

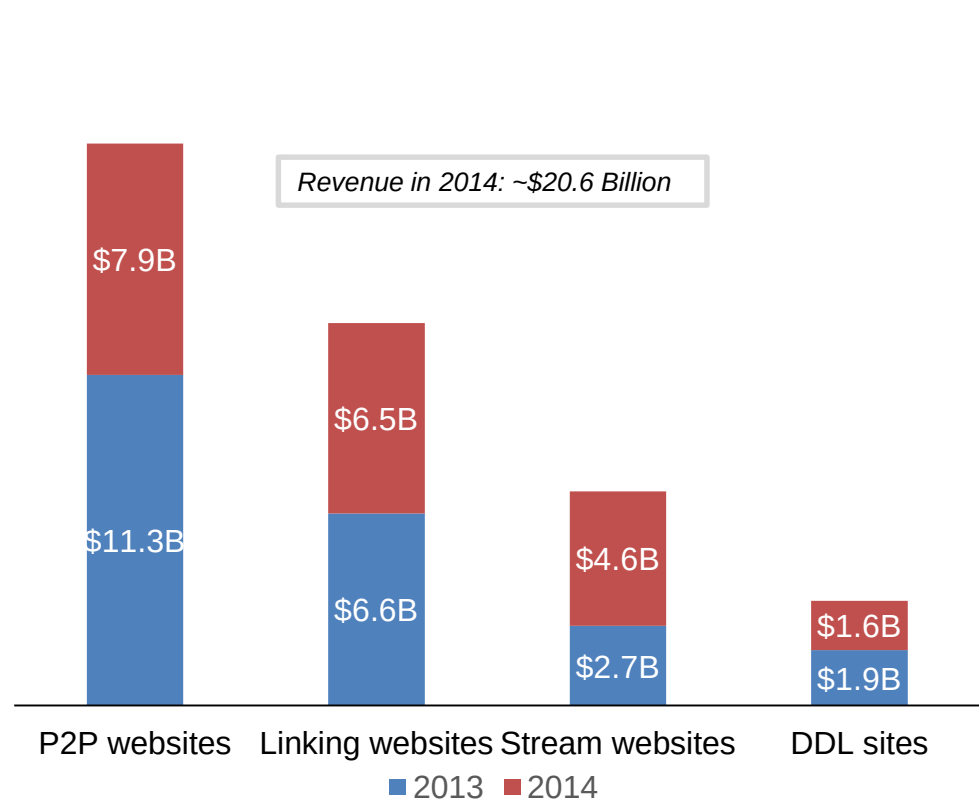


Digital Piracy India

Tactical & Strategic Measures

Pirates make significant amount of advertisement money which comes from top brands pursuing eye balls

Yearly ads revenue – by website size



Note1: All the revenue data collected from research paper “Good Money Still Going Bad” by Digital Media Citizen Alliance

Advertisement brands on pirate websites



Note2: Refer of MarkScan case study in appendix “A. Piracy Revenue chain” for details on piracy revenue chain

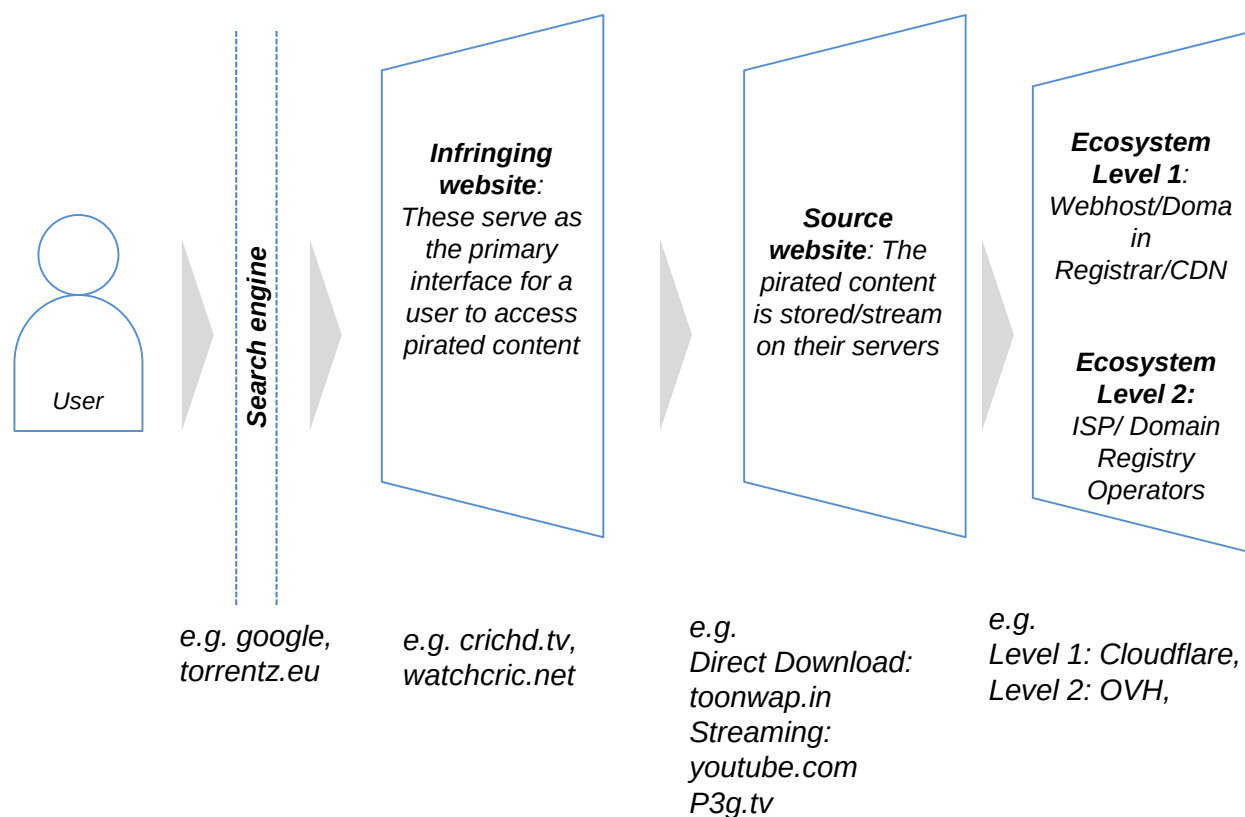
Criminal release groups provide pirate content and users access the content via search engines & pirate websites

Release groups nexus

- Criminal release groups record/leak the digital products
- The Internet provides numerous channels through which pirate and counterfeit products can be sold or distributed
- Peer-to-peer (P2P) networks and file-sharing sites are increasingly used to traffic digital content, while forums, blogs and Internet Relay Chat (IRC) help these release groups to communicate with their customers
- Meanwhile, online auction sites are increasingly used to sell these pirate copies, frequently to unsuspecting users

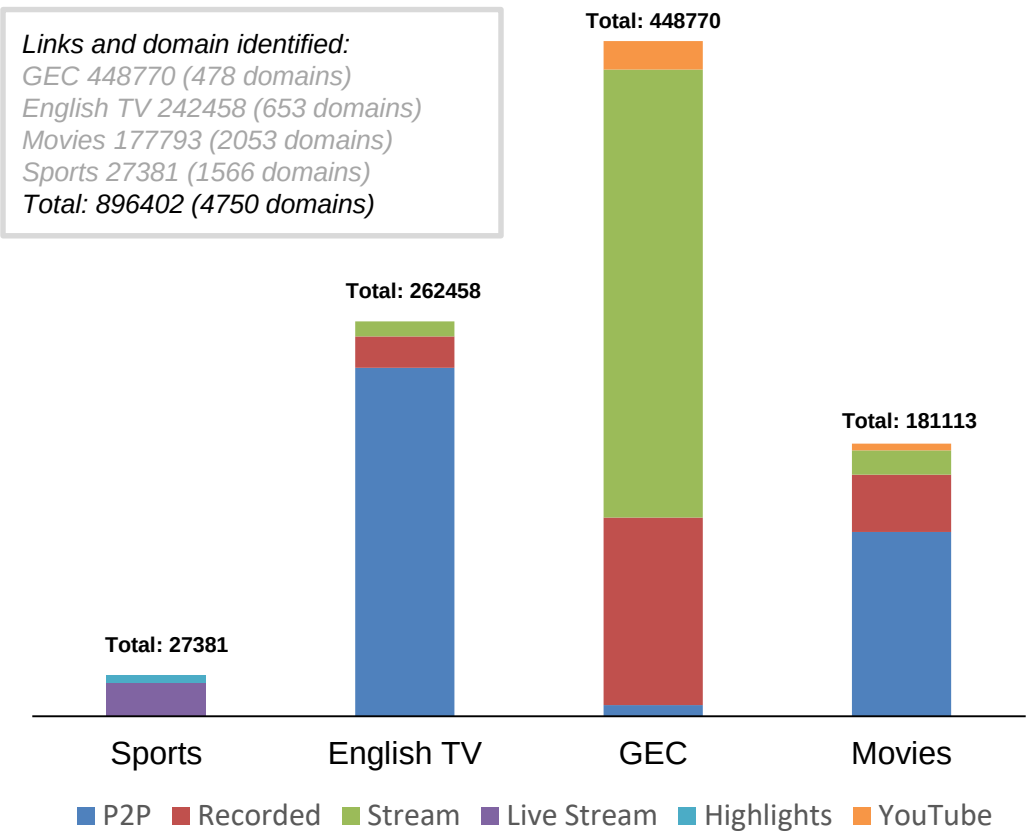
Note: Information collected through own research & from members of Industry

