

Stream-ripping:

How it works and its role in the UK music piracy landscape

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Executive Summary

Prepared by Dennis Collopy. Senior Research Fellow, School of Creative Arts, University of Hertfordshire

1. Research Purpose

This project was initiated to better understand the operation of 'stream-ripping' services, as well as their impacts on the UK market and the way in which such services are changing consumers' online behaviour. The Intellectual Property Office (IPO) in conjunction with PRS for Music (PRS) commissioned two separate research studies in late 2016; firstly, from INCOPRO on the operation and impact of stream-ripping services in the context of the music piracy landscape; and secondly from Kantar Media to assess the awareness, use of and attitudes to these services and their relationship to online consumer behaviour. This summary sets out the key findings and outcomes from both studies and examines these in relation to other existing studies.

2. Definitions

Stream-ripping services are defined as any site, software program or app which provides users with the ability to download content without permission, and therefore illegally, from a third-party internet stream which can be used offline.

These services can be split into five further sub-categories, which have been considered throughout the report:

- **Download apps** source and download content from licensed services – delivering through an app.
- **Download sites** source and download content from licensed services -delivering through a website.
- **Stream-ripping sites** allow the user to download content from licensed services, via the input by the user of the URL/link for where the content is made available on the licensed service.
- **Stream-ripping plug-ins**, otherwise known as browser extensions, provide browser level functionality allowing for streamed content to be downloaded. The advantage of these services is that the ripping functionality can be turned on and off by the user in real-time without the need to switch between the streaming service and the stream ripping service. Content can also therefore be downloaded in bulk, removing the need to download files one by one.
- **Stream-ripping software** is downloaded via developer websites, software or review sites, and allows for streamed content to be copied, or ripped, and stored as a downloadable file.

3. Key findings across the studies

Incopro's report revealed that music-specific infringement in the UK is dominated by stream-ripping. This constituted the majority (68.2%) of total usage across the 50 top music-specific sites. However, stream-ripping is far less prominent on non-music-specific sites.

The use of stream-ripping services increased by 141.3% in the period January 2014 to September 2016, overshadowing other illegal services. YouTube is by far the most popular source of content for these sites (used by 75 of the 80 stream-ripping services surveyed).

Even though the majority of traffic comes from direct access, search engines deliver a significant proportion of traffic to the stream-ripping services, notably over 60% for one stream-ripping service category.

Advertising is the main funding model associated with stream-ripping services, with over half (52.5%) linked to malware/potentially unwanted programme (PUP) advertising.

Kantar's study indicated 57% of the UK adults surveyed claimed to be aware of stream-ripping services and 15% claimed to have used a stream-ripping service. Those who claimed to have used a stream-ripping service were significantly more likely to be male, ABC1 social grade, and between the ages of 16 to 34 years.

Stream-ripping apps were the most common type of stream-ripping service in terms of awareness (11% of those surveyed) and use (54% of those using stream-ripping services).

The reasons given by those surveyed for stream-ripping were: the music was already owned in another format (31%); they wanted to listen to music offline (26%); and they wanted to listen on the move (25%), unaffordability (21%) and feeling official content was overpriced (20%) were the next most common responses.

4. Summary Analysis

- Any assessment of stream-ripping must involve linking the massive scale of YouTube's 'online library' and the ease of use of services such as youtube-mp3.org. This makes ripping so appealing, especially for use on mobile handsets and given that so many 'traditional' pirate sites have been blocked. Youtube-mp3.org was very active during the research-period although following legal action it is currently not easily available

in the UK. Even with its recent demise, there are at present, a myriad of other stream-ripping offers not just for YouTube, but also for other licensed services such as Soundcloud, Spotify and Deezer. This suggests that displacement of pirate sites leads inevitably to traffic moving to other sites.

