminished in any way, and in reality have done less work than if the user had not been using an ad blocking software.¹⁹⁸ However, that does not automatically mean that any claim based only on financial damages is invalid. Although the damage caused by a single person's use of ad blockers may seem *de minimis*, with over six hundred and fifteen million devices using ad blocking software worldwide,¹⁹⁹ the financial losses as a result of ad blocking add up quickly. Despite the scale of the potential financial damages, the decisive factor will be whether ad blockers cause any physical damages to the chattels of advertisers when hiding elements.

The sequences of events that occur after an ad impression is sent to a publisher's ad network are amongst the most complicated on the Internet.²⁰⁰ In less than a quarter of second, a profile is created for the user, the ad network evaluates whether any of its inventory fits the profile, dozens of servers across the world analyze and bid on an impression, a winning bid is selected, and the advertising materials are sent to the user's web browser.²⁰¹ This process involves some of the most complex systems that have cost countless hours and resources to develop and maintain.²⁰² The problem is, if a user's ad blocker uses element-hiding technology, then this entire process serves no purpose. Instead, every single time a user, or hundreds of thousands of users, visit a website, this entire process is carried out for the sole purpose of showing a blank space on the user's screen.

In *eBay*, the court determined that Bidder Edge's crawling of eBay's servers was sufficient to be considered damages.²⁰³ This was based on the

193. *Id.*

194. *Id.*

195. See Cassidy, *supra* note 52 (explaining how there is no physical damage).

196. See Louisiana, *ex rel. Guste v. M/V Testbank*, 564 F. Supp. 729 (E.D. La. 1983) (holding that there is no recovery for economic loss unless there is physical damage).

197. Cassidy, *supra* note 52.

198. *Id.*

199. PAGEFAIR, *supra* note 3, at 5.

200. See *Behind the Banner*, *supra* note 1 (explaining the sequence of events).

201. *Id.*

202. See *Ad Exchange*, RYTE, https://en.ryte.com/wiki/Ad_Exchange (last visited Oct. 21, 2017) (explaining the history of Ad Exchange development).

203. *eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058, 1070 (N.D. Cal. 2000).

reasoning that Bidder Edge's use of eBay's servers limited the amount of bandwidth available to eBay and therefore prevented eBay from using this bandwidth.²⁰⁴ The same can be said in the case of servers used by advertisers, ad networks, and ad exchanges (collectively "advertisers"). When advertisers are forced to use their servers to conduct auctions that can never result in a successful placement of advertisements, it constitutes a waste of the advertiser's property. Doing so consumes the server's bandwidth and limits the advertiser's ability to allocate those resources to other tasks.²⁰⁵ Additionally, the amount of daily uses potentially stemming from element-hiding methods greatly dwarfs the amount of uses in *eBay*.²⁰⁶ With over six hundred million devices running ad blockers and users accessing websites multiple times a day,²⁰⁷ the number of daily auctions being run for elements that will be hidden will significantly higher than the one hundred thousand daily interactions with eBay's server.²⁰⁸

The amount of damage to advertisers' chattels will be further exacerbated by the fact that an auction is run not only every time any user visits any web site that contains advertisements, but because an auction is also conducted for every advertising placement on every page visited.²⁰⁹ For instance, imagine a user using an ad blocker that operates by hiding elements visits a website with three advertising locations on each page of their website. If the user visits five different pages on the website and were shown zero advertisements, up to fifteen auctions were conducted by dozens of advertiser's servers resulting in no benefit for the advertiser.

This situation is substantially similar to that presented in *Register.com*. There the court found that Register.com had a valid claim of trespass to chattels because the crawling of their servers by a competitor presented a potential risk to their servers.²¹⁰ The court determined that to allow the crawling to continue could result in an increase of crawling of Register.com servers, and that this increase could reach a level that would prevent Register.com from operating their servers.²¹¹ The court in *Register.com* sought to avoid a snowball effect that would allow the unlimited crawling of Register.com's servers. Likewise, with the use of ad blocking growing at a year over year growth of thirty percent,²¹² the unnecessary use of ad blockers could result in serious damage to advertisers' personal property. Therefore, the use of element hiding by ad blockers can cause a diminishing of advertisers' physical property that exceeds the scope of permission granted to the ad blocker user.

