



MOTION PICTURE ASSOCIATION

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October 6, 2023

Jake Ewerdt
Deputy Assistant for Innovation
and Intellectual Property
Office of the U.S. Trade Representative
600 17th Street, NW
Washington, D.C. 20508

Re: Request for public comment on
the 2023 Special 301 Out-of-
Cycle Review of Notorious
Markets Docket No. USTR-2023-
0009

Dear Mr. Ewerdt:

The Motion Picture Association (MPA) submits the following response to the request issued August 24, 2023, by the Office of the U.S. Trade Representative (USTR), inviting submissions from the public on notorious markets outside of the United States.

MPA serves as the global voice and advocate of the motion picture, television, and streaming industries. It works in every corner of the globe to advance the creative industry, protect its members' content across all screens, defend the creative and artistic freedoms of storytellers, and support innovative distribution models that bring an expansion of viewing choices to audiences around the world.¹ Its member studios are: Walt Disney Studios Motion Pictures; Netflix Studios, Inc.; Paramount Pictures Corporation; Sony Pictures Entertainment Inc.; Universal City Studios LLC; and Warner Bros. Entertainment Inc.

The American motion picture and television industry is a major U.S. employer that supported 2.4 million jobs and \$186 billion in total wages in 2021. This includes 336,000 jobs in the core business of producing, marketing, and manufacturing motion pictures, television shows, and video content, as well as 486,000 jobs in the distribution of motion pictures, television shows, and video content to consumers, including people employed at movie theaters, television broadcasters, cable companies, and online video services. The industry also supports indirect jobs in the thousands of companies that do business with the industry, such as caterers, dry

¹ MPA works in close partnership with the Alliance for Creativity and Entertainment (ACE), the world's leading coalition dedicated to protecting the dynamic legal market and reducing digital piracy. Driven by a comprehensive approach to addressing piracy through criminal referrals, civil litigation, and cease-and-desist operations, ACE has achieved many successful global enforcement actions against illegal streaming services and other sources of unauthorized content and their operators. Drawing upon the collective expertise and resources of more than 50 media and entertainment companies around the world and reinforced by the content protection operations of the MPA, ACE protects the creativity and innovation that drive the global growth of core copyright and entertainment industries. For more information, please visit www.alliance4creativity.com.

cleaners, florists, hardware and lumber suppliers, and retailers. This is a nationwide network of mostly small businesses representing every state in the country, with 92 percent employing fewer than 10 people.

The American motion picture and television production industry remains one of the most highly competitive in the world. In 2022, the enduring value and global appeal of U.S. entertainment earned \$17 billion in audiovisual exports. Today, there are over 871 legitimate streaming services providing audiovisual content to consumers online, accommodating all manner of consumer viewing preference. Moreover, this industry is one of the few that consistently generates a positive balance of trade: in 2022, that services trade surplus was \$10.3 billion, or four percent of the total U.S. private-sector trade surplus in services.

As the industry distributes its films and television shows in over 130 countries and MPA member companies earn well over half of their distribution revenue overseas, MPA has a strong interest in the health and sustainability of these international markets. MPA greatly appreciates USTR's interest in identifying notorious markets that jeopardize the growth of legitimate commerce and that impair U.S. global competitiveness. The economic and cultural vitality of the creative industries is one of our nation's most valuable assets and it is critical that our trading partners protect and enforce copyright.

While in prior years MPA had included physical marketplaces in our notorious markets recommendations to USTR, this year we again focus our recommendations on the online marketplaces in which copyright infringement occurs. To be clear, physical notorious markets—and in some cases content distributors with physical distribution infrastructure—remain a persistent threat in many territories around the world. Online marketplaces that traffic in stolen content, however, are frequently extraterritorial in reach and have the most significant impact on the global legitimate market for U.S. movies and television programming and are a direct threat to our members' online businesses. Moreover, they are the focus of MPA's global content protection efforts.

MPA commends the USTR's focus this year on “the potential health and safety risks posed by counterfeit goods” and agrees with the USTR that counterfeiting and piracy present serious safety risks to American consumers.² Information from Internet safety experts indicates that American consumers who purchase piracy subscriptions services are frequent targets for identity theft. For example, the Digital Citizens Alliance (DCA) states that: “Internet users who signed up for a piracy subscription service using a credit card were 4 times more likely to report unwanted credit card purchases than those who said they do not visit piracy websites and apps,” and “72 percent of those who used a credit card to sign up for a piracy service reported credit card fraud.”³ Moreover, DCA research indicates that “Americans lost \$5.8 billion from such

² See, e.g., Office of the U.S. Trade Representative, *2022 Review of Notorious Markets for Counterfeiting and Piracy* (Jan. 31, 2023), p.1., [https://ustr.gov/sites/default/files/2023-01/2022%20Notorious%20Markets%20List%20\(final\).pdf](https://ustr.gov/sites/default/files/2023-01/2022%20Notorious%20Markets%20List%20(final).pdf) (“Commercial-scale copyright piracy and trademark counterfeiting cause significant financial losses for U.S. right holders and legitimate businesses, undermine critical U.S. comparative advantages in innovation and creativity to the detriment of American workers, and pose significant risks to consumer health and safety.”).

³ Digital Citizens Alliance, *Giving Piracy Operators Credit: How Signing Up for Piracy Subscription Services Ratchets Up the User Risk of Credit Card Theft and Other Harms* (June 2023), p. 1., <https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/Giving-Piracy-Operators-Credit.pdf> (“DCA Piracy Subscriptions Report”).



fraud in 2021, the last year for which there is confirmed data. That fraud was more than double what occurred in 2020.”⁴

Online piracy also increases the spread of malware. A 2018 Carnegie Mellon University study determined that “when users spend more time on infringing sites in a given month, they are also more likely to download malware files on their machines in the same time period.”⁵ This study further estimated that “doubling the amount of time spent on infringing sites causes a 20 percent increase in malware count.”⁶ Such risks jeopardize the safety of the general public, the health of the Internet, and legitimate digital trade. DCA also cautions that:

*The risk of malware is severe on piracy sites, in large part because illicit actors know that they can manipulate users either through fear (false claims about viruses) or enticement (getting something for free) to make a fateful click that compromises their devices. In fact, those who visit piracy websites and apps are five times more likely to report having an issue with malware over the last year.*⁷

The detection, sanctioning, and avoidance of these pernicious activities are crucial to protecting the safety of American consumers online. For example, the Federal Trade Commission (FTC) has urged consumers to report malware,⁸ and has recommended that consumers refrain from downloading pirated content to avoid becoming victims of malware attacks.⁹

Overview

Content thieves provide or administer easy-to-use online piracy websites, apps, and services to distribute infringing content, usually for monetary gain. These sites and services often have the look and feel of legitimate content distributors, luring unsuspecting consumers into piracy. Online enforcement efforts are complicated when intermediaries fail to take adequate steps to ensure their services are not being used to facilitate copyright infringement, a problem compounded by the fact that most website operators operate anonymously and outside the boundaries of the law. All stakeholders in the Internet ecosystem—including hosting providers, DNS providers, content delivery networks, reverse-proxy and other anonymization services, registrars, registries, cloud services, advertising networks, payment processors, social networks, and search engines—should actively seek to reduce support for notoriously infringing sites such as those identified in these comments, including through voluntary initiatives aimed at combating online content theft.

Many copyright infringing sites utilize two types of technology services to mask their Internet protocol (IP) address—i.e., the Internet location of their server—and the hosting provider of their website, so as to thwart enforcement efforts. The first type of service is a reverse proxy: it funnels

⁴ *Id.* at p. 2.

⁵ Rahul Telang, *Does Online Piracy Make Computers Insecure? Evidence from Panel Data*, Carnegie Mellon University (March 12, 2018), p.1., https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3139240.

⁶ *Id.*

⁷ DCA Piracy Subscriptions Report at p. 11.