Delivery of pirated content



Pirate content is available on the Internet & Mobile platforms in epic amounts...

Pirated content – Internet



Pirated content – Mobile apps

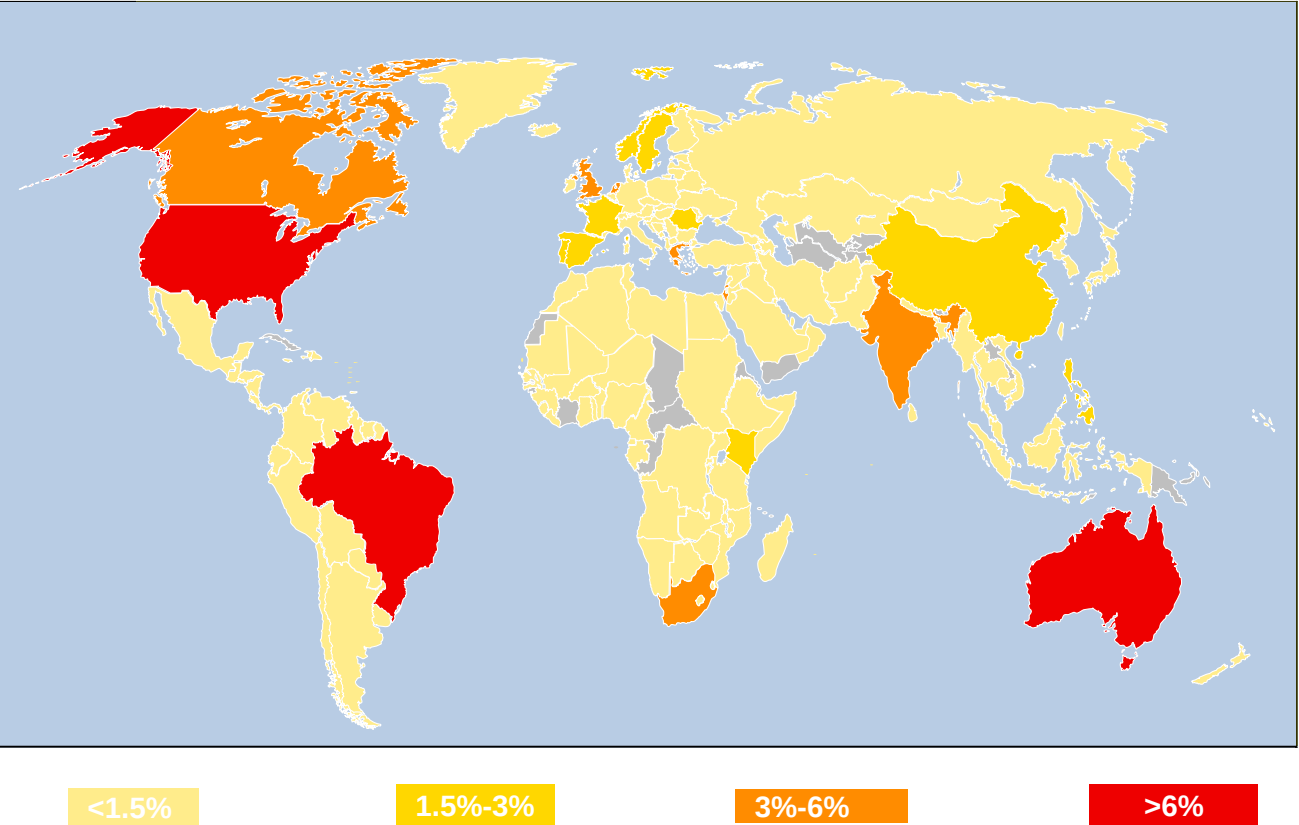
Mobile Platform	Total
	7
	104
	16
Total	127

Google Play Store, i-Tunes store & Windows mobile platforms account for almost all mobile app downloads

Note: Internet data is from 24th Feb to 31st May and Mobile apps data is of 1st May 2015 to 31st May 2016

... and is being consumed by the Indian diasporas as well as global audience around the globe...

Global piracy map of P2P users



Top countries & % of users

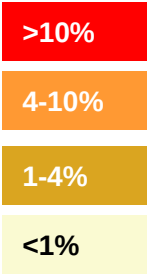
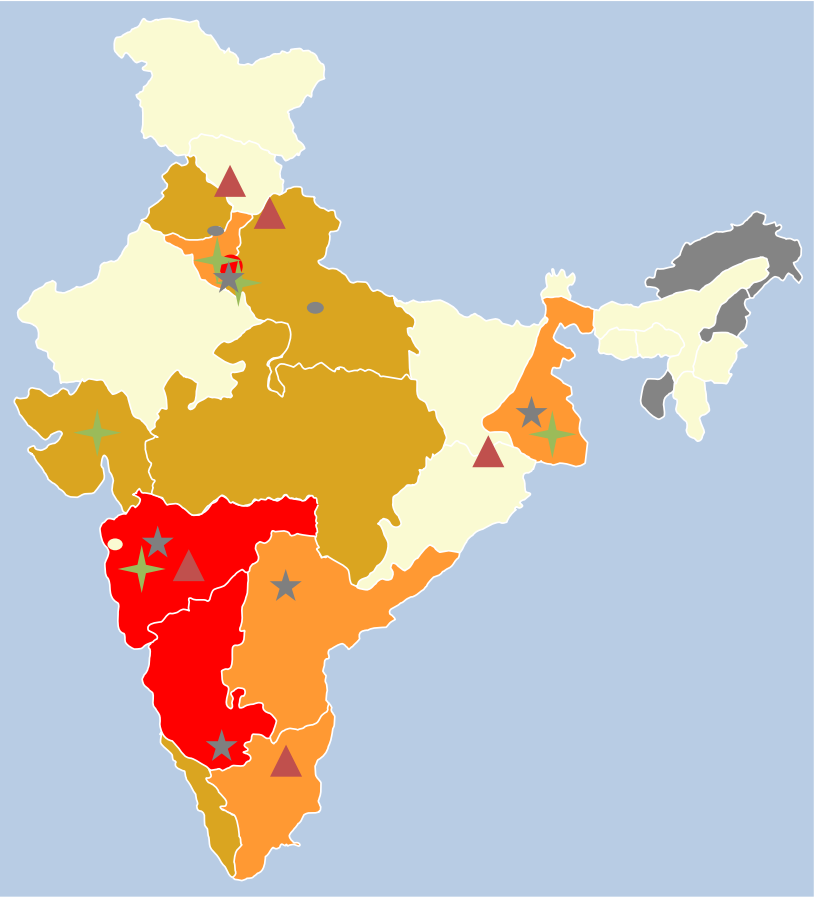
Country	% of Users
United States	10%
Australia	7%
Brazil	6%
United Kingdom	6%
Netherlands	5%
Canada	4%
South Africa	3%
India	3%
Israel	3%
Greece	3%

