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### The subsistence and enforcement of copyright and trademark rights in the metaverse

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# THE SUBSISTENCE AND ENFORCEMENT OF COPYRIGHT AND TRADEMARK RIGHTS IN THE METAVERSE

The metaverse has been widely hailed as a symbol of technological progress, presenting an immersive virtual realm that has the potential to transform how individuals engage in social and commercial activities. However, this conception of a borderless virtual world – which purportedly transcends the capabilities and reach of Web 2.0 – sits uncomfortably with the territorial nature of intellectual property rights. This article examines the complexities surrounding the subsistence and enforcement of intellectual property rights within the metaverse, with a specific focus on copyright and trademarks. Especial attention is paid to issues concerning choice of law and jurisdiction. Finally, the authors conclude with two recommendations which aim to facilitate and supplement the application of existing rules in addressing copyright and trademark infringements in the metaverse.

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## I. Introduction

The metaverse has generated much excitement in recent times,<sup>1</sup> leading to “feverish speculation” over the functional possibilities of these new virtual worlds.<sup>2</sup> Tech giants have largely served as the catalyst for the buzz, as they eagerly propagate their visions of the metaverse’s role in a collective tech-friendly future.<sup>3</sup> Amid the noise, however, many of us are left grappling with this vexed question: what exactly *is* the metaverse?

Definitions of the metaverse are elusive, not least because it remains a pipe dream at present.<sup>4</sup> The term, which was first coined in a science fiction novel in 1992,<sup>5</sup> generally refers to the

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<sup>1</sup> See, eg, The Economist, “A reality check for the metaverse is coming” (14 November 2022); Lim Sun Sun, “The metaverse – bridging the chasm between promise and reality” (The Straits Times) (3 January 2023).

<sup>2</sup> The Economist, “In ‘The Metaverse’, Matthew Ball explains where the idea came from” (27 July 2022).

<sup>3</sup> See, eg, Kari Paul, “Facebook announces name change to Meta in rebranding effort” (The Guardian) (28 October 2021).

<sup>4</sup> Kenneth Rapoza, “The Metaverse Is Failing, But This is One Investment That Will Not Die” (Forbes) (21 October 2022).

<sup>5</sup> The Economist, “In ‘The Metaverse’, Matthew Ball explains where the idea came from” (27 July 2022).

concept of an immersive, unified and persistent virtual world where users can communicate and interact with other users and the surrounding environment and engage in social (and commercial) activities similar to interactions in the physical world.<sup>6</sup> While such virtual worlds are not unlike those created by developers of video games such as Second Life (which have existed for decades),<sup>7</sup> they differ in several key aspects. In particular, the metaverse will offer interoperability across networked platforms,<sup>8</sup> cater for an immersive, three-dimensional user experience, allow for real-time network access, and span the physical and virtual worlds.<sup>9</sup> In other words, the metaverse – as envisioned by tech giants today – will allow users to transfer data, digital items/assets and content across decentralised platforms, and enable them to link their actions in the virtual world with real-life.<sup>10</sup>

Putting aside the various issues which need to be addressed in constructing this metaverse (such as technical challenges in integrating disparate pieces of code and considerations surrounding the collection and use of personal data/information), the notion of a metaverse poses interesting questions for the field of intellectual property law. Specifically, the creation of a truly borderless virtual world challenges the conventional wisdom that intellectual property rights are “territorial in nature”<sup>11</sup> beyond the limits which have already been stretched thin with the rise of the Internet. This is particularly so because of the intrinsic features of the metaverse – such as the use of cryptocurrencies (and the attendant opacity of the blockchain) and automatic translation tools as well as the lack of country-specific top-level domains or physical shipping addresses – which typically lacks the traditional territorial connecting factors that might exist on the Internet. Because users of the metaverse often leverage on these features to “de-territorialize” their activities, the enforcement of intellectual property rights in the metaverse becomes particularly challenging.

This article will first explore the implications which the metaverse will bear on ownership and infringement issues vis-à-vis copyright and trademark rights. The focus on these two intellectual property rights stems from the fact that most cross-border intellectual property infringements tend to involve the infringement of either a registered trademark or a copyright (or related right).<sup>12</sup> The analysis herein will also be undertaken primarily with reference to jurisprudence from the United States (“US”) and the European Union (“EU”) as they provide helpful guidance from the perspectives of a common law and (a group of) civil law jurisdictions, respectively. Finally, the authors will propose two recommendations which may prove helpful

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<sup>6</sup> Congressional Research Service (US), “The Metaverse: Concepts and Issues for Congress” (26 August 2022) at p 3.

<sup>7</sup> See Edd Gent, “What can the Metaverse learn from Second Life?” (IEEE Spectrum) (29 November 2021).

<sup>8</sup> Several metaverse platforms already exist and they include Decentraland, Roblox, The Sandbox and Axie Infinity, just to name a few.

<sup>9</sup> Matthew Ball, “The Metaverse: What It Is, Where to Find it, and Who Will Build It” (13 January 2020) <accessed at <https://www.matthewball.vc/all/themetaverse>>.

