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November 6, 2020

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 2020 Special 301 Out of Cycle
Review of Notorious Markets.
Docket No. USTR-2020-0035

Dear Mr. Ewerdt:

The Motion Picture Association submits the following response to the request issued October 1, 2020, 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 \$181 billion in total wages in 2018. Nearly 319,000 jobs were in the core business of producing, marketing, and manufacturing of motion pictures and television shows.

Another nearly 573,000 jobs were engaged in the distribution of motion pictures and television shows to consumers, including people employed at movie theaters, video retail and rental operations, 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.

The American motion picture and television production industry remains one of the most highly competitive in the world. In 2018, the enduring value and global appeal of U.S. entertainment earned \$16.3 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 2018, that services trade surplus was \$9.4 billion, or four percent of the total U.S. private-sector trade surplus in services.

The industry distributes its films and TV shows to over 130 countries and with well over half of MPA member companies' distribution revenue annually earned from 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. It is critical that our trading partners protect and enforce intellectual property rights.

While in prior years MPA has included physical marketplaces in our notorious markets recommendations to USTR, this year we again focus our recommendations on online marketplaces. 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, however, are frequently extraterritorial in reach and have the most significant impact on the global legitimate market for U.S. movies and television programming. Moreover, they are the focus of MPA's global content protection efforts.

Online Notorious Markets 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.¹ This piracy costs the U.S. economy at least \$29.2 billion in lost revenue each year.²

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, Open/public 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 of these sites utilize reverse proxy functionality to hide the real IP address of a web server. An example of a content delivery network (CDN) frequently exploited by notorious markets to avoid detection and enforcement is CloudFlare, a reverse-proxy service that also provides a CDN functionality. 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 rightsholders' copyrights over four million separate

¹ MUSO, <https://www.muso.com/magazine/global-piracy-hits-190-billion-visits-in-2018-but-uk-sees-a-drop>.

² 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>

times.³ Nonetheless, The Pirate Bay, and other notorious pirate sites, remain Cloudflare customers despite repeated notices of infringement to Cloudflare.

An emerging 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.⁴

Piracy devices preloaded with software providing access to illicitly streamed movies and television programming and a related ecosystem of infringing add-ons continue to be problematic, particularly in certain countries in which the legality of the boxes and of activities surrounding their trafficking remains in doubt. Websites enable one-click installation of modified software onto set-top boxes or other Internet-connected devices. This modified software taps into an ecosystem of infringing content add-ons and portals to illicitly stream movies and television programming live or “on demand.”

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 Alexa⁵ and site traffic volume data from SimilarWeb⁶, 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 implicate the availability of the piracy service in the specific territories in which the orders are issued; they are not directed at 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 this in mind, with regard to online markets, MPA has aimed to identify each site’s predominant location(s) determined by a number of factors including server location, host location, and domain registrant location, recognizing that, frequently, these may be different. This underscores the vital importance of cross-border law enforcement cooperation.

³ Google Transparency Report.

https://transparencyreport.google.com/copyright/overview?hl=en&browse_copyright=ce:domain;size:6&lu=search_copyright©right_result_owner=©right_result_org=©right_result_domain=&search_copyright=q:THEPIRATEBAY.ORG

⁴ Money for Nothing: The Billion-Dollar Pirate Subscription IPTV Business. Digital Citizens Alliance and NAGRA. August 2020.

⁵ Alexa rank represents the approximate number of web sites in the world that have popularity higher than 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.

⁶ SimilarWeb site traffic data cited here represents worldwide unique visitors on desktop and mobile for the last month available. 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.

MPA appreciates this year's focus on the use of e-commerce platforms and other third-party intermediaries to facilitate the importation of pirated goods into the United States. Hard goods piracy, particularly on e-commerce platforms such as eBay, Facebook Marketplace, and OLX, remains a concern for MPA members. Much of this hard goods piracy comes in the form of illicit streaming devices (ISDs) which are TV-connectable devices pre-configured with infringing software and subsequently imported into the United States and around the world. This software allows users to access MPA members' content without authorization by using preloaded applications to scrape the internet (typically linking sites) for cyberlocker links to content.

Just in the second half of this year, the MPA sent notices for, and saw the successful removal of, more than 500 listings across these major marketplaces for infringing ISDs. Despite this success, more are being discovered and actioned weekly. Many of these listings pair ISDs with an IPTV subscription, further cementing their illegality. These listings often contain key descriptors meant to entice the buyer and lend illegitimate credibility to the seller by leveraging official brand names, such as "Can't afford HBO, Netflix, or Disney+?" or "Watch Netflix movies for free." These ISDs fraudulently pose as trustworthy and legal content viewing options, and the volume of listings reported by the MPA supports the severity of the issue at hand.

