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Combatting Online Privacy: A Case Study on Popcorn Time and Revising Available Remedies to Copyright Holders

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COMBATTING ONLINE PIRACY: A CASE STUDY ON POPCORN TIME AND REVISING AVAILABLE REMEDIES TO COPYRIGHT HOLDERS

*Zachary Charles Fritts Landy**

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I. INTRODUCTION

“Netflix for pirates” is the moniker that has been given to Popcorn Time, an open-source, peer-to-peer file sharing application released in 2014.¹ With reportedly millions of users and an estimated 100,000 downloads per day, the service poses a significant threat to Tinseltown’s continued success.² According to the Motion Picture Association of America (MPAA), domestic box office sales decreased by 5% from 2013 to 2014.³ There are likely a variety of factors for this decline, like people choosing to rent from RedBox or watch Netflix and it may not be a big concern because these box office figures increased from 2011 to 2012 and from 2012 to 2013.⁴ An increase in piracy is always a concern, however.

In 2013, a study from Columbia University estimated that 45% of American citizens actively pirate movies.⁵ That number seems alarmingly high, and that was well before the release of Popcorn Time, which undoubtedly makes piracy easier and available to a wider audience than ever before. In 2005, the MPAA estimated that piracy cost the United States film industry approximately \$6.1 billion annually.⁶ Another study from 2005 estimated that a 10% decrease in piracy worldwide would add over 1 million jobs, \$64 billion in taxes, and \$400 billion in economic growth over a four-year period.⁷

¹ Ernesto Van der Sar, *Popcorn Time: Open Source Torrent Streaming Netflix for Pirates*, TORRENT FREAK (Mar. 8, 2014), <https://torrentfreak.com/open-source-torrent-streaming-a-netflix-for-pirates-140308/>.

² Justin Kahn, *Pirated Movie Service Popcorn Time Goes P2P to Side-Step Legal Action*, TECHSPOT (Mar. 20, 2015), <http://www.techspot.com/news/60117-pirated-movie-service-popcorn-time-goes-p2p-side.html>.

³ *Theatrical Market Statistics 2014*, MOTION PICTURE ASSOCIATION OF AMERICA 4 (JAN. 8, 2015), <http://www.mpa.org/wp-content/uploads/2015/03/MPAA-Theatrical-Market-Statistics-2014.pdf> [hereinafter *Statistics*].

⁴ *Id.*

⁵ Trevor Norkey, *Film Piracy: A Threat to the Entire Movie Industry (with sources)*, MOVIEPILOT (Apr. 27, 2015, 3:13 AM), http://moviepilot.com/posts/2015/04/27/film-piracy-a-threat-to-the-entire-movie-industry-with-sources-2889420?lt_source=externa.manual (citing Jason Mick, *Nearly Half of Americans Pirate Casually, But Pirates Purchase More Legal Content*, DAILYTECH (Jan. 21, 2013), <http://www.dailytech.com/Nearly+Half+of+Americans+Pirate+Casually+But+Pirates+Purchase+More+Legal+Content/article29702.htm> (citing Joe Karaganis & Lennart Renkema, *Copy Culture in the US & Germany*, THE AMERICAN ASSEMBLY 5 (2013), http://americanassembly.org/sites/default/files/download/publication/copy_culture.pdf)).

⁶ U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-10-423, INTELLECTUAL PROPERTY: OBSERVATIONS ON EFFORTS TO QUANTIFY THE ECONOMIC EFFECTS OF COUNTERFEIT AND PIRATED GOODS 21 (Apr. 2010), <http://www.gao.gov/new.items/d10423.pdf>.

⁷ Norkey, *supra* note 5 (citing WIPO/OECD EXPERT MEETING ON MEASUREMENT AND STATISTICAL ISSUES, PART II: ECONOMIC MODELING, SIMULATIONS, AND OTHER APPROACHES: ANALYSIS CONDUCTED BY THE ACADEMIC COMMUNITY 2 (2005), http://www.wipo.int/mdocsarquivos/WIPO-OECD_STAT_05/WIPO-OECD_STAT_05_5%20i_E.pdf).