Most of the users were identified in US, Australia, Brazil, UK & Netherlands

Note: This sample data used one torrent of 10 English properties to track users of pirated content on p2p platforms

...and in India, with metros accounting for most consumption of the pirate content

Piracy map of P2P users in India



★ Tier 1 Cities and % viewers in India

Mumbai	15%	Total Tier 1: 60%
Bangalore	15%	
New Delhi	11%	
Kolkata	5%	
Hyderabad	3%	

★ Tier 2 Cities and % viewers in India

Gurgaon	2%	Total Tier 2: 18%
Noida	1%	
Thane	1%	
Ahmedabad	1%	
Suri	1%	

▲ Tier 3 Cities and % viewers in India

Shimla	0.3%	Total Tier 3: 22%
Kundan	0.3%	
Powai	0.3%	
Vellore	0.3%	
Jamshedpur	0.2%	

Tier 1: Metropolitan Cities
Tier 2: State capitals & other commercially important cities
Tier 3: Consists of 385 cities that are not categorized under Tier 1 & 2, & user data has been captured during per our research

Note: This sample data used one torrent of 10 English properties to track users of pirated content on p2p platforms

We will look at ongoing as well as proposed tactical & strategic measures against digital piracy, including those around the world

Ongoing

Proposed

Tactical Measures

- A** Digital Content Protection Program
- B** Court Websites Blocks/John Doe Orders



Enhanced Protection Program



International protection

- *IPTV enforcement*
- *Global content consumption heat maps*



Dedicated Digital platform/forum

- *Piracy revenue chain throttle*
- *User (demand) & uploader (supply) liability*
- *Digital policy advocacy*
- *Eco-system coordination*
- *Coordination with other digital content owners*
- *Liaison with global enforcement bodies*

Strategic Measures

IP/Copyright policy advocacy via listing industry forums CII/FICCI



Global digital enforcement & policies

- *US*
- *Canada*
- *Netherlands*
- *UK*
- *S. Korea*
- *Australia*
- *France*
- *Brazil*
- *Spain*

MarkScan has launched a comprehensive digital protection program for Copyright owners

Google removal

- MarkScan is member of TCRP (Trusted Copyright search removal program); Google global program for select content protectors
- We remove pirated search results from Google with a Media TAT of <4 Hours and reduced visibility of pirated content by 90%+

Content removal

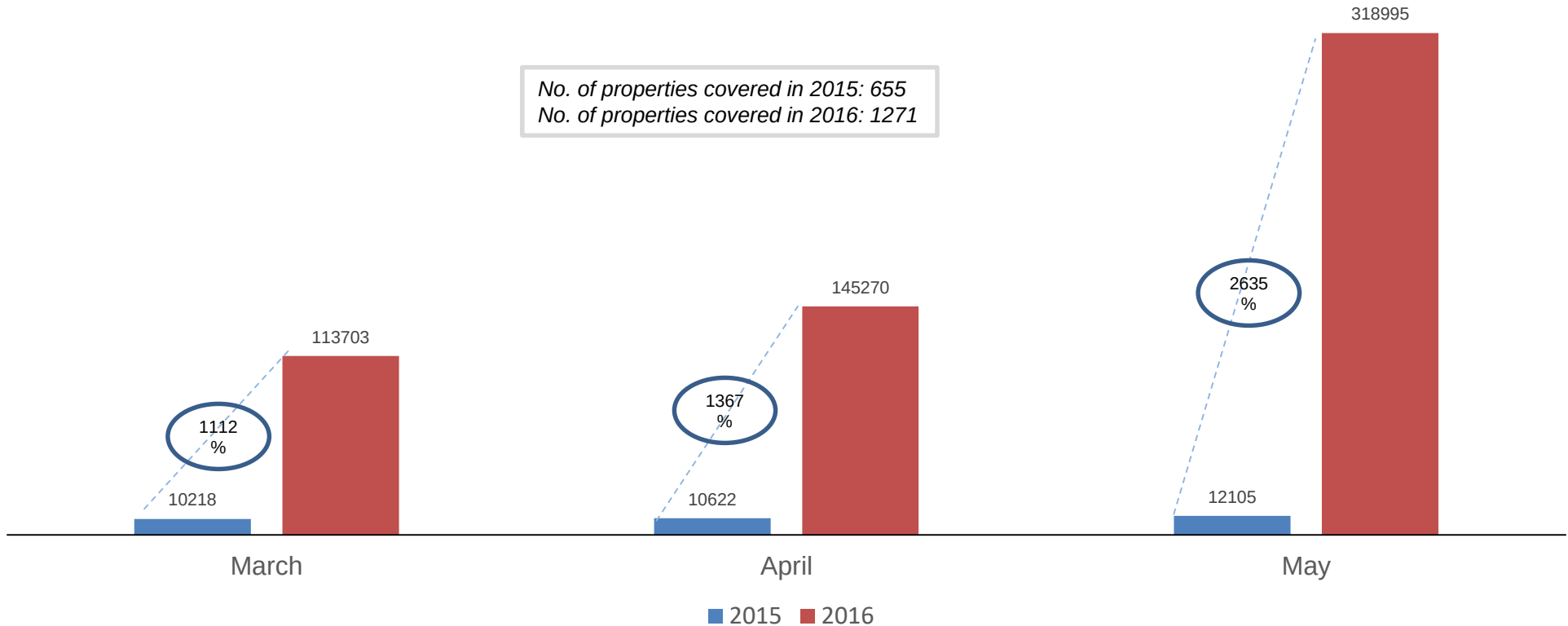
- We have ensured >85% content removal, resulting 95% of reduced accessibility on pirated content
- Our MediaScan System has direct emails of copyright agents of >2000 websites.
- We have direct take down tool of >50 popular pirate platforms.

Advanced escalations & relationships

- We follow rigorous enforcement strategy where we reach out to internet ecosystem elements and filing criminal complaints against rogue websites through e-mails and phones irrespective of their location.
- We have very sound relationships with several websites & intermediaries who help us remove pirate content expeditiously.
- We ensured 90%+ reduction in the accessibility of pirate content

Digital antipiracy efforts have been significantly scaled up.....

Links reported to Google – comparison



Note: All the data has been collected from Google transparency report.

