



MOTION PICTURE ASSOCIATION

October 8, 2021

Jacob Ewerdt
Director 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 2021 Special 301 Out of Cycle
Review of Notorious Markets
Docket No. USTR-2021-0013

Dear Mr. Ewerdt:

The Motion Picture Association (MPA) submits the following response to the request issued August 30, 2021, by the Office of the U.S. Trade Representative (USTR), inviting submissions from the public on notorious markets outside of the United States.

The American motion picture and television industry is a major U.S. employer that supported 2.5 million jobs and \$188 billion in total wages in 2019. This includes 331,000 jobs in the core business of producing, marketing, and manufacturing motion pictures, television shows and video content, as well as 579,000 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 cleaners, florists, hardware and lumber suppliers, and retailers. This is a nationwide network of mostly small businesses representing every state in the country, with 87 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 2019, the enduring value and global appeal of U.S. entertainment earned \$17.3 billion in audiovisual exports. Today there are over 480 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 2019, that services trade surplus was \$9.6 billion, or three percent of the total U.S. private-sector trade surplus in services.¹

As the industry distributes its films and TV 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

¹ All the above jobs, economic and trade figures are from The American Motion Picture and Television Industry – Creating Jobs, Trading Around the World. The Motion Picture Association, April 8, 2021, https://www.motionpictures.org/wp-content/uploads/2021/06/MPA_Economic_contribution_US_infographic_2019_032521.pdf



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. It is critical that our trading partners protect and enforce intellectual property rights.

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 intellectual property (IP) 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.

Overview

Online content theft continues to pose the most significant and evolving threat to our industry. In 2018, there were an estimated 190 billion global visits to piracy sites.² This piracy costs the U.S. economy at least \$29.2 billion in lost revenue each year.³

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, cloud services (including reverse-proxy and other anonymization services), advertising networks, payment processors, social networks, and search engines – should actively seek to reduce support for notoriously infringing sites such as those we have nominated in these comments, including through voluntary initiatives aimed at combating online content theft. Identifying a service as an infrastructure service does not absolve that service of responsibility.

Many copyright infringing sites utilize, in particular, 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 is a reverse proxy: it funnels connections to many different websites through shared servers that then redirect 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 to some of the most popular web streaming services. One of the by-products of

² MUSO, <https://www.muso.com/magazine/global-piracy-hits-190-billion-visits-in-2018-but-uk-sees-a-drop>.

³ Impacts of Digital Video Piracy on the U.S. economy. Blackburn, Eisenach, Harrison Jr., June 2019. <https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf>



using a CDN is that it masks the IP address and hosting provider of a website. An 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, long-standing pirate websites in the world, including The Pirate Bay, whose current domain, thepiratebay.org, has been identified as infringing rights holders' copyrights nearly six million separate times.⁴ Nonetheless, The Pirate Bay, and other notorious pirate sites, remain Cloudflare customers despite repeated notices of infringement to Cloudflare.

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 one thousand of these illegal IPTV services operating around the world. In the U.S., these illegal services have been valued at over one billion dollars in piracy subscriptions alone.⁵

This year, for the first time, our filing includes “Piracy-as-a-Service” as a new category of notorious markets. It encompasses a suite of services that make it easy for would-be pirates 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 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 from both Alexa,⁶ and popularity rankings and site traffic volume data from SimilarWeb,⁷ as well as information on revenues where available, among other details. MPA has also attempted to respond to the FRN's request for information of any known enforcement activity including by noting jurisdictions that have issued blocking orders against the named market. 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 location and can hide behind anonymizing services with ease, as discussed above. With

⁴ 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>

⁵ Money for Nothing: The Billion-Dollar Pirate Subscription IPTV Business. Digital Citizens Alliance and NAGRA. August 2020, p. 2. <https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/DCA-Money-for-Nothing-Report.pdf>

⁶ An Alexa 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. To put this in context, Wikipedia is ranked fifth in worldwide traffic and Netflix is 32. See <http://www.alexa.com> for more information.

⁷ A SimilarWeb rank, like an Alexa 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.



this in mind, MPA has aimed to identify each site's predominant location(s) based on several factors – including location of the server, host or domain registrant, or if they are unknown by reference to the market the site targets or draws a disproportionate share of its audience from – recognizing that, frequently, these may be different. This underscores the vital importance of cross-border law enforcement cooperation.

Linking and Streaming Websites: Linking sites aggregate, organize, and index links to content stored on other sites, largely deriving revenue from advertising and referrals. Linking sites that offer unauthorized movies and TV shows typically organize posts by title, genre, season, and episode and often use the official, copyright-protected cover art to advertise the content similarly to legitimate services. 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 either 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 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.

An important development in this space in 2021 was the action taken by the Vietnamese authorities against the notorious and massively popular piracy site Phimmoi. We commend the Vietnamese authorities for the actions taken to date, but only time will tell whether Vietnam's criminal justice system will set a precedent it can follow with other very popular sites like Fmovies, Bilutvs.net,⁸ Motchill.net,⁹ and Dongphymtv.com.¹⁰

- **Afdah.video** – Singapore. This pirate streaming site has been active since 2020 and is highly popular in the U.S., though the operator is based in Singapore. Afdah.info (which went offline but redirects to afdah.video) had over 7 million visits in August 2021 from nearly 1.5 million unique visitors according to SimilarWeb. It features movies, including content from MPA members, that can be searched easily with a filter and search engine. The site first started operating at afdah.com in 2013 and later at afdah.tv and afdah.to which were blocked in Singapore in 2018. Afdah.info was blocked in Singapore in February 2021 pursuant to a dynamic injunction covering variant domains over time.
- **Altadefinizione** – Italy. Altadefinizione is a long-standing series of streaming piracy sites in Italy. It is a persistent infringer that thwarts blocking efforts by repeatedly moving the website to a new domain every time AGCOM (the Italian communications regulator) blocks the previous domain, often in just a few hours. Its current active domain, Altadefinizione.photos, had 819 thousand visits in the last 28 days (August/September 2021), according to SimilarWeb. The previous domain, Altadefinizione.sale, had 15.66 million

⁸ Vietnamese streaming site with 3.8 million monthly visits in August 2021, according to SimilarWeb.

