Web monetisation

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Abstract: Web monetisation is the conversion of user traffic into revenue. Initially referring to websites, in more recent years, the meaning of the term has been expanded to refer to non-website traffic, such as social media applications, which this glossary entry gives more attention to. Within social media, the concept of content monetisation has developed as a way to denote the various approaches content creators have in creating online revenue out of the content they produce. This glossary entry provides an overview of the concepts of web and content monetisation, discusses aspects arising out of their interaction, and addresses three main issues currently associated with the term: the interoperability of social media infrastructures, the interoperability of content and web monetisation, and the moderation of content monetised decentrally.

Definition of the term

Web monetisation is the conversion of user traffic into revenue.

Origin and evolution of the term

Since its early days, the internet completely changed the way in which people interacted with information. As personal computing became more pervasive in society across the past decades, so did the online presence of households, which has been steadily on the rise. This was facilitated, among others, by factors such as Tim Berners-Lee contributions of hypertext database architectures (Tim Berners-Lee, 1990), and the development of the internet protocol suite (TCP/IP) reflecting data communication protocols used on the internet (Leiner et al. 1997; Cerf & Kahn, 1974). This is now known as the 'web'.

Globally, the increasing number of people browsing the internet (Statista, 2019) would initially visit websites with static information which had no native payment infrastructures and also no default commercial purpose. By 1994, there were around 3,000 websites on the internet (Statista, 2021). Also called the 'old Web', or Web 1.0 (approximately 1990-2004), this initial period of Internet presence was defined by an inherent asymmetry between content creators and content consumers, with the latter category reflecting the vast majority of Internet users (Cormode & Krishnamurthy, 2008). As companies started building their own online presence, incentives for the commodification of Internet traffic added a commercial layer to the Internet. Companies like eBay triggered the rise of e-commerce by offering new affordances such as information retrieval via search and filters, as well as easy to manage transaction workflows (Fingar et al., 1999). By using such a platform, any entrepreneur could, as a peer, make money on the Internet by selling things. However, not the same could be said for content. With the advent of free information available around the clock via an Internet connection (John, 1996), paying for content with attention became the norm (ZDNet, 2002; Aigrain, 1997). This led to the development of a complex advertising industry and business models which in essence were fighting for pixels and clicks on and from Internet websites (Bambury, 1998; McLeod, 2013). Yet (digital) advertising—especially the intrusive type, featuring pop-ups and mid-stream video interruptions—has never been

popular with consumers, and the preference of not having to deal with advertising when consuming content online led to the creation of subscription-based (pay-walled) business models (Bambury, 1998; Fishburn et al., 1997) or the use of ad-blockers (Mendelez, 2019).

Web 2.0, a term coined around 2004 to reflect the rise of social media and the interactive Web, brought with it a 'portalization' of Internet content, namely locking users into websites by trying 'to build every possible feature into the site' (Cormode & Krishnamurthy, 2008). Another metaphor used to describe this iteration of the Internet is 'Web as a platform', meaning that software would be built on the Internet instead of as desktop applications (Cabage & Zhang, 2013). In turn, this development attracted the collection and sharing of personal data at unprecedented scales (Goanta & Mulders, 2019). The consolidation of advertising by big tech companies, as well as the secondary markets operating around data brokerage have centralised platform power, in spite of the fact that the Internet as such has never been bigger. In 2021, the Internet consists of a whooping 1.88 billion websites (Statista, 2021). On the one hand, this brings with it certain benefits. In an ever-growing informational landscape, the automation and optimisation of information retrieval services (e.g. price, offer or availability comparisons) can help consumers with informed choice. On the other hand, if user profiling skews choice based on commercial interests, that can lead to new types of online harms affecting informed consent (Staben, 2012), as well data governance as a whole (Viljoen, 2021). The resulting power centralisation by private actors has led to the so-called 'privatization of Internet governance' (Musiani, 2013), a narrative often used to call into question the legitimacy of advertising-based Internet business models (Wagner, 2019).

Legitimacy issues arising out of governance structure, and user harms characteristic to Web 2.0 have motivated calls for yet a new iteration of the Internet (Web 3.0): the decentralised Internet – verifiable, trustless and self-governing (Dabit, 2021; Harbinja & Karagiannopoulos, 2019). In some ways, the projection of such a new Internet era is considered to be a return to the decentralised architecture initially proposed by Tim Berners-Lee himself (Silver and Forbes Technology Council, 2020): 'No permission is needed from a central authority to post anything on the web, there is no central controlling node, and so no single point of failure ... and no "kill switch"! This also implies freedom from indiscriminate censorship and surveillance' (World Wide Web Foundation, 2021). Among the normative narratives relating to the goal of achieving decentralised web governance that embraces new models of monetisation, native payment solutions reflect an important necessary

infrastructure. This is what has driven initiatives such as the Web Monetization Protocol (W3C, 2021), proposing an architecture for micropayments which can empower content creators to earn revenue independently from the business models offered by big tech companies. Web Monetization is an API that allows websites to request micropayments from users through their browsers, and that focuses on continuous, rather than discrete payments. An earlier example is the Brave browser, which is supposed to offer users more control over the way in which they deal with their own data on the Internet (Brave, 2021), in a similar vein to Tim Berners-Lee's renewed support for data sovereignty (Verdegem, 2021; Verborgh, 2019).