.....and accessibility to pirate content has been severely restricted

Pirated content taken down

Total Identified= 916401
Total Takedown= 826063

Live Stream



YouTube



Recorded content



■ Takedown ■ Total Identified

Google search removal results

Total = 577968

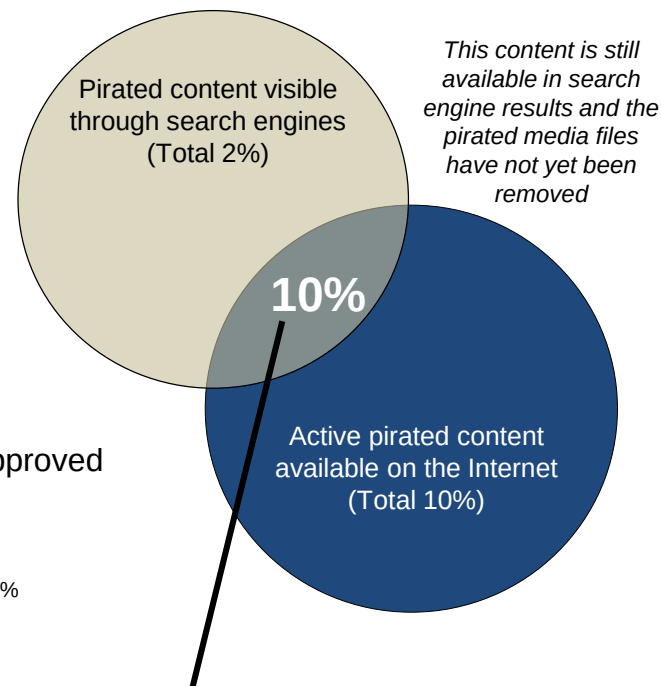
<1%

2%

■ Pending ■ Rejected ■ Approved



Impact on user access



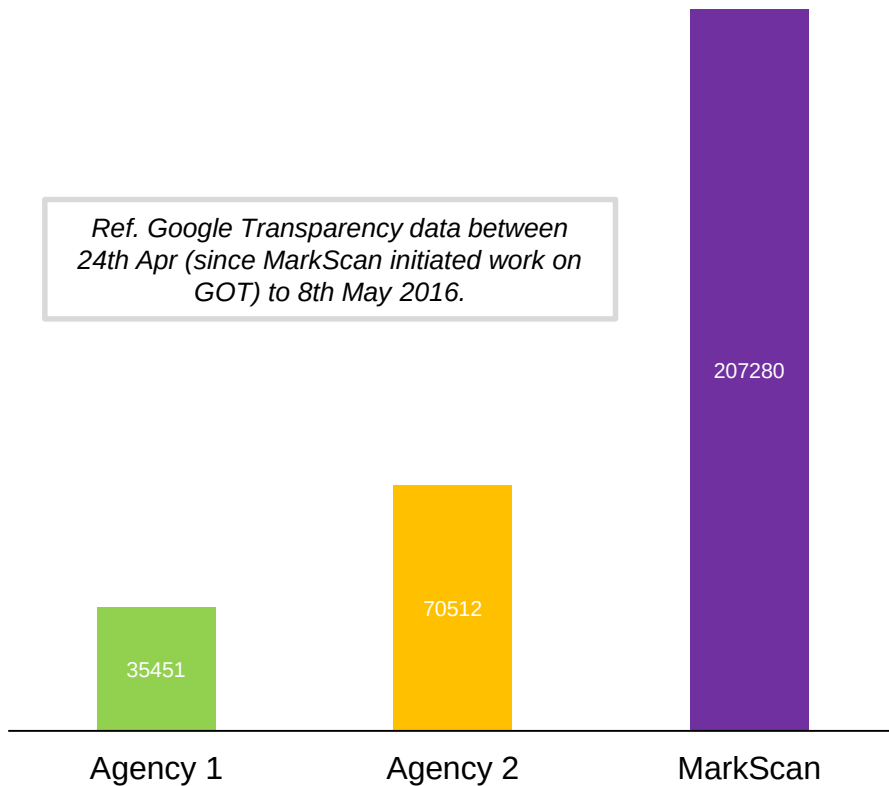
This content is still available in search engine results and the pirated media files have not yet been removed

Note1: Takedown on YouTube refers to the implementation of applicable policy

Note2: Sports Live stream which were removed from Google are mentioned as taken down.

Worthy results have been delivered on critical projects, persistent offenders have been punished by escalations to ecosystem

English TV – MarkScan vs Global agencies



Enforcement highlights – few cases

Website(s)	Escalation Details	Impact
watchvideo2.us vidshare.us idowatch.net cloudy.ec letwatch.us playu.net	(GEC) The case was escalated to the CDN provider	149,985 links taken down
monova.org torrentz.eu torrentsmirror.com torrentz.in torrentz-proxy.com torrentz.website torrent-download.website torrent.officialwap.com	(English TV) Links taken down using take down tools	47,484 links taken down
Sports websites	(Sports) Homepage of these websites were delisted from search results	64 websites were delisted

Note: We reached out to several 3rd parties playing key roles in the ecosystem to have infringing content taken down or blocked for access

However, there are persistent non-compliant offenders which are causing significant harm

Internet eco-system elements – Top 10 non-compliant platforms (Streaming, Torrents, Live)

Streaming Websites	ISP/CDN	Registrar	Torrent Websites	Revenue	Registrar	Live Streaming Websites	Revenue	Registrar
watchvideo2.us	CloudFlare	Enom, Inc.	torrentfunk.com	CloudFlare	Tld Registrar Solutions Ltd	p3g.tv	CloudFlare	Name.Com, Inc.
vidshare.us	Contabo GmbH	Enom, Inc.	torrentreactor.com	CloudFlare	Godaddy.Com	biggestplayer.me	CloudFlare	Enom, Inc.
idowatch.net	CloudFlare	Enom, Inc.	torrentdownloads.me	CloudFlare	Enom, Inc.	cast4u.tv	CloudFlare	Pdr Ltd.
embedvideo.to	Tamatiya EOOD	Tonic	limetorrents.cc	CloudFlare	Enom, Inc.	streamifyplayer.com	CloudFlare	Gandi Sas
letwatch.us	Contabo GmbH	Enom, Inc.	itorrents.org	CloudFlare	Enom, Inc.	yocast.tv	CloudFlare	Pdr Ltd.
cloudy.ec	CloudFlare	Nameaction Inc.	torrents.net	prq Inet - Access	Enom, Inc.	embeducaster.com	CloudFlare	Dynadot, Llc
letwatch.to	Contabo GmbH	Tonic	torlock.com	CloudFlare	Tld Registrar Solutions Ltd	zenexplayer.com	CloudFlare	Key-Systems
tvlogy.to	CloudFlare	Tonic	extratorrent.cc	CloudFlare	Internet Bs	embedezcast.com	CloudFlare	Key-Systems
playu.net	CloudFlare	Bigrock Solutions	1337x.to	CloudFlare	Tonic	rocktv.co	CloudFlare	Godaddy
vodlocker.com	CloudFlare	Enom, Inc.	torrent.isohunt.to	CloudFlare	Tonic	P2pcast.tv	IAAS SAAS	Enom, Inc.

Note: CloudFlare is a U.S. company that provides content delivery, sitting between the visitor and the website hosting provider, acting as a reverse proxy for websites

These non-compliant pirates are using technology and exploiting the short comings of the legal system

Functionality - Popcorn time

- The program has been forked several times with several other development teams, means mass production.
 - The most effective available at this stage is to block Popcorn Times and 3 Torrent websites
 - However the app can still be used as uTorrent client.
- Require Internet to work in popcorn time
-
- Popcorn time application
- YTS.AG
- Kickasstorrents
- RARBG
- Bittorrent client
- Work Similar to uTorrent

Shortcomings of Indian legal system

Process & Technical Issues

- ISP coordination process for communicating and monitoring the block is tedious & unnecessarily opaque
- No standard turaround time requirements for ISPs means inordinate delay
- DNS server block methodology used by ISPs is easily circumvented

Legal Related Issues

- Legal orders have no validity beyond India whereas target viewership is global, similar jurisdiction al shortcomings also for websites & ecosystem which is all mostly outside India
- Court orders not consistent on url vs domain level block; mirror websites are left out of the ambit
- Resource & time intensive process which is repetitive & increasingly template driven, limited incremental value coming out

Enhanced digital protection leverages technology, digital forensics and coordination with ecosystem & law enforcement ✓

Enhanced Protection Measures – Framework

Action area	Disruption target	frequency	Modus operandi	Action pros & cons
1 Internet Ecosystem	a Hosting server	Ongoing	—Copyright infringement notices —Legal C&D notices, escalations & follow-ups	+ Relatively easier to detect technically - Easy to replace streaming server
	b Content Delivery Network	Intermittent	—Identify the ecosystem & dependencies —Disrupt content delivery by targeting key technology enablers	+ Resource intensive to rebuild for the pirates - Technically challenging to build full map
2 Operational Infrastructure	a Uploader group	Ongoing & One-time	—Work with broadcasters/operators to identify fingerprints — Kill their nexus — Enforcement action in India (see below)	+ Disruption of multiple group networks - Enforcement action is time/resource intensive
	b Datacenters/Office	One-time	—Collect evidence using online & on-ground investigations —Liaise with foreign law enforcement bodies to carry out enforcement action (civil/criminal raid, etc.)	+ Permanent seizure of operations, financial losses, judicial punishments/jail
	c Sales network		—Liaise with foreign legal partners to ensure effectiveness	- Global enforcement action even more time/resource intensive
3 Financial Ecosystem	a Payment gateway & Banks	Ongoing	—Identify, notify & disrupt the payment gateways/ bank accounts supporting operations	+ Potential revenue loss - PGs relatively easy to replace

Note: The framework has been designed to deliver targeted impact on specific products/services

We deployed enhanced digital protection measures for RokuIndia, ✓ resulting in seizure of their funds & suspension of the website

Breakthrough in Rokuindia case

- 1 We sent first level notice to the website owner and forced them to suspend their operation in India immediately.
- 2 Simultaneously we had escalated the matter to the intermediaries of Rokuindia.com.
- 3 They didn't stop operations globally hence we identified their PayPal account and escalated the matter to PayPal team
- 3 PayPal Initiated investigation on the case on 14th April 2016
- 2 Rokuindia.com suspended their operations globally after we put pressure on the website's intermediary, 15th April 2016
- 3 The website found suspicious during PayPal investigation and they seized the PayPal account.