⁹ Vietnamese site with rank in Vietnam of 130 and 8.3 million visits in August 2021, according to SimilarWeb data for former domain Motphim.net.

¹⁰ Vietnamese site with 21.7 million visits in August 2021, according to SimilarWeb data for former domain Dongphim.net.



visits from 3.7 million unique visitors with a rank of 100 in Italy in August 2021, according to SimilarWeb.

- **Bs.to** – Germany. Bs.to is Germany’s top pirate site for free streaming of TV series. The site publishes links of different hosts that lead to the video content of more than 4,400 series. The website has more than 230,000 registered users. While Bs.to does not charge for any service, it does ask users to sign up for a free account in order to access content without advertising. Bs.to had 33.45 million total visits from 2.3 million unique visitors in August 2021 representing a 33 percent increase over 2020, according to SimilarWeb. The site has been subject to blocking orders in Germany and Australia and is hosted by DDOS Guard.
- **CB01** – Italy. CB01 is a long-standing piracy source in Italy. The website frequently moves to a different top-level domain as it has been blocked in Italy and Indonesia. The newest domain, cb01.boutique, has only been functioning for a month and yet has already climbed to 661 in Italy, with 2.1 million visitors over the last 28 days (August/September 2021), according to SimilarWeb. The previous domain, cb01.systems, had approximately 2 million visits in August 2021, according to SimilarWeb. The site has over 25,000 movie titles and over 2,500 TV shows available. CB01 uses Cloudflare’s reverse proxy service, which masks the location of the website’s server.
- **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 over 55 million worldwide visits from 8.8 million unique visitors in August 2021, according to SimilarWeb, a 10 percent increase over last year. The site currently has a global SimilarWeb rank of 1,017 and a local rank of 22 in Poland. The operator of the website, CDA Spółka Akcyjna, uses Cloudflare’s services which mask the IP location of the website. Cda.pl is hosted by OVH Poland in Poland.
- **Chomikuj.pl** – Poland. Chomikuj.pl has been operational since at least 2013 with nearly 8 million worldwide visits from 2.7 million unique visitors in August 2021, according to SimilarWeb. The site has a local rank in Poland of 122 and 127 according to Alexa and SimilarWeb respectively. Chomikuj.pl is a high-volume host that avoids impact to its service from takedowns by permitting the prompt re-upload of content. Chomikuj.pl is hosted by Leaseweb Netherlands BV and the operator of the website uses Cloudflare’s services which mask the IP location of the website.
- **Cuevana3.io** – Argentina. Cuevana3.io is currently the most popular streaming site in the Spanish-speaking part of Latin America, offering more than 7,000 titles including movies and television series. The website has been active since at least 2018. Its global Alexa rank is 791 with a rank of 56 in Mexico. Cuevana3.io received over 111.4 million visits in August 2021 from 20.9 million unique visitors, according to SimilarWeb. The website’s administrators monetize their infringing service through advertising served by many national and international ad networks. The hosting location is masked by Cuevana3.io’s use of Cloudflare’s reverse proxy service, but it is believed to be operated from Argentina.
- **Dytt8.net, Dy2018.com, Dygod.net, and Ygdy8.com** – China; Taiwan. Dytt8.net is a



consistently high-ranking pirate website in China with local rankings of 1,453 and 251 on Alexa and SimilarWeb, respectively, and it received 12.89 million visits in August 2021, according to SimilarWeb. With a very user-friendly interface and the provision of direct links to third-party storage providers, this website remains a particular threat to legitimate services both within and outside China. Dytt8.net is part of a group of related sites including dy2018.com, dygod.net, and ygdy8.com. The sites were referred to the National Copyright Administration of China (NCAC) in 2019 as part of its annual ‘Swordnet’ campaign and investigation though the investigation has been suspended after law enforcement were unable to identify an operator. Some of its servers are believed to be in Taiwan.

- **Egy.best** – Egypt. Egy.best is one of the oldest movie-linking websites in the Middle East and it remains one of its most popular in spite of enforcement actions (including by MPA) that took it offline in the spring of 2019. In August 2021, this site saw 17.9 million total visits from 4.9 million unique visitors, according to SimilarWeb. Sister sites are active at egybest.xyz and egybest.co. The site uses geo-protection filters to stave off enforcement and Cloudflare’s reverse proxy to mask its IP location. It is hosted by IHOR Servers in Russia.
- **Fmovies.to** – Vietnam. Fmovies, also branded as Bmovies, Bflix, and other names, is one of the most popular piracy streaming websites/brands in the world, providing unauthorized access to popular movies and TV series. The site’s Alexa rank is 1,156 globally and 1,028 in the U.S., with 80.08 million global visits from 6 million unique visitors in August 2021, according to SimilarWeb. The site used to be hosted by BlueAngelHost at the Neterra data center in Bulgaria, but its host is now masked by Cloudflare’s reverse proxy service. The site has been blocked in many countries, some due to MPA action, including India (which drove down its popularity ranking significantly), Australia, Denmark, Malaysia, and Singapore. The former domain, Fmovies.se, was blocked in nine countries. The site has been referred for criminal prosecution in the United States and Vietnam.
- **Gimy.app** – Taiwan. The key domains of the highly popular Chinese language Gimy pirate website have now been redirected to Gimy.app (the main domain), Gimy.tv.com, Gimy.cc, and Gimy.one. Gimy’s global Alexa rank is 2,265 and the site is extremely popular in Taiwan with a local rank of 55. The Gimy website/domains had an aggregate of 23 million monthly visits in August 2021, according to SimilarWeb. A criminal referral was made in Taiwan in December 2020 and there was a raid in early 2021. Despite this enforcement action, which resulted in several key Gimy pirate domains going offline, Gimy has re-emerged with the domains noted above. The case continues to be under investigation by Taiwanese prosecutors.
- **Gnula.se/Gnula.nu** – Bolivia. The Gnula sites are popular streaming sites that cater to Spanish-speaking audiences. They offer large libraries of movies (Gnula.nu) and television series (Gnula.se). Gnula.nu has been active since at least 2014, its Alexa rank is 4,149 globally and 83 in Spain, and it received over 15.1 million visits in August 2021 from 3.4 million unique visitors, according to SimilarWeb. Gnula.se has been active since at least 2012, its Alexa rank is 13,263 globally and 425 in Spain, it received over 9.1 million visits in August 2021 from 0.79 million unique visitors, according to SimilarWeb. The sites’ operators monetize it through advertising served by many national and international ad