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 akin 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 the content in a video-on-demand format or downloading a permanent copy to their computers. 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 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 2020 was the enforcement action by Taiwanese authorities against the operators of 8maple.ru, a streaming piracy site which was highly popular in Taiwan and Hong Kong and which received around 32 million monthly visits. The website earned money from advertising revenues estimated at US \$140,000 per month. On March 31, 2020, police seized and took offline 8maple.ru and seven other related domains, arrested two primary operators, and froze more than US \$2 million worth of property and cash.

- **720pizle.org & Dizilla.com** – Turkey. These are the two most popular Turkish streaming sites. The sites are related: one focuses on movie streaming and the other focuses on TV series. The sites saw 27 million total visits and 6.9 million unique visits in September 2020. The sites are hosted at OVH SAS in Germany.

- **Bs.to** – Germany. Bs.to is Germany’s top pirate site for free streaming of TV series. The site publishes links of different hosters 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 25 million total visits and 1.7 million unique visitors in September 2020. The site is hosted with DDOS Guard.
- **Cda.pl** – Poland. Cda.pl is Poland’s most popular piracy website, eclipsing several legitimate VOD services in the country. Cda.pl had over 50 million worldwide visitors with 8 million unique visitors in September 2020, according to SimilarWeb data. The site currently enjoys a global SimilarWeb rank of 977 and a local rank of 242 in Poland. The operator of the website, Comedian S.A., uses Cloudflare’s services which mask the IP location of the website. Cda.pl is hosted at OVH Poland in Poland.
- **Cinecalidad.to** – Venezuela; Mexico; Argentina; Colombia; Dominican Republic; Peru; Chile; Guatemala; Ecuador; Panama; Uruguay. Cinecalidad.to is a popular streaming linking site that offers more than 5,000 infringing links to more than 2,000 titles including movies and television series. The website has been active since at least 2015. Its global Alexa rank is 499 with the following local Alexa ranks: Venezuela, 80; Mexico, 272; Argentina, 252; Colombia, 252; Dominican Republic, 78; Peru, 221; Chile, 309; Guatemala, 86; Ecuador, 214; Panama, 224; Uruguay, 348. Cinecalidad.to had over 12 million visits in September 2020 from 1.71 million unique visitors, according to SimilarWeb data. The site’s administrators monetize their infringing service through advertising served by a large number of national and international ad networks, as well as through the mining of bitcoin through users’ browsers, a method known as “cryptojacking.” Cinecalidad.to uses Cloudflare’s services which mask the IP location of the website.
- **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 480 and 328 on Alexa and SimilarWeb, respectively, and it receives around 9.5 million visits per month. 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 remain under investigation.
- **Egy.best** – Egypt. Egy.best is one of the oldest and most popular movie-linking websites in the Middle East. The site uses geo-protection filters to stave off enforcement. In September 2020, this site saw almost 34 million total visits and 9.6 million unique visitors, according to SimilarWeb data. Egy.best has returned to popularity despite enforcement actions, including by MPA, resulting in the site being taken offline in the spring of 2019. The site uses Cloudflare to mask its IP location, and the site is hosted by IHOR Servers in Russia.
- **Fmovies.to** – Unknown. 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 global Alexa rank is 1,699 with local

ranks of 875 in the U.S., and 268 in South Africa. Fmovies.to had 38.5 million monthly visits in August 2020, according to SimilarWeb data. According to the last available update, the site was hosted by BlueAngelHost at the Neterra data center in Bulgaria and is being masked behind the reverse proxy service Cloudflare. This masking curbs rights holders' ability to identify the site's precise host and location of the website's server. The site has been blocked in many countries, some due to MPA action, including India (which drove its popularity ranking down significantly), Australia, Denmark, Malaysia, and Singapore after former domain fmovies.se was blocked in nine countries.