Note: Bullet points mentioned in this e-mail are directly referred to enhanced digital protection exercise.

Confirmation e-Mail PayPal



Dear

Thank you for submitting the Infringement Report form.

We have investigated the matter and taken the appropriate action with regard to the PayPal accounts associated with the reported website/s.

This refers to the following URL/s:

<https://rokuindia.com/>

PayPal is now no longer a functioning payment option on the reported URL/s.

You can find additional information and tips about buying and selling safely on our Business Resource Center at <https://www.paypal-businesscenter.com/buy-and-sell-safely>.

We thank you in advance for your cooperation. If you have any questions, please contact the PayPal Brand Risk Management Department at infringementreport@paypal.com.

Sincerely,

Sara

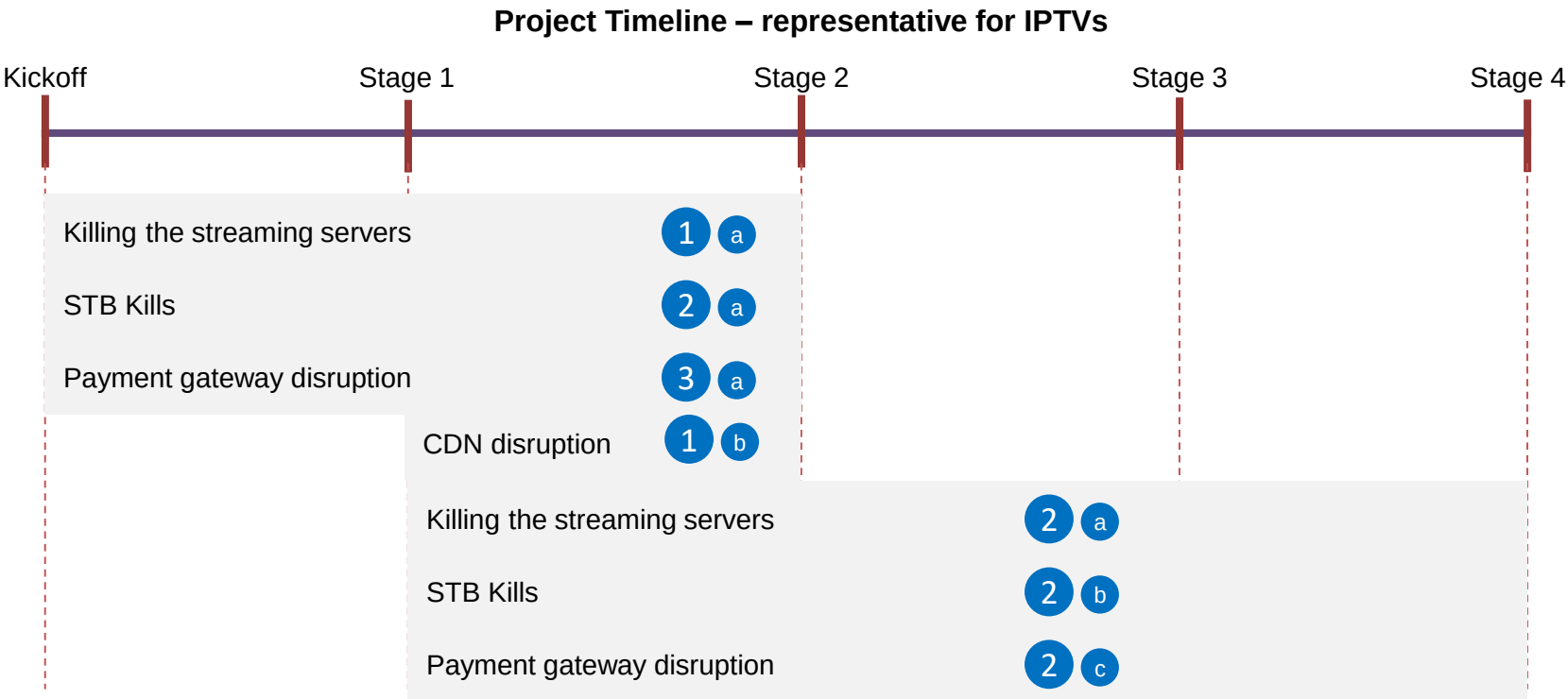
PayPal, Brand Risk Management

PayPal



These enhanced protection measures can also be used by the international team to tackle pirate IPTV networks

Enhanced Protection Measures Modus Operandi – IPTV

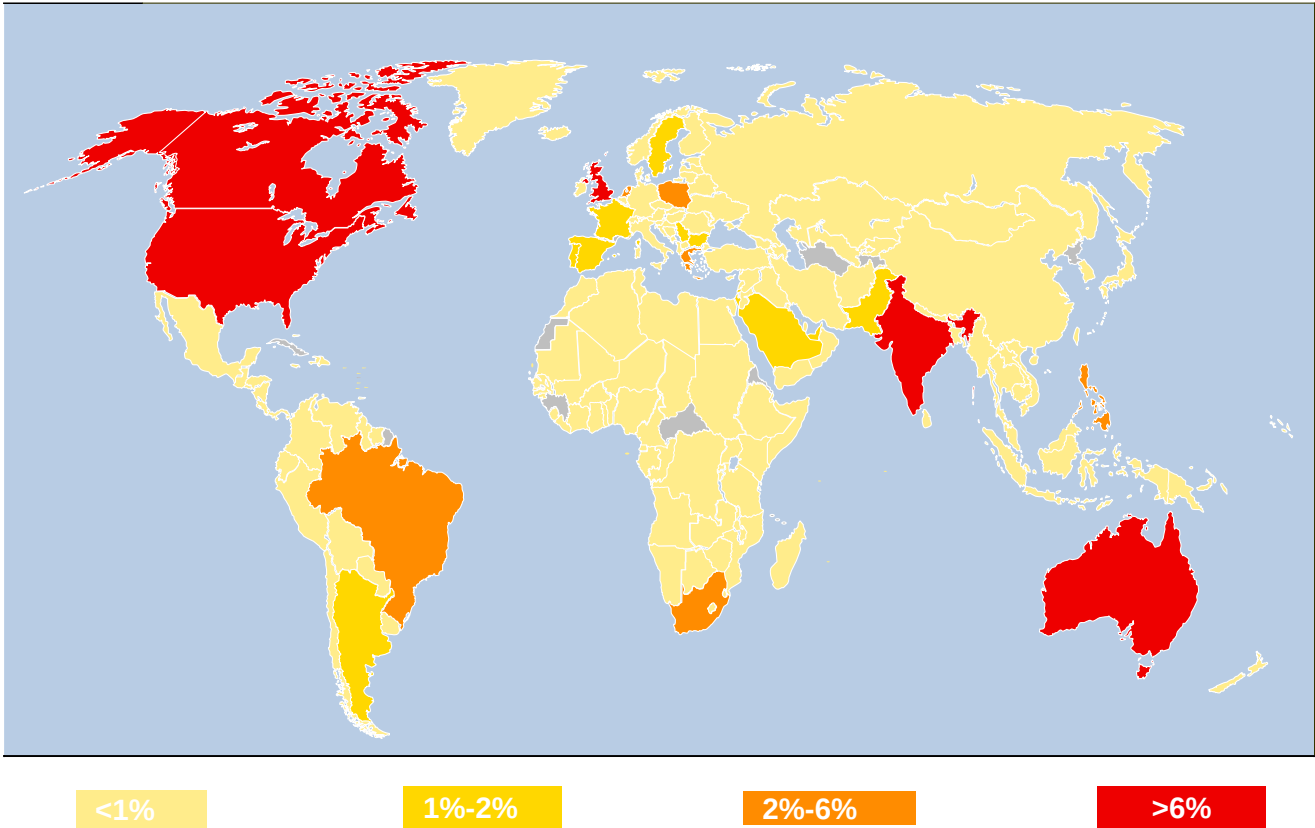


Note: The applicable actions vary from case to case & will be decided basis the requirement of the specific project

Pirated content consumption heat maps can be used by the international teams to identify new markets and key properties