<sup>10</sup> One example of this would be for a person’s virtual avatar to be able to walk into a McDonald’s restaurant in the metaverse and have the meal sent to the person’s physical location minutes later: see Shinu Vig, “Intellectual Property Rights and the Metaverse: An Indian Perspective” (2022) 25 *Journal of World Intellectual Property* 753 at 756.

<sup>11</sup> Alexander Peukert, “Territoriality and Extra-Territoriality in Intellectual Property Law” in Gunther Handl, Joachim Zekoll & Peer Zumbansen, *Beyond Territoriality: Transnational Legal Authority in an Age of Globalization* (Brill, 2012) at p 189.

<sup>12</sup> See Andrew Christie, “Private International Law Principles for Ubiquitous Intellectual Property Infringement – A Solution in Search of a Problem?” (2017) 13(1) *Journal of Private International Law* 152 at 158.

in overcoming some of the challenges posed by the metaverse in the enforcement of copyright and trademark rights.<sup>13</sup>

## II. The subsistence of copyright and trademark rights in the metaverse

The territorial nature of intellectual property rights means that such rights are limited to the territory of the state which grants and protects them.<sup>14</sup> It may therefore be helpful to begin the analysis with an evaluation of how these rights arise, and how the ownership of these rights is determined.

Copyright comes into existence *ipso jure* by the act of creation, without the need for formal requirements to be fulfilled.<sup>15</sup> These rights, which subsist automatically under the law of the country with the closest relationship,<sup>16</sup> accrue to the author(s) of the work.<sup>17</sup> Protection is also accorded under the Berne Convention for the Protection of Literary and Artistic Works (“**Berne Convention**”), where copyright can subsist in (a) works created by nationals of member states, (b) works created by individuals who have their habitual residence in member states, or (c) works first published in any of the member states.<sup>18</sup> These connecting factors serve as “points of attachment” which grant authors protection for their works under the Berne Convention.<sup>19</sup> Assuming any of these factors apply, the author(s) will enjoy in all other member states the rights which their respective laws grant to their nationals.<sup>20</sup> This has been taken to mean that works created by nationals of a member state of the Berne Convention will enjoy parallel rights under the laws of *each* member state.<sup>21</sup> Given that more than 180 countries are members of the

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<sup>13</sup> It is beyond the remit of this article to consider and examine circumstances where the platform operator’s Terms of Service (TOS) expressly spell out: (a) the rules pertaining to the ownership of intellectual property rights (especially copyright) for works and other subject matter created in the metaverse; (b) a notice and takedown enforcement mechanism reminiscent of the US Digital Millennium Copyright Act 1998 (17 USC § 512) and/or any other parameters for the adjudication of intellectual property disputes arising in the metaverse; and (c) the applicable/governing law and jurisdiction in which intellectual property disputes in the metaverse are to be resolved – see, *eg*, clause 5.6 of the “Supplemental Meta Platforms Technologies Terms Of Service” (<<https://www.meta.com/legal/quest/terms-of-service/>>) and clause 4(4) of Meta’s “Terms of Service” (<<https://www.facebook.com/terms.php>>) which require all platform users to “submit to the personal jurisdiction” of either “the US District Court for the Northern District of California or a state court located in San Mateo County”.

<sup>14</sup> Alexander Peukert, “Territoriality and Extra-Territoriality in Intellectual Property Law” in Gunther Handl, Joachim Zekoll & Peer Zumbansen, *Beyond Territoriality: Transnational Legal Authority in an Age of Globalization* (Brill, 2012) at p 189.

<sup>15</sup> Berne Convention for the Protection of Literary and Artistic Works (1971 Paris Text) (“**Berne Convention**”), Arts 5(1) and 5(2); Agreement on Trade-Related Aspects of Intellectual Property Rights 1994 (“**TRIPS Agreement**”), Art 9.

<sup>16</sup> *Itar-Tass Russian News Agency v Russian Kurier Inc* 153 F.3d 82 at 90–91 (1998); Toshiyuki Kono, *Intellectual Property and Private International Law: Comparative Perspectives* (Hart Publishing, 2012) at p 136.

<sup>17</sup> Berne Convention, Art 2(6).

<sup>18</sup> Berne Convention, Arts 3(1) and 3(2).

<sup>19</sup> Paul Goldstein & Bernt Hugenholtz, *International Copyright: Principles, Law, and Practice* (Oxford University Press, 2013) at pp 158–162.

<sup>20</sup> Berne Convention, Art 5(1).

<sup>21</sup> Alexander Peukert, “Territoriality and Extra-Territoriality in Intellectual Property Law” in Gunther Handl, Joachim Zekoll & Peer Zumbansen, *Beyond Territoriality: Transnational Legal Authority in an Age of Globalization* (Brill, 2012) at p 197. See also the Berne Convention, Arts 2(6) and 5(1).