- **Gimyvod.com** – Taiwan. Following the shutdown of 8maple.ru and related domains in Taiwan in March 2020, gimyvod.com has emerged as one of the most popular streaming Chinese language websites in the Asia region. Gimyvod.com contains a vast library of motion picture, television, anime content, and Asian dramas. As of August 2020, the site was ranked 36th in Taiwan with 39.8 million monthly visits from over 8 million unique visitors, according to SimilarWeb data. Gimyvod.com uses Cloudflare to mask its IP location curbing rights holders' ability to identify the site's precise host and location of the website's server.
- **“Indo 21” (Indoxxi) and many interrelated domains (e.g., dunia21.app, idtube.me, lk-21.info and layarkaca21indo.xyz)** – Indonesia. “Indo 21” and related brands remain popular Bahasa-language piracy sites throughout Indonesia and Malaysia. In December 2019, the Indonesian government announced that it had closed down more than 1,100 streaming piracy websites. In the wake of this action, the operators of Indoxxi announced that they were voluntarily closing their operations. Notwithstanding these developments, the Indoxxi group has continued to operate via a network of websites which are constantly being redirected, altered, and modified including to nameless IP addresses, so as to evade tracking and extensive site blocking efforts. Current counts have identified more than 200 URLs which are part of the “Indo 21” brand with approximately 80 of those currently redirecting to associated sites or IP addresses, and hundreds of others use related piracy “brands” to attract traffic such as “nonton” and “dunia21.” The most popular site of 2019, “indoxx1.center,” has since been redirected to “idtube.me” and had 360,856 visits in August 2020. Currently the most popular of the Indo 21 domains is “layarkacaxxi.org,” with 1,029,382 visits in August 2020. The average monthly visits across currently known Indo21 sites is more than 3.2 million in Indonesia alone. These sites use Cloudflare's reverse proxy services which mask the location of the websites' servers. At last available update, the site was hosted by India-based Host Palace. Many domains associated with this syndicate have already been blocked in Indonesia, Malaysia, and Australia.
- **MrPiracy.top** – Portugal. MrPiracy is operated out of Portugal and mainly caters to the Portuguese and Brazilian markets. Despite being blocked in Portugal, its domain, MrPiracy.top, is ranked 23 locally, according to SimilarWeb due to referrals from unblocked domains such as MrPiracy.site that provides over half of all visits to MrPiracy.top. The site enjoys 11.84 million monthly visitors, according to SimilarWeb data. The site hosts over 13,000 movie titles and 2,250 different TV shows. The operator of the website uses Cloudflare's services to mask the location of the website's server. The site is hosted by OBE Hosting in Sweden.

- **Pelisplus.me (formerly, Pelisplus.co)** – Mexico; Venezuela; Argentina; Peru; Spain; Colombia; Chile; Ecuador; Dominican Republic; Brazil. Pelisplus.me is a popular streaming linking site that offers more than 7,000 infringing links to more than 4,000 titles including movies and television series. The website has been active since at least 2018. Its global Alexa rank is 1,199 with the following local Alexa ranks evidencing substantial regional use: Mexico, 75; Venezuela, 58; Argentina, 119; Peru, 66; Spain, 221; Colombia, 163; Chile, 167; Ecuador, 73; Dominican Republic, 95; Brazil, 1,536; Bolivia, 28; Costa Rica, 126. Pelisplus.co had 60.74 million visits in September 2020 from 9.79 million unique visitors, according to SimilarWeb data. The site’s administrators monetize their infringing service through advertising served by a large number of national and international ad networks.
- **Phimmoi** – Vietnam. Phimmoi, found until recently at phimmoi.net and most recently at phimmoizz.net, is a Vietnamese-language streaming website offering thousands of unauthorised feature film and television series from the United States and all over the world. According to SimilarWeb data, for the 12 month period from June 2019 to May 2020, Phimmoi.net received a total of 862 million visits (a monthly average of 71.83 million visits), with 98 percent of this traffic coming from Vietnam. In August 2019, the MPA in conjunction with local rights holders filed a criminal complaint with the Vietnamese Ministry of Public Security. In June 2020, the authorities issued a notice of suspension of the investigation for unknown reasons. The Phimmoi.net domain was subsequently blocked, however Phimmoi has simply moved to alternate domains. In August 2020, phimmoizz.net received 19.45 million visits, according to SimilarWeb data. The site is ranked 50th in Vietnam, according to SimilarWeb data, and ranked 19th locally, according to Alexa data.
- **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 TV series, including cartoons and anime. Content can be searched and filtered by genre, year, and categories. According to SimilarWeb data, Rezka sees over 50 million monthly visitors and 7.5 million unique monthly visits. The content is sourced from the website’s own video CDN and from other external video CDNs.
- **Superflix.net** – Brazil. Superflix.net is a popular streaming linking site that offers more than 8,000 infringing links to more than 4,000 titles including movies and television series. The website has been active since at least 2017. Its global Alexa rank is 24,330 with a local Alexa rank in Brazil of 446. Superflix.net had 7.6 million visits in September 2020 from 1.5 million unique visitors according to SimilarWeb data. The site’s administrators monetize their infringing service through advertising served by a large number of national and international ad networks. The hosting location of superflix.net is being masked behind the reverse proxy service Cloudflare.
- **Topflix.tv** – Brazil. Topflix.tv 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 7,507 with the following local Alexa ranks: Brazil, 245; Angola, 73. Topflix.tv had 6.9 million visits in September 2020 from 2.2 million unique visitors according to SimilarWeb data. The site’s administrators

monetize their infringing service through advertising served by a large number of national and international ad networks. The hosting location of topflix.tv is being masked behind the reverse proxy service Cloudflare.

- **Zt-za.com** – France. Zt-za.com is the latest domain for zone-telechargement. One of the most popular direct download pirate sites in France, the main domain had 12.7 million total visits and 1.13 million unique visits in September 2020, according to SimilarWeb data. The domain has been changing over the last few years to avoid blocking and de-indexing actions by the MPA and others. The site is hosted with 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 which can be downloaded and/or streamed by the public. The distribution process is simple. A user uploads an infringing file and the cyberlocker or video hosting service gives the user a link for accessing the file. The user posts the link on one or several linking sites facilitating access to the wider public. Clicking the link will either initiate a download, a stream, or both, of the uploaded file.