networks. Gnula.nu and Gnula.se have been subject to blocking orders in Spain, Portugal, and Brazil. They mask their hosting locations with the reverse proxy service Ddos-guard.net but are believed to be operated out of Bolivia.

- **MrPiracy.top** – Portugal. MrPiracy is operated out of Portugal and caters to the Portuguese and Brazilian markets. Despite being blocked in Portugal, its domain, MrPiracy.top, is ranked 14 locally, according to SimilarWeb, due to referrals from unblocked domains (such as MrPiracy.site which provides over half of all visits to MrPiracy.top). The site received 21.25 million monthly visits from 1.73 million unique visitors in August 2021, according to SimilarWeb. The site hosts over 13,000 movie titles and 2,250 TV shows. The operator of the website uses Cloudflare’s services, which mask its IP address. The site is hosted by OBE Hosting in Sweden.
- **Pelisplushd.net** – Peru; Uruguay. Pelisplushd.net is believed to be operated out of Peru; it appears related to an operator raided in 2019 in Uruguay and caters to Spanish-speaking audiences. Pelisplushd.net is a popular streaming site that offers a large library of titles including movies and television series. The website has been active since at least 2019. Its global Alexa rank is 1,334 with a local rank of 73 in Mexico. Pelisplushd.net received over 58.2 million visits in August 2021 from 8.4 million unique visitors, according to SimilarWeb. The sites’ operators monetize it through advertising served by many national and international ad networks. The hosting location of Pelisplushd.net is masked by the use of Cloudflare’s reverse proxy service.
- **Phimmoi** – Vietnam. According to press reports, the founder and two IT employees of the notorious piracy site Phimmoi were identified and called in for questioning by the Vietnamese police in August 2021. The main domains of the website are offline, although one domain has redirected to another Vietnamese infringing website called Skyphim.net which has a ranking of 5,301 in Vietnam. Skyphim.net can also be accessed via the domain 1080tv.net. There may also be a new copycat domain at phimmoiii.net. The Phimmoi website, which offered thousands of unauthorized feature films and television series from the United States and all over the world, was one of the most popular pirate websites in Vietnam. At its peak of popularity between June 2019 and June 2020, Phimmoi was the 22nd most popular website in Vietnam and averaged over 69 million visitors per month from 10.69 million unique visitors, according to SimilarWeb.
- **Rezka.ag** – Russia. Formerly known as hdreзка.me, rezka.ag is a popular Russian language streaming website that offers over 22,000 movies and 5,000 TV series, including cartoons and anime. Content can be searched and filtered by genre, year, and categories. According to SimilarWeb, Rezka received 85.8 million visits from 11.17 million unique visitors in August 2021 despite site blocking efforts in multiple jurisdictions. The content is sourced from the website’s own video CDN and from other external video CDNs.
- **Topflix.vc (formerly, topflix.tv)** – Brazil. Topflix.vc is a popular streaming linking site that offers more than 5,000 infringing links to more than 1,500 titles including movies and television series. The website has been active since at least 2018. Its global Alexa rank is 18,386 with a local Alexa rank of 241 in Brazil. Topflix.vc had 14.6 million visits in August



2021 from 3.6 million unique visitors, according to SimilarWeb. The sites' operators monetize it through advertising served by many national and international ad networks. The hosting location of topflix.vc is masked by the use of Cloudflare's reverse proxy service.

- **Zone-telechargement.com** – Bulgaria. Zone-telechargement.com is the latest domain for the zone-telechargement service. One of the most popular direct download pirate sites in France, the main domain had 11.3 million visits from 1.34 million unique visitors in August 2021, according to SimilarWeb data. The domain has repeatedly changed over the last few years to avoid blocking and de-indexing actions by the MPA and others. The site is hosted by IWL Networks in Bulgaria.

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. They 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, 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 huge amounts of traffic.

- **1fichier.com** – France. 1fichier.com is a direct download cyberlocker with a global Alexa rank of 1,722 and a local rank in France of 216. 1fichier.com had 37.35 million visits worldwide from 11.6 million unique visitors in August 2021, according to SimilarWeb. Users can use 1fichier's services for free with a limited speed and capacity or register for two paid tiers that provide secure access and unlimited speeds. 1fichier.com offers a referral program where users can receive up to 50 percent commission on each transaction of their prospects, and up to 40 percent on future valid rebills. It is hosted by Online SAS in France.
- **Baidu Pan** – 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 holds more than an 80 percent share of China's search engine market, and it is the second largest search engine in the world by userbase. 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 tools for taking down unauthorized motion picture and television content, and demoting



infringing video listings of new release titles on Baidu search results, the average time it takes Baidu to remove infringing links from Baidu Pan is two or more days, which is inexplicably long considering the resources available to Baidu. Additionally, rights holders are sometimes forced to send Baidu thousands of follow up notices for proliferating copies of a single piece of content. Finally, Baidu should apply rigorous filtering technology to identify infringing content, to take more effective action to suspend or terminate repeat infringers.