Berne Convention,<sup>22</sup> it is likely that a large majority of works will be granted protection under at least one of the “points of attachment”.<sup>23</sup>

This position will unlikely change with the advent of the metaverse. Even works created entirely within the virtual world – by *human* authors no less – will likely engender protection under the respective laws of each member state by way of the application of Article 5(1) read with Articles 3(1) and 3(2) of the Berne Convention. The applicability of the “points of attachment” involving nationality and habitual residence under Articles 3(1)(a) and 3(2) may, however, be contingent upon the need for some degree of *transparency* with regard to publicly available information pertaining to users/participants in the metaverse.<sup>24</sup> Specifically, it may be difficult to justify protection under the Berne Convention if one is unable to determine whether an author or creator in the metaverse hails from a particular member state or is habitually resident there.

Alternatively, creators may rely on the “point of attachment” in Article 3(1)(b) pertaining to either first publication of the work in a member state or simultaneous publication in a member state and a non-signatory to the Berne Convention. This option will, however, only be available in specific factual scenarios where the creators of the works have made copies available to the public, thereby satisfying the definition of “published works” laid out in Article 3(3) of the Berne Convention.<sup>25</sup> In particular, the mere exhibition of an artistic work and communication or broadcast of literary or artistic works in the metaverse will *not* constitute publication.<sup>26</sup> Moreover, even if publication can be established on the facts, it is unclear how the *place* of publication will be identified, especially vis-à-vis works created and distributed wholly within the metaverse. Creators seeking to assert copyright in their works in the metaverse are thus more likely to rely on the “points of attachment” involving nationality and habitual residence instead, thereby triggering protection under the respective laws of Berne Convention member states.

Turning, then, to registered trademarks, the registration of the mark within a particular jurisdiction will accord the proprietor the relevant rights provided for by the laws of that jurisdiction.<sup>27</sup> These rights will, in line with the principle of territoriality, afford the proprietor protection only in the countries which have granted them.<sup>28</sup> This means that proprietors who

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<sup>22</sup> See WIPO IP Portal, “Contracting Parties of the Berne Convention” <accessed at [https://www.wipo.int/wipolex/en/treaties/ShowResults?search\\_what=C&treaty\\_id=15](https://www.wipo.int/wipolex/en/treaties/ShowResults?search_what=C&treaty_id=15)>; Cornell Law School Legal Information Institute, “Berne Convention” <accessed at [https://www.law.cornell.edu/wex/berne\\_convention](https://www.law.cornell.edu/wex/berne_convention)>.

<sup>23</sup> This is also because most countries are parties to the World Trade Organisation which obligates compliance with the Berne Convention by way of Art 9(1) of the TRIPS Agreement.

<sup>24</sup> Or, in the alternative, whether full anonymity may be allowed to prevail in the metaverse.

<sup>25</sup> See also WIPO, Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works to be Considered by the Diplomatic Conference (1996) <accessed at [https://www.wipo.int/edocs/mdocs/diplconf/en/cnrn\\_dc/cnrn\\_dc\\_4-part3.html](https://www.wipo.int/edocs/mdocs/diplconf/en/cnrn_dc/cnrn_dc_4-part3.html)> at para 3.06, where the proposal states that nothing precludes the interpretation of the term “means of manufacture” found in Art 3(3) of the Berne Convention to include the “decentralized production of copies by means of communication networks”.

<sup>26</sup> Berne Convention, Art 3(3).

<sup>27</sup> See Marketa Trimble, “The Multiplicity of Copyright Laws on the Internet” (2015) 25 *Fordham Intellectual Property, Media & Entertainment Law Journal* 339 at 388, where the author draws a distinction between the creation of registered and unregistered intellectual property rights.

<sup>28</sup> Graeme Dinwoodie, “Trademarks and Territory: Detaching Trademark Law from the Nation-State” (2004) 41 *Houston Law Review* 885 at 899.

wish to obtain parallel rights will typically need to make separate applications to the national intellectual property offices in each jurisdiction where protection is sought for their marks.<sup>29</sup>

In the context of the metaverse, protection for trademarks will therefore flow from the registration of these marks in relation to the respective goods and/or services which proprietors intend to offer in the metaverse. To this end, the categories delineated by the Nice Classification have been used by both the US Patent and Trademark Office (“USPTO”) and the EU Intellectual Property Office (“EUIPO”) to classify the goods and services which may be protected by a particular trademark application.<sup>30</sup> In anticipation of the use of their trademarks in the metaverse, brands and businesses – such as Victoria’s Secret and Nike – have filed trademark applications specifically in Classes 9, 35 and 41 of the Nice Classification (amongst others).<sup>31</sup> These applications have designated, *inter alia*, “downloadable multimedia files authenticated by non-fungible tokens” (class 9),<sup>32</sup> “downloadable virtual goods” (class 9),<sup>33</sup> “provision of an online marketplace for downloadable digital art images” (class 35),<sup>34</sup> and the organisation of virtual events (class 41).<sup>35</sup> In theory, trademarks registered in respect of these novel categories of goods/services will ensure the continued protection of these marks in the metaverse, in so far as any potential infringement may be taken to have occurred within the territory of the particular state(s) where the trademarks have been registered.