It is common for links to unauthorized copies of movies and television programs to be widely disseminated across the internet, not just via linking sites, but also via 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. Moreover, they often do not present any search function, necessitating discovery elsewhere on separate websites. If a content owner sends an infringement notice for one of the links, the others may remain active, enabling continued infringement. Additionally, 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.

- **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 a 75 percent share of China's search engine market, and it is the second largest search engine in the world by user base. 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 has in recent years provided tools for taking down unauthorized motion picture and television content, and demoted infringing video listings of new release titles on Baidu search results, takedown rates and timeframes for removal of infringing links are inconsistent and inexplicably long. The average time it takes Baidu to remove infringing links from Baidu Pan is two or more days, with follow up notices being a necessity for rights holders. Given

Baidu's size, rights holders must sometimes send up to thousands of infringement notices for proliferating copies on Baidu Pan of a single piece of content. Considering its scale and resources, Baidu should do more to ensure consistent and speedy processing of takedown requests, to apply rigorous filtering technology to identify infringing content, and to take more effective action to suspend or terminate repeat infringers to ensure all rights holders are treated consistently and infringing content and links are removed expeditiously. In 2017, Sohu was successful in a first-instance suit against Baidu Pan for indirectly facilitating copyright infringement of third parties. However, that case is on appeal, and meanwhile, Sohu has filed two additional cases against Baidu for copyright infringement of additional licensed series.

- **Clipwatching.com** – Vietnam. Clipwatching.com is a cyberlocker video host with a global Alexa ranking of 5,160 with 20.8 million visits worldwide and 5.7 million unique visitors in September 2020, according to SimilarWeb data. When a user successfully uploads a video, links and html codes are generated to enable public distribution of the file. As a video host, Clipwatching.com has a generous affiliation program, offering payments of \$50 USD for every 10,000 views of a video longer than one minute in its top tier countries, and with a minimum payout of \$20 USD for 10,000 views in the lowest tier. Users can pay \$30 USD per year to access the uploaded content without advertisements. The site has approximately 100 subdomains and these act as referral points to help upload content to the service. Clipwatching.com has been steadily gaining popularity since its inception in 2017.
- **Collaps.org**– Russia. This popular pirate movie CDN has gained attention since MoonWalk, another prominent CDN, went offline in 2019. Currently the popular streaming video hosting service HDGO uses Collaps.org. These types of services are considered a Piracy as a Service (PaaS). PaaS refers to a suite of “off-the-shelf” piracy facilitation services that make it easy for would-be pirates to create and monetize a fully functioning pirate service.
- **Gounlimited.to** – Russia. Gounlimited.to is a streaming/downloading cyberlocker with a global SimilarWeb ranking of 1,883. Gounlimited.to had 23.22 million visits worldwide and 6.43 million unique visitors in September 2020, according to SimilarWeb data. Users who upload files are rewarded up to approximately \$30 USD per 10,000 views in top tier countries (Germany, UK, and U.S.). Gounlimited.to has a valuable membership scheme that offers an additional 50 percent profit to users on views when their video player is used as the main server on their website. Gounlimited.to has exploded in popularity over the past few years, with the site jumping from 2.2 million visits in February 2019 to 23.22 million visits in September of this year. This site is hosted at DDOS-Guard Ltd in Russia.
- **Mixdrop.co** – Russia. Servers for this video hosting service are located in Russia with MS Networks LTD. Mixdrop has a personal dedicated affiliate program, MixPartners, and advertises that affiliates can earn up to \$1,000 USD a week. The Mixdrop.co website states that it complies with DMCA notice requests, however, MPA has seen no compliance at all. The site had over 26 million visits from 7.2 million unique visitors in September 2020, according to SimilarWeb data.
- **Uploaded.net** – Netherlands; Switzerland. Uploaded.net is a direct download cyberlocker

that incentivizes users to upload large files, such as those associated with television episodes and movies, by paying rewards based on the file size, as well as a percentage of premium account sales referred by the user. This popular site also has a global SimilarWeb rank of 1,327. Users who upload files to the site are rewarded up to approximately \$50 USD for every 1,000 downloads; for every initial purchase of a premium membership, the user making the referral is paid 60 percent of the sale. Additional renewals of the premium membership earn the user making the referral 50 percent of the sale. Download speeds are throttled for users who do not purchase the \$69.99 USD annual premium membership. The website operates through multiple redundant domains that include Uploaded.to and Ul.to. The site is blocked in Italy and India. Uploaded.net had over 26 million visits from nearly 6.5 million unique visitors in September 2020, according to SimilarWeb data. It is owned by Swiss company Cyando AG and is hosted at Eweka Internet Services B.V. in the Netherlands.