⁸ Federal Trade Commission, *How to Recognize, Remove, and Avoid Malware* (May 2021), <https://consumer.ftc.gov/articles/how-recognize-remove-avoid-malware>.

⁹ Federal Trade Commission, Consumer Alert, *Malware from illegal video streaming apps: What to know* (May 2019), <https://consumer.ftc.gov/consumer-alerts/2019/05/malware-illegal-video-streaming-apps-what-know>.



connections to many different websites through shared server(s) that then redirects the connection to its correct destination (which remains masked). The second is a content delivery network (CDN): it is typically used to efficiently deliver content to a global userbase by placing servers all around the world that store copies of that content, providing a high-speed infrastructure for some of the most popular web streaming services. One of the consequences of using a CDN is that it masks the IP address and hosting provider of a website.

One example of a CDN and reverse proxy service frequently exploited by notorious markets to avoid detection and enforcement is Cloudflare. Cloudflare's customers include some of the most notorious, longstanding pirate websites in the world, including the massively popular streaming sites vegamovies.im, cuevana3.ch, and The Pirate Bay, whose current domain, thepiratebay.org,¹⁰ has been identified as infringing rights holders' copyrights more than six million separate times. An analysis of 1,386 unique and currently active piracy domains found that 65 percent use Cloudflare's services. Another example of a CDN and reverse proxy service frequently used by notorious markets to avoid detection and enforcement is DDos-Guard. DDos-Guard is based out of Russia and its customers include some of the world's most egregious pirate infrastructure sites, most notably the video hosting service Doodstream, discussed later in this filing. The Pirate Bay, Doodstream and other notorious pirate sites remain customers despite repeated notices of infringement to these services.

A growing global threat is piracy from illegal Internet protocol television (IPTV) services that provide stolen telecommunication signals/channels and often on-demand infringing film and episodic content to a global audience via dedicated web portals, third-party applications, and piracy devices configured to access the service. MPA has identified over 1,000 of these illegal IPTV services operating around the world. In the U.S., these illegal services have been valued at over \$1 billion in piracy subscriptions alone.¹¹

MPA's filing includes "Piracy-as-a-Service" (PaaS) as a category of notorious markets. PaaS is a subset of the larger threat of Cybercrime-as-a-Service, which was identified by Europol as a growing threat enabling a variety of cybercrimes. PaaS encompasses a suite of often off-the-shelf services that make it easy for would-be pirates without any technical knowledge to create, operate, and monetize a fully functioning pirate operation, such as website templates, databases of infringing content, and hosting providers specialized in servicing infringers. These services are evidence of the scale, sophistication, and profitability of modern online commercial copyright infringement. The emergence and development of PaaS providers have become a key concern for MPA and a top priority for its anti-piracy efforts.

The list of online markets below is not intended to be comprehensive but, rather, reflects an attempt to identify sites and services particularly illustrative of the current nature and scope of online content theft. When possible, we have attempted to provide the specific information requested in the Federal Register Notice (FRN), including popularity rankings and site traffic

¹⁰ Enter thepiratebay.org in the search bar of the Google Transparency Report's "Content delistings due to copyright" available at <https://transparencyreport.google.com/copyright/overview?hl=en>.

¹¹ Digital Citizens Alliance and NAGRA, *Money for Nothing: The Billion-Dollar Pirate Subscription IPTV Business* (August 2020), p. 2., <https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/DCA-Money-for-Nothing-Report.pdf> ("Money for Nothing Report").



volume data from SimilarWeb,¹² as well as information on revenues where available, among other details. MPA has also attempted to respond to the FRN’s request for information regarding any known enforcement activity, including by identifying jurisdictions that have issued blocking orders against the named piracy site or service. In all instances, blocking orders affect the availability of the piracy service in the specific territories in which the orders are issued; they do not affect the availability of such services extraterritorially.

In most instances, criminal enterprises and individuals work to obfuscate identifying information, such as hosting location, and they can hide behind anonymizing services with ease, as discussed above. With this in mind, MPA has aimed to identify each site’s predominant location(s) based on several factors—including location of the server(s), web host, or domain registrant. If these factors are unknown, we have referenced the market, the site targets or where the site or service draws a large share of its audience. China, India, Russia, and Vietnam are notable jurisdictions for these piracy services.

Linking and Streaming Websites

Linking sites aggregate, organize, and index links to content stored on other sites, largely deriving revenue from advertising and referrals. Similar to legitimate services, linking sites that offer unauthorized movies and television shows typically organize posts by title, genre, season, and episode and often use the official, copyright-protected cover art to advertise the content. The sites then provide one or more active links so users can access the infringing content. Depending on the website, users are commonly presented with the options of streaming or downloading the content. Many streaming link sites also frame or embed video players from third-party websites, reducing the number of clicks needed to get to content for a more seamless user experience while retaining the user to serve, and monetize from, advertisements or malware. Some of these sites also appear to be hosting the underlying content files on servers they control to maintain continuity of infringing offerings and to avoid takedowns on third-party, file-hosting sites.

There were several positive developments in the infringing linking and streaming ecosystem in 2023, including the voluntary closing of noonoo.tv in April following site blocking by the Korean Communications and Standards Commission and an announcement by the Korean Ministry of Culture Sports and Tourism of the formation of a dedicated investigative team. MPA lauds this development and encourages law enforcement to continue their investigation. Similarly, Soap2Day announced it was permanently shutting down in June 2023 following numerous enforcement and site blocking actions in several marketplaces.

As reflected below, MPA has listed the most significant global notorious linking and streaming sites in order of priority. We next list additional notorious sites of focus in alphabetical order.

Priority Notorious Linking and Streaming Sites

- **Fmovies.to** – Vietnam. Fmovies was launched in 2015 and is currently one of the most visited streaming websites in the world providing unauthorized access to popular movies

¹² A SimilarWeb rank represents the approximate number of web sites in the world whose popularity is higher than that of the given site: the more popular a site, the smaller the number. SimilarWeb also provides site traffic data that represents worldwide unique visitors on desktop and mobile for the last available month. SimilarWeb is a market intelligence company that uses a combination of panel, public data sources, ISP, and other data for its data estimations. See <http://similarweb.com> for more information.



and television series. Fmovies.to has more than 60 associated domains many of which are well-known piracy brands such as Bmovies, 9anime, Putlocker, and Solarmovies. The site's global rank is 429, it is ranked 312 in the U.S., and 13th overall among all sites in the "TV and Movie Streaming" category, according to SimilarWeb. Fmovies averages 98 million users a month—however, this figure spiked in August 2023 to 119.5 million global visits from 9.2 million unique visitors, according to SimilarWeb, with 33 percent of the traffic originating from the U.S. The site is currently masked by Cloudflare's reverse proxy service. The site has been blocked in many countries, including India, Australia, Denmark, Indonesia, Malaysia, and Singapore. With its former primary source for streaming video files 2embed taken down in July 2023, Fmovies.to now uses video streaming API¹³ vidsrc.to. It is likely that Fmovies.to has a close association with vidsrc.to. The combined traffic of all streaming sites using vidsrc.to totalled 446.9 million visits in August 2023.

- **Vegamovies** – India. Vegamovies.im is one of the most accessed streaming piracy sites in India with 184.8 million monthly visits, according to SimilarWeb, with 96 percent of the traffic originating from India. Vegamovies provides unauthorized access to a range of international content including movies and television shows, as well as Indian movies through associated domains available on the site's home page. Vegamovies and its associated domains distribute content through cyberlockers and drive-to-drive source domains¹⁴ and have multiple sources of revenue including advertising for illicit gambling services and crypto trading platforms through ad networks. Vegamovies actively changes domains to circumvent site blocking orders and site tracking efforts. The hosting location of Vegamovies' domains are masked by the use of Cloudflare's reverse proxy service.
- **Cuevana3.ch** – Venezuela. After the takedown of the original Cuevana branded site, Cuevana3.ch is currently the most popular streaming site in the Spanish-speaking part of Latin America and is one of the most popular streaming piracy sites in the world, offering more than 7,000 titles including movies and television series. The website has been active since at least 2020. It received 36.35 million visits in August 2023 from 8.3 million monthly unique visitors, with a global rank of 1,611 and local ranks of 66 in Ecuador, 110 in Bolivia, 128 in Colombia, 1,258 in Mexico, and 165 in Argentina. The websites' administrators monetize their infringing service through advertising served by many national and international ad networks. The hosting location is masked by Cuevana3.ch's use of Cloudflare's reverse proxy service, but it is believed to be currently operated from Venezuela.