- **Mixdrop.co** – Russia. Servers for this video hosting service are located in Russia with MS Networks LTD. Mixdrop has an affiliate program, MixPartners, and claims that affiliates may earn up to 1,000 USD a week depending on the number of views they generate. SimilarWeb indicates that Mixdrop.co attracted over 39.1 million visits from 12.66 million unique visitors in August 2021, increases of approximately one-third in comparison to last year.
- **PowVideo.net** – Russia. PowVideo is a video hosting service offering free storage and bandwidth. PowVideo 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 and length of video. While the PowVideo.net website states that it complies with DMCA notices, they do not in fact comply with MPA’s notices. SimilarWeb indicates that PowVideo.net had 1.78 million visits from 558,000 unique visitors in August 2021. The hosting location of PowVideo.net is masked by the use of Cloudflare’s reverse proxy service, however RIPE¹¹ analysis shows the originating host to be Vesp in Russia.
- **Streamtape.com** – Switzerland. 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. According to SimilarWeb, in August 2021 streamtape.com had 36.01 million visits from 11.76 million unique visitors.
- **Telegram** – Russia. Telegram is an instant messaging service available on Windows, iOS, Android, and Linux that allows users to create channels and groups, upload and share content, and run livestreams. In January 2021, Telegram’s active userbase exceeded 500 million accounts, with particularly significant reach in Russia, India, and Indonesia. One of its growth drivers is the presence of copyrighted content on the platform, core features that support the sharing and discoverability of unauthorized files, protect anonymity of uploaders, and make consumption easy and convenient supercharging the circulation of infringing content, whether deliberate or accidental. Telegram’s Terms of Service make no mention of copyrighted content and Telegram does not provide any tool for reporting copyright infringements. Instead, rights holders must rely on email or use the Report option intended for the behaviors that Telegram’s Terms of Service do prohibit.¹² While there has been

¹¹ RIPE NCC (Réseaux IP Européens Network Coordination Centre) is the regional internet registry (RIR) for Europe, the Middle East and parts of Central Asia. A RIR allocates blocks of IP addresses to internet service providers and other organizations.

¹² 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.



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 in spite of 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, the European Commission placed Telegram on its Counterfeit and Piracy Watch List.¹³ Enforcement actions have been brought successfully in India, Israel, and Italy requiring Telegram to block access to infringing content. Telegram is a platform of immediate concern.

- **Uploaded.net** – Netherlands; Switzerland. Uploaded.net is a direct download cyberlocker with over 19 million visits from 5.8 million unique visitors in August 2021, according to SimilarWeb. Uploaded.net incentivizes its users to upload infringing files with various rewards: up to approximately 50 USD per 1,000 downloads; commissions on sales of premium memberships they have referred (60 percent for the initial sale, 50 percent for subsequent renewals); and rewards based on the size of files uploaded (to encourage the upload of television episodes and movies). The website operates through multiple redundant domains that include Uploaded.to and Ul.to. The site is blocked in Italy and India. The Court of Justice of the European Union (CJEU) ruled in July 2021 that certain factors present in Uploaded's business model can result in direct liability but left the final decision to the German Federal Court of Justice, which will continue hearing the case in February 2022. It is owned by Swiss company Cyando AG and is hosted by Eweka Internet Services B.V. in the Netherlands.
- **Uptobox.com** – France. Uptobox.com is a direct download cyberlocker but it also allows streaming and embedding via its related site, uptostream.com. The site offers a relatively inexpensive premium account for 28 USD a year with unlimited storage and no ads. It is widely used among pirate sites in Europe to generate revenue, utilizing ads on their own sites with embedding, or linking downloads through networks that pay per link visited such as adf.ly. This popular site has a global rank of 1,182 and 1,799 with a rank of 92 and 218 in France, according to Alexa and SimilarWeb respectively, with 35.6 million visits from 10.7 million unique visitors in August 2021, according to SimilarWeb. The site is owned by Upworld Genius in Geneva, Switzerland. The hosting location of Uptobox.com is masked by the use of Cloudflare's reverse proxy service, however, analysis shows the originating host to be ONLINE SAS in France.
- **Vivo.sx** – Czech Republic. Vivo.sx is the most popular German language cyberlocker. The main domain saw 11.75 million visits from 1.3 million unique visitors in August 2021, according to SimilarWeb. Vivo.sx offers an affiliate program to encourage users to upload popular files, offering 4 USD per 10,000 views in top-tier countries. It is used by most of the major pirate sites in Germany, including bs.to (see above). Vivo.sx is hosted in the Czech Republic by Datacamp.

¹³ Counterfeit and Piracy Watch List, p.35, https://trade.ec.europa.eu/doclib/docs/2020/december/tradoc_159183.pdf



- **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 illegally access music and video files. After Mail.Ru Group acquired VKontakte in 2014, it began a movement towards 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. While VK is generally responsive to takedown notices, it 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 which are used to share infringing content and often have thousands of users. MPA welcomes overtures by Mail.ru Group expressing a desire to address piracy issues on VK and other Mail.ru services, including joining the anti-piracy memorandum in November 2018. Unfortunately, VK does not engage in the kind of open dialogue with rights holders that could improve the takedown of infringing content. The site operates on servers owned by VK that are located 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 a number of related illegal businesses including ones engaged in (i) the re-sale 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.¹⁴ 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 re-sell them for a profit, further complicating investigations. A recent study found that the estimated profit margins range from 56 percent for retailers to 85 percent for wholesalers.¹⁵ These resellers are also often involved in the promotion and support of the service with many also providing a limited number of channels to a given service.