204. *Id.*

205. Rob Fernandez, *Will Blocking Ad Categories Effect AdSense Revenue?*, EZOIC BLOG (Feb. 25, 2016), <https://blog.ezoic.com/blocking-ad-categories/>.

206. *Behind the Banner*, *supra* note 1.

207. PAGEFAIR, *supra* note 3, at 4.

208. *eBay Inc.*, 100 F. Supp. 2d at 1070.

209. *Behind the Banner*, *supra* note 1.

210. *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393, 404 (2d Cir. 2004).

211. *Id.*

212. PAGEFAIR, *supra* note 3, at 15.

IV. RECOMMENDATION

If advertisers were to bring a claim of trespass to chattels against ad blocking software producers, they would likely prevail in situations where the company utilizes element-hiding technology. The success of such an action would likely have a very large impact on the ad blocking community. Because so many ad blockers rely on element hiding it would likely severely limit the effectiveness of many ad blockers.²¹³ This is because many publishers integrate their advertising code into the content, and thus make element hiding the only way to block the advertisement.²¹⁴ This is great news for advertisers, as it would give them the ability to widely circumvent the remaining ad blockers on the market. However, this could create a problem for the average Internet user. Despite their flaws, ad blockers have worked as a check on the advertising industry, and their whitelists have improved the quality of advertisements across the Internet.²¹⁵ Additionally, though less prevalent than it once was, there are still malicious advertisements out there that deliver malware on to users' computers to steal information or damage property.²¹⁶ Therefore, it is time for policy makers to begin to more actively regulate online advertising.

The Federal Trade Commission (FTC) is the best equipped to do so, as they already regulate some aspects of online advertising.²¹⁷ The FTC already requires that all digital advertising contain a disclosure identifying the ad as such.²¹⁸ In most cases, it will be obvious that a user is viewing an ad, but there may be some confusion when a user is viewing an ad that is being presented as related content.²¹⁹ The FTC should develop a universal definition of what constitutes an "acceptable ad" and should use its powers to regulate both publishers and advertisers to limit the invasiveness and disruptiveness of online advertising.

The FTC would need to craft a definition that allows advertisers to continue practices that have been effective, but limit activities that are overtly disruptive to a user's online experience.

Inevitably, there will always be disagreement as to what represents an invasive, annoying, and disruptive ad, but a well-defined definition is needed. Adblock Plus's acceptable ad criteria provides a good starting point for determining what a universal definition of an acceptable ad would entail.²²⁰ The criteria revolves around three basic components: placement, distinction, and size.²²¹ It is these three criteria that will be the basis of any new definition.

213. Cassidy, *supra* note 52.

214. *Id.*

215. *Id.*

216. Blue, *supra* note 93.

217. FTC, .COM DISCLOSURES: HOW TO MAKE EFFECTIVE DISCLOSURES IN DIGITAL ADVERTISING (Mar. 2013), <https://www.ftc.gov/system/files/documents/plain-language/bus41-dot-com-disclosures-information-about-online-advertising.pdf>.

218. *Id.* at 12.

219. *Id.*

220. ADBLOCK PLUS, *supra* note 63.

221. *Id.*

A good ad blends into the content, is not overly obvious, and does not disrupt the user's experience.²²² Regarding acceptable ad placement, Adblock Plus states that "ads must not disrupt the user's natural reading flow."²²³ In order to achieve this result, Adblock Plus limits ad placement to the top and side of the website and below the website's primary content.²²⁴ It is likely that the prohibition on ad placement in the content of the website would be objected to by advertisers, as this is a common placement of many ads.²²⁵ However, the FTC should allow ad placement in the primary content, as even Adblock Plus's own research has shown that ads placed in the primary content are not significantly more disruptive than ads placed below the content.²²⁶

The largest contention regarding placement would almost assuredly revolve around the use of pop-up ads. Adblock Plus's study shows that pop-up ads are amongst the most disruptive,²²⁷ while many advertisers claim that pop-up ads are amongst the most effective.²²⁸ Though there may be some common ground as the Interactive Advertising Bureau, an organization whose members represent more than 86% of all advertising in the United States,²²⁹ is now advising that advertisers should refrain from the use of pop-up ads on mobile device.²³⁰ However, with many advertisers claiming that pop-up ads are favorites of companies who purchase ad space,²³¹ and that pop-up ads can have up to 49% higher visibility than banner ads.²³² It is likely that pop-up ads will be one of the most contentious issues when determining a universal definition. However, the FTC can seek to provide a definition that does not out-right ban the use of pop-up advertisement, but rather limits when they may be used. For instance, the FTC could allow pop-up advertisements on desktop computers, but forbid them from being used on mobile devices.