Additional Notorious Linking and Streaming Sites

- **Aniwatch.to** – Vietnam. Aniwatch appears to be a rebrand of the previously popular

¹³ An Application Programming Interface (API) enables two different software programs or web services to interoperate, i.e., work together.

¹⁴ Drive-to-drive is a method of copying files directly between a hidden master resource drive and the downloader. A website for a Cloning Tool provides "access" to copyrighted content by way of a binary file. An attempt to "download" results in enabling the Cloning Tool which intends to deliver the file not to the user's desktop but to their drive. The pirate file is physically located on a drive account of the owner of the pirate solution. The precise location of that file on the drive is unknown, and a direct link is never revealed. The way to obtain the file is via the Cloning Tool's domain. After granting the permission, the file is copied directly into the end user's drive account.



anime streaming site zoro.to and has a global ranking of 140, according to SimilarWeb. The site provides access to a range of content including movies and television series, particularly anime. Aniwatch had 277.8 million visits from 23.5 million unique visitors in August 2023, according to SimilarWeb. The hosting location is masked by the use of Cloudflare’s reverse proxy service, but the site is currently believed to be operated from Vietnam.

- **Cda.pl** – Poland. Cda.pl is Poland’s most popular piracy website, eclipsing several legitimate video-on-demand (VOD) services in the country. Cda.pl had 34.1 million worldwide visits from 6.7 million unique visitors in August 2023, according to SimilarWeb. The site currently has a global SimilarWeb rank of 1,765 and a local rank of 32 in Poland. The operator of the website, CDA Spółka Akcyjna, uses Cloudflare’s reverse proxy service to mask the IP location of the main domains and subdomains, but the video hosting subdomains for Cda.pl are hosted by OVH SAS in France.
- **Dizibox.tv** – Turkey. Dizibox is Turkey’s most popular illicit streaming service. Dizibox.tv had 32.63 million worldwide visits from 4.7 million unique visitors in July 2023, according to SimilarWeb. The site currently enjoys a 2,401 global rank, and a local SimilarWeb rank of 61 in Turkey. The hosting location is masked by the use of Cloudflare’s reverse proxy service.
- **Dytt8.net, Dy2018.com, dygod.net, and Ygdy8.com** – China; Taiwan. Dytt8.net, Dy2018.com, dygod.net, and Ygdy8.com collectively have more than 22 million monthly visits in July 2023, according to SimilarWeb. Most of the traffic emanates from mainland China, followed by Taiwan, the United States, and Hong Kong. Dytt8.net has a local China rank of 264 and a global rank for “file sharing and hosting” of 96 globally, according to SimilarWeb. Dy2018.com has a local China rank of 198 and a global “TV Movies and Streaming” rank of 301. These sites were referred to the National Copyright Administration of China (NCAC) in 2022 as part of their annual campaign. The operator reportedly resides in China.
- **Futemax.app (currently, Futemax.to) and Futebolplayhd.com** – Brazil. Futemax.app received 27.79 million visits from 6.98 million unique visitors in August 2023 and Futebolplayhd.com received 5.53 million visits from 1.61 million unique visitors in August 2023, according to SimilarWeb. Futemax.app ranks 2,271 globally and has a local rank of 88 in Brazil, 84 in Mozambique, 132 in Angola, and 1,094 in Portugal. The sites’ operators monetize through advertising served by many national and international ad networks. The hosting location is masked by the use of Cloudflare’s reverse proxy service.
- **Indoxxi Network** – Indonesia. Indoxxi is a popular brand of Indonesian streaming sites that provide unauthorized access to a vast selection of movies and television series. Given that current Indoxxi domains are static IP addresses (nameless domains), the popularity of Indoxxi sites is hard to track. Since 2018, there has been a continuous effort by the Indonesian government to disrupt and block Indoxxi domains. In December 2019, following the blocking of hundreds of Indoxxi domains, the operators publicly announced that they would cease operating as of January 1, 2020. However, Indoxxi continued their operations via nameless domains and fixed IP addresses routed through



reverse proxies to circumvent blocking orders. Indoxxi sites are well-known for gambling advertisements and forensic evidence suggests that a high percentage of the gambling advertisements are placed by the site operators themselves and not via an advertising exchange, suggesting that Indoxxi sites are also being used to attract users to gambling websites that Indoxxi may also control. Indoxxi applications can be found on multiple websites and Android APK platforms. The network also operates Telegram groups that provide links to infringing content and announce changes to a website's fixed IP addresses. The Indoxxi network is operated from within Indonesia and has suspected links to illicit online gambling.

- **KatmovieHD** – India. KatmovieHD is a network of linking websites, providing unauthorized access to popular movies and television series through third-party cyberlockers, and communication platforms Telegram and Disqus. KatmovieHD domains are regularly changed to evade judicial site blocking orders in India and other Asia Pacific jurisdictions. The current flagship domain, katmoviehd.ma, had 32.36 million visits in July 2023 and is ranked 1,733 globally and 144 locally in India according to SimilarWeb. Katmoviehd.mov is a new domain and already has 7.02 million visits in August 2023. All active domains utilize Cloudflare's reverse proxy service to mask their location. The operator is located in India.
- **Librefutboltv.com** – Argentina. Librefutboltv.com attracted 68.96 million visits from 8.96 million monthly unique visitors in August 2023, according to SimilarWeb. It is the largest illegal live sports streaming service in Latin America. Librefutboltv.com ranks globally as 1,123 and has a local rank of 30 in Argentina, 84 in Peru, 128 in Ecuador, 184 in Colombia, and 301 in Mexico, according to SimilarWeb. The site's operators monetize through advertising served by many national and international ad networks. The hosting location is masked by the use of Cloudflare's reverse proxy service.
- **Myflixerz.to** – Vietnam. MyFlixer is currently a network of eight popular streaming sites with a combined 68.9 million visits in August 2023, according to SimilarWeb, that provides streams of film and television content for free with ads. Users can check the status of MyFlixer domains from the site myflixerz.me. Myflixerz.to had 58.5 million visitors with 8.75 million unique visitors in August 2023, according to SimilarWeb. Infringing content previously was provided by the PaaS content management system 2embed and Myflixerz.to was temporarily disrupted when ACE took down 2embed in July 2023. The domain currently uses UpCloud and MegaCloud as its content source. The site is being blocked in numerous countries including France and the United Kingdom. The operator(s) of MyFlixer are located in Vietnam. The hosting location is masked by the use of Cloudflare's reverse proxy service.
- **Rezka.ag** – Russia. Formerly known as hurezka.me, rezka.ag is a popular Russian language streaming website that offers over 22,000 movies and 5,000 television series, including cartoons and anime. Content can be searched and filtered by genre, year, and categories. According to SimilarWeb, Rezka received 93.5 million visits from 11.2 million unique visitors in August 2023 despite site blocking orders in multiple jurisdictions including Russia, Indonesia, Spain, and Brazil. Rezka also provides a CDN service that is utilized by other piracy sites.