- **BIPTV.best and BestBuyIPTV.store** – Vietnam. BestBuyIPTV is very popular in 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

¹⁴ Panel hosting is the ability to buy the backend of the IPTV service and customize the design of the frontend.

¹⁵ Money for Nothing: The Billion-Dollar Pirate Subscription IPTV Business. Digital Citizens Alliance and NAGRA. August 2020, p. 2. <https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/DCA-Money-for-Nothing-Report.pdf>



operating systems, including iOS, Kodi, and Roku. It uses resellers, which leads to pricing variations, but the main site charges 70 USD 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.

- **GenIPTV** – United Kingdom (UK); 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. The service saw over 7,400 visitors in August 2021, according to SimilarWeb. Hosting of the GenIPTV frontend domain is provided by Bandwidth Technologies in the UK, while their backend domain is hosted by Network Dedicated SAS in Switzerland.
- **IPTVForest.net** – Switzerland. This service offers a reseller program and customer plans starting at 10 EUR a month for premium TV channels and an extensive VOD collection. Popularity has fluctuated significantly over the last year, but traffic to the website in August 2021 stood at around 58,000 visitors a month from almost 12,000 unique visitors. As the website provides no other functions, such as providing content, tech support or updates, all of these site visits are likely from people interested in purchasing the service.
- **TheKing365tv.org** – North Africa. This is a long-standing and well-known illegal IPTV provider with servers in North Africa. The service offers over 2,200 international channels and an extensive VOD library. TheKing365tv.org attracts approximately 40,000 visits a month from 16,500 unique visitors, according to SimilarWeb. We believe, however, that the actual subscriber audience of this service is significantly higher than the SimilarWeb data would suggest: once a user has purchased a subscription, the user accesses the infringing content on third-party media players, and this access is not counted by SimilarWeb. As the website provides no other functions, such as providing content, tech support, or updates, all of these site visits are likely from people interested in purchasing the service.
- **King-IPTV.net** – Middle East and North Africa. In operation since 2016, this service offers over 16,000 international channels and over 20,000 VOD titles. The site also offers IPTV restreaming, potentially feeding hundreds of IPTV retransmission/streaming websites or apps around the world. The main domains have received over 500,000 visitors in the last 12 months, according to SimilarWeb. As a sign of its popularity, the service boasts a 24/7 customer support system. Analysis shows the originating host to be in the Middle East and North Africa region.
- **SatCon Africa** – Gabon and Central Africa. SatCon Africa is a television operator based in Gabon recognized to be infringing IP laws and the rights of third parties. While some SatCon channels are properly licensed from their rights holders, SatCon also offers several pirated television channels (particularly channels that offer appealing entertainment content such as movies, TV series, and sports). SatCon steals this content from legitimate local distributors or satellite signals and illegally rebroadcasts it. SatCon is estimated to serve between 40,000 and 50,000 users.



Piracy Devices and Apps: Piracy devices and apps, also known as illicit streaming devices (ISDs), provide illegal access to movie and television content through a variety of means, including downloading and streaming content as well as 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 TV/VOD subscription services can be found online, as well as in physical marketplaces, particularly in the Asia-Pacific region.¹⁶ 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.

- **EVPAD** – China. EVPAD (ievpad.com) is an Android app that incorporates P2P technology as well as EVPAD-branded apps to enable access to more than 2,000 movies and TV titles and over 1,000 live international channels. EVPAD has a large pool of resellers worldwide, and a global userbase. It has recently established a new brand, “EVBOX,” targeting Taiwanese & European customers.
- **PopcornTime** – Global. PopcornTime is a known infringing application that has seen a surge in popularity. It makes available thousands of movies and TV shows. PopcornTime started as an open-source software project and has many versions. PopcornTime.app, one of the main domains where users can download the app, had over 162,000 visitors in August 2021. The app has been subject to blocking orders in many countries, including Denmark, Norway, the UK, Belgium, Italy, and Portugal.
- **PopcornTime.one (Kids)** – Ukraine. PopcornTime.one (Kids) is the successor to GetpopcornTime.is, which was recording 2.2 million monthly visits at its peak in April 2021, prior to the domain’s suspension by ISNIC (the registry operator of .is). The PopcornTime.one app is a child-friendly version of the PopcornTime app because it specifically offers children’s content, walled off from most age-inappropriate content. This includes 35,000 movie titles and 6,600 TV series stolen from all MPA members. Due to its recent launch, traffic data is not yet available as a basis on which to assess popularity. Analysis shows the originating host to be located in Ukraine.
- **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 pirate TV, movie, and music content from a range of copyright holders. According to SimilarWeb, Shabakaty attracted 6.15 million visits from 377,576 unique visitors in August 2021.
- **SVI Cloud** – China. SVI Cloud is an IPTV service which includes an Android device manufactured in China and application called SVI GO/MO offering access to pirated VOD and live TV channel content. SVI Cloud has a large pool of resellers worldwide and a userbase that is global but particularly strong in the Asia Pacific region.
- **TVTap** – Pakistan. TVTap is a free Android streaming application with access to over 500 live channels. According to SimilarWeb, the app saw over 1.5 million visits in the last year at

¹⁶ The Government of Singapore is considering amendments to strengthen protections against resellers of such boxes, although no draft has yet emerged.



its main domain, tvtap.bz, which facilitates access to the infringing application. The app is monetized through advertising placed within its content offerings. The site relies mostly on servers hosted by Amaratu in the Netherlands but likely has operators in Pakistan.