### III. Managing infringements of intellectual property rights in the metaverse

Having established the subsistence of intellectual property rights with respect to authorial works and trademarks in the metaverse, the article now turns to the arguably more complex question as to how infringements of these rights within the metaverse ought to be addressed. For instance, in light of the territoriality principle, in which territory can it be argued that the alleged infringement (whether of copyright or a registered trademark) had occurred? The answer to this question will impinge on other associated issues as well – namely, the

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<sup>29</sup> See, eg, Annette Kur & Ulf Maunsbach, “Choice of Law and Intellectual Property Rights” (2019) 6(1) *Oslo Law Review* 43 at 55.

<sup>30</sup> See EUIPO, “Nice Classification (trade marks)” <accessed at <https://euipo.europa.eu/ohimportal/en/nice-classification>>; USPTO, “Nice Agreement current edition version – general remarks, class headings and explanatory notes” <accessed at <https://www.uspto.gov/trademarks/trademark-updates-and-announcements/nice-agreement-current-edition-version-general-remarks#:~:text=The%20Nice%20Classification%20is%20used,identification%20of%20goods%20and%20services>>.

<sup>31</sup> See, eg, Jordan Major, “Official: Victoria’s Secret forays into NFTs and metaverse with 4 blockchain-related trademark filings” (14 February 2022) <accessed at <https://finbold.com/official-victorias-secret-forays-into-nfts-and-metaverse-with-4-blockchain-related-trademark-filings/>>; Jessica Golden, “Nike is quietly preparing for the metaverse” (CNBC) (2 November 2021) <accessed at <https://www.cnbc.com/2021/11/02/nike-is-quietly-preparing-for-the-metaverse-.html>>.

<sup>32</sup> See WIPO IP Portal, “Class 9” <accessed at [https://www.wipo.int/classifications/nice/nclpub/en/fr/?basic\\_numbers=show&class\\_number=9&explanatory\\_notes=show&lang=en&menulang=en&mode=flat&notion=&pagination=no&version=20230101](https://www.wipo.int/classifications/nice/nclpub/en/fr/?basic_numbers=show&class_number=9&explanatory_notes=show&lang=en&menulang=en&mode=flat&notion=&pagination=no&version=20230101)>.

<sup>33</sup> See, eg, EUIPO, “Virtual goods, non-fungible tokens and the metaverse” (23 June 2022) <accessed at [https://euipo.europa.eu/ohimportal/en/news-newsflash/-/asset\\_publisher/JLOyNNwVxGDF/content/pt-virtual-goods-non-fungible-tokens-and-the-metaverse](https://euipo.europa.eu/ohimportal/en/news-newsflash/-/asset_publisher/JLOyNNwVxGDF/content/pt-virtual-goods-non-fungible-tokens-and-the-metaverse)>.

<sup>34</sup> See EUIPO, “Draft Guidelines for Examination in the EUIPO” (15 June 2022) <accessed at [https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document\\_library/contentPdfs/trade\\_marks/draft-guidelines-wp-2023/Trade mark Guidelines 2023 consultation en.pdf](https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/contentPdfs/trade_marks/draft-guidelines-wp-2023/Trade mark Guidelines 2023 consultation en.pdf)> at pp 344–345.

<sup>35</sup> Examples include the provision of online virtual tours or online fashion shows: see WIPO IP Portal, “Class 41” <accessed at [https://www.wipo.int/classifications/nice/nclpub/en/fr/?basic\\_numbers=show&class\\_number=41&explanatory\\_notes=show&lang=en&menulang=en&mode=flat&notion=&pagination=no&version=20230101](https://www.wipo.int/classifications/nice/nclpub/en/fr/?basic_numbers=show&class_number=41&explanatory_notes=show&lang=en&menulang=en&mode=flat&notion=&pagination=no&version=20230101)>.

jurisdiction of courts and choice of law – which the authors will also examine in this section of the article.

### A. *Copyright infringements in the metaverse*

Let us consider a hypothetical situation where an original work is created entirely in the metaverse by User A who is domiciled in Jurisdiction A. User B, who is domiciled in Jurisdiction B, then comes upon the work and decides to reproduce it and make it available to the public in the metaverse.<sup>36</sup> Can User A bring a claim for copyright infringement and, if so, which court has jurisdiction and which country's law will govern the dispute in question?

#### (1) Issues pertaining to jurisdiction

Addressing first the issue of jurisdiction, the general rule is that each domestic legal system will have a set of rules to determine which cases it will accept and adjudicate.<sup>37</sup> Slight differences exist between the jurisdictional structures in common law and civil law (specifically the EU) systems. These structures, and how they apply to copyright infringements arising in the metaverse, will be analysed in turn.