- **Tamilblasters/Streamblasters** – India. The Tamilblasters network of sites is a follow-on to what was once known as Tamilrockers and has expanded its original peer-to-peer operation into linking and streaming. Traffic to this network is currently spread across 23 domains totaling 46.2 million visits in August 2023, according to SimilarWeb. The largest site is 1tamilblasters.info at 9.8 million visits in August 2023 followed by 1tamilmv.mov at 9.67 million visits in August 2023. While rights holders are attempting to disable access to the Tamilblasters domains through regular site blocking applications, they remain a major source of piracy in India, actively scraping content from legitimate sites, illegally acquiring releases from screeners, and engaging in illegal camcording. Tamilblasters changes domains frequently to evade the site blocking efforts and tracking. There are currently more than 40 domains associated with this network, with domains often reaching millions of visits globally before being changed. Tamilblasters.plus attracted 31.49 million visitors in March 2023, according to SimilarWeb, before migrating to a new domain (1tamilblasters.sbs). The Tamilblasters domains use Cloudflare’s reverse proxy service obfuscating their hosting location. Some recent domains were hosted by Scaleway, KnownSRV Ltd, and SpectraIP B.V.

Direct Download Cyberlockers and Streaming Video Hosting Services

Direct download cyberlockers and streaming video hosting services are websites that provide centralized hosting for infringing content. These services allow users to upload infringing files, and users can then disseminate the corresponding weblinks—which enable either downloads (from cyberlockers), streams, or both—across the Internet via linking sites, mobile and other web applications, social media platforms, forums, blogs, and/or email. Complicating enforcement, cyberlockers and video hosting services frequently provide several unique links to the same file and use proxy services to mask the locations of where the site and content are hosted. If a content owner sends an infringement notice for one of the links—and that particular link is then removed—but the underlying file is not removed, the other links may remain active, enabling continued infringement. Cyberlockers and video hosting services often do not present any search function, necessitating discovery elsewhere on separate websites. Many cyberlockers and video hosting services do not respond to takedown notices.

The cyberlockers and video hosting services listed below include examples of both direct download and streaming models. By making vast amounts of infringing premium content available to the public, these sites attract vast amounts of traffic. MPA’s highest priority sites are listed immediately below and are ordered by importance. These three priority sites are then followed by additional notorious sites that are listed in alphabetical order.

Priority Notorious Direct Download Cyberlockers and Streaming Video Hosting Services

- **DoodStream.com** – India. DoodStream is a video hosting service offering free storage and premium services for priority encoding, high speed, and no ads. DoodStream operates a partner program that offers financial remuneration, either per download or stream depending on the country of origin. DoodStream has embedded links on many streaming piracy websites, including extramovies.ioan, tamilblasters.cloud, 1tamilmv.cyou, fmovies.win, and attacker.tv. DoodStream and known associate domains had 43.5 million visits in July 2023, according to SimilarWeb and is mainly hosted by OVH SAS in France, but also uses Online S.A.S., Hetzner Online GmbH, Interkvm Host



SRL, among others. DoodStream was subject to site blocking orders in the Delhi High Court in 2023. The service was also subject to a site blocking order by a Parisian court in 2023 that observed that DoodStream and other platforms in the case “should be aware that protected content is being massively and illegally made available to the public through them,” and that the site “encouraged the infringement of copyright and related rights by setting up tools specifically designed for the mass and illicit sharing of protected content.” The operators are located in India. The hosting location is masked by the use of DDoS-Guard’s reverse proxy service.

- **Mixdrop.co** – Netherlands. This video hosting service is hosted in the Netherlands by SOLLUTIUM EU Sp z.o.o. Mixdrop has an affiliate program, MixPartners, and claims that affiliates may earn up to \$1,000 a week depending on the number of views they generate. SimilarWeb indicates that Mixdrop.co attracted 17.9 million visits from 6.5 million unique visitors in August 2023. Mixdrop was subject to a site blocking order in the United Kingdom in 2022 followed by site blocking orders in Courts in both Australia and India holding that the operators of the Mixdrop cyberlocker facilitate massive amounts of copyright infringement and that this illegal cyberlocker is suitable for blocking due to the evidence of piracy on the service.¹⁵ Mixdrop.co is hosted by Amarutu Technology Ltd.
- **Streamtape.com** – France. Streamtape is a video hosting service offering unlimited storage and bandwidth. Streamtape operates a partner program, through which it is possible to earn a fixed amount per 10,000 downloads or streams, depending on the country of origin. As a result, this platform has become a popular place for the unauthorized sharing of media content. Streamtape.com had 27.22 million visits from 9.5 million unique visitors in August 2023, according to SimilarWeb. Streamtape is hosted by OVH SAS in France.

Additional Notorious Direct Download Cyberlockers, Streaming Video Hosting Services, and Related Services

- **Baidu Pan and Baidu Search** – China. Piracy over cloud storage services in China represents an increasing concern for copyright holders, with large quantities of infringing content being stored on Baidu Pan, Baidu’s cloud storage service, and then disseminated through popular Chinese social media platforms and piracy linking sites. Baidu Search holds a more than 80 percent share of China’s search engine market and is the second largest search engine in the world by userbase with roughly five billion monthly visits. It is the most popular domain in China, according to SimilarWeb. Given its market dominance, it is critical to ensure that Baidu has rigorous content protection standards and practices in place, cooperates fairly and transparently with rights holders, and sets the right example for other Internet businesses. Although Baidu provides some tools to take down unauthorized motion picture and television content, and to request demotion of infringing video listings of new release titles on Baidu search results, these tools are applied unevenly and are generally lacking when considering the steps taken by other similarly situated services around the world. The average time it takes Baidu to remove

¹⁵ See *Universal City Studios LLC & Ors. v. Mixdrop.co & Ors.* CS (Comm), No. 663 of 2022 (India); *Roadshow Films Pty Ltd & Ors v Telstra Corp Ltd & Ors*, NSD257/2022 (Australia).



infringing links from Baidu Pan is unreasonably long for rights holders given the resources available to Baidu. Additionally, rights holders are sometimes forced to send Baidu multiple follow-up notices for proliferating copies of a single piece of content. Baidu should apply rigorous filtering technology to identify infringing content and take more effective action to suspend or terminate repeat infringers.

- **HQQ/WaaW/Netu** – Belize. Hqq.tv is a video hosting service that allows users to upload, share, and view videos/listen to audio. Website registration is not required, and users can choose to create an account for free. According to SimilarWeb, the service attracted almost 8 million global visits from 3 million unique visitors in August 2023. The service is hosted by DDoS-Guard in Belize.
- **Telegram** – UAE. Telegram, an instant messaging service based in Dubai and available on Windows, iOS, Android, and Linux, allows users to create channels and groups, upload and share content, and run livestreams. Telegram has an active userbase of around 700 million accounts, with particularly significant reach in Russia, India, and Indonesia. One of its growth drivers is the presence of infringing copyrighted content on the platform, core features that support the sharing and discoverability of unauthorized files, protecting anonymity of uploaders, and making consumption easy and convenient, which supercharges the circulation of infringing content, whether deliberate or accidental. Telegram’s Terms of Service make no mention of copyrighted content.¹⁶ While there has been improvement in compliance rates for the removal of infringing links and channels, Telegram’s response to takedown notices varies greatly from almost immediate to none, despite multiple re-notifications. Furthermore, instances of online piracy accessed through Telegram remain high overall due to the ease with which the same content can be uploaded to channels, discovery of infringing content that is facilitated by piracy bots, and inconsistent enforcement of its repeat infringer policy. In 2020 and continuing into the 2022 report, the European Commission placed Telegram on its Counterfeit and Piracy Watch List.¹⁷ Enforcement actions have been brought successfully in India to require Telegram to disclose information on alleged infringers, and in Israel and Italy requiring Telegram to block access to infringing content. Telegram continues to be a platform of concern.
- **Uloz.to** – Czech Republic. Uloz is a premium/paid video-sharing platform that allows users to upload, view, rate, share, add to playlists, report, download, and comment on videos in exchange for credit. The platform offers a wide variety of infringing movies, television series, along with user-generated videos with a focus on content in Czech and Czech produced content. The company also has its own file hosting service. According to SimilarWeb, Uloz received 10 million visits from 2.6 million unique visitors in August 2023. The hosting location is masked by the use of Cloudflare’s reverse proxy service.