- **Unblock Tech (unblocktech.com)** – China. Unblock Tech’s core business is the manufacture and distribution of the ‘Ubox’ series of ISDs. Ubox runs on Android and incorporates peer-to-peer (P2P) technology as well as UB-branded apps to enable access to pirated VOD and live TV channel content. It appears that Unblock Tech has a large pool of resellers worldwide, and a userbase that is global but particularly strong in the Asia Pacific region.

Peer-to-Peer Networks & BitTorrent Portals: Users of peer-to-peer (P2P) networks use software that allows them to illicitly make available their libraries of content 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 allowing 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 the 2020 dismantling of Sparks Group – a criminal gang operating a peer-to-peer network that inflicted tens of millions of dollars in losses to film production studios, according to the U.S. Department of Justice¹⁷ – in a multi-country enforcement action coordinated by the U.S. with support from Eurojust and Europol, MPA was heartened to learn of the extradition to the United States of one of the operators of Sparks Group in August 2021. There, he will face charges of conspiracy to commit copyright infringement, wire fraud conspiracy, and conspiracy to commit interstate transportation of stolen property.

Another recent and important development came in late 2020, when the infamous torrent site Tamilrockers.ws out of India, along with its many copycats, finally went offline. The Indian authorities should complement this effort by blocking copycat sites Tamilblasters and TamilMV.

The torrent sites discussed in this year’s filing 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.

- **1337x.to** – Bulgaria. 1337x.to is a popular torrent website with a global SimilarWeb rank of 505, up from 592 in 2020. The site provides access to a range of content, including movies, TV series, music, and software. 1337x.to had 66.2 million visits from 10.1 million unique visitors in August 2021, according to SimilarWeb – showing year over year increases of 27.3 and 31.9 percent respectively. The site is hosted by the DMCA-resistant BlueAngelHost in Bulgaria. Variants of the site have been subject to blocking orders in the UK, Denmark, Portugal, Belgium, Indonesia, Ireland, Malaysia, India, Austria, Australia, and Italy.
- **Gimmepeers.com (formally Bitsoup.org)** – Canada. Gimmepeers.com is a popular,

¹⁷ U.S. Department of Justice, August 26, 2020, press release. <https://www.justice.gov/usao-sdny/pr/acting-us-attorney-announces-federal-charges-and-international-operation-dismantle-0>



subscription-based torrent website that provides access to 29,000 torrent files across a range of content including movies, TV series, music, and software. Gimmepeers is using Cloudflare's reverse proxy service and has been in operation since 2017. The site consistently averages over 500,000 visits per month with over 60 percent of visits coming from the United States and Canada.

- **Rarbg.to** – Bosnia and Herzegovina. Rarbg.to is a very popular torrent website with a global Alexa rank of 596 and a local rank of 478 in the U.S. The site provides access to a range of content including movies and TV series, with over 1.5 million total torrents available. According to SimilarWeb, Rarbg.to had over 51 million visits from 6.3 million unique visitors in August 2021 – an increase of 3 million visits from the same period last year. Rarbg.to is hosted in Bosnia and Herzegovina by S A and A stroi proekt EOOD. The site and its variants have previously been subject to blocking orders in Portugal, Italy, Denmark, Finland, Indonesia, Belgium, Ireland, Malaysia, Australia, and the UK.
- **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 993 and a local rank of 125 in Russia. According to SimilarWeb, Rutracker.org had 38.8 million visits from 6 million unique visitors in August 2021. The site is hosted in Russia by Dreamtorrent Corp., a Seychelles company that is also believed to be the owner of the site. The site has been subject to blocking orders in Italy, Indonesia, Greece, Australia, 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 1,466, and a rank of 1,539 in the U.S. In January 2008, Swedish prosecutors filed criminal charges against TPB operators for facilitating breach of copyright law. The operators were found guilty in March 2009 and sentenced to prison and a multi-million dollar fine. This judgment was affirmed by the Svea Court of Appeal and the European Court of Human Rights. Site blocking orders have been handed down in Argentina, Australia, Austria, Belgium, Denmark, Finland, France, Iceland, Ireland, Indonesia, Italy, Malaysia, the Netherlands, Norway, Portugal, Spain, and the UK. The website has had multiple alternative domains hosted in various countries around the world over the years. According to SimilarWeb, ThePirateBay.org received 30 million visits from 9.2 million unique visitors in August 2021, which was consistent with its August 2020 audience. The hosting location of the website is concealed by Cloudflare's reverse proxy service and by its hosting provider Shinjiru Technology of Malaysia.
- **Yts.mx** – Bulgaria; Belize. The world's most popular P2P torrent site dedicated to movies, YTS boasts 85.2 million total monthly visits from 13.7 million unique visitors as of August 2021, according to SimilarWeb. Over 32,000 movies are available in HD and 4K quality. The site is ranked 427 globally, according to SimilarWeb – an increase on its rank of 461 in 2020. While the site is accessed from all over the world, it is most popular in the U.S., which originates 11.5 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 UK, Italy, Ireland, Norway, Australia, Portugal, Denmark, India, and Spain. The site frequently changes web domains to avoid site blocking. It is currently hosted by Cloudwall Ltd and Tamatiya Eood in Bulgaria, and Private Internet Hosting in Belize.

Hosting Providers: Hosting providers offer the essential infrastructure to operate a website. Websites engaged in massive copyright infringement require high-quality video playback. The hosting provider has the ability to take websites engaged in massive copyright infringement offline. 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.