Recently, copyright holders for several movies decided they had enough of the piracy, at least from Popcorn Time users. Rather than standing by and allowing these “pirates” to watch their movies free of charge, copyright holders are taking a stand in courts. The copyright holder of Adam Sandler’s comedy, *The Cobbler*, filed suit against eleven Popcorn Time users in Oregon, in August of 2015.⁸ This has not turned out to be an isolated incident as other copyright holders have followed the same course of action, choosing to file lawsuits against users, en masse.⁹

There is a reason that the law makes it a crime to supply and consume illegal drugs. This same theory can be applied to copyright infringement. If an action is to be quelled, then it must be attacked from the head and the tail. In this instance, the developers, or suppliers, are the head, while the end-users are the tail. Courts have previously recognized the need to hold the head accountable under copyright law, but the head is not always identifiable.¹⁰ At least, the Popcorn Time head is not.

The unique technological properties of Popcorn Time leave copyright holders with relatively few options for remedies, which explains why they have undertaken the inefficient approach of suing individual users. One of Popcorn Time’s unique features is that it is open-source software.¹¹ This affords many people the opportunity to contribute to the software from anywhere around the world. Effectively, the open-source feature means a developer can remain anonymous for as long as he chooses.

Battling piracy is critical to maintain the value of copyrights. Without legitimately protected copyrights, creators have less incentives to create. If creators perceive that they stand to make less money from a certain venture, then they will undoubtedly look for more lucrative alternatives. In another sector of the entertainment industry, a similar battle can be seen with musical artists taking on streaming services. Taylor Swift has completely withdrawn her music from the streaming service Spotify because she “doesn’t think music streaming services appropriately value her art.”¹² Similarly, movies and

⁸ Jared Newman, *Popcorn Time Users Are Now Getting Sued by the Movie Industry*, PCWORLD (Aug. 20, 2015), <http://www.pcworld.com/article/2973556/streaming-media/popcorn-time-users-are-now-getting-sued-by-the-movie-industry.html>.

⁹ See, e.g., Ernesto, *Dallas Buyers Club Jumps on the Popcorn Time Lawsuit Bandwagon*, TORRENT FREAK (Sept. 22, 2015), <https://torrentfreak.com/dallas-buyers-club-jumps-on-the-popcorn-time-lawsuit-bandwagon-150922/>; Joe Mullin, *Popcorn Time Lawsuits Continue as 16 Are Sued for Watching Survivor*, ARS TECHNICA (Sept. 1, 2015), <http://arstechnica.com/tech-policy/2015/09/popcorn-time-lawsuits-continue-as-16-are-sued-for-watching-survivor/>.

¹⁰ See *MGM Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005).

¹¹ Van der Sar, *supra* note 1.

¹² Pamela Engel, *Taylor Swift Explains Why She Left Spotify*, BUS. INSIDER (Nov. 13, 2014), <http://www.businessinsider.com/taylor-swift-explains-why-she-left-spotify-2014-11>.

television shows that are streamed on the Popcorn Time application are significantly devalued by users. However, copyright holders do not have the ability to remove their copyrighted work from the service.

In addition to the importance of protecting copyrights to maintain entertainment as a viable and worthwhile career path, it is morally repugnant to pirate copyrighted works. Piracy is no different than stealing. It is analogous to walking into a brick and mortar store, taking the movie or television series off the shelf, and walking out the door. Popcorn Time facilitates this activity in a way that looks innocent. The user interface is easy to use and reminiscent of Netflix, which is why it earned its nickname. Regardless of appearance, the acts that the software and its developers encourage should have serious legal consequences if copyrights are to be appropriately protected.

This Note concentrates on the inefficiency inherent in the current approach forced on the copyright holders of these movies and television shows, and possible solutions to combat this unique, ever-changing software.

II. BACKGROUND

In order to fully understand the legal issues involved with Popcorn Time, it is necessary to have a general understanding of the software's unique technological facets.

A. UNIQUE TECHNOLOGICAL ISSUES PRESENTED

There are three technological issues that make Popcorn Time unique from other streaming services: it is open source, it uses torrent streaming to download content, and it advises its users to obtain a private virtual network.

By September of 2015, the most popular version of Popcorn Time had an estimated 283 different developers work on it.¹³ And yes, there are multiple versions. The choice to design Popcorn Time as open-source software was a strategic one by the project's lead designers, who hail from Argentina.¹⁴ This choice has allowed a plethora of designers from around the world to get involved and spawn multiple versions of the software.¹⁵ It has also enabled these developers to largely remain anonymous.¹⁶

¹³ Ernesto Van der Sar, *283 Developers Have Contributed to Popcorn Time, So Far*, TORRENT FREAK (Sept. 13, 2015), <https://torrentfreak.com/283-developers-have-contributed-to-popcorn-time-so-far-150913/>.

¹⁴ Van der Sar, *supra* note 1.