In common law systems, jurisdiction is typically assessed on the basis of “personal jurisdiction” and “subject matter jurisdiction”.<sup>38</sup> Personal jurisdiction concerns the power of the court to render a binding decision on parties if they have sufficient contact with the place where the court is located.<sup>39</sup> In other words, it goes towards the question of *who* may be bound by the orders of a court. Such jurisdiction is founded when a defendant is duly served with an originating process in a manner authorised by the law founding such personal jurisdiction or when the defendant otherwise submits to the jurisdiction of the court.<sup>40</sup> In addition to personal jurisdiction over the alleged infringer in question (*ie*, User B in our example), subject matter jurisdiction must also be established. The scope of subject matter jurisdiction is determined by the laws of the forum in which the claim is brought, although superior courts generally have unlimited subject matter jurisdiction (subject to certain common law exceptions).<sup>41</sup> Finally, even if the jurisdictional requirements are made out, the courts in common law jurisdictions may nevertheless refuse to hear the case on the basis that there is some other available forum possessing competent jurisdiction which is clearly or distinctly the more appropriate forum to

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<sup>36</sup> Under copyright law, it is trite that User B's conduct has clearly infringed User A's exclusive right of reproduction and making available the work to the public.

<sup>37</sup> See Paul Torremans, “Jurisdiction for Cross-Border Intellectual Property Infringement Cases in Europe” (2016) 53(6) *Common Market Law Review* 1625 (at Section 1). The authors recognise that the Convention of 30 June 2005 on Choice of Court Agreements (entry into force 1 October 2015) could be of some relevance in situations where an exclusive choice of court agreement exists between the parties, but such situations remain outside the scope of this article. See further Warren B Chik & Saw Cheng Lim, *Information and Communications Technology Law in Singapore* (SAL Academy Publishing, 2020) at para 11.004.

<sup>38</sup> Annabelle Bennett & Sam Granata, “When Private International Law Meets Intellectual Property Law: A Guide for Judges” (WIPO and the HCCH, 2019) at p 32.

<sup>39</sup> For instance, the US Supreme Court has observed that personal jurisdiction over foreign defendants may be established where they have engaged in substantial activities connected to the forum in a “systematic and continuous” way: see *International Shoe Co v Washington* 326 US 310 at 320 (1945).

<sup>40</sup> Adrian Briggs, *Civil Jurisdiction and Judgments* (Routledge, 7th Ed, 2021) at pp 389–391. See also US Federal Rules of Civil Procedure, Rule 4(k); Supreme Court of Judicature Act 1969 (Singapore), s 16.

<sup>41</sup> See Adrian Briggs, *Civil Jurisdiction and Judgments* (Routledge, 6th Ed, 2015) at p 393 *ff*. See also the “Moçambique rule” which originated from *British South Africa Co v Companhia de Moçambique* [1893] AC 602.

hear the case (the doctrine of *forum non conveniens*).<sup>42</sup> This assessment is carried out with reference to the presence (or absence) of connecting factors between the dispute and the forum. Such factors include the location of the parties, witnesses, facts, and evidence (eg, where the infringing acts were committed), and the law(s) applicable to the dispute.<sup>43</sup>

Returning to the hypothetical situation above, several common law courts, including those of Jurisdictions A and B,<sup>44</sup> may possess competent jurisdiction over the copyright infringement dispute arising in the metaverse (depending, of course, on the precise factual matrix of the dispute). Nevertheless, suing User B in Jurisdiction B – which is the territory in which he is domiciled (and is likely to have assets) and from which the infringing act probably originated (or was committed) – will likely be the preferred choice. This will reduce the practical difficulties in establishing personal jurisdiction over User B, as he may be served with an originating process relatively easily in his country of residence. Furthermore, subject matter jurisdiction will also be fulfilled given that copyright protection will likely accrue in both Jurisdictions A and B pursuant to the Berne Convention, and the courts in Jurisdiction B must surely have subject matter jurisdiction to adjudicate over rights that are recognised and granted by the state in that jurisdiction.<sup>45</sup> In any event, where the act of infringement originates from the same location as the infringing user’s domicile/residence, bringing the claim before the courts in Jurisdiction B will also minimise the risk that the claim might be rejected by the courts on the basis of *forum non conveniens*, since the requisite evidence (for instance, the physical equipment on which User B committed the infringement) will likely be located there as well.

In truth, this ostensibly straightforward analysis belies considerable practical difficulties. First, it assumes that personal data/information pertaining to users (such as User B) in the metaverse will be readily available so as to enable the copyright holder to ascertain the identity of the infringing user. This may not necessarily be so. Instead, the copyright holder may be completely unaware of *who* the infringing user is, much less the appropriate jurisdiction in which to sue him/her.<sup>46</sup>

Secondly, the difficulties in identifying the place of infringement may bear significant implications on whether a common law court should rightly assert jurisdiction over a dispute occurring in the metaverse. Similar to copyright infringements on the Internet, infringing acts committed in the metaverse may well infringe copyright in *multiple* countries in which the content – once uploaded or “made available” to the public in the metaverse – can be viewed/accessed, streamed or downloaded.<sup>47</sup> This phenomenon affects the jurisdiction of the common law courts principally because of the application of the *forum non conveniens* doctrine. Simply put, if it is unclear where the infringing act has (largely) taken place, it will naturally

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<sup>42</sup> See *Spiliada Maritime Corp v Cansulex Ltd* [1987] AC 460, which has been endorsed and followed in many common law jurisdictions. See further *Entertainment One UK Ltd v Sconnect Co Ltd* [2022] EWHC 3295 (Ch) at [155].