¹⁶ Telegram’s Terms of Service only prohibit three types of behavior—spam, inciting violence, and illegal adult content—and these prohibitions do not apply to private chats and group chats, regardless of size.

<https://telegram.org/tos/terms-of-service-for-telegram>.

¹⁷ European Commission, Commission Staff Working Document, *Counterfeit and Piracy Watch List 2022*, p.12, <https://circabc.europa.eu/ui/group/d0803128-7d62-40ee-8349-c43ee92745aa/library/b36f701d-2850-4768-9b3e-e487140e11e5/details?download=true>.



- **VK.com** – Russia. VKontakte, or VK.com, is the leading social network and the most visited website in Russia. VK.com, available in 86 languages, is a hotbed of illegal distribution of movie and television files. The service provides its users with the tools to upload video files, an internal search engine that makes it relatively easy to find the content, and it allows users to stream that content by embedding a VK video player. Historically, it became popular by making it easy to access infringing music and video files. After the Mail.ru Group acquired VKontakte in 2014, it made moves toward legalization that included entering into license agreements with some music rights holders. In 2016, VK took steps to limit access to third-party applications dedicated to downloading content from the site, which has made it more difficult for users to download content directly. VK blocks infringing sites from accessing videos stored on VK, but third-party pirate sites can still stream illegal content from another service (video.mail.ru) operated by the same parent company. VK continues to be a significant infringement hub. Every month, MPA and its member companies find thousands of infringing files on the site, especially via dedicated groups that are used to share infringing content and often have thousands of users. While VK was generally responsive to takedown notices prior to the Russian invasion of Ukraine, we have since seen a noticeable decline in responsiveness and cooperation. The site operates on servers owned by VK in Russia. The site has been subject to criminal blocking orders in Italy.

Illegal IPTV Services

Illegal IPTV services typically offer hundreds of channels illegally sourced from providers worldwide, alongside VOD content that includes unauthorized copies of movies and television series. Many of these services offer monthly or yearly subscriptions. IPTV services have been a driving force in the emergence of several related illegal businesses including ones engaged in (i) the resale of IPTV services and (ii) the theft, distribution, and sale of channel feeds.

IPTV services must rely on a vast and complex infrastructure and support services—which makes the identification of content sources and service operators extremely challenging—including hosting providers, media servers, and panel hosting.¹⁸ Some of these services are used without the knowledge or approval of the service provider. The marketing and sale of IPTV services is often carried out by a growing network of global IPTV service resellers who purchase subscriptions at wholesale prices and resell them for a profit, further complicating investigations. A 2020 study found that the estimated profit margins range from 56 percent for retailers to 85 percent for wholesalers.¹⁹ The resellers are also often involved in the promotion and support of the service, with many also illegitimately sourcing a limited number of unauthorized channels for a given service.

Illegal IPTV services of focus are listed in alphabetical order.

- **Apollo Group TV** – Netherlands. Apollo Group TV is a piracy group and service that has been active since at least 2016. It began as an add-on app for the Kodi media player, before fully transitioning to a full-service IPTV and VOD provider. The site serves only as a download and subscription point for the IPTV service, rather than being where users access the unauthorized content, and attracted approximately 502,475 visits in

¹⁸ Panel hosting is the ability to buy the backend of the IPTV service and customize the design of the frontend.

¹⁹ Money for Nothing Report at p. 2.



August 2023, according to SimilarWeb. The Apollo Group TV service is hosted by Amarutu Technology Ltd in the Netherlands.

- **Bestbuyiptv.biz** – Vietnam. BestBuyIPTV is extremely popular in the United States & Europe, offering country-specific channel lists, more than 10,000 channels from 38 countries, and 19,000 VOD titles in multiple languages. BestBuyIPTV is available on several platforms and operating systems, including iOS, Kodi, and Roku. The primary source of revenue is through paid subscriptions and reseller accounts. It uses resellers, which leads to pricing variations, but the main site charges \$70 per year for the service. BestBuyIPTV advertises that it provides services to over 900,000 users, 12,000 resellers, and 2,000 re-streamers worldwide. The operators are located in Vietnam.
- **GenIPTV** – United Kingdom; Switzerland. One of the largest IPTV providers in the world, GenIPTV (operating via genip.tv) offers over 10,000 channels and 52,000 VOD titles. Multiple affiliates exist through which additional services are resold, and together they saw 237,473 global visits from 35,789 unique visitors in August 2023, according to SimilarWeb. Hosting of the GenIPTV frontend²⁰ domain is provided by Bandwidth Technologies in the UK, while the service’s backend domain is hosted by Network Dedicated SAS in Switzerland.
- **Iptv.casa** – Netherlands. Iptv.casa is an IPTV service selling multiple IPTV subscriptions. It specifically targets the Belgian audience and offers access to more than 17,000 IPTV channels from 82 countries. Prices range from €15 to €25 per month. In July 2023, the domain—which only serves as a point to subscribe to the service— attracted 107,068 global visits from approximately 35,000 unique visitors. The iptv.casa service is hosted by Amarutu Technology Ltd in the Netherlands.
- **MagisTV** – China. MagisTV has been in operation since approximately 2019, significantly longer than its peers. Generally, IPTV services popular in Latin America repeatedly change domain names and/or brands to avoid detection and enforcement actions. MagisTV has become not just a distributor of infringing content, but also a brand: resellers can purchase credits from magistv.net for MagisTV-branded IPTV services, which they then resell in the form of monthly, quarterly, or yearly subscriptions. Magistv.net received 2.2 million visits from 187,000 unique visitors in August 2023, with a rank of 78 in Venezuela in August 2023, according to SimilarWeb. It is believed to be operated out of China with affiliates operating around the world.
- **Pure IPTV** – France. Pure-iptv.org is a popular IPTV service that offers a library comprising around 199,793 episodes of television shows, 13,361 movies, and 9,781 live television channels. The service offers mobile applications for Android that users can download directly from their website. PureIPTV targets French-speaking audiences and is popular in both France and Belgium.
- **Spider Receiver** – Jordan. Spider Receiver is an IPTV service selling multiple IPTV subscriptions and preloaded devices in the Middle East and North Africa region. It offers

²⁰ The “frontend” of a website is what users will see and interact with, whereas the “backend” is the application and database that functionally underpin the website.



approximately 10,000 channels and 50,000 VOD titles. There are 90,000 to 150,000 confirmed subscribers, and the service has two physical shops in Amman, Jordan. Their prices range between \$10 and \$40 per month.

Piracy Devices and Apps

Piracy devices—also known as illicit streaming devices (ISDs)—and piracy apps provide illegal access to movie and television content through a variety of means, including downloading and streaming content and unauthorized streaming of live television and sporting events on a user's choice of devices, including televisions. ISDs that are preloaded with infringing apps and television/VOD subscription services can be found online and in physical marketplaces, particularly in the Asia-Pacific region. Additionally, illegal apps that can place infringing material on otherwise legitimate streaming devices can be found through a myriad of mainstream and specialty app repositories representing a growing threat.

Piracy devices and apps of focus are listed in alphabetical order.