¹⁵ Van der Sar, *supra* note 13.

¹⁶ Buster Hein, *Popcorn Time: Everything You Need to Know about the Netflix of Torrents*, CULT OF MAC (Oct. 8, 2014, 1:13 PM), <http://www.cultofmac.com/298976/q-fuck-popcorn-time/>.

Open source software is loosely defined as “software with source code that anyone can inspect, modify, and enhance.”¹⁷ “Source code” is what makes the program run, in essence its operating protocol.¹⁸ The Open Source Initiative offers a more detailed list of criteria.¹⁹ Those important to the legal analysis of Popcorn time are free redistribution, derived works, and other license requirements.²⁰ Free redistribution means that “[t]he license shall not require a royalty or other fee for such sale.”²¹ The license must also “allow modifications and derived works . . . to be distributed under the same terms as the license of the original software.”²² The Open Source Initiative also requires that the license not be specific to a product and it must not restrict other software.²³

While Popcorn Time is generally referred to as open source software, at least one of its offspring was licensed under the GNU general public license from the Free Software Foundation.²⁴ Open source and free software are very similar. Free software users have “the freedom to run, copy, distribute, study, change and improve the software.”²⁵

If software is only modifiable by one person, team, or organization it is referred to as “closed source,” or “proprietary software.”²⁶ The original authors of the source code are the only individuals authorized to alter it, which can restrict collaboration and innovation in designing the software. This is one reason, of many, that developers and contributors sometimes prefer to use open source software.²⁷

Once the original developers of open source, or free, software have released the source code, future programmers do not need their permission to modify the code.²⁸ On one hand, this is beneficial because any problems with the code can be fixed quickly.²⁹ On the other hand, it creates an issue when these programmers are engaged in illegal activity, such as promoting or contributing to copyright infringement. There is no easy way to track who has altered the

¹⁷ *What is Open Source?*, OPENSOURCE.COM, <http://opensource.com/resources/what-open-source> (last visited Aug. 24, 2016) [hereinafter *Open*].

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *The Open Source Definition*, OPEN SOURCE INITIATIVE, <http://opensource.org/docs/osd> (last visited Aug. 24, 2016) [hereinafter *Definition*].

²² *Id.*

²³ *Id.*

²⁴ POPCORN TIME, <http://popcorn-time.to/source.html> (last visited Sept. 21, 2016).

²⁵ *What is Free Software*, THE FREE SOFTWARE FOUND., <http://www.gnu.org/philosophy/free-sw.en.html> (last visited Aug. 21, 2016).

²⁶ *Open*, *supra* note 17.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

code, and another requirement of the Open Source Initiative is that the license cannot discriminate against anyone, even those with ill designs.³⁰

To release software as open source, or any other kind, one must obtain a license. As previously mentioned, at least one version of the Popcorn Time software is licensed under a GNU general public license from the Free Software Foundation. Releasing software under such a license requires very little in the way of documentation. The Free Software Foundation recommends only that the licensee provide a copyright notice in the release and a copy of its license.³¹ That is all. This license may be used by anyone.³²

This discussion of open source software was meant to create a basic understanding of the concept, and highlight how easy it is for developers to release, and subsequent programmers to get involved.

The second feature of Popcorn Time that makes it difficult to reign in is its torrent file sharing system. Torrent, or BitTorrent networking is a form of peer-to-peer file sharing.³³ Peer-to-peer file sharing has been popular for years and has been the subject of a considerable amount of litigation involving companies such as Grokster and Napster.

Upon its initial release, Popcorn Time hosted the data directly through centralized servers and domains, but to avoid liability it adapted into a BitTorrent sharing system.³⁴ Technically, torrents “work by downloading small bits of files from many different web sources at the same time.”³⁵ It debuted in 2001 and has since gained in popularity around the world, being used to download movies, television shows, and music over the Internet.³⁶ The main purpose of torrents is to distribute large media files to private users, but it has some special characteristics different from other peer-to-peer processes.³⁷ Two of these characteristics are important to Popcorn Time. First, “torrents actively encourage users to share,” or “seed,” their files.³⁸ Second, “torrent code is open-source, advertising-free, and adware/spyware-free,” so no single person or entity profits from the file sharing.³⁹

³⁰ *Definition*, *supra* note 21, at 11.

³¹ *How to Use GNU Licenses for Your Own Software*, THE FREE SOFTWARE FOUNDATION, <http://www.gnu.org/licenses/gpl-howto.html> (last visited Aug. 21, 2016).