<sup>43</sup> See Brenda Tiffany Dieck, “Reevaluating the Forum Non Conveniens Doctrine in Multiterritorial Copyright Infringement Cases” (1999) 74 *Washington Law Review* 127 at 141 ff; William F Patry, *Patry on Copyright* (Thomson Reuters, 2023) (March 2023 update) at §§17.209–17.210.

<sup>44</sup> This assumes for now that such courts are sited in common law jurisdictions.

<sup>45</sup> Benedetta Ubertaini, “Intellectual Property Rights and Exclusive (Subject Matter) Jurisdiction: Between Private and Public International Law” (2011) 15(2) *Marquette Intellectual Property Law Review* 357 at 361.

<sup>46</sup> See the authors’ recommendations in Section IV(A) below.

<sup>47</sup> Marketa Trimble, “The Multiplicity of Copyright Laws on the Internet” (2015) 25 *Fordham Intellectual Property, Media & Entertainment Law Journal* 339 at 356. See also the discussion in Warren B Chik & Saw Cheng Lim, *Information and Communications Technology Law in Singapore* (SAL Academy Publishing, 2020) at para 11.030 ff.

be challenging for the courts to decide whether the dispute in question should rightly be heard in a particular forum.

In civil law systems such as the EU, jurisdiction with regard to copyright infringements may be based on “general jurisdiction” (according to the defendant’s domicile) and “special jurisdiction” (for instance, for matters relating to contract or tort).<sup>48</sup> Accordingly, under the Brussels Ia Regulation,<sup>49</sup> a copyright holder may sue an infringer either (a) in the member state of the infringer’s domicile,<sup>50</sup> or (b) in the member state where the “harmful event” occurred or may occur.<sup>51</sup> Given that the Court of Justice of the EU (“CJEU”) has interpreted the place where the “harmful event” occurred to encompass both the place where the event giving rise to the damage took place and the place where the damage occurred,<sup>52</sup> the copyright holder will thus have the option of electing which court, out of three available options, to sue the infringer in.<sup>53</sup> The courts in the member state of the infringer’s domicile as well as in the member state where the event giving rise to the damage had taken place are granted jurisdiction for *all* the damage sustained in light of the infringement.<sup>54</sup> Conversely, the courts in the member state where the damage had occurred only have jurisdiction to rule in respect of the harm caused within the territory of that member state.<sup>55</sup>

In the context of copyright infringements in the metaverse, one might wonder how the “event giving rise to the damage” and “the place where the damage occurred” ought to be identified. To this end, the case law on copyright infringements on the Internet provides instructive guidance.

With regard to the identification of where the damage had occurred for infringements on the Internet, the CJEU has ruled that damage occurs in every member state where the protected content is or has been made accessible.<sup>56</sup> The preference for *accessibility* as the touchstone for conferring special jurisdiction on the courts of member states has been criticised as overly broad and uncertain, as well as being prejudicial to defendants who face potentially unjustifiable lawsuits in a multiplicity of jurisdictions.<sup>57</sup> This has led commentators to argue that some “likelihood of damage” should be required before special jurisdiction is established under this limb.<sup>58</sup> Extending this approach to copyright infringements in the metaverse, copyright holders will likely be able to sue in any court within the EU as long as the infringing

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<sup>48</sup> Annabelle Bennett & Sam Granata, *When Private International Law Meets Intellectual Property Law: A Guide for Judges* (WIPO and the HCCH, 2019) at p 32.

<sup>49</sup> Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on Jurisdiction and the Recognition and Enforcement of Judgments in Civil and Commercial Matters (Recast) [2012] OJ L351/1 (“**Brussels Ia Regulation**”).

<sup>50</sup> Brussels Ia Regulation, Art 4(1).

<sup>51</sup> Brussels Ia Regulation, Art 7(2).

<sup>52</sup> See, eg, *Handelskwekerij Bier v Mines de Potasse d’Alsace* C-21/76, EU:C:1976:166 at paras 19 and 24–25; *Shevill and others v Presse Alliance* C-68/93, EU:C:1995:61 at paras 20–24.

<sup>53</sup> *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at paras 18–19.

<sup>54</sup> Pedro De Miguel Asensio, *Conflict of Laws and the Internet* (Elgar Publishing, 2020) at para 4.60.

<sup>55</sup> Pedro De Miguel Asensio, *Conflict of Laws and the Internet* (Elgar Publishing, 2020) at para 4.50. See also *Pez Hejduk v Energie Agentur.NRW GmbH* C-441/13, EU:C:2015:28 at para 36; *Peter Pinckney v KDG Mediatech* C-170/12, EU:C:2013:635 at para 45.

<sup>56</sup> See *Gflix Tv v DR* C-251/20, EU:C:2021:1036 at para 41; *Pez Hejduk v Energie Agentur.NRW GmbH* C-441/13, EU:C:2015:28 at paras 34 and 38; *Peter Pinckney v KDG Mediatech* C-170/12, EU:C:2013:635 at paras 43–44. See also Andrew Christie, “Private International Law Principles for Ubiquitous Intellectual Property Infringement – A Solution in Search of a Problem?” (2017) 13(1) *Journal of Private International Law* 152 at 173.