- The question of consumer attitudes to accessing music through the use of stream-ripping services is of greatest concern. The survey data from Kantar indicates high levels of digital literacy, with an ability and willingness to find alternative ways to access free music, even as access to 'traditional' pirate sites has been restricted. The advent of stream-ripping and the dominance of the 16-34 age group in its use suggests there are problems convincing not just the post-Napster but also the post-YouTube generation of the value of music. 'Freemium' platforms like YouTube have become the destination of choice for music discovery and consumption for these predominantly young consumers.
- What must also worry advocates of new high-end audio digital music formats is the readiness of these mainly young music consumers to 'rip' essentially low-grade versions of audio recordings. Among this generation there are many who expect free music in a form convenient to them, ideally bypassing any kind of legal paid service as well as the freemium services and their online ads.
- The primary threat posed by the emergence and growth of stream-ripping services is to undermine the ad-funded streaming model that represents the vast bulk of music consumption. Though it accounts for a smaller amount of revenue than from paid subscriptions, this ad-based revenue is important for rightsholders. Stream-ripping should be seen as a major hurdle in the consumer journey from free to paid subscriptions to listen to music. This is especially relevant in light of the significant proportion (19% of stream-rippers surveyed) of music fans who want to avoid ads whilst listening to their music of choice.
- Even with the snap-shot nature of the Kantar survey and the limited time frame of the Incopro study, both reports provide clear evidence of the emerging threat posed by stream-ripping services.
- However, neither report can quantify the harm from stream-ripping, given difficulties in assessing the number of individual user clicks on a ripping website, estimating the length of the content to be ripped and with the different functionalities on certain ripping sites. There are also issues with most tracking tools that only count Unique

Monthly Visitors and do not quantify repeat visitors, making it hard to estimate the amount of time spent by individual users on such sites. Other problems include accessing download or usage figures from the ripping websites as well as understanding the impact of user's internet speeds.

A review of other recent research data from IFPI, Muso, MusicWatch, EU IPO supports the credibility of the Incopro and the Kantar studies' findings. It should be noted that unlike much of the other evidence, the Kantar and Incopro research data sets are publicly available for scrutiny and review by third parties in order to meet the IPO's "[Good Evidence](#)" threshold.

- The risks from stream-ripping have been known for several years but appear to have increased over the past 2 years mainly because of 'mobile ripping' among young consumers (16-24).
- The IFPI figure for UK use of stream-ripping sites (19%) is very close to the Kantar figure of 15%.
- The Incopro trend analysis shows a rise in stream-ripping of 141.3%, which bears out the data from Muso, which was collected between 2015 and 2016.

Literature Review

4.2. Research context: Review of evidence from other sources

4.2.1 Risks from stream-ripping have been known for several years

Molly McHugh¹ argued in 2012 that providing access to music rather than the product had 'drawbacks and benefits'. Although consumers no longer 'owned' the music, streaming had meant a reduction in piracy. However, stream-ripping services provided a means to continue pirating for those '*who want some ownership over their digital content*'. Mark Mulligan had warned that stream-ripping had been a risk, albeit not a major one for streaming services for years, notably for services like Spotify. This warning was echoed by Paul Jessop² who argued that stream-ripping was the 'main emerging problem in music' and one that impacted on YouTube's business model. This is because users of such services are less likely to "look at Google ads".

Charlotte Hassan³ questioned why piracy had not been eliminated given the "*ubiquitous, legal listening options now available*" and she argued it was the attitude of post-Napster music consumers to the value of music that was the real problem. Most music consumers "*believe that they should have access to the music they want to listen to, whenever they want to listen to it, and for free*". Hassan challenged the notion that free streaming was supposed to have displaced piracy given evidence from Cisco Virtual Networking in the USA that illegal file-sharing had grown by 44% between 2008 and 2014.⁴ A more recent study⁵ by Music Watch indicated approximately 20% of the US population frequently used pirate sites for music although the methods to pirate content had diversified. Citing a recent UK Study⁶ Paul Resnikoff⁷ pointed to "*the risks of engaging in music piracy as being simply too low to affect their (consumers') behaviour*". Music Watch's data highlighted the trend of fewer people using torrent sites and more people directly downloading music videos from YouTube. Resnikoff claims that mobile is a major source of both legal and illegal music acquisition and increasingly people are stream-ripping from YouTube using their mobile devices.

4.2.2. Muso Research data

Stuart Dredge from the music business strategy consultancy, Music Ally,⁸ described stream-ripping services' increased popularity over the previous two years, particularly amongst younger internet users. Muso, a content protection firm, claimed that YouTube stream-ripping had grown by 25% in 2015, with mobile ripping overtaking desktop. More recent Muso data⁹ indicated stream-ripping sites had attracted 7.2bn visits in the first nine

1 Molly McHugh (2012) Could music stream ripping software put Spotify and other music services at major risk? Digital Trends January 7th 2012

2 Collopy et al (2014) Measuring Infringement of Intellectual Property Rights" IPO Page 111

3 Hassan, C. (2016) Is the Streaming Industry Lying About Piracy? - Digital Music News March 31, 2016 Accessed Online march 29th 2016 <https://www.digitalmusicnews.com/2016/03/31/is-streaming-making-piracy-worse/>

4 <http://www.digitalmusicnews.com/2015/07/16/if-you-think-piracy-is-decreasing-you-havent-looked-at-the-data-2/>.