³² *Id.*

³³ Paul Gil, *Torrents 101: How Torrent Downloading Works*, ABOUT.COM, <http://netforbeginners.about.com/od/peersharing/a/torrenthandbook.htm> (last updated June 5, 2016).

³⁴ Kahn, *supra* note 2.

³⁵ Gil, *supra* note 33.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

The users who have been sued have been identified through their IP addresses.⁴⁰ Their general location is also made available once the IP address has been discovered, but to identify the users requires the help of an Internet Service Provider and may raise questions of privacy.⁴¹ This is an intensive process merely to identify users of the software in the current manner, and Popcorn Time encourages its users to further conceal their activity when using the software.

The third feature that aims to make Popcorn Time users' actions undetectable is the use of virtual private networks (VPN) while they are watching movies or television shows through the app. One version of the app advertises, "we provide VPN built in within the app because your anonymity is important!"⁴² VPNs are common in the workplace, and widely used to protect a user's online privacy.⁴³

The reason that Popcorn Time users would be interested in VPNs is because of the potential online privacy they offer. If a user connects to an encrypted VPN the VPN encrypts their Internet traffic.⁴⁴ This helps to prevent others from peering at one's browsing activity, among other possible benefits.⁴⁵ Popcorn Time explicitly encourages its users to employ a VPN through third-party software.⁴⁶ There are different types of VPNs, and different methods of obtaining a VPN, but the main objective for all Popcorn Time users is achieving anonymity with their browsing. Their hope is that this will prevent copyright holders from discovering their activity, and subsequently bringing a suit against them.

All three of these features have legitimate purposes on their own, and some of these points have been touched on throughout the description of each. When they are combined, as has been done with Popcorn Time, the result has the potential to create a veil of anonymity that protects all users and programmers alike.

⁴⁰ Nathanvi, *Popcorn Time Users Being Sued by Hollywood Studio*, INQUISITR (Sept. 2, 2015), <http://www.inquisitr.com/2387774/popcorn-time-users-being-sued-by-hollywood-studio/>.

⁴¹ *Id.*

⁴² POPCORN TIME, <http://popcorn-time.se> (last visited Sept. 21, 2016).

⁴³ Eric Geier, *How (and Why) to Set Up a VPN Today*, PCWORLD (Mar. 19, 2013, 3:01 AM), <http://www.pcmag.com/article/2030763/how-and-why-to-set-up-a-vpn-today.html>.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ Ray Walsh, *Hollywood Studios Begin Suing Popcorn Time Users*, BEST VPN (Sept. 3, 2015), <https://www.bestvpn.com/blog/27344/Hollywood-studios-begin-suing-popcorn-time-users/>.

B. APPLICABLE COPYRIGHT LAW

Courts and legislatures have long recognized the need to protect copyright holders from infringement.⁴⁷ The founding fathers of the United States had the foresight to include a provision in the Constitution, which stated that Congress should have the power “[t]o 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 Discoveries.”⁴⁸ Copyright law has evolved significantly since the first Copyright Act was passed in 1790.⁴⁹ Attempting to keep pace with ever-changing technology, Congress has passed extensive copyright legislation and courts have decided complex copyright cases, including some relating to peer-to-peer file sharing.⁵⁰

1. *Statutes.* The Copyright Act of 1976 was most recently amended in 2002.⁵¹ The section pertaining to copyright infringement works in broad strokes. It states that “[a]nyone who violates any of the exclusive rights of the copyright owner . . . is an infringer of the copyright or right of the author.”⁵²

The statute makes several remedies available to copyright owners. First, they have the option to seek an injunction, which is effective “throughout the United States” and is “enforceable . . . by any United States court having jurisdiction of that person.”⁵³ Copyright holders may alternatively seek to have any copies impounded and disposed of.⁵⁴ As the copyright owners have chosen to do with Popcorn Time users, they have the option to pursue monetary damages from infringers.⁵⁵ These damages can be actual, or as prescribed by the statute.⁵⁶ Statutory damages typically range from \$750 to more than thirty thousand, but the legislature left courts some discretion to increase or decrease damages according to an infringer’s *mens rea*.⁵⁷ Important for these civil suits and the copyright owners, like *The Cobbler*, is that the “court in its discretion may allow the recovery of full costs by or against any party” including a

⁴⁷ U.S. CONST. art. I, § 8, cl. 8; *Barrow–Giles Lithographic Co. v. Sarmony*, 111 U.S. 53, 54–61 (1884) (extending copyright protection to photography).