- **Uptobox.com** – Switzerland. 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 SimilarWeb rank of 1,913 and a local rank of 230 in France. It offers a referral/reseller program, for which if a user deposits over €500, they get a 25 percent discount on a premium membership. According to SimilarWeb data, Uptobox.com had 30 million visits from nearly 8.6 million unique visitors in September 2020. The site is owned by Upworld Genius in Geneva, Switzerland and is hosted by Online SAS in France. The hosting location of Uptobox.com is being masked behind the reverse proxy service Cloudflare.
- **Vivo.sx** – Germany. Vivo.sx is the most popular German language cyberlocker. The main domain saw 36.8 million visits and 2.4 million unique visits in September 2020. Vivo.sx offers an affiliate program, promoting \$4 per 10,000 views in top-tier countries. It is being used by most of the major pirate sites in Germany, including bs.to discussed above. The servers for this hosting service are located in Czech Republic with CDN77.
- **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 supports streaming playback through embedded video players. Historically, it gained its popularity from easy access to illegal 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 operated by the same parent company. Technically, VK provides a content filtering system that purportedly allows rights holders to search and remove the

infringing content. However, the tool is not effective at detecting and blocking infringing content uploaded by users and does not work to proactively prevent piracy at the point of upload. VK is generally responsive to takedown notices; and still, it continues to be a significant infringement hub. Every month, MPA and its member companies find thousands of infringing files on the site. MPA welcomes recent overtures by VK parent company Mail.ru Group expressing a desire to address piracy issues with VK and other Mail.ru services, including joining the anti-piracy memorandum in November 2018. Unfortunately, VK remains relatively closed for external communication with rights holders, whereas an open dialogue could improve the overall approach in taking the infringing content down. The site operates on corporate-owned servers in Russia. The site has been blocked subject to criminal blocking orders in Italy.

Illegal IPTV Services: Illegal IPTV services typically offer hundreds of channels illegally sourced from providers worldwide alongside video-on-demand (VOD) content that includes unauthorized copies of movies and television series. Many of these illegal services are subscription based and run for profit, offering monthly or yearly packages to their user base. The technical infrastructure related to these services is often vast and complex, making the identification of content sources and service operators extremely challenging. 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 infrastructure and support services, such as hosting providers, media servers, and panel hosting, in order to function. 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 and 85 percent for wholesalers.⁷ 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.

A significant 2020 development in the IPTV piracy space was the Atria-Sohan Operation headed by the Spanish National Police and supported by Eurojust. This group offered illegal access to over 40,000 streaming services, subscription television channels, and films to approximately two million subscribers worldwide. Eurojust approximates that the proceeds for the suspects was at least €15 million. The Eurojust press release notes that approximately 50 servers were seized across nine countries.⁸

The following notorious markets are a sampling of the global illegal IPTV ecosystem:

⁷ Money for Nothing: The Billion-Dollar Pirate Subscription IPTV Business. Digital Citizens Alliance and NAGRA. August 2020

⁸ Eurojust press release, The Hague, June 10, 2020.

<http://www.eurojust.europa.eu/press/PressReleases/Pages/2020/2020-06-10.aspx>

- **BIPTV.best and BestBuyIPTV.store** – Unknown. BestBuyIPTV offers country-specific channel lists and boasts IPTV subscriptions with more than 10,000 channels from 38 countries and 19,000 VOD titles in multiple languages. BestBuyIPTV is compatible with most open/semi-open platforms and operating systems such as iOS (Apple), Kodi, Roku, and others. It adopts a common reseller affiliate model and while the site utilizes resellers, which leads to pricing variations, 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 restreamers worldwide.
- **Buy-IPTV.com** – Middle-East & North Africa. This service is popular in the Middle East and North Africa, with subscriptions to the service starting as low as €20 for a three month period. The backend website of the service, myiptv.services, has seen over 460,000 visitors in 2020 so far, for which the only purpose is to buy subscriptions to this infringing service. We can deduce that subscriber figures are therefore significantly higher. Buy-IPTV is compatible with all types of devices and is supplying over 5,000 live channels and 2,000 VOD channels. The service has been operating since 2016.
- **GenIPTV** – UK; Switzerland. One of the largest IPTV providers in the world, GenIPTV has over 10,000 international channels and 52,000 VOD titles. The service attracts over 200,000 visitors a month, according to SimilarWeb, and has multiple resellers. Hosting of their front-end domain is with Bandwidth Technologies in the UK, and their backend domain is hosted at Network Dedicated SAS in Switzerland.
- **IPTVForest.net** – Switzerland. This service offers a reseller program and customer plans starting at €10 a month for premium TV channels and an extensive VOD collection. Traffic to the website is around 50,000 visitors a month. 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.
- **King365tv.com** – North Africa. This is a long-standing and well-known IPTV provider. The service offers over 2,200 international channels and an extensive VOD library. King365tv.com averages around 75,000 visitors a month and, as the website provides no other functions, such as providing content, tech support, or updates, all these visits are likely from people interested in purchasing the service. Once a user has purchased a subscription, the user accesses the infringing content on other media players. As such, the subscriber count for King365tv.com is likely much higher than its domain traffic would indicate.
- **King-IPTV.net** – Middle East & North Africa. In operation since 2016, this service offers over 16,000 international channels and over 20,000 VOD titles as well as offering IPTV restreaming, potentially feeding hundreds of IPTV retransmission/streaming websites or apps around the world. The main domains have received over 1.13 million visitors in the last 12 months, according to SimilarWeb data. The service boasts a 24/7 customer support system.