Issues currently associated with the term

As an umbrella term, web monetisation includes a very wide variety of business models, including advertising, subscription and crowdfunding-based models supported or facilitated through Internet websites. Web monetisation is also used generally used in a broader sense than content monetisation: while the first refers to the process of creating revenue out of content available on the web (e.g. blog posts monetised via advertising), the latter is often used in the context of social media monetisation and linked to revenue earned by content creators.

Monetisation business models have become increasingly complex during the past decades. Particularly in the context of content monetisation, the amount of attention Internet users spend on social media has been heavily on the rise, particularly during the recent pandemic (Auxier and Anderson, 2021). In itself, this has led to more granular approaches to monetisation through advertising. A telling example in this respect is the ubiquitous phenomenon of influencer marketing (Goanta & Ranchordas, 2020). Yet all notable social media platforms are developing monetisation policies to create new opportunities for content creators to monetise user traffic on these platforms (e.g. partner programmes where creators receive money from social media companies; Tiktok, 2021).

Monetisation options are becoming increasingly diverse, and also increasingly intertwined. For instance, creators can receive money from platforms (ad revenue), or from sponsors (influencer/affiliate marketing); they can sell their own goods and services through new 'platformised' business models such as drop-shipping, or platform affordances brought about by trends such as social commerce (e.g. Instagram Checkout); they can ask for subscriptions or donations from their audiences, etc. All these monetisation models entail cross-platform activities reflecting that oftentimes, the volatility of monetisation makes it necessary for more sources of revenue to be combined at the same time. Current trends raise three main issues

relating to the future of web and content monetisation.

Firstly, given that commercial activity is cross-platform, as well as across applications and websites, there is a question of interoperability: are content creators supported or deterred from relying on more or less sources of monetisation across the Internet? Platforms such as Youtube and TikTok have their own internal tokenisation/donation/ad affordances, often linked to the activities performed on a given platform by a content creator. It therefore seems unlikely that commercial incentives will be developed by these platforms in the following years to facilitate activities (e.g. payment) which take place on other platforms. The flexibility of business cases (or current general lack thereof) is directly linked to the technical challenges that arise in this space. For instance, current implementations of the Web Monetisation payment are limited, as they depend on the use of specific services such as those offered by the Brave browser, Coil, and Interledger. However, given the tremendously fast pace of developments in this field, and the nature of the competition between platforms, it remains to be seen how this ecosystem will evolve, and how scalability will look like in the next decade.

Secondly, big platforms protect their commercial activities through terms of service, which have been in the past used to deny access to users who were engaging with their affordances externally (e.g. by using browser extensions; Kayser-Bril, 2021). Without clear interoperability incentives, platform terms can create legal shields against potential bridges which can be made between web monetisation and content monetisation currently native to social media.

Lastly, while decentralised solutions such as web monetisation promise the return to a free internet, a fundamental problem of content moderation emerges. If illegal content becomes decentralised (and easier to monetise), the digital monitoring efforts required from public authorities tasked with the enforcement of the law on digital markets would become disproportionately large. Recent regulatory reforms such as the Digital Services Act package (European Commission, 2020) show a tendency of regional regulators to attempt to hone in centralisation in order to achieve the enforcement of state-made content regulation. In the absence of infrastructures to facilitate content moderation (whether public or private), a return to the earlier focus on the Internet's libertarian freedoms is currently incompatible with the complex web of global, regional and national legal standards which online content needs to fulfill.

Conclusion

In general, web monetisation is the conversion of user traffic into revenue. Initially referring to websites, in more recent years, the meaning of the term has been expanded to refer to non-website traffic, such as social media applications, which this glossary entry gives more attention to. Particularly for social media, the concept of content monetisation has developed as a way to denote the various approaches content creators have in creating online revenue out of the content they produce. In a more narrow understanding, Web Monetization is a proposed W3C standard for generating website content revenue through micropayments. Three main issues were discussed, most specifically from the perspective of the infrastructures web and content monetisation need to function. Firstly, there is a problem with interoperability within content monetisation, as more and more creators operate across platforms with specific governance and technical infrastructures. Secondly, there is also an interoperability problem between content and web monetisation showing how difficult it may be to link revenue and business models not only from one social media platform to another, but also from social media platforms to other providers of content publication services (e.g. Wordpress). Thirdly, focusing on web monetisation in Web 3.0, a general issue of content moderation emerges, in the absence of centralised entities which can provide filters for illegal or otherwise potentially harmful content.

References

Aigrain, P. (1997). Attention, media, value and economics. *First Monday*, *2*(9). https://doi.org/10.5210/fm.v2i9.549

Auxier, B., & Anderson, M. (2021). *Social Media Use in 2021* [Report]. Pew Research. https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/

Bambury, P. (1998). A taxonomy of internet commerce. *First Monday*, *3*(10). https://doi.org/10.5210/fm.v3i10.624

Berners-Lee, T. (1990). *Information management: A proposal*. CERN. https://www.w3.org/History/1989/proposal.html

Brave. (2021). *Brave browser*. Brave. https://brave.com.