⁴⁸ U.S. CONST. art. I, § 8, cl. 8.

⁴⁹ Orit Fischman-Afori, *The Evolution of Copyright Law and Inductive Speculations as to Its Future*, 19 J. INTELL. PROP. L. 231 (2012).

⁵⁰ *See, e.g., MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005); *A&M Records v. Napster, Inc.*, 239 F.3d 1004 (9th Cir. 2001).

⁵¹ Copyright Act of 1976, 17 U.S.C. § 501 (2006).

⁵² *Id.* § 501(a).

⁵³ *Id.* § 502(b).

⁵⁴ *Id.* § 503.

⁵⁵ *Id.* § 504(a).

⁵⁶ *Id.*

⁵⁷ *Id.* § 504(c)(1)–(2).

“reasonable attorney’s fee to the prevailing party.”⁵⁸ Finally, “any person who willfully infringes a copyright” for financial gain can be punished under 18 U.S.C. § 2319 and face a prison sentence.⁵⁹

The following case examined some of these provisions in the context of peer-to-peer file sharing.

2. *MGM v. Grokster*. In *MGM Studios Inc. v. Grokster, Ltd.*, the defendants distributed free software, which allowed users to “share electronic files through peer-to-peer networks”⁶⁰ The networks were primarily used “to share copyrighted music and video files. . . .”⁶¹ It was determined by a statistician that over ninety percent of the files available on the software were copyrighted.⁶² Additionally, there had been more than one hundred million downloads of the software with billions of files shared each month.⁶³ These facts were accompanied by evidence that the defendants engaged in express promotion and marketing, that the majority of the users were attempting to download copyrighted works, and that neither defendant made an effort to block access to copyrighted material.⁶⁴

The Supreme Court reversed a summary judgment ruling for the defendants. In spite of the fact that “‘the Copyright Act does not expressly render anyone liable for [another’s] infringement’”⁶⁵ the Court concluded that “one infringes contributorily by intentionally inducing or encouraging direct infringement.”⁶⁶ To survive summary judgment on contributory infringement, “evidence of actual infringement by recipients of the . . . software” is required, in addition to “intent to bring about infringement and distribution of a device suitable for infringing use.”⁶⁷

It has been suggested that the Court left open the possibility that one could produce software that has potentially copyright infringing uses without meeting the criteria for contributory infringement outlined in *Grokster*.⁶⁸ If distributors of peer-to-peer file sharing software declare publicly that it should not be used for infringing purposes, brand their software in a way that does not suggest it

⁵⁸ *Id.* § 505.

⁵⁹ *Id.* § 506(a)(1).

⁶⁰ *MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 913 (2005).

⁶¹ *Id.* at 920.

⁶² *Id.* at 922.

⁶³ *Id.* at 923.

⁶⁴ *Id.* at 926.

⁶⁵ *Id.* at 930 (quoting *Sony Corp. v. Universal City Studios*, 464 U.S. 417, 434 (1984)).

⁶⁶ *Id.*

⁶⁷ *Id.* at 940.

⁶⁸ Darryl Edwards, *How to Run Online File-Sharing Technology Without Really Infringing: Why the Supreme Court’s MGM v. Grokster Decision Does Not Make File-Sharing Illegal Per Se*, 52 WAYNE L. REV. 1461, 1473 (2006).

should be used for infringing purposes, and dissociate themselves from user inquiries, then it is possible that they could avoid liability for contributory infringement under *Grokster*.⁶⁹

For the purposes of this Note, let us assume that copyright owners would be able to produce evidence sufficient to hold the distributors of Popcorn Time liable for contributory infringement. The difficult question before us is what to do when the distributors of peer-to-peer file sharing software cannot be identified. In *Grokster*, MGM was able to point to specific defendants at the root of the problem.⁷⁰ There is not one organization responsible for the distribution of Popcorn Time, and it has multiple iterations. Fortunately, England has already dealt with the problem.

C. ENGLAND'S INJUNCTION DIRECTED AT INTERNET SERVICE PROVIDERS

One possible solution to this dilemma has been presented by the British courts. Members of the MPAA applied to have website-blocking orders established.⁷¹ The defendants were major Internet service providers in England.⁷² Two versions of Popcorn Time were among the websites to be blocked by the order.⁷³

Under British copyright law,

[t]here are four matters which need to be established for the court to have jurisdiction . . . to make the order sought: (1) that the ISPs are service providers, (2) that the users and/or operators of the target websites infringe copyright, (3) that users and/or the operators of the target websites use the services of the ISPs to do that, and (4) that the ISPs have actual knowledge of this.⁷⁴

The U.K.'s High Court of the Chancery found that "[t]he point of Popcorn Time is to infringe copyright," it "has no legitimate purpose," and it was a "proper use of the court's power . . . to seek to prevent its dissemination and to seek to interfere with its operation."⁷⁵

The website-blocking order issued by the court turned out to be the beginning of the end for one version of Popcorn Time. A number of its core

⁶⁹ *Id.* at 1477–78, 1481.