- **Amaratu/KoDDos** – Netherlands. This service is considered a “bulletproof” hosting provider for pirate sites because it allows its customers to upload and distribute infringing content without much consequence. Some of the biggest sites and services take advantage of Amaratu/KoDDos services, such as MoonWalk, a CDN and content management system that provided content sources for numerous pirate sites and went offline in 2019. Amaratu/KoDDos does not respond to takedown requests.
- **BlueAngelHost** – Bulgaria. Advertised as non-DMCA compliant in their description when searched on Google, BlueAngelHost is a safe haven for pirates who have hopped between different hosting providers in their efforts to escape enforcement actions.
- **Ddos-Guard.net** – UK; Russia. This service is also considered a bulletproof hosting provider for pirate sites. Some of the biggest sites are taking advantage of Ddos-Guard’s services, including bs.to (see above). Ddos-Guard does not respond to takedown requests.
- **Host-palace.com** – Netherlands; India. This service is also considered a bulletproof hosting provider for pirate sites. Many piracy sites including watchseries.movie (and its alternative domains gowatchseries.ac and gowatchseries.bz), kebioskop21.club, and filmapik.id have previously, or currently, used HostPalace to host and serve video content. HostPalace does not respond to takedown requests.
- **Mnogobyte** – Russia. Mnogobyte provides infrastructure to various infringing CDNs and websites. The entity has been named in connection with VideoCDN, Kodik, Videoframe, and popular pirate streaming services including HDrezka and Kinogo.

Registries: Registries are organizations that oversee the registration, and maintain the authoritative database, of domain names within a specific top-level domain (TLD).¹⁸ Registries

¹⁸ In example.com, “example” is the domain name and “.com” is the TLD.



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, has the ability to withdraw or disable domain names used by websites engaged in massive copyright infringement.

- **.CH Registry** – .CH is the ccTLD for Switzerland, and its registry is SWITCH Information Technology Services. Examples of infringing websites operating with .CH domains include kickass2.ch, wootly.ch, movierulz.ch, project-free-tv.ch, and torrentdownload.ch. Unblockit.ch, a proxy service enabling access to otherwise blocked sites, also operates with a .CH domain, although it is known to frequently cycle through domains to avoid detection and disruption through site blocking. SimilarWeb reports 30.2 million visits to this site from 4.2 million unique visitors in August 2021, highlighting the popularity of the site.
- **.IS Registry** – .IS the ccTLD for Iceland, and ISNIC is its registry. Examples of infringing websites operating with .IS domains include filmlinks4u.is, watch32.is, soap2day.is, torrentz2.is, and moviewatcher.is. ISNIC does not generally respond to international or local law enforcement requests.
- **.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, 33bukvi.ru, tvundergroud.org.ru, kinoflix.ru, films-torrent.ru, and hd-videobox1.ru.
- **.TO Registry** – .TO is the ccTLD of Tonga, and its registry is the Tonga Network Information Center (TONIC). Examples of infringing websites operating with .TO TLD include rarbg.to, fmovies.to, kinox.to, serienstream.to, 1337x.to, torrentgalaxy.to, solarmovie.to, ibit.to, and bs.to.
- **.TV Registry** – .TV is the ccTLD for Tuvalu, and its registry is The .tv Corporation. .TV domains are particularly valuable for operators of legitimate as well as infringing television sites and related offerings. Examples of infringing websites operating with .TV domains include pelispedia.tv, hdfilme.tv, cima4u.tv, and lostfilm.tv.

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 the 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.

- **VoguePay** – Nigeria. VoguePay is popular among illegal IPTV service providers, including King365tv.com, mymagic-tv.net, acasatv.net, beiptv.com, volkaiptv.fr, iptvstramers4less.com, and ipxbuy.com. The company offers a secure payment gateway for



risky online businesses in exchange for substantial transaction fees. This gateway accepts credit cards.

Ad Networks and Online Advertisers: Ad networks are the companies that place ads on behalf of advertisers on websites that display advertising, thus supporting infringing sites by providing them with considerable advertising revenue – an estimated 1.34 billion USD, according to the Digital Citizens Alliance.¹⁹ Although many ad networks have established best practices and guidelines to address piracy, the detection and policing of illicit sites remains challenging.

- **1XBET** – Russia; Cyprus. 1XBET is not an ad network but an advertiser. In 2020 it became the third most active online advertiser in Russia. It is an online gambling site that originated in Russia but now operates worldwide. 1XBET knowingly and routinely pays to place display ads on pirate sites as well as ads with promotion codes watermarked into infringing videos, including in some of the earliest releases of infringing theatrical camcord recordings. After Russian law enforcement agencies initiated an investigation in 2020, its advertising activity declined. However, 1XBET remains active, and its ads continue to appear on infringing websites today.
- **AdsKeeper** – Russia. AdsKeeper is an ad network that is heavily used by pirate services in Russia and likely generates high levels of revenue for illicit streaming operators. AdsKeeper has been linked to various named pirate operations including vidoza.net, magnetdl.com, and sportsarefree.xyz,
- **GetB8.com** – Russia. Getb8.com is not an ad network but an online casino that is based in Russia. Like 1XBET, it knowingly and routinely pays to place display ads on pirate sites as well as ads with promotion codes watermarked into infringing videos captured from illegal theatrical camcording.
- **PopAds and PopCash** – Costa Rica; Poland. PopAds and PopCash are ad networks owned by Tomksoft in Poland but incorporated in Costa Rica. PopAds generates advertising revenue for copyright infringing sites including gomovies123.org, megafilmeshdplus.org, video.az, and mega1080.com, while PopCash is currently used by watchmoviestream.me. PopAds had previously been generating advertising revenue for Openload and Streamango, two of the most popular video file hosting services with over 136 million and 32 million visits per month, respectively, according to SimilarWeb (Openload and Streamango were shut down in October 2019).
- **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 and the Isle of Man. The company is a dominant ad provider to streaming cyberlockers.
- **RevenueHits** – Israel. RevenueHits is one of the most popular ad networks amongst pirate

¹⁹ Breaking (B)ads: How Advertiser-Supported Piracy Helps Fuel A Booming Multi-Billion Dollar Illegal Market, Auguste 2021, p. 1. <https://www.digitalcitizensalliance.org/clientuploads/directory/Reports/Breaking-Bads-Report.pdf>



sites, especially cyberlockers and file hosting services, where most of their ad impressions are displayed, such as turbobit.net and zippyshare.com. Many of their ads target the European market. RevenueHits operates from Israel.