Global piracy map of P2P users



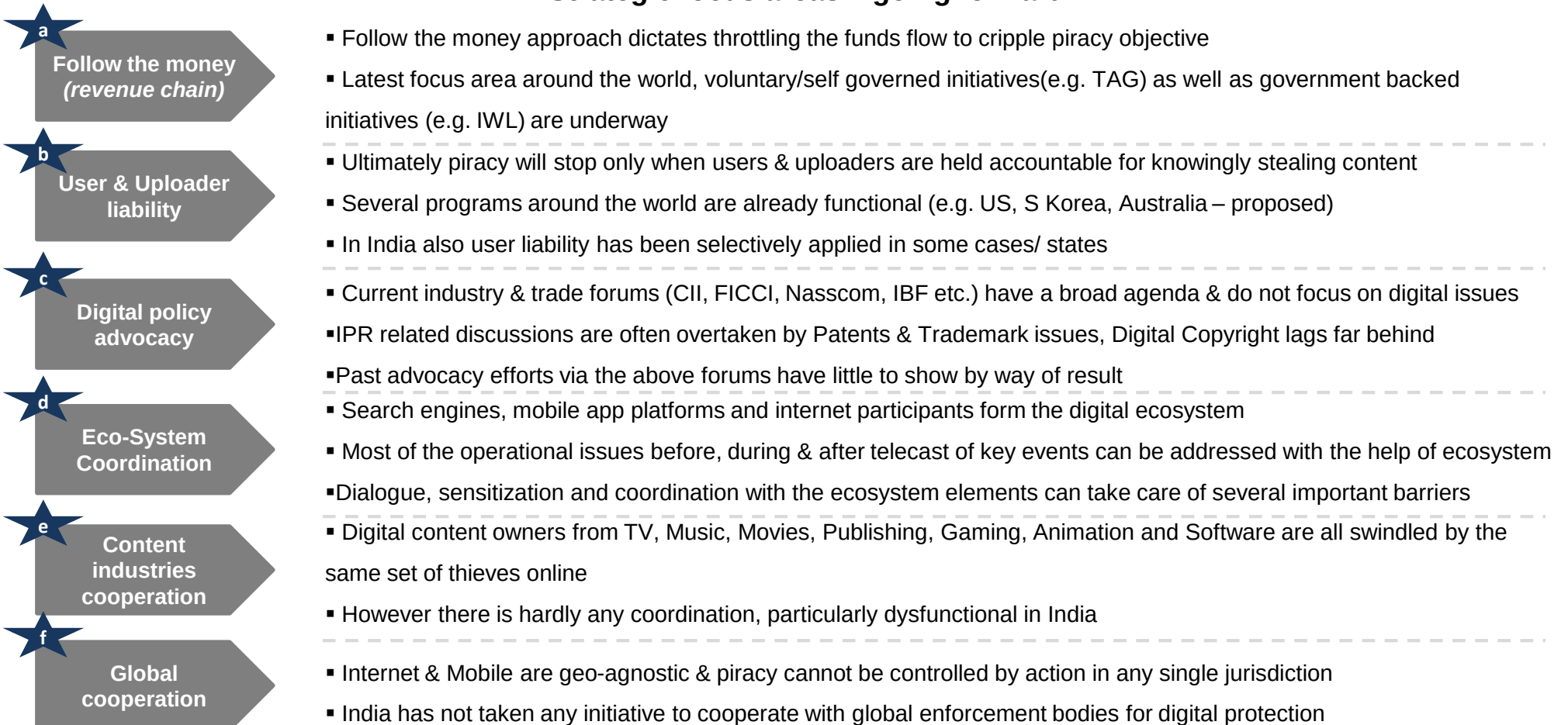
Top countries & % of users

Country	% of Users
United States	11%
United Kingdom	8%
Australia	8%
India	7%
Canada	6%
Brazil	5%
Philippines	4%
Greece	3%
Netherlands	3%
South Africa	2%

Most of the users were identified in US, UK, Australia, India & Canada

Key strategic areas need to be focused upon for effective clampdown on digital piracy

Strategic focus areas – going forward



Undermining the revenue flowing into pirate website from well known advertisers should be a key strategic focus area

Advertising revenue chain – sample of Indian brand owners

Brand(s)	Media Agency	Digital Media Agency	Internet Ad Network	Website
<i>Jabong.com</i>	➤ Mindshare (A WPP Group Company)	➤ Zenith Optimedia	➤ appnexus.com bidvertiser.com clicksor.com directrev.com doubleclick.com doubleclick.net googleads	➤ 1337x.unlocktorrent.com 300mbfilms.co 300mblinks.com 300mbmovies4u.com allmoviesdvd.com athomemovies.net bayproxy.me
<i>Olx.in</i>	➤ Lowe Lintas (An IPG media brands company)	➤ Zenith Optimedia	➤ adnxs.com googleadservices.com mgid.com popads.net	➤ ahashare.com animeultima.tv bollywoodglow.com ddlvalley.org full2movies.net
<i>Shaadi.com</i>	➤ JWT (A WPP Group Company)	➤ Havas Media	➤ adcash.com adk2.com adnxs.com clickwinks clkads.com directrev.com	➤ 1337x.unblocked2.co 720pmovies.net animefave.net anime-media.com animesubbed.com clickhdmovies.me
<i>zovi.com</i>	➤ JWT (A WPP Group Company)	➤ OMD India	➤ adcash.com adnxs.com directrev.com doubleclick.com onclickads.com	➤ bts.to downloadingzoo.com filmikz.ch freemoviestime.com fullmovie2in.com

Note: There are two major initiatives underway by to address the above issue



UK & USA have taken the lead in denying advertising funds to pirates



- A ground-breaking police operation that disrupts illegal websites providing access to films, TV, books, music and games has seen major success.
- A report by the Digital Citizens Alliance estimated that in 2013 piracy websites generated \$227million from advertising.
- If a website fails to comply and engage with the police, then a variety of other tactical options may be used including.
- Suspension of the site disrupting advertising revenue through the use of an **Infringing Website List (IWL)** are few tactics.
- The IWL is an online portal providing the digital advertising sector with an up-to-date list of copyright infringing sites.
- Websites identified by the creative industries, evidenced and verified by PIPCU are part of the IWL list.
- Police Intellectual Property Crime Unit (PIPCU) launched Operation Creative and the Infringing Website List in 2013.
- There has been 73% decrease in advertising from the UK's top ad spending companies on copyright infringing websites.



- Trustworthy Accountability Group (TAG) is a cross-industry accountability program to create transparency in the business relationships and transactions that undergird the digital ad industry
- TAG was created with a focus on four core areas: eliminating fraudulent digital advertising traffic, combating malware, fighting ad-supported Internet piracy, and promoting brand safety.
- Interactive Advertising Bureau (IAB) has released its *Anti-Fraud Principles*, to root poor-quality ad traffic out of the system.
- These principals are Fraud Detection, Source Identification & Process Transparency.
- These principals are to help the industry reclaim some of the \$8.2 billion by improving fundamental business practices
- IAB is comprised of >600 media and technology companies that are responsible for selling 86% of digital ads in the US.
- The organization educates marketers and the wider business community about the value of interactive advertising.

Developed digital economies across the globe leverage demand side as well as supply side measures to restrict pirated content

Individual subscribers (Demand Side) sanctions

- **US, FR, KR, UK** warning letters to subscribers who have been found downloading/uploading pirated content.
- There is ultimate sanction of prosecution if infringement from the account being monitored does not cease.
- Slowing the speed of the internet connections to accounts that have been linked to infringement if the behavior persists (**US**)
- **US & South Korea** have given right to terminate internet access for a given period for persistent infringers.
- **All the countries** reserve the right to use traditional judicial measures to pursue persistent infringers.
- Only **Brazil and South Korea** are the countries where there can be imprisonment on these cases
- The first four types of sanctions are extra judicial processes that have been developed across these countries

Content providers (Supply Side) sanctions

- Take down and blocking of sites (**US, UK, BR, IT, NL & SP**)
- 'Follow the money' approaches, targeting intermediaries for being involved in monetization of pirated copyright content (**NL, SP, UK**)
- Content providers can file a case with courts to takedown/block sites as well as for damages and compensation (**All countries**)
- Some countries (**IT, KR, NL**) provides lists of 'clean sites' to increase consumer awareness
- **France** has provided subsidies (Youth music cards) to consume the legal content online
- Educative approach rather than punitive, by govt. (**FR, UK, CA, US**) sponsoring educative classes
- Both take down and follow the money are also extra judicial processes.