⁷⁰ *MGM Studios Inc.*, 545 U.S. at 913.

⁷¹ *See* Twentieth Century Fox Film Corp. v. Sky UK, Ltd., [2015] EWHC (Ch) 1082, ¶ 1 (Eng.).

⁷² *Id.*

⁷³ *Id.* ¶ 9.

⁷⁴ *Id.* ¶ 25.

⁷⁵ *Id.* ¶ 66.

developers left the project in October 2015, which led to a “fork” of the app being shut down.⁷⁶ That does not mean, however, that the app will not make a comeback. Its open source feature enables any other budding developer to attempt a resurrection.

III. ANALYSIS

The use of open source software in conjunction with peer-to-peer file sharing and virtual private networks has been shown to create unique legal challenges. The original developers of Popcorn Time believed that their creation was legal because it was not used for their financial gain.⁷⁷ Although the Supreme Court, in *Grokster*, proved that there was more to the equation, it did not necessarily make all peer-to-peer file sharing technology illegal. The British courts have provided a possible solution in the form of a website-blocking order, the effectiveness of which will be discussed further.

In United States courts, copyright owners have chosen thus far to attack Popcorn Time by suing the individual users of the software for copyright infringement. These copyright owners likely pursued this method because, with the help of Internet service providers, they could more easily identify the software’s users than the project’s developers.

Here, copyright owners face another obstacle when confronting insolvent infringers. A reasonable person is unlikely to intentionally infringe known copyrighted material given reasonable economic means. Given this assumption, it is probable that the copyright owners have filed or will file suit against some insolvent users because an economic constraint encouraged them to engage in copyright infringing behavior. There is a rather complex test to determine whether debt acquired due to an adverse copyright infringement suit would be dischargeable in a bankruptcy proceeding.⁷⁸

There is cause to question whether this method provides sufficient deterrence incentives to prevent other users from further infringement. If the user is insolvent and the adverse debt can be discharged in bankruptcy, the user has no incentive to stop using the software. In addition to the possible issue of user insolvency, the virtual private networks attempt to create a veil of anonymity for users of the software. As mentioned previously, a user has the

⁷⁶ James Vincent, *The Most Popular Popcorn Time Fork Has Been Shut Down*, THE VERGE (Oct. 26, 2015, 5:44 AM), <http://www.theverge.com/2015/10/26/9614354/popcorn-time-io-fork-down>.

⁷⁷ *Id.*

⁷⁸ See *Barbosa v. New Form, Inc.*, 545 F.3d 702 (9th Cir. 2008); see also Meaghan Olson, *Copyright Infringement Award May Be a Dischargeable Debt When Filing Bankruptcy*, TOTAL BANKR., <http://www.totalbankruptcy.com/news/articles/miscellaneous/chapter-7-dischargeable-debts-copyright-infringement.aspx> (last visited Aug. 22, 2016).

option to pay a minimal monthly fee to have their Internet activity encrypted through a virtual private network, supposedly making their activity anonymous. Undoubtedly, this would make it more difficult for Internet service providers and copyright owners to identify infringers.

Going back to the head and tail analogy discussed earlier, the developers have no incentive to discontinue their actions because the users of the software are being sued. If the developers were deriving some financial benefit from the venture, this might be true as the customer base would be depleted, but that is not this case. It makes it more difficult to attack the head when it is invisible. England has demonstrated one possible solution, but it remains to be seen if this is a feasible alternative in the U.S. Criminalizing the service providers is another alternative that has been explored, however, it has received poor reviews.⁷⁹

A. HISTORY AND EFFECTIVENESS OF WEBSITE-BLOCKING ORDERS

While website-blocking orders have become more common in European countries, no American case law references such a remedy. The first appearance of website-blocking was in 2011, when the U.K. High Court of the Chancery Division ordered ISPs to block the file sharing site Newzbin.⁸⁰