- **EVPAD** – China. EVPAD (ievpad.com) is an Android-based set-top box that incorporates peer-to-peer technology and EVPAD-branded apps to enable access to more than 2,000 infringing movies and television titles and over 1,000 live international channels. EVPAD has a large pool of resellers worldwide and a global user base. It has recently established a new brand of set-top box, “EVBOX,” targeting Taiwanese & European customers. Current information suggests that the boxes are manufactured in China and that the operator is located in China.
- **LokLok** – China/Indonesia/Singapore. This app/website has grown significantly in popularity in Southeast Asia in recent years, and particularly in the Philippines, Malaysia, and Indonesia. It appears the app/site was developed in China by local operators who evaded local detection and enforcement action by geo-blocking access to China-based IP addresses. According to SimilarWeb, loklok.com and loklok.tv together attracted 2.2 million monthly visits from almost 1 million unique visitors in July 2023. Even though it has been taken down repeatedly in the Google Play Store, new app listings have quickly reappeared. LokLok has been disrupted by site blocking orders in Indonesia and Malaysia.
- **Movie Box** – Iran. MovieBox is a Persian app for Android and Windows distributed via the website webmoviebox.xyz. In July, the website attracted 683,032 visits from 353,686 unique visitors. As the site is only used to download the app, the number of app users is much higher. MovieBox has grown 21.8 percent of its monthly active user base from January to June (822,000 to 1 million) and increased a further 35 percent from June to July (1.355 million), according to SimilarWeb data. It offers television shows and movies with different quality (SD to HD), in their original language, with Persian subtitles.
- **PikaShow** – India. According to an MPA analysis, the PikaShow application has been downloaded over 10 million times across various mobile application stores and Telegram. The application sources most of the content directly from the servers of copyright holders (live television and VOD) by circumventing their technological



protection measures and then reuploads and hosts the stolen content on third-party cyberlockers and user-generated content platforms. In November 2022, the Delhi High Court directed the blocking of URLs offering the Pikashow app for download. In January 2023, the Bengaluru police arrested the suspected operator of Pikashow. However, the application is still available for download on various websites, such as pikashowdownload.in, pikashows.download, pikashowhd.com, pikashowsapk.net, pikashowsapk.me, pickashows.com, and pikashows.pro. Collectively, these sites have had more than 12 million visits from January to August 2023, according to SimilarWeb.

- **Shabakaty** – Iraq. Shabakaty is a suite of apps developed by Iraq’s largest ISP, Earthlink. Marketed via Shabakaty.com, the Shabakaty apps offer unauthorized access to pirated television, film, and music content from a range of copyright holders. Shabakaty.com attracted 3.98 million visits from 194,700 unique visitors in August 2023, according to SimilarWeb.
- **TVMob** – Pakistan. TVTap has rebranded as TVMob, a free Android streaming application that provides unauthorized access to over 500 live television channels. According to SimilarWeb, tvmob.net (its application download page) attracted 55,321 visits from 20,910 unique visitors in August 2023. The app is monetized through advertising placed within its content offerings. The site relies mostly on Amaratu’s hosting servers in the Netherlands. The operators are located in Pakistan.
- **Unblock Tech (unblocktech.com & ub1818.com)** – China. Unblock Tech’s “Ubox” series of ISDs pose enormous piracy and enforcement challenges. The manufacturer of the Unblock Box appears to be Shenzhen Unblock Global Technology Co. Ltd. Operators selling the box and providing after-sales service can be found throughout Asia and worldwide. Ubox runs on Android and incorporates peer-to-peer (P2P) technology and UB-branded apps to enable access to pirated VOD and live television channel content. Unblock Tech appears to have a user base that is global but particularly strong among Chinese speakers in the Asia-Pacific region. The official sites (unblocktech.com & ub1818.com) currently receive around 200,000 visits per month, with Taiwan, Malaysia, the United States/Canada, and China/Hong Kong making up over 80 percent of the traffic. An affiliated streaming website for Ubox, www.ub1818.com, was referred to the NCAC during its 2021 anti-piracy campaign. The NCAC transferred the case to the Shenzhen Market Supervision and Regulation Bureau which undertook a very brief investigation prior to notifying the NCAC that as the site was geo-blocked and not accessible in China, resulting in no enforcement action being taken.

Peer-to-Peer Networks & BitTorrent Portals

Peer-to-peer (P2P) networks use software that allows users to illicitly make their libraries of content available to any other user of the same network. The most popular P2P software is BitTorrent. BitTorrent websites facilitate file sharing by organizing and indexing torrent files, which allows trackers to initiate and manage the download process. BitTorrent remains popular, serving millions of torrents to tens of millions of users at any given time.

Following a series of ACE actions, a spate of U.S. IP workshops with Bulgarian officials, and international law enforcement cooperation, the Bulgarian P2P network, and major content release



hub, RARBG ended its operations at the end of May 2023.²¹ At the time of its closure, RARBG received 35 million visits from 3.4 million unique visitors, according to SimilarWeb.

The notorious torrent sites discussed in this year’s filing below were identified in part because of their high-quality, recently released content and because—in some cases—they coordinate the actual upload and download of that content.

Peer-to-peer networks and BitTorrent portals of focus are listed in alphabetical order.

- **1337x.to** – Bulgaria. 1337x.to is a popular torrent website with a global SimilarWeb rank of 444. The site provides access to a range of infringing content—including movies, television series, music, and software. 1337x.to had 69.9 million visits from 10.32 million unique visitors in August 2023, according to SimilarWeb. The site is hosted by BlueAngelHost in Bulgaria, which promotes itself as a web hosting provider that ignores copyright infringement notices. Variants of the site have been subject to blocking orders in the United Kingdom, Denmark, Portugal, Belgium, Indonesia, Ireland, Malaysia, India, Austria, Australia, and Italy.
- **DonTorrent.com** – Spain. DonTorrent.com is one of the most popular torrent services in Spain and globally. To circumvent site-blocking orders, the service changes its domain on a frequent basis, announcing the new domains on the service’s Telegram channel. The service offers an infringing library comprising nearly 10,000 television shows with full seasons and episodes and over 25,000 movies. During the last two years, the domains of the service—combined—had an average of 7.34 million monthly visits, with 1.17 million unique visitors, and mostly popular in Spain (85.07 percent), Chile (2.72 percent), and Mexico (2.04 percent), according to SimilarWeb data. The hosting location is masked by the use of Cloudflare’s reverse proxy service.
- **Rutracker.org** – Russia. This BitTorrent portal was launched in 2010 in response to the takedown of Torrent.ru by the Russian criminal authorities. Rutracker.org is a BitTorrent indexing website with 12.3 million registered users and 1.9 million active torrents. It is one of the world’s most visited pirate websites, with a global SimilarWeb ranking of 887 and a local rank of 120 in Russia. According to SimilarWeb, Rutracker.org had 44.6 million visits from 7.7 million unique visitors in August 2023. The site is hosted in Russia by Dreamtorrent Corp., a Seychelles company that we believe is also its owner. The site has been subject to blocking orders in Italy, Indonesia, Greece, Australia, India, Malaysia, Denmark, Singapore, Russia, and Portugal.
- **ThePirateBay.org** – Global. Available in 35 languages, ThePirateBay.org (TPB) is one of the largest BitTorrent websites, with a global SimilarWeb rank of 1,838, and a rank of 1,710 in the United States. TPB received 22.52 million visits from 6.2 million unique visitors in August 2023, according to SimilarWeb. In January 2008, Swedish prosecutors filed criminal charges against TPB operators for facilitating breach of copyright law. The

²¹ Torrent Freak, *RARBG Shut Down in the Middle of a Bulgarian Piracy Crackdown* (September 6, 2023), <https://torrentfreak.com/rarbg-shut-down-in-the-middle-of-a-bulgarian-piracy-crackdown-230906/>.



operators were found guilty in March 2009 and sentenced to prison and a multimillion-dollar fine. This judgment was affirmed by the Svea Court of Appeal and the European Court of Human Rights. Site blocking orders have been issued in Argentina, Australia, India, Singapore, Austria, Belgium, Denmark, Finland, France, Iceland, Ireland, Indonesia, Italy, Malaysia, the Netherlands, Norway, Portugal, Spain, and the United Kingdom. Over the years, the site has had multiple alternative domains hosted in various countries around the world. The hosting location of the website is concealed by Cloudflare's reverse proxy service and its hosting provider Shinjiru Technology of Malaysia.