<sup>57</sup> Pedro De Miguel Asensio, *Conflict of Laws and the Internet* (Elgar Publishing, 2020) at para 4.76.

<sup>58</sup> Pedro De Miguel Asensio, *Conflict of Laws and the Internet* (Elgar Publishing, 2020) at para 4.76.

work is accessible by users located within those jurisdictions. Flowing from the understanding that the metaverse has been envisioned to be a single/unified virtual world accessible to all individuals across the globe (much like an omniverse), infringing works within the metaverse will likely be deemed globally accessible. Interestingly, in espousing the touchstone of accessibility, the CJEU has also expressly eschewed a “targeting” approach in relation to the identification of where the damage arising from copyright infringements on the Internet has occurred.<sup>59</sup>

In the alternative, the copyright holder may also bring the infringement claim at the place where the event giving rise to the damage took place. This has been interpreted by the CJEU – albeit in the context of trademark infringement through keyword advertising on the Internet – to refer to the location where the defendant decided to *activate* the technical process which enabled the subsequent communication to the public of advertising content.<sup>60</sup> The identified location must also have been foreseeable for the parties.<sup>61</sup>

How then to identify such a location vis-à-vis copyright infringements in the metaverse? *Prima facie*, one viable option would be the location at which the infringing user was *physically* present when he/she performed the infringing act in the metaverse (for instance, using tools or equipment physically located at the same place). The primary advantage of adopting this location is the availability of relevant physical/real evidence,<sup>62</sup> assuming of course that the location of the infringing user can be determined. Another option is to consider the place where third party servers are located or the infringing user’s secondary places of establishment, but only if such locations are indeed identifiable and foreseeable for the parties.<sup>63</sup> In any case, given that the location where the event giving rise to the damage has taken place will often coincide with the infringing user’s domicile,<sup>64</sup> most copyright holders relying on this limb will likely find themselves suing in the member state of the infringing user’s domicile.

Accordingly, in the EU, the courts in (potentially) three member states will arguably have jurisdiction over the copyright infringement claim: (a) the courts in the member state of the infringing user’s domicile, (b) the courts in the member state where the damage occurs (*ie*, the place from which the infringing work in the metaverse may be accessed), and (c) the courts in the member state where the event giving rise to the damage takes place. The practical difficulties arising in this context mirror those faced by the common law courts, namely the potential dearth of personal information pertaining to infringing users and the challenges in developing a mechanism or test to determine precisely where the “event giving rise to the damage” has taken place. These difficulties, however, appear to be ameliorated by the reliance of the EU courts on the *accessibility* approach to jurisdiction, which will allow copyright

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<sup>59</sup> *Peter Pinckney v KDG Mediatech* C-170/12, EU:C:2013:635 at para 42; *Pez Hejduk v Energie Agentur.NRW GmbH* C-441/13, EU:C:2015:28 at para 32; *Gtflifx Tv v DR* C-251/20, EU:C:2021:1036 at para 41.

<sup>60</sup> *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at paras 34–39. In the copyright context, see *Pez Hejduk v Energie Agentur.NRW GmbH* C-441/13, EU:C:2015:28 at paras 23–26.

<sup>61</sup> *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at para 31.

<sup>62</sup> *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at para 33.

<sup>63</sup> Lydia Lundstedt, “Jurisdiction and Choice of Law in Online Copyright Cases” in Eleonora Rosati, *The Routledge Handbook of EU Copyright Law* (Routledge, 2021) at p 403; *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at para 36.

<sup>64</sup> Lydia Lundstedt, “Jurisdiction and Choice of Law in Online Copyright Cases” in Eleonora Rosati, *The Routledge Handbook of EU Copyright Law* (Routledge, 2021) at p 403. For a critique of this proposition, see Eleonora Rosati, “The localization of IP infringements in the online environment: from Web 2.0 to Web 3.0 and the Metaverse” (2023) 18(10) *Journal of Intellectual Property Law & Practice* 720 at 732–733.

holders to bring claims in virtually every member state from which the infringing material made available for consumption in the metaverse may be accessed.

In sum, while the resolution of copyright disputes arising in the metaverse will no doubt pose some jurisdictional uncertainties (specifically with regard to the application of the *forum non conveniens* doctrine for common law courts and the identification of the place where the event giving rise to the damage has taken place for courts in the EU), the extant jurisdictional approaches adopted in both legal systems appear to be sufficiently robust in meeting these challenges.