Copyright holders have viewed the recent trend of blocking websites “as a triumph” in Europe.⁸¹ In October 2014, British ISPs obtained a website-blocking order against twenty-one peer-to-peer file sharing websites, not including Popcorn Time.⁸² This blocking order was brought by record labels, which together accounted for nearly ninety-nine percent of the music legally available in the U.K.⁸³

Despite the praise, the effectiveness of this approach is not bulletproof. It is conceivable that the original developers could post similar software with a different name and possibly avoid the website-blocking order. In fact, the Popcorn Time software supposedly blocked by court order in the U.K. is still available with “some U.K. ISPs,” and Virgin Media outwardly criticized the

⁷⁹ Anjanette H. Raymond, *Intermediaries' Precarious Balance Within Europe: Oddly Placed Cooperative Burdens in the Online World*, 11 NW. J. TECH. & INTELL. PROP. 359, 376–80 (2013).

⁸⁰ Brett Schiff, *Copyright Alert System: Six-Strikes and Forced Arbitration Might Not Be the Answer*, 16 CARDOZO J. CONFLICT RESOL. 909, 924 (2015). See also Mark Swency & Josh Halliday, *High Court Forces BT to Block File-Sharing Website*, THE GUARDIAN (July 28, 2011, 5:58 AM), <http://www.theguardian.com/technology/2011/jul/28/high-court-bt-files-sharing-website-newzbin2>.

⁸¹ Schiff, *supra* note 80, at 933.

⁸² *Id.*

⁸³ Andy, *Record Labels Obtain Order to Block 21 Torrent Sites*, TORRENT FREAK (Oct. 23, 2014), <https://torrentfreak.com/record-labels-obtain-orders-to-block-21-torrent-sites-141023/>.

measure as being “ineffective.”⁸⁴ While Popcorn Time has been dealt some setbacks, it is currently unclear whether future developers have been deterred from creating and releasing similar software.

B. ALTERNATIVE SOLUTIONS TO DETER DISSEMINATION OF SOFTWARE

The Copyright Alert System (CAS), is a privatized, contractual response system that is comprised of the MPAA, the Recording Industry Association of America (RIAA), and the United States’ five largest internet service providers.⁸⁵ The CAS’s goal is to alert users when they engage in unlawful sharing of content, inform users about how they can prevent copyright infringement, and present alternative legal methods for users to view the desired content.⁸⁶ ISPs are responsible for punishing consumers who have been alerted about their infringement in various ways, including: (1) “[a] temporary reduction in Internet speed,” (2) “[a] temporary downgrade in Internet service tier,” or (3) “[r]edirection to a landing page for a set period of time until a subscriber contacts the ISP or until the subscriber completes an online copyright education program.”⁸⁷ To discover when their copyrighted material is being shared illegally, copyright holders join public peer-to-peer networks and, with the assistance of the ISPs, locate computers illegally disseminating their material.⁸⁸ However, none of the user’s personal information is revealed.⁸⁹

The CAS employs a graduated response system where the punishments become more severe with each alert a consumer receives.⁹⁰ On the positive side, this helps unknowing consumers avoid large copyright infringement fines.⁹¹ A graduated response system also helps copyright holders by avoiding

⁸⁴ Anthony Cuthbertson, *Proxy Websites for Pirate Bay, Kickass Torrents and more disappear in ProxyHouse Blitz*, INT’L BUS. TIMES (Oct. 13, 2015, 12:08 BST), <http://www.ibtimes.co.uk/proxy-websites-pirate-bay-kickass-torrents-more-disappear-proxyhouse-blitz-1523794>.

⁸⁵ Schiff, *supra* note 80, at 909.

⁸⁶ *What is a Copyright Alert?*, CENTER FOR COPYRIGHT INFORMATION, <http://www.copyrightinformation.org/the-copyright-alert-system/what-is-a-copyright-alert/> (last visited Sept. 5, 2016).

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Schiff, *supra* note 80, at 921–22 (citing *Role of Voluntary Agreements in the U.S. Intellectual Property System: Hearing Before the Subcomm. on Courts, Intellectual Prop., and the Internet of the Comm. on the Judiciary H. Rep.*, 113th Cong. 9–12 (2013) (statement of Jill Lesser, Executive Director, The Center for Copyright Information)).