Piracy Devices and Apps: A damaging piracy ecosystem has emerged around piracy devices and apps, i.e. “illicit streaming devices” (ISDs). Piracy devices and apps 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, thus undermining the licensing fees paid by distributors on which content creators depend. MPA members continue to suffer enormously from a growing threat of these devices and apps. Streaming devices that are preloaded with infringing apps and TV/VOD subscription services can be found online and in physical marketplaces. 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. Piracy devices are also sold in physical marketplaces in the Asia Pacific region, notably including Singapore’s Sim Lim Square.⁹

- **Everstream** – France. This VOD app offers movies and TV shows with a significant amount of content dubbed into French. This application is often pre-bundled with illicit IPTV streaming devices. Everstream has a premium option that offers extra features and removes advertising for two Euros a month. We estimate that the app has been downloaded around one million times.
- **Mobdro** – Global. Mobdro is one of the most popular IPTV applications worldwide. The app offers hundreds of channels, including genre or series-specific channels. Despite malware accusations stemming from research carried out by network security company Dark Wolfe and published by the Digital Citizens Alliance, the application’s popularity continues to grow. According to self-reported data from Aptoide, Mobdro had over 1.6 million monthly visitors and over five million downloads on Aptoide alone.
- **PopcornTime** – Global. PopcornTime is a known infringing application that enjoyed a recent surge in popularity. PopcornTime started as an open source project and has many ‘forks’ and versions. PopcornTime.app, an example of one of the main domains where users can download the app, had over 980,000 visitors in September 2020. GetpopcornTime.is/kids.html, another noteworthy domain, offers a version that caters specifically to children’s content walled off from most age inappropriate content. The app uses a sophisticated interface with many APIs connected to make available thousands of movies and TV shows. The app has been subject to blocking orders in many countries, including: Denmark, Norway, UK, Belgium, Italy, and Portugal.
- **TVTap** – Global. TVTap is a free Android streaming application with access to over 500 live channels. The app saw almost two million visits in the last year at its official domain, tvtap.bz, which simply 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.
- **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

⁹ The Government of Singapore is considering amendments to strengthen protections against resellers of such boxes, although no draft has yet emerged.

incorporates 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 more than 500 agents and distributors worldwide, while sellers and users of the device can be found across Asia Pacific, Europe, the U.S., and Canada. Unblock Tech's set top boxes have continued to be among the most popular in the Asia Pacific region.

Peer-to-Peer Networks & BitTorrent Portals: Users of peer-to-peer (P2P) or file-sharing networks use software that allows them to join “swarms” of other users who are distributing a particular title (*e.g.*, a movie, TV show, song, book, etc.). As each user downloads pieces of the file, their computer distributes the pieces to others in the swarm. The most popular P2P software is “BitTorrent.” BitTorrent websites facilitate file sharing by organizing and indexing torrent files, and initiating and managing the download process. The BitTorrent landscape remains popular, serving millions of torrents to tens of millions of users at any given time.

A significant development in 2020 in the BitTorrent piracy space was the dismantling of Sparks Group in a multi-country enforcement action coordinated by the U.S. with support from Eurojust and Europol. The U.S. Department of Justice approximates that the damage caused by the criminal gang operating Sparks Group amounts to tens of millions of dollars in losses to film production studios.¹⁰ The Eurojust press release notes that the Group had servers in 15 countries around the world.

The torrent sites identified 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 592. The site provides access to a range of content, including movies, TV series, music, and software. 1337x.to had nearly 52 million visits from 7.66 million unique visitors in September 2020, according to SimilarWeb data. The site is hosted with the DMCA resistant BlueAngel Host in Bulgaria. 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.
- **Rarbg.to** – Bosnia and Herzegovina. Rarbg.to is a very popular torrent website with a global Alexa rank of 414 and a local rank of 293 in the U.S. The site provides access to a range of content including movies and TV series. According to SimilarWeb data, Rarbg.to had nearly 46 million visits from 5.3 million unique visitors in August 2020. The site is hosted in Bosnia and Herzegovina by NETSAAP Transit Services. The site and its variants have been subject to blocking orders in Portugal, Italy, Denmark, Finland, Indonesia, Belgium, Ireland, Malaysia, Australia, and the United Kingdom.
- **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

¹⁰ 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>

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 895 and a local rank of 108 in Russia. According to SimilarWeb data, Rutracker.org had 47.3 million visits from 5.3 million unique visitors in September 2020. 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.