Note1: Ref. Reports published by IPO UK: International comparisons of approaches to online copyright infringement 2015

Note2: This study has reviewed the online copyright infringement policies of US, UK, Brazil, Canada, Italy, France, Netherlands & South Korea



Six strikes user liability program in the US has been one of the most effective, some isolated actions have been taken in India

USA Copyright alert system (6 strikes program)

- The Copyright Alert System (CAS) is a private system for alerting, educating, and punishing subscribers of five major ISP.
- The CAS framework was established on July 7, 2011 by the Center for Copyright Information
- The system issues alerts to subscribers whenever they download pirated content
- Alerts usually contains explanation on how to avoid future offenses, and direct users to lawful content sites.
- If the suspicious behavior persists, additional alerts are sent. These alerts ask the subscriber to acknowledge receipt of the messages by clicking a notice.
- After a fifth alert, ISPs are allowed to take "mitigation measures" to prevent future infringement.
- If the ISP did not institute a mitigation measure following the fifth alert, it must enact one after the sixth alert.
- In the CAS's first year, Comcast, the nation's largest ISP, sent out 625,000 warnings to its users

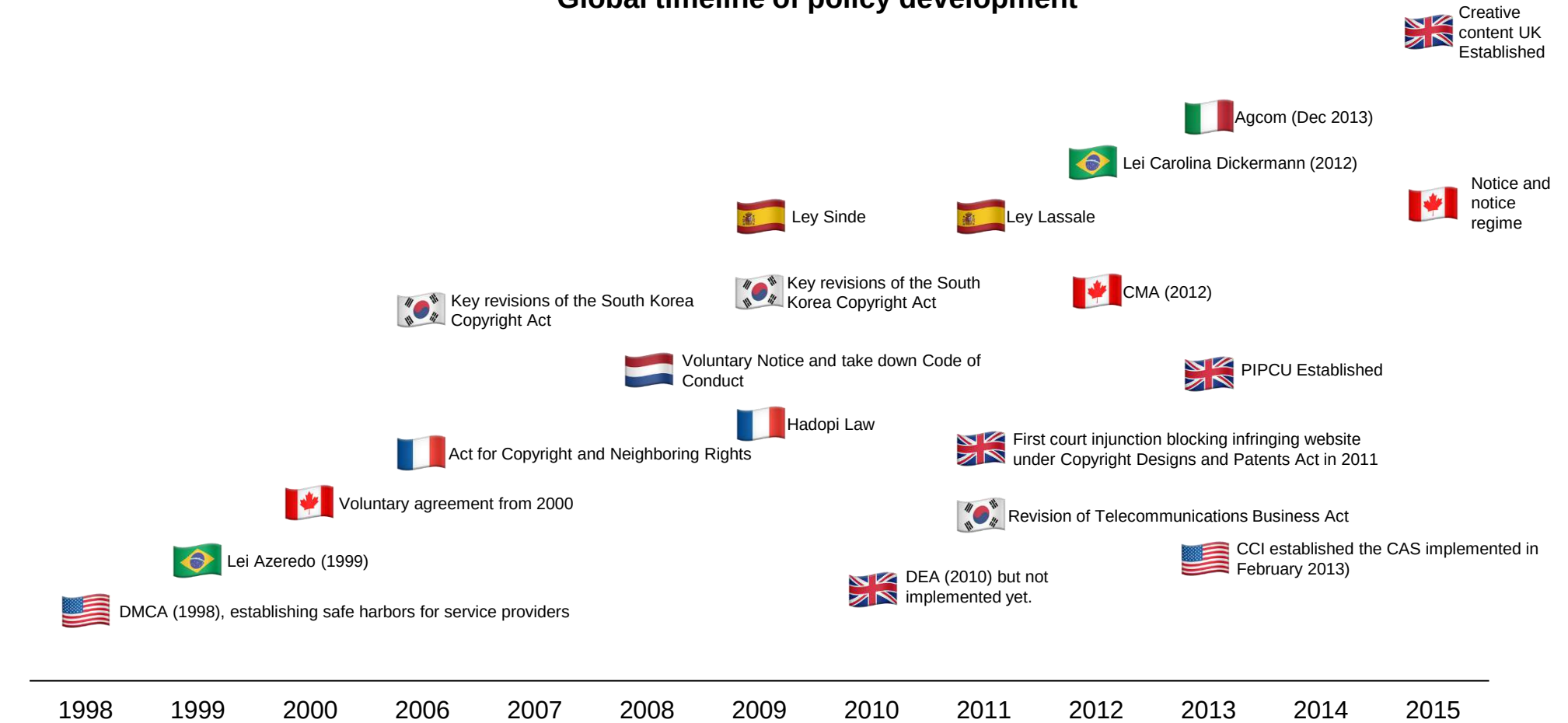
India isolated cases

- First case of holding users liable for copyright infringement has happened in 2012 when the Bachelor party (Malayalam movie) was released.
- Anti-piracy cell of the Kerala Police registered cases against 1,010 Internet users for uploading and downloading the movie.
- A Tamil Nadu-based film website was also among those facing legal charges
- Internet users and anti-monopoly advocates say the police action against movie downloaders is "questionable."
- Shemaroo Entertainment, has procured a John Doe order from the Mumbai HC to pre-emptively protect 'Hunterr' movie.
- The order, not only was to restrict piracy on cable, digital and physical medium but watching the film from an illegal source.
- There are no official information available whether any of the cases were registered against the users who downloaded the movies.



Key countries have been developing & evolving policies to tackle digital piracy for years, India has not even started

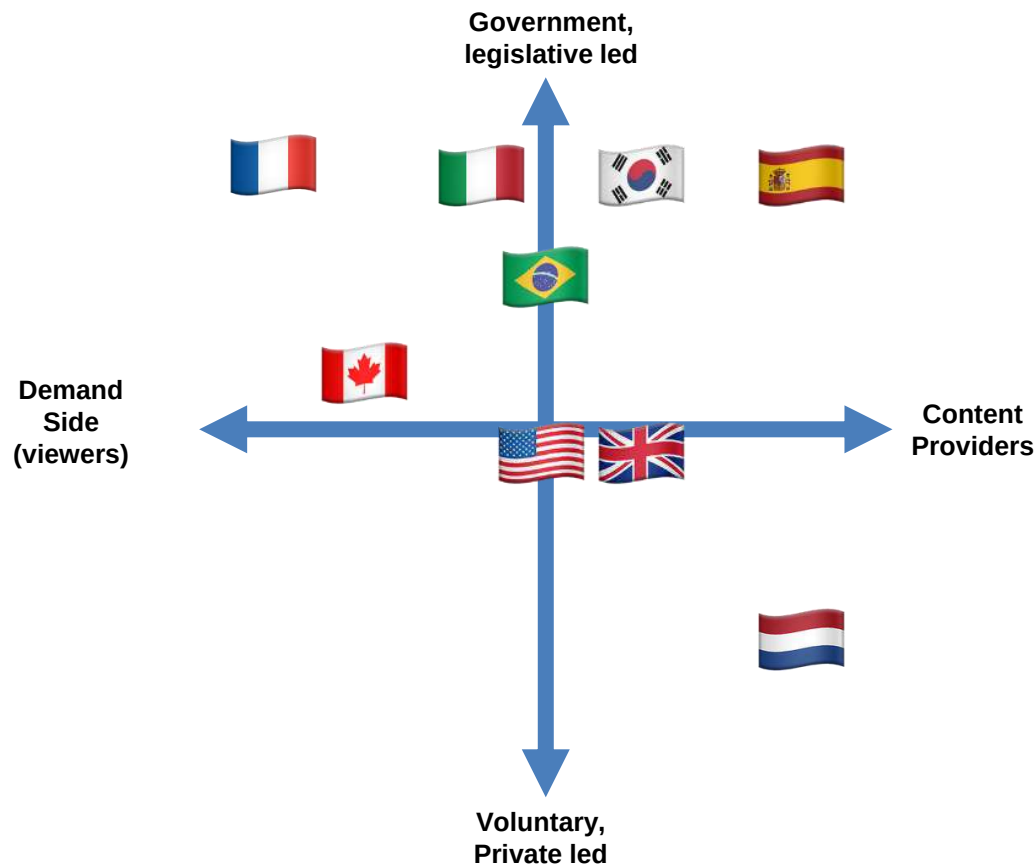
Global timeline of policy development



Note: Ref. Reports published by IPO UK: International comparisons of approaches to online copyright infringement 2015