Additionally, the size of an ad can have a large impact on how disruptive it can be, and both Adblock Plus and the Interactive Advertising Bureau²³³ have very specific guidelines for the size of ads.²³⁴ Although they do differ, they share many similarities. For example, both organizations require that certain aspect ratios be observed regarding the size of ads, and that ads should not

222. Daniel B. Kline, *Best Practices for Banner AdDesign and Placement*, REASON & WATSON, <https://reasonandwatson.com/best-practices-banner-ad-design-and-placement> (last visited Oct. 21, 2017).

223. ADBLOCK PLUS, *supra* note 63.

224. *Id.*

225. EYEO, *STUDY: PERCEPTION OF ONLINE ADVERTISING—USA: COMPARISON OF 13 DIFFERENT FORMS OF ONLINE ADVERTISING*, 13–29, <https://adblockplus.org/textpattern/files/US%20ad%20study%20-%20FINAL.pdf> (last visited Oct. 21, 2017).

226. *Id.*

227. *Id.*

228. See Jay Baer, *Pop Up Ads: Necessary Evil, or Just Evil?*, CONVINC & CONVERT (June 1, 2004), <http://www.convinceandconvert.com/digital-marketing/pop-up-ads-necessary-evil-or-just-evil/> (stating that advertisers love pop up ads and that many companies can attribute their success directly to pop up ads).

229. *About IAB*, INTERACTIVE ADVERT. BUREAU, <https://www.iab.com/our-story/> (last visited Oct. 21, 2017).

230. *IAB New Ad Portfolio*, INTERACTIVE ADVERT. BUREAU, <https://www.iab.com/newadportfolio/#new-ad-portfolio-content> (last visited Oct. 21, 2017) [hereinafter *IAB Portfolio*].

231. See Baer, *supra* note 228 (describing advertisers and pop up ads).

232. *Id.*

233. ADBLOCK PLUS, *supra* note 63; *IAB Portfolio*, *supra* note 230.

234. ADBLOCK PLUS, *supra* note 63; *IAB Portfolio*, *supra* note 230.

occupy more than 25% of the viewable space.²³⁵ These similarities in no way imply that there will be no disagreements regarding the size or distinction of acceptable ads, but rather illustrate that there are sufficient guideposts to assist the FTC in crafting a universal definition.

V. CONCLUSION

Ad blocking software that utilizes the ad blocking method of element hiding both exceeds the scope of permission granted to the user of the ad blocker and causes real damages to advertisers in the form of physical and monetary damages.

Element hiding results in dozens of servers owned by various advertisers, ad networks, and ad exchanges to conduct complex real-time auctions to fulfil an ad impression with no possibility of ever benefiting from the effort.²³⁶ The use of ad blockers can result in millions, if not tens of millions, of unnecessary complex real times auctions every day utilizing advertiser's servers' bandwidth. The unnecessary use and scale of the use of advertiser servers caused by ad blockers diminishes advertisers' personal property by preventing them from allocating their resources as they see fit.

However, it is also clear that the vast majority of users are unhappy with the ads that are being presented to them, and that until a change is made to the type of ads displayed and the data collected from them, there will continue to be a rapid increase to the amount of people utilizing ad blocking software or other alternative methods of disabling ads.

Therefore, the FTC should seek to introduce a universal definition of an acceptable ad. This definition should seek to limit the intrusiveness and disruptiveness of online advertising. The FTC should draw from the guidelines provided by both Adblock Plus' Acceptable Ads initiative²³⁷ and the recommendations of the Interactive Advertising Bureau²³⁸ to construct a definition that allows advertisers to continue to utilize methods of advertising that are effective without unduly burdening users.

With the rapid growth of ad blocker usage and growing monetary damages suffered by advertisers, it is time for the FTC to begin more actively regulating online advertising.

235. ADBLOCK PLUS, *supra* note 63; IAB Portfolio, *supra* note 230.

236. *Behind the Banner*, *supra* note 1.

237. ADBLOCK PLUS, *supra* note 63.

238. IAB Portfolio, *supra* note 230.