- **Tamilrockers.ws** – India. This infamous torrent site, along with its many progeny and copycats, constitutes a notorious piracy brand syndicate for motion pictures. The primary domain Tamilrockers.ws has grown exponentially over a short period of time, with the site now ranking in the top 200 in 12 countries. The site is currently ranked 470 in India and received 11.2 million total visits in August 2020, according to SimilarWeb data. The site's operators frequently boast about offering new releases on their site within hours of a film's theatrical release. Despite sustained efforts to block Tamilrockers and its related sites, the group has shown an expertise in evasion by quickly creating and rotating new domains to continuously thwart blocking efforts. The syndicate's operators and server locations are unknown and it uses proxy servers located in Russia or the Ukraine.
- **ThePirateBay.org** – Vietnam. Available in 35 languages, ThePirateBay.org (TPB) is one of the largest BitTorrent websites, with a global SimilarWeb rank of 1,390, and a local rank of 1,287 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 Austria, Belgium, Denmark, Finland, France, Iceland, Ireland, Italy, Malaysia, the Netherlands, Norway, Portugal, Spain, Indonesia, Australia, Argentina, and the United Kingdom. The website has been reported to have multiple alternative domains hosted in various countries around the world over the years. According to SimilarWeb data, ThePirateBay.org had 30 million visits from 9.25 million unique visitors in August 2020. The hosting location of the website is kept hidden by two intermediaries: first by Cloudflare's reverse proxy service and second by a system located at the hosting provider Shinjiru Technology in Malaysia.
- **Yts.mx** – Netherlands. The most popular movie-dedicated P2P torrent site in the world, YTS boasts 67 million total visits and 10.3 million unique visitors, as of September 2020. Over 17,000 movies are available in HD and 4K quality. The site is ranked 461 globally, according to SimilarWeb data. While the site is accessed from all over the world, it is most popular in the U.S., with almost 14 percent of traffic originating from the U.S. The site has worldwide appeal due to its vast library that prides itself on 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, UK, Italy, Ireland, Norway, Australia, Portugal, Denmark, India, and Spain. The site is a frequent domain hopper to avoid site blocking. The site is hosted at Abelohost in the Netherlands.

Hosting Providers: Hosting providers make available the essential infrastructure required to operate a website. Websites engaged in massive copyright infringement depend on a hosting provider for the technical infrastructure to make their website easily viewable and to provide high-quality video playback. The hosting provider has the ability to take websites engaged in massive copyright infringement offline or to disable or otherwise shut them down.

Some hosting providers allow sites to hide behind a content delivery network (CDN). A CDN is typically used to effectively and efficiently deliver content to a global user base by placing servers all around the world that cache the pages of the website, providing a high-speed hosting infrastructure to some of the most popular web streaming services. One of the by-products of using a CDN is that they mask the true IP and hosting provider of a website. An example of a CDN frequently exploited by notorious markets to avoid detection and enforcement is CloudFlare, a reverse-proxy service that also provides a CDN functionality. Reverse proxy functionality hides the real IP address of a web server.

Given the central role of hosting providers in the online ecosystem, it is disconcerting that many refuse to take action upon being notified that their hosting services are being used in clear violation of their own terms of service that prohibit intellectual property infringement and, with regard to notorious markets such as those cited in this filing, in blatant violation of the law.

- **Amaratu/KoDDos** – Netherlands. This service is considered a “bullet-proof” hosting provider for pirate sites, meaning it allows their customer considerable leniency in the kinds of material they may upload and distribute. Some of the biggest sites take advantage of Amaratu/KoDDos services. For example, MoonWalk, the CDN network that went offline last year, relied heavily on their services. Amaratu/KoDDos is not responsive to takedown requests.
- **BlueAngel Host** – Bulgaria. Advertised as Non-DMCA compliant in their description when searched on Google, BlueAngel 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 “bullet-proof” hosting provider for pirate sites. Some of the biggest sites are taking advantage of Ddos-Guard’s services, including bs.to and s.to from this list. Ddos-Guard is not responsive to takedown requests.
- **HydraX.net** – Vietnam. HydraX.net offers a “Proxy CDN Service” that allows users to upload videos via Google Drive or dragging and dropping files onto the sites page. HydraX.net then obfuscates the location of the hosted content to prevent enforcement and shield the identity of the uploader. The service then provides the ability to embed the videos with their own player on separate sites for free but viewers will be served ads by HydraX.net. Many piracy sites including 123movies.fun, gostream.site, solarmoviez.ru, and yesmovies.to have previously, or currently, used HydraX.net to host and serve video content.