Enforcement measures are mostly government led, with some self regulatory initiatives also in place, to deter supply as well as demand

Online enforcement across different countries



Implementation and institutional aspects

- There is a quite a mix in terms of the degree to which enforcement is undertaken in countries
- **Netherlands** is the only country with private & voluntary system of 'notice and takedown'.
- The **French** system is the mirror image of the Dutch, targeting individual subscribers (HADOPI)
- The **UK** has almost arrived at a voluntary system by default (Digital Economy Act)
- Copyright Alert System in the **US** has been designed from the outset as a voluntary scheme
- The approach in **Brazil** can target either individuals or content providers/enablers and has no voluntary elements
- **South Korea (MCSS) and Italy (Regulator)** enforcements are led by dedicated public institutions.
- **NL, SP, UK** explicitly tackle the wider ecosystem as part of their enforcement efforts.

Note: Ref. Reports published by IPO UK: International comparisons of approaches to online copyright infringement 2015

Dialogue & coordination with key participants of Internet & mobile ecosystem can help resolve many of the process issues

Improvement Areas – for before, after & during content telecast

		Before	During	After
Internet	Search Engine	Google preemptive block of persistent/suspected urls	- Google slow on weekends, also not 24x7 on weekdays - Mirror search results should be removed automatically	Permanent delisting of hard core pirate websites
	Website & Eco-System	- Action on advance caution notices mandatory 'Safe harbor' websites need to mandatorily have take down tool	- Lesser turnaround time from intermediaries for known platforms - Content re-upload should not be possible	- Coordination with ecosystem elements to prevent switching - Website risk classification - Concentration of ecosystem in non-compliant geo to be denied
Mobile Apps	Mobile Platforms	- Content authorization should be mandatory before listing - App developer info not to be shielded	- App store process & turnaround time for removal to be standardized & published - Content removal vs App removal policy to be consistent	- Infringing Mobile apps already downloaded still functional after removal from platform - Blacklisting of persistent offenders
	Focus Area	Preemptive steps	Turnaround time	Penal Action

Non-compliant platforms having pirated content are also the nemesis for music, books, software & gaming industries

GEC – Top 10 websites

Website	Content delivery	TOC
watchvideo2.us	Stream	   
vidshare.us	Stream	   
idowatch.net	Stream	   
embedvideo.to	Stream	   
letwatch.us	Stream	   
cloudy.ec	Stream	   
letwatch.to	Stream	   
tvlogy.to	Stream	   
playu.net	Stream	   
vodlocker.com	Stream	   

Movies – Top 10 websites

Website	Content delivery	TOC
torrentfunk.com	P2P	      
torrentreactor.com	P2P	      
torrentdownloads.me	P2P	      
limetorrents.cc	P2P	      
itorrents.org	P2P	      
torrents.net	P2P	      
torlock.com	P2P	      
extratorrent.cc	P2P	      
1337x.to	P2P	      
torrent.isohunt.to	P2P	      

Sports – Top 10 websites

Website	Content delivery	TOC
p3g.tv	Live Feed	 
biggestplayer.me	Live Feed	 
cast4u.tv	Live Feed	 
streamifyplayer.com	Live Feed	 
yocast.tv	Live Feed	 
embeducaster.com	Live Feed	 
zenexplayer.com	Live Feed	 
embedezcast.com	Live Feed	 
rocktv.co	Live Feed	 
P2pcast.tv	Live Feed	 

 TV Shows
  Movies
  Software
  Games
  Sports
  Music
  Books

UK IPO works with several international & national bodies, as well industry & enforcement partners to address piracy issues

UK IPO Liaison with global partners & enforcement bodies

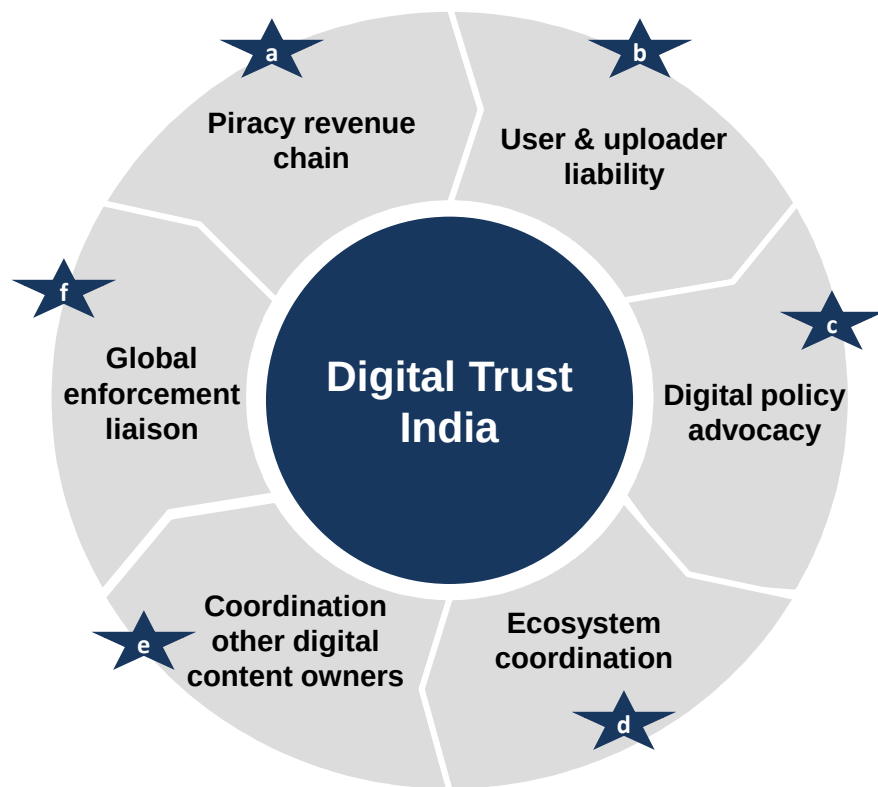


- The UK IPO works with the **WIPO**, the **European commission** and through bilateral agreements with other member states to fight IP crimes and infringement.
- PIPCU (UK Govt. agencies)**, between 2010 (when the reforms started) to 2013, suspended over 8000 websites.
- In 2014, **UK** publishers association has request Google to remove 1.75 million URLs from its search results
- To address low levels of IP awareness among enforcement officers in **India**, they worked with **FICCI** to produce an Enforcement Toolkit.
- Their partners based in **Brazil, India, China and SE Asia** have delivered practical support in IP protection.
- In partnership with **Interpol**, IPO provides training and development of cross agencies to combat IP crime in the **ASEAN region**
- They have provided direct training to **Indonesian law enforcement** and are working with **Vietnam** in the same vein

Note: Ref. Report published by IPO UK: IP Enforcement 2020.

We recommend creating Digital Trust India – a dedicated platform to execute the strategic measures required to address digital piracy

Digital Trust India - strategic mandate



Key Aspects

- Digital Trust India to be created in partnership by Industry and MarkScan, with the support of Gol.
- Platform to have an Advisory Board, Principal Sponsors, Members and an Operating Organisation.
- Platform to roll out full agenda in a phased manner – it can start as a risk evaluation & information platform for rating the websites & digital ecosystem in India.
- Risk measurement & ratings to be used by brand owners, (digital) media agencies, internet ad networks, websites, ecosystem supporting websites, content owners & licensees, government, and the public – to thwart piracy revenue chain.
- Steady state revenue sources to include Subscription fees, Pay as you go usage, Enrolment charges for websites, Sponsorship & membership fees
- Relevant case studies include Barc India, Satyam negative list/ CIBIL, Ops creative (PIPCU) & TAG/IAB

Note: Ref. to appendix “E. Digital trust India” for more information recommended platform