5 (<http://www.digitalmusicnews.com/2016/02/26/57-million-americans-illegally-acquire-music-study-finds/>).

6 Watson, Steven J., Zizzo, Daniel J., Fleming, Piers (2016) Risk, Benefit, and Moderators of the Affect Heuristic in a Widespread Unlawful Activity: Evidence from a Survey of Unlawful File-Sharing Behavior. Journal of Risk Analysis 1539-6924 <http://dx.doi.org/10.1111/risa.12689>

7 Resnikoff, R. (2016) Legal Threats Have Absolutely No Impact on Music Piracy, Study Finds. Digital Music News, September 26, 2016 accessed online 29th March 2017 <https://www.digitalmusicnews.com/2016/09/26/music-piracy-legal-no-impact/>

8 Dredge, S. (2016) YouTube goes after stream-ripping site TubeNinja. Musically May 31, 2016. <http://musically.com/2016/05/31/youtube-goes-after-stream-ripping-site-tubeninja/>

9 Dredge, S. (2016) Muso data suggests sharp rise in stream-ripping visitors. MusicAlly [accessed online 22/12/2016] <http://musically.com/2016/10/26/muso-data-suggests-sharp-rise-in-stream-ripping-visitors/>

months of 2016, almost 60% up on the whole of 2015's 6.2bn. Approximately 60% of that going to audio-only music sites¹⁰. According to Muso, stream-ripping platforms represented 17.7% of music-related visits to pirate sites across the globe in 2015.

4.2.3 The IFPI / Ipsos Connect consumer insight data

The International Intellectual Property Alliance (IIPA) described stream ripping as a "*global problem undermining the legitimate online music market*"¹¹. The 2016 US Trade Representative¹² warned of the 'emerging threat' of stream-ripping that was "increasingly causing substantial economic harm to music creators and undermining legitimate services". Both cited the September IFPI report¹³ that gained extensive media coverage in The Wall Street Journal, The Times and The Financial Times. Stuart Dredge of Music Ally said that "the data certainly plays in to the fears of the industry"¹⁴. The IFPI report claimed:

- o over one third (35%) of internet users accessed music through infringement;
- o stream-ripping was now more popular than other forms of downloading;
- o 30% of internet users had stream-ripped music in the past six months (27% on computer, 19% on mobile);
- o This was a significant increase compared to 27% in 2015.

Stream ripping is particularly popular among 16-24s (49%, up from 41% in 2015). Comparing stream-ripping figures against download figures highlights the change in how copyright is being infringed online.

In their assessment of the IFPI report The Wall Street Journal¹⁵ described stream-ripping users' motivation as enabling them to "*listen to the songs without YouTube's ads—and without having to buy the songs or pay for a subscription service*". The main source of ripping was YouTube, which breached their terms of service. YouTube's sister firm Google Play's store offers a range of "tube" downloading apps, though many caution they should not be used on YouTube videos. Dredge sees the "*characterisation of stream-ripping as a new piracy apocalypse for the industry ...as an overreaction given the simultaneous growth of paid music subscriptions*". Yet this argument ignores the impact that stream ripping has on the ad-based payments from YouTube.

4.2.4. Major labels' lawsuit against YouTube-MP3

The US record labels issued a lawsuit against the German-owned YouTube-mp3.org in September 2016. It alleged contributory and vicarious copyright infringement, and claimed "*defendants are illicitly circumventing technology measures that YouTube has implemented to control access to and prevent copying of works*"¹⁶. YouTube-mp3.org,

10 Ingham, T. (2016) Music biz faces rampant piracy threat as stream ripping jumps 60% in 2016. Music Business Worldwide October 25th, 2016. [Accessed online 5th March 2017] <http://www.musicbusinessworldwide.com/music-biz-faces-rampant-piracy-threat-stream-ripping-jumps-60-2016/>