Registries: Registries are organizations that manage the registration of domain names within the

domains for which they are responsible, control the policies of domain name allocation, and technically operate their domain. They can also fulfill the function of a domain name registrar or may delegate that function to other entities. Websites engaged in massive copyright infringement depend on a registry to provide the domain name required to operate. The registry, directly or via its contractual relationship with 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. It is administered by SWITCH Information Technology Services. Examples of infringing websites operating with .CH TLD include yggtorrent.ch, kickass2.ch, wootly.ch, movierulz.ch, project-free-tv.ch, and torrentdownload.ch.
- **.IS Registry** – .IS the ccTLD for Iceland. Registration of .IS domains is open to all persons and companies without any special restriction. Examples of infringing websites operating with .IS TLD include filmlinks4u.is, watch32.is, soap2day.is, torrentz2.is, and moviewatcher.is. The .IS registry does not respond to international or local law enforcement requests.
- **Njalla** – Saint Kitts and Nevis. This registry provides registrar and privacy protection services and was founded and is owned by Peter Sunde, a founder of The Pirate Bay. While there are many piracy services on the market, Njalla is prominent among pirate services with notorious sites such as FlixTor.is, GetPopcornTime.is, and yggtorrent.is using Njalla to hide their registration details.
- **.RU Registry** – .RU is the ccTLD for the Russian Federation. The control of .RU is assigned to the Coordination Center for TLD RU (CC for TLD .RU), the current official registry. Examples of infringing websites operating with .RU TLD include rlsbb.ru, 33bukvi.ru, tvundergroud.org.ru, kinoflix.ru, films-torrent.ru, and hd-videobox1.ru.
- **.TO Registry** – .TO is the ccTLD of the Kingdom of Tonga. The Government of Tonga sells domains in its ccTLD to any interested party. The .TO ccTLD is administered by 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. It is marketed commercially for use in television or video-related sites. It can, however, be registered and used for any purpose. Examples of infringing websites operating with .TV TLD include pelispedia.tv, hdfilme.tv, cima4u.tv, and lostfilm.tv.

Payment Providers: Payment processors include credit card companies and networks, acquirer banks within these networks, Paypal 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 the abuse of payment processors by piracy services is

found in the hundreds of millions of dollars paid for infringing content and counterfeit goods each year.

- **VoguePay** – Nigeria. Based in Nigeria, this payment provider is quite popular among illegal IPTV service providers. The company offers a secure payment gateway for risky online businesses at the cost of having substantial transfer fees. The gateway accepts credit cards. VoguePay is used by the following infringing IPTV services: King365tv.com, mymagic-tv.net, acasatv.net, beiptv.com, volkaiptv.fr, iptvstramers4less.com, and ipxbuy.com.

Ad Networks and Online Advertising Entities: Ad networks are the companies that connect advertisers to infringing websites, contributing to the prevalence and prosperity of infringing sites by providing funding to the operators of these sites through advertising revenue. Although many ad networks have established best practices and guidelines to address ads supporting or promoting piracy, detection and policing of illicit sites continues to have its challenges.

- **1XBET** - Russia. 1XBET is a Russian gambling site that has started to support some of the earliest releases of infringing theatrical camcords and infringing streams of live television broadcasts. It has become the third most active online advertiser in Russia. According to data collected and published by Mediascope, 1XBET's advertising comprised 2.4 percent of all advertisements available in Russia, compared to 3.3 percent by Google and 3.1 percent by PepsiCo. Reportedly, the online casino pays to insert visual and audio advertisements into new piracy content sources incentivizing camcord and livestreaming piracy. 1XBET knowingly and routinely advertises its services through display ads on piracy sites and by burning a watermark with promotion codes into the video files of infringing camcord recordings. Thus, piracy is used as a vehicle to support this online gambling giant.
- **GetB8.com** – Russia. Getb8.com is an online casino that, like 1xBet, has been suspected of financially supporting infringing camcord release groups by paying them to integrate burned-in advertisements in video files captured from illegal theatrical camcording.
- **PopAds and PopCash** – Costa Rica; Poland. Both PopAds and PopCash are owned by Tomksoft in Poland but registered in Costa Rica. PopAds is actively involved in generating revenue for copyright infringing platforms including gomovies123.org, megafilmeshdplus.org, video.az, and mega1080.com and PopCash is currently used by watchmoviestream.me. These sites also used PopAds to pay invoices to third parties such as intermediaries, including hosting providers, and to pay uploaders as part of the platforms' reward scheme. PopAds had previously been generating revenue for Openload and Streamango, two of the most popular video file hosting services that were shut down in October 2019 with over 136 million and 32 million visits per month, respectively, according to SimilarWeb data in the months prior to shut down.
- **RevenueHits** – Israel. RevenueHits is one of the most popular ad networks amongst pirate sites, especially cyberlockers/file hosting services, where most of their ad impressions are targeted, such as turbobit.net and zippyshare.com. Many of their advertisements appear to be

focused on the European market through targeted ad placements.

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', written in a cursive style.

Charles H. Rivkin
Chairman & CEO