Cabage, N., & Zhang, S. (2013). Web 3.0 has begun. *ACM Interactions*, *5*, 26.

Cerf, V. G., & Kahn, R. E. (1974). A protocol for packet network interconnection. *IEEE Transactions on Communication Technology*, *22*(5), 627–641. https://www.cs.princeton.edu/courses/archive/fall06/cos561/papers/cerf74.pdf.

Cormode, G., & Krishnamurthy, B. (2008). Key differences between Web 1.0 and Web 2.0. *First Monday*. https://doi.org/10.5210/fm.v13i6.2125

Dabit, N. (2021). *What is Web3? The Decentralised Internet of the Future Explained*. FreeCodeCamp. https://www.freecodecamp.org/news/what-is-web3/.

European Commission. (2020). *The Digital Services Act Package*. European Commission. https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package

Fingar, P., Kumar, H., & Sharma, T. (1999). 21st century markets: From places to spaces. *First Monday*, *4*(12). https://doi.org/10.5210/fm.v4i12.707

Fishburn, P. C., Odlyzko, A. M., & Siders, R. C. (1997). Fixed fee versus unit pricing for information goods; competition, equilibria, and price wars. *First Monday*. https://doi.org/10.5210/fm.v2i7.535

Goanta, C., & Mulders, S. (2019). Move fast and break things': Unfair commercial practices and consent on Social Media. *Journal of European Consumer and Market Law*, *8*(4), 136–146.

Goanta, C., & Ranchordas, S. (2020). *The Regulation of Social Media Influencers*. Edward Elgar.

Harbinja, E., & Karagiannopoulos, V. (2019). Web 3.0: The decentralised web promises to make the internet free again. *The Conversation*. https://theconversation.com/web-3-0-the-decentralised-web-promises-to-make-the-internet-free-again-113139

John, N. R. (1996). Putting content onto the Internet. *First Monday*. https://doi.org/10.5210/fm.v1i2.477

Kayser-Bril, N. (2021). *AlgorithmWatch forced to shut down Instagram monitoring project after threats from Facebook'*. Algorithm Watch. https://algorithmwatch.org/en/instagram-research-shut-down-by-facebook/.

Leiner, B. M., Cerf, V. G., Clark, D., Kahn, R. E., Kleinrock, L., Lynch, D. C., Postel, J., Roberts, L. G., & Wolff, S. (2017). *Brief History of the Internet 1997* [Report]. Internet Society. https://www.internetsociety.org/wp-content/uploads/2017/09/ISOC-History-of-the-Internet_1997.pdf

McLeod, A. M. (2013). *Magazines monetizing their digital presence: Three strategies, some success* [Simon Fraser University]. https://summit.sfu.ca/item/12608.

Mendelez, K. (2019). The state of web monetization. *State of Web Monetization*. https://write.as/kenmelendez/the-state-of-web-monetization

Musiani, F. (2013). Dangerous liaisons? Governments, companies and Internet governance. *Internet Policy Review*, *2*(1). https://doi.org/10.14763/2013.1.108

Pfeiffer, A. (2002). *Why won't you pay for Net content?'*. ZDNet. https://www.zdnet.com/article/why-wont-you-pay-for-net-content/

Silver, C. & Forbes Technology Council. (2020). *What Is Web 3.0?* Forbes. https://www.forbes.com/sites/forbestechcouncil/2020/01/06/what-is-web-3-0/?sh=13cb040258df

Staben, J. (2012). Consent under pressure and the Right to Informational Self-Determination. *Internet Policy Review*, *1*(4). https://doi.org/10.14763/2012.4.265

Statista. (2019). *Share of households with a computer at home worldwide from 2005 to 2019'*. Statista. https://www.statista.com/statistics/748551/worldwide-households-with-computer/.

Statista. (2021). *How many websites are there?* Statista. https://www.statista.com/chart/19058/numb

er-of-websites-online/

TikTok. (2021). *Business and creator monetization*. TikTok. https://support.tiktok.com/en/business-and-creator.

Verborgh, R. (2019). Re-decentralizing the Web, for good this time'. *Ruben Verborgh*. https://ruben.verborgh.org/articles/redecentralizing-the-web/.

Verdegem, P. (2021, February 5). Tim Berners-Lee's plan to save the internet: Give us back control of our data'. *The Conversation*. https://theconversation.com/tim-berners-lees-plan-to-save-the-internet-give-us-back-control-of-our-data-154130

Viljoen, S. (2021). A Relational Theory of Data Governance. November 2021. *The Yale Law Journal*, *131*(2). https://www.yalelawjournal.org/feature/a-relational-theory-of-data-governance

Wagner, K. (2019). *Mark Zuckerberg explains why an ad-free Facebook isn't as simple as it sounds*. Vox. https://www.vox.com/2019/2/20/18233640/mark-zuckerberg-explains-ad-free-facebook.

World Wide Web Foundation. (2021). *History of the Web*. World Wide Web Foundation. https://webfoundation.org/about/vision/history-of-the-web/.