11 Ovum (2017) "Ovum View" in Music & Copyright Newsletter, 15th February 2017

12 Office of the US Trade Representative (2016) 2016-Out-of-Cycle-Review-Notorious-Markets. December 2016. <https://ustr.gov/.../2016-Out-of-Cycle-Review-Notorious-Markets.pdf>

13 Ipsos and IFPI, 2016 Music Consumer Insight Report, at 16, available at <http://www.ifpi.org/downloads/Music-Consumer-Insight-Report-2016.pdf>

13 Karp, H. (2016) Music Industry's Latest Piracy Threat: Stream Ripping. The Wall Street Journal, September 12th, 2016

14 Dredge, S. (2016) Muso data suggests sharp rise in stream-ripping visitors. MusicAlly. October 25th, 2016 [Accessed online 22nd December 2016] <http://musically.com/2016/10/26/muso-data-suggests-sharp-rise-in-stream-ripping-visitors>

16 Gardner, E. (2016). Major Record Labels Sue Over Ripping Audio Tracks from YouTube Videos. Billboard 26th September 2016. [accessed online 27th September 2016] <http://www.billboard.com/articles/business/7519005/major-labels-sue-stream-ripping-youtube-mp3-audio-tracks-umg-wmg-sony-music>

was accused of "accounting for upwards of 40% of all unlawful stream ripping that takes place in the world." David Kravets¹⁷ quoted information included in the LA federal court lawsuit, namely that from 2013 to 2015, there had been a 50% increase in unauthorised stream-ripping in the United States. The lawsuit said Youtube-mp3.org had "tens of millions of users and is responsible for upwards of 40% of all unlawful stream-ripping of music from YouTube in the world."

4.2.5 Kantar/Incopro: comparison with other studies

The lower claimed figures for levels of infringement shown by Kantar (15% versus IFPI's 30%) can be explained by reference to the likely variation in the IFPI combined numbers from the likely higher rates of infringement in some of the other 12 countries. IFPI confirmed the headline figure for the UK was 19% and their unpublished UK data contains very similar variations across age and gender.

The IFPI survey was of 900 Internet users, 16-64 years old in each of 13 of the world's leading music markets. Specific breakdowns on music usage and behaviours were provided for each of the markets but not for the unlicensed music section of the report, which were only segmented by gender and age. This made it impossible to benchmark their findings against the Kantar / Incopro UK-only results. This is important given the IFPI / Ipsos study indicates 81% of UK 16-64 year olds are YouTube music users against 99% in Mexico and 94% in Brazil (page 11). It suggests significant variations in national rates of those using unlicensed music and specifically stream-ripping software.

These different national rates are further borne out by the EUIPO's 2016; *European Citizens and Intellectual Property: Perception, Awareness, and Behaviour* study, which highlights the variations in attitudes towards IP Rights of citizens in different countries, with the UK very close to the EU average in most categories. However, in relation to one key question, whether "...it is acceptable to obtain content illegally from the internet when there is no immediately available legal alternative"¹⁸ there were marked differences between the UK (22%), the Netherlands (49%) and the EU 28 (average 31%).

The key issues for the credibility of research of this kind include ensuring an assessment of both revealed and stated behaviour as well as establishing a meaningful trend over time. For the latter, this was not possible for the Kantar Media study given this was the first UK focused opportunity to survey stream-ripping behaviours, but Incopro's use of historical data from Alexa (January 2014 to September 2016) provides a meaningful snapshot of the recent piracy landscape.

The Incopro trend analysis indicates every other category of piracy (BitTorrent et al) has declined, between 23.8% and 41%, whereas stream ripping has grown by almost 30% in the same time period. As such this finding is in line with IFPI and particularly Muso's research, the latter having surveyed the piracy landscape for several years.

17 Kravets D. (2016) RIAA takes on stream-ripping in copyright lawsuit targeting YouTube-mp3 | Ars Technica 27th September 2016 [accessed online 22nd October 2016 <http://arstechnica.com/tech-pol/cy/2016/09/riaa-takes-on-stream-ripping-in-copyright-lawsuit-targeting-youtube-mp3/>]

18 EUIPO (2016) European Citizens and Intellectual Property: Perception, Awareness, and Behaviour study [Accessed online 28th March 2017] <https://euiipo.europa.eu/ohimportal/documents/11370/80606/IP+perception+study/page/58>

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