- **Ygg/Yggtorrent.wtf** – Netherlands. Ygg is presented as the most prolific francophone BitTorrent community. Yggtorrent.wtf received 11.85 million visits from 1.1 million unique visitors in August 2023, according to SimilarWeb. The website has many load balancers and different domains pointing to the content, which is another indicator of the high traffic this website generates. Ygg offers access to over 72,000 movies and 48,000 television series, affecting all ACE members. The site relies mostly on Amaratu's hosting servers in the Netherlands.
- **Yts.mx** – Bulgaria; Belize. The world's most popular P2P torrent site dedicated to movies, YTS boasted 75.8 million total monthly visits from 8.1 million unique visitors in August 2023, according to SimilarWeb, which ranks it 436 globally. Over 32,000 movies are available in HD and 4K quality. While the site is accessible from all over the world, it is most popular in the U.S., which originates 11.2 percent of its traffic. The site has worldwide appeal due to its vast library of quality torrents, but also the accompanying subtitle site yifysubtitles.org, which provides subtitles in an array of languages synchronized to each individual torrent. The site has been blocked in France, the United Kingdom, Italy, Ireland, Norway, Australia, Indonesia, Malaysia, Portugal, Denmark, India, and Spain—and frequently changes web domains to evade site blocking. It is currently hosted by Cloud Wall Ltd. and 4 Vendeta EOOD (aka Tamatiya EOOD) in Bulgaria, and Private Internet Hosting in Belize.
- **Zamunda.net** – Bulgaria. Zamunda.net is one of the oldest and most popular pirate services in Bulgaria, and now the top piracy site after the closedown of RARBG. It is ranked as the 16th most visited website in the country. Hosted by Swiss Global, it offers a range of films and television series and is the go-to site for piracy in Bulgaria. According to SimilarWeb, Zamunda.net had 7 million visits from 720,000 unique visitors in August 2023. Zamunda.net was subject to a blocking order on May 31, 2023, by the Sofia City court. However, Zamunda.net and its alternative domain Zamunda.ch are both fully accessible in Bulgaria and Turkey (its secondary target market) at the moment but cannot be accessed from the U.S. or France due to geo-blocking.

Hosting Providers

Hosting providers offer the essential infrastructure to operate a website. In particular, websites engaged in massive copyright infringement require hosting providers that enable high-quality video playback. The hosting provider has the ability to take websites offline engaged in massive copyright infringement. Some hosting providers also provide reverse proxy and CDN functionality to their customers, and thus, allow copyright infringers to thwart enforcement efforts. Given the central role of hosting providers in the online ecosystem, it is disconcerting that



many refuse to take action upon notification that their services are being used to infringe intellectual property in blatant violation of both their own terms of service and the law. Some hosting providers are referred to as “bulletproof” because their terms of service even allow their customers to upload and distribute infringing content without consequence.

Hosting providers of focus are listed in alphabetical order.

- **Amaratu/KoDDos** – Netherlands. This service is considered a bulletproof hosting provider for pirate sites. Some of the biggest piracy sites and services take advantage of Amaratu/KoDDos services, such as cuevana3.nu, TVMob, repelishd.cx, and Ygg. Amaratu/KoDDos does not respond to takedown requests.
- **DDoS-Guard.net** – UK; Russia. This service is also considered a bulletproof hosting provider for pirate sites. Some of the biggest infringing sites are taking advantage of DDoS-Guard’s services, including bs.to and DoodStream.com (see section on direct download cyberlockers and streaming video hosting services above). DDoS-Guard does not respond to takedown requests.
- **Mnogobyte** – Russia. Mnogobyte provides infrastructure to various infringing CDNs and websites. Several pirate sites and services have previously used or currently use Mnogobyte, including VideoCDN, Kodik, and Videoframe.
- **Squitter.eu (ABC Consultancy)** – Netherlands. Squitter.eu is a bulletproof hosting provider for pirate sites. Many piracy sites have used or are still using Squitter to host and serve media content, including 2embed.cc and filman.cc. The service does not respond to takedown requests.
- **Veesp** – Latvia. Veesp is also recognized as a hosting provider that offers strong support to pirate websites. Some of the infringing sites are taking advantage of this service’s lack of compliance, are 123moviesfree.net, membed1.com, and gowatchseries.tv.

Piracy-as-a-Service (PaaS)

PaaS offerings constitute a suite of off-the-shelf services that make it easy for would-be pirates to create, operate, and monetize a fully functioning piracy operation. PaaS providers lower the barriers to entry into commercial piracy. They include in particular: (i) content management systems (CMS), which are databases providing access to tens of thousands of infringing movies and television series, in exchange for the payment of a fee or a cut of the advertising revenue; (ii) dashboards that allow an illegal IPTV operator to oversee the infrastructure and operation of their service (including monetization, content-hosting servers, and user interactions); (iii) hosting providers that provide a safe haven for pirates because they do not respond to DMCA notices of copyright infringement (for examples, see the Hosting Providers section on page 19); (iv) video hosting services that obscure links to infringing content (instead of providing a single weblink for each piece of content, a PaaS video host may break up the content and host it across dozens of random links to inhibit its takedown, without inhibiting its access via a streaming site that pieces the content back together); (v) website templates that facilitate setup of streaming websites; (vi) domain name obfuscation services that anonymize the registration and procurement of domain names in an effort to thwart registries’ terms of service; and (vii) decentralized streaming software



that acts as a third-party tool between a streaming site and a cyberlocker or video host, allowing for quicker upload of content with a large variety of cyberlockers and video hosting services.

PaaS is a subset of the larger threat of Cybercrime-as-a-Service identified by Europol, which has noted that illegal online activities are “increasingly enabled” by third-party tools that make these crimes feasible for even technically inexperienced criminals.²² PaaS is evidence of the scale, sophistication, and profitability of modern online commercial copyright infringement.

An important 2023 development in this space was the takedown of the pirate content management system (CMS) 2embed.to based out of Vietnam. The 2embed service had been used by at least 520 popular streaming sites with the vast majority using 2embed as their exclusive content source. The combined traffic of all streaming sites using 2embed totaled in excess of 1.2 billion visits in Q1 2023 according to SimilarWeb. 2embed and associated sites were successfully taken down by ACE in June 2023.

MPA’s priority PaaS provider is WHMCS Smarters discussed immediately below. MPA then lists additional notorious PaaS providers in alphabetical order.

Priority Notorious PaaS Provider

- **WHMCS Smarters** – India. WHMCS Smarters is an IPTV turnkey solution. Its IPTV software solution offers website design and development, customized apps on several platforms (including iOS, Android, and Windows), and a billing platform. It also offers an IPTV media player through the IPTV Smarters Pro app. The IPTV Smarters Pro app and WHMCS Smarters were developed by New Spark Technology, a company based in Mohali, India.

Additional Notorious PaaS Providers

- **2embed.me** – Vietnam. This is a pirate CMS which offers a large library of movies via streaming, direct link, or embedding. Pirate site operators can either use 2embed’s service for free, in which case 2embed remunerates itself by inserting ads, or use its paid service that allows them to insert their own ads. This PaaS service was launched in September 2023 and is believed to be closely associated with 2embed.to which was successfully taken down by ACE in June 2023 (see above). The operators of 2embed.me are located in Vietnam.
- **Collaps.org** – Russia. This popular pirate CMS has gained prominence since MoonWalk, another prominent CMS, went offline in 2019 following a concerted multinational enforcement action. The popular streaming video hosting service HDGO currently uses collaps.org, timehd.org, and kinogo.bz. This off-the-shelf piracy facilitation service makes it easy for would-be pirates to create and monetize a fully functioning pirate service.
- **GDrivePlayer** – Russia. GDriveplayer.to offers various simple-to-use APIs for

²² Europol, *Internet Organised Crime Threat Assessment 2020*, <https://www.europol.europa.eu/publications-events/main-reports/internet-organised-crime-threat-assessment-iocta-2020>.



operators of pirate streaming services to source lists of links to infringing video content hosted on Google Drive, Google Photo, YouTube, Facebook, and Fembed. The content is played through GDrivePlayer's own media player, which can be embedded in Android apps. GDrivePlayer is compatible with the popular web publishing system WordPress. The service is monetized by displaying one ad before each play. GDrivePlayer has been observed in use in popular websites such as uflix.cc, cinehub.wtf, and filmycesky.cz.