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 pirate operation. PaaS providers lower the barriers to entry into commercial piracy. They include in particular: (i) website templates that facilitate setup of streaming websites; (ii) content management systems (CMS), which are databases providing access to tens of thousands of infringing movies and TV series, in exchange for the payment of a fee or a cut of the advertising revenue; (iii) dashboards that allow an illegal IPTV operator to oversee the infrastructure of their service (including monetization, content-hosting servers, and user interactions); (iv) 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 above); (v) 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); and (vi) 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.²⁰ PaaS is evidence of the scale, sophistication, and profitability of modern online commercial copyright infringement.

- **2embed.ru** – Russia; Belize. 2embed.ru is a pirate content management system (CMS) library used by at least 30 sites that collectively receive over 200 million visits per month according to SimilarWeb. The site’s CMS crawls various websites and search engines to find movie and TV show streaming links which are then stored in their database and served through their API service.²¹ It offers a large library of movies via streaming, direct link, or embedding. 2embed provides its service for free and remunerates itself by inserting ads.
- **Abyss.to** – Vietnam. Abyss.to, formerly HydraX.net, offers a “Google pass through,” i.e., a service that allows users to upload videos via Google Drive or dragging and dropping files onto the site’s page. The service then obfuscates the location of the hosted content, to prevent enforcement and shield the identity of the website’s operator. Abyss.to also provides the ability to embed the videos with the Abyss media player on separate sites for free, but viewers will be served ads by Abyss.to. Many piracy sites including 123movies.fun, gostream.site, solarmoviez.ru, and yesmovies.to have previously, or currently, used Abyss.to

²⁰ In its Internet Organised Crime Threat Assessment 2020 (<https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime-threat-assessment-iocta-2020>), Europol notes that illegal activities such as phishing and ransomware are “increasingly enabled” by third-party tools that make these crimes feasible for even technically inexperienced criminals.

²¹ An Application Programming Interface (API) enables two different software programs or web services to interoperate, i.e., work together.



or HydraX.net to host and serve video content.

- **Collaps.org** – Russia. This popular pirate movie CMS has gained attention since MoonWalk, another prominent CMS, went offline in 2019 following a concerted multi-national enforcement action. The popular streaming video hosting service HDGO currently uses Collaps.org. This off-the-shelf piracy facilitation service makes it easy for would-be pirates to create and monetize a fully functioning pirate service.
- **Embedforfree.co** – Canada. This is a widely used pirate CMS library operated by the same operators as playdrive.xyz and movieforfree.co (which has an identical library). This service is known for pirating the latest content from streaming platforms such as Netflix, Disney+, HBOMax, Apple TV+, and Amazon Prime Video. The service profits from advertisements shown in streams that are embedded using its CMS.
- **Fembed.com** – Vietnam. Fembed is a CMS service that launched in early 2018 and is commonly used by pirate movie streaming websites. Fembed is popular worldwide with an average of 6 million monthly visitors, according to SimilarWeb (note, however, that these SimilarWeb numbers only reflect end-user traffic that comes directly to its site and not to traffic that passes through its CMS customers that operate their own streaming services). Fembed generates revenue either from advertising – by inserting ads in Fembed’s media players embedded in its customers’ illegal streaming services – or by charging a premium fee that allows its customers to generate revenue by inserting their own ads.
- **GDrivePlayer** – Russia. GDriveplayer.to offers various simple-to-use APIs for 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. A subsidiary service, omdbapi.com, offers a user-friendly API to retrieve movie poster graphics and information necessary to present the content on a streaming website. The service is monetized by displaying one ad before each play. GDrivePlayer has been observed in use in popular websites such as seriestop.unblockit.uno and 123moviesonline.online.
- **IPTV Smarters** – India. IPTV Smarters is an IPTV turnkey solution. Its IPTV software solution, which trades under the brand name WHMCS Smarters, offers website design and development, customized apps on several platforms (including iOS, Android, and Windows), and a billing platform. They also offer 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.
- **Njalla** – Saint Kitts and Nevis. 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, a founder of The Pirate Bay. Njalla is prominent among pirate services, with customers such as FlixTor.is, GetPopcornTime.is, and yggtorrent.is.



- **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 likely related to other sites such as pelisplus.move. The site has been active since at least 2019. Pelisplus.icu’s Alexa rank is 43,423 globally, with a rank of 3,140 in Venezuela, and it received 5.3 million visits in August 2021 from 2 million unique visitors, according to SimilarWeb (note, however, that these Alexa and SimilarWeb numbers only reflect end-user traffic that comes directly to its site and not to traffic that passes 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 creation of a cyberlocker (XVideoSharing is the most widely used cyberlocker program). Both products include a wide range of modern technical features, either out of the box or as premium features. Major services such as GoUnlimited, Openload, and FruityHost are among the sites that are, or have been, their clients.

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,

A handwritten signature in black ink, appearing to read "C. H. Rivkin".

Charles H. Rivkin
Chairman & CEO