⁹¹ *Id.* at 922 (citing Rachel Storch, Note, *Copyright Vigilantism*, 16 STAN. TECH. L. REV. 453, 469 (2013)).

the negative goodwill associated with initiating infringement lawsuits against children, single mothers, and the deceased, as has happened in the past.⁹²

The CAS is not without criticism. A major distinguishing feature between similar foreign policies is that ISPs in other countries are required by law to partake in these monitoring systems.⁹³ Conversely, ISPs in the U.S. voluntarily participate in the CAS and dole out punishments, and arguably fail to act as “neutral providers.”⁹⁴ The concern here is that the ISPs could open themselves up to contractual suits.⁹⁵ Compounding the problem is that the ISPs are actively participating in the flow of information, which prevents them from relying on the safe harbors afforded them by law.⁹⁶

Response to online piracy has been impeded in the United States by protests, among other things. Protests in 2012 prevented “both the Stop Online Piracy Act (“SOPA”) and the Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act (“PROTECT IP”)” from passing.⁹⁷ These bills supported privatizing the policing of online piracy to “facilitate a . . . focus on single actors/websites.”⁹⁸ The CAS has attempted to fulfill this goal without the passage of the bills.

Another alternative to prevent future copyright infringement by consumers is through criminalizing the ISP directly.⁹⁹ The idea is that ISPs should be penalized for failing to prevent copyright infringement by its consumers. There are several reasons why this is not the best solution. The most persuasive is that ISPs should not be tasked with, and possibly punished for, determining whether a specific act constitutes copyright infringement when the acts must be evaluated on a case-by-case basis.¹⁰⁰ There are too many variables involved, like creative sampling and fair use, for ISPs to effectively and accurately police the activity of their users.¹⁰¹

Website blocking orders, privatized consumer policing, and criminalizing ISPs are some of the available alternatives to aid in the prevention of copyright

⁹² *Id.* (citing John Borland, *RLAA Settles with 12-year-old Girl*, CNET (Sept. 10, 2003), <https://www.cnet.com/news/riaa-settles-with-12-year-old-girl/>; Eric Bangeman, *I Sue Dead People*, ARS TECHNICA (Feb. 4, 2005), <http://arstechnica.com/uncategorized/2005/02/4587-2/>).

⁹³ *Id.* at 925 (citing Arno A. Lodder & Nicole S. van der Meulen, *Evaluation of the Role of Access Providers Discussion of Dutch Pirate Bay Case Law and Introducing Principles on Directness, Effectiveness, Costs, Relevance, and Time*, 4 J. INTELL. PROP. INFO. TECH. & E-COM. L. 130, 137 (2013)).

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.* at 926 (citing Storch, *supra* note 91, at 462).

⁹⁸ *Id.* (citing Protect IP Act, 5,968, 112th Cong. (2011)).

⁹⁹ Raymond, *supra* note 79, at 376.

¹⁰⁰ *Id.* at 378.

¹⁰¹ *Id.*

infringement on the Internet. Hopefully, the drawbacks of each have been outlined previously, and there is unlikely to be one perfect solution. So, maybe the solution is combining multiple methods.

C. PROPOSED SOLUTION

First, if privatized monitoring of consumers is shown and believed to be effective, then ISPs should be required by law to participate, like they are in other countries. If ISPs are, in fact, open to contractual suit brought by consumers because they are voluntarily participating in the CAS, then this needs to be remedied. Undoubtedly, being open to contractual suit minimizes the effectiveness with which the ISPs can go about their monitoring duties.

Second, website-blocking orders should be an available remedy to copyright holders, in much the same way they are available in Europe. Admittedly, this requires a slight concession to the high value Americans place on free speech. However, so long as these types of injunctions are enacted in only the most egregious of copyright infringement cases, where the website has no other legitimate purpose, it should be an easy concession to make. A website like Popcorn Time, which has been classified as having no legitimate legal use, would be a perfect place to start.

Finally, steps should be taken to ensure software similar to Popcorn Time is made illegal *per se*. Peer-to-peer file sharing software coupled with data encryption technology, like virtual private networks, has very few legitimate legal purposes. Making such software illegal *per se* will certainly require further cooperation from ISPs, possibly infringing on citizens' right to privacy. Again, this is something that must be balanced against the benefits that would be achieved by reducing piracy. Some cooperation was required from ISPs to initiate the suits against Popcorn Time users, which weighs favorably toward the slight increase in cooperation that a designation of illegality *per se* would require.

IV. CONCLUSION

The aim of this paper was to bring to light new and evolving technology that poses a threat to copyright owners and other creators of original content and present a workable and realistic solution to this problem. Popcorn Time will not be the last program designed specifically to infringe copyright. There are steps that need to be taken to make it significantly easier and more efficient to apprehend the distributors of such software in the future and additional measures that could cease or deter its dissemination.