- **HDVB** – Russia. HDVB has been detected on 166 sites providing English- and Russian-language content delivery solutions; it is a video player that can be embedded directly onto piracy websites. HDVB is free to use and monetizes its videos through serving ads to viewers directly in the player, paying its users roughly \$0.40 per 1,000 views. It has no front-facing website and communication with the PaaS can be done through various forum threads, email, or on Telegram.
- **Njalla** – Saint Kitts and Nevis; Cyprus. Njalla (located at njal.la) acts as an intermediary for domain name registration purposes, procuring and owning domain names on behalf of others to provide them with anonymity. Njalla was founded and is owned by Peter Sunde, cofounder of The Pirate Bay. Njalla is prominent among piracy services, with customers such as 123-movies.rs and 1337x.so. Njalla also has another brand, Sarek Oy, with primewire.tf and 123moviesgo.ac using their registration services.
- **Pelisplus.icu** – Mexico. Pelisplus.icu is a popular CMS library service that also streams its own library as a standalone piracy site. Analysis suggests that the operator is based in Mexico and is likely related to other sites such as pelisplus.movie. The site has been active since at least 2019. Pelisplus.icu has a local rank of 605 in Mexico and 1,178 in Colombia and received 5.9 million visits from 2 million unique visitors in August 2023, according to SimilarWeb (note that SimilarWeb numbers only reflect end-user traffic that comes directly to its site and not traffic that comes to it by passing through its CMS customers that operate their own streaming services). The site's administrators monetize their infringing service through advertising served by national and international ad networks and by reselling their library to other site operators focusing on Spanish-language clients. The hosting location of Pelisplus.icu is masked by Cloudflare's reverse proxy service.
- **XFileSharing/XVideoSharing** – Russia. SibSoft.net has developed two software programs that enable the automation of file hosting and sharing: XFileSharing and the cyberlocker XVideoSharing. XVideoSharing is one of the most widely used cyberlocker programs, with the service claiming in its marketing materials to work with over 1,000 customers. Both products include a wide range of modern technical features to facilitate piracy, either out of the box or as premium features. Major services such as Upbam.org, GoUnlimited, Openload, and FruityHost are among the sites that are, or have been, their clients.

Registries

Registries are organizations that oversee the registration and maintain the authoritative database of domain names within a specific top-level domain (TLD). Registries operate either generic TLDs



([gTLDs], such as .com or .org) or country code TLDs (ccTLDs, such as .fr for France or .us for the United States). Registries usually delegate the function of registering domain names to registrars, which operate under their supervision. A registry—directly or via its contractual relationship with its registrars—can withdraw or disable domain names used by websites engaged in massive copyright infringement.

The following registries continue to maintain domain registrations for notorious piracy sites despite notification and outreach. These registries are listed in alphabetical order.

- **.CC Registry** – .CC is the ccTLD for the Cocos (Keeling) Islands, an Australian territory. Examples of infringing website operating with the .CC domain are streamtape.cc, kinokrad.cc, and hurawatch.cc.
- **.IO Registry** – .IO is the ccTLD for the British Indian Ocean Territory. This registry is operated commercially by Afilias, a subsidiary of Ethos Capital. Examples of infringing websites operating with .IO domains include gogoanimehd.io, w1.putlockers.io, rezka.io, and forowarez.io.
- **.ME Registry** – .ME is the ccTLD for Montenegro. The .ME registry is operated by doMEN. Examples of infringing websites operating with .ME domains include animeow.me, tvday.me, methstreams.me, and pelisonline.me.
- **.RU Registry** – .RU is the ccTLD for the Russian Federation, and its registry is the Coordination Center for TLD RU. Examples of infringing websites operating with .RU domains include rlsbb.ru, films-torrent.ru, xcine.ru, and doramalive.ru.
- **.TO Registry** – .TO is the ccTLD of Tonga, and its registry is the Tonga Network Information Center. Examples of infringing websites operating with .TO domains include solarmovie.to, ibit.to, and bs.to.

Payment Processors

Payment processors include credit card companies and networks, acquirer banks within these networks, and other payment processing and money transfer services. Significant online sales of any kind are almost impossible without the transmission of payments through these payment processing services. Many piracy services depend heavily on electronic payment services and evidence of their abuse of payment processors is found in the hundreds of millions of dollars paid for infringing content and counterfeit goods each year. While cooperation from mainstream payment processors is more commonplace, there are other payment services that have been less willing to take steps to prevent abuse of their services in connection with copyright infringement.

- **Wise** – UK. Wise is a popular payment processor with infringing services, including Lookmovie.io, s.to, and iptvgreat.com. Wise offers a secure payment gateway for risky online businesses in exchange for transaction fees.

Ad Networks and Online Advertisers

Ad networks are the companies that place ads on behalf of advertisers (i.e., the entities and brands



that are seeking publicity) on websites and apps that display advertising, thus, supporting infringing sites by providing them with considerable advertising revenue—an estimated \$1.34 billion, according to DCA.²³ Although many ad networks have established best practices and guidelines to address piracy, the detection and policing of illicit sites remains challenging though the service(s) identified below fail to address piracy concerns. An additional concern is that some of the advertisements served to users of pirate sites contain malicious software, such as ransomware, that can infect their device. This “malvertising” is estimated to generate over \$120 million a year for operators of pirate sites.²⁴

- **Propeller Ads** – Cyprus. Although primarily based in Cyprus, Propeller Ads is an ad network operated by Russian individuals that has subsidiary offices in the Czech Republic, the Isle of Man, and the United Arab Emirates. The company is a significant ad provider to streaming cyberlockers. According to DCA, Propeller Ads is among the biggest facilitators of malvertising on piracy sites, accounting for a quarter (estimated at \$31 million) of their malvertising.²⁵ Propeller Ads has been offering its services to dozens of illegal and infringing sites such as French-Stream.gg, Supervideo.tv, Vidlox.me, and Filmpertutti.lat, helping those sites generate significant revenues through advertising.

Closing

In the U.S. and around the world, the motion picture and television industry is a community of creators and innovators who work tirelessly at the art and craft of storytelling. The criminals who profit from the most notorious markets threaten the very heart of our industry and in so doing, threaten the livelihoods of the people who give it life. These markets are an immediate threat to legitimate commerce, impairing legitimate markets’ viability and curbing U.S. competitiveness. USTR’s efforts to shine a light on the most egregious instances of copyright theft in foreign markets is an essential step in fostering creativity and innovation—not only in the film and television industry—but throughout the creative economy.

MPA appreciates the opportunity to comment and is ready to provide further information or answer questions as requested.

Sincerely,

Charles H. Rivkin
Chairman & CEO

²³ Digital Citizens Alliance, *Breaking (B)ads: How Advertiser-Supported Piracy Helps Fuel A Booming Multi-Billion Dollar Illegal Market* (August 2021) p. 1,

<https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/Breaking-Bads-Report.pdf>.

²⁴ Digital Citizens Alliance, White Bullet and Unit 221B, *Unholy Triangle – From Piracy to Ads to Ransomware: How Illicit Actors Use Digital Ads on Piracy Sites to Profit by Harming Internet Users* (September 2022),

<https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/Unholy-Triangle-Report.pdf> (“Unholy Triangle Report”).

²⁵ Unholy Triangle Report at p. 35.