## (2) Issues pertaining to choice of law

Once a court decides that it has jurisdiction, the applicable law will typically be determined under its own private international choice of law rules.<sup>65</sup> Where copyright infringement is concerned, the principle of territoriality dictates that national copyright law is applicable only within that country's borders.<sup>66</sup> There is also the principle of the country of protection (the *lex loci protectionis*), which states that the origination and scope of copyright protection ought to be determined by the law of the country for which protection is sought.<sup>67</sup> At this point, it should be noted that the place where copyright protection is sought might well be different from the place where the copyright holder intends to commence proceedings. The former typically refers to the place where the infringing act(s) had taken place (thereby falling within the purview of the copyright granted by that particular state);<sup>68</sup> the latter, however, simply refers to the place where the copyright holder ultimately decides to sue (for instance, where the defendant is domiciled). Notably, the application of the *lex loci protectionis* rule has been widely accepted,<sup>69</sup> including in the US<sup>70</sup> and the EU (where it has been codified in the Rome II Regulation).<sup>71</sup> In cases involving cross-border copyright infringements, the *lex loci protectionis* rule traditionally

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<sup>65</sup> See generally Paul Torremans, "Jurisdiction for Cross-Border Intellectual Property Infringement Cases in Europe" (2016) 53(6) *Common Market Law Review* 1625 (at Section 1).

<sup>66</sup> Andreas Reindl, "Choosing Law in Cyberspace: Copyright Conflicts on Global Networks" (1998) 19 *Michigan Journal of International Law* 799 at 804. Interestingly, the US Court of Appeals for the Second Circuit held in *Itar-Tass Russian News Agency v Russian Kurier Inc* 153 F.3d 82 (1998) that a foreign law (here, Russian law) – which bore "the most significant relationship" to the copyright interests of the plaintiffs – ought to govern issues concerning copyright ownership.

<sup>67</sup> Berne Convention, Art 5(2); Kai Burmeister, "Jurisdiction, Choice of Law, Copyright, and the Internet: Protection Against Framing in an International Setting" (1999) 9 *Fordham Intellectual Property, Media and Entertainment Law Journal* 625 at 658; Rita Matulionytė, "IP and Applicable Law in Recent International Proposals: Report for the International Law Association" (2012) 3 *JIPITEC* 263 at 265. See, for further insights, Sam Ricketson & Jane C Ginsburg, *International Copyright and Neighbouring Rights: The Berne Convention and Beyond* (Oxford University Press, 3rd Ed, 2022) (especially at paras 20.09–20.12). It has also been observed, however, that "though the language of article 5(2) of the Berne Convention suggests that it lays down a choice of law rule, this analysis is not universally accepted": see Joseph Lau, "(Let's) playing by the rules: A choice of law rule for communication of copyright material from video games to the public, through Let's Plays" (2023) 49 *Computer Law & Security Review* 1 at 8 (footnote citations omitted).

<sup>68</sup> Brenda Tiffany Dieck, "Reevaluating the Forum Non Conveniens Doctrine in Multiterritorial Copyright Infringement Cases" (1999) 74 *Washington Law Review* 127 at 131. See also *Creative Technology Ltd v Aztech System Pte Ltd* 61 F 3d 696 at 700–701 (9th Cir. 1995).

<sup>69</sup> Paul Goldstein & Bernt Hugenholtz, "International Copyright: Principles, Law, and Practice" (Oxford University Press, 2013) at pp 137–139.

<sup>70</sup> See, eg, Brenda Tiffany Dieck, "Reevaluating the Forum Non Conveniens Doctrine in Multiterritorial Copyright Infringement Cases" (1999) 74 *Washington Law Review* 127 at 131.

<sup>71</sup> Regulation (EC) 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations [2007] OJ L199/40 ("**Rome II Regulation**"), Art 8(1) and Recital (26).

leads to the application of the laws of each country for which protection is sought in so far as the impugned activity *infringes* the rights conferred in *each* of these territories.<sup>72</sup>

As with copyright infringements on the Internet, the problem chiefly lies in deciding where the infringing act(s) had taken place. How should the location of a cyber-infringement be determined, whether this occurs in the metaverse or on the Internet? Moreover, given that copyright infringements in the metaverse might simultaneously infringe rights that are recognised and protected under as many laws as there are members of the Berne Convention,<sup>73</sup> it would clearly be impractical for courts to apply over 180 national laws, not to mention the practical implications which this might have on the *forum non conveniens* analysis in common law jurisdictions.<sup>74</sup>

The approach taken on both sides of the Atlantic with regard to infringements on the Internet entails the adoption of “targeting” criteria so as to establish a link with *some* jurisdiction.<sup>75</sup> In the EU, “targeting” involves the identification of an act(s) disclosing an intention on the part of the person performing the act(s) to target members of the public in that territory.<sup>76</sup> Factors which are relevant to the determination of the *place* of “targeting” include the language used for the defendant’s website<sup>77</sup> and the accessibility of the website to members of the public in a state’s territory.<sup>78</sup> In the US, the courts will apply US law if the alleged infringer has sufficient contacts with the forum and the acts complained of possess a nexus with the US.<sup>79</sup> The relevant factors here include the number of US users who have viewed the infringing materials online and whether transmissions were received in US territory.<sup>80</sup>

Nevertheless, for the purposes of ascertaining the applicable law for copyright infringements in the metaverse, such an approach can be problematic. This is because the factors which have so far been developed by the courts in relation to copyright infringements on the Internet do not translate neatly in their application to corresponding infringements in the metaverse. For instance, in ascertaining whether there has been a breach of the exclusive right of communication (or making available) “to the public”, it may be difficult to determine the precise number – and provenance – of “views” of an infringing work within the metaverse, as opposed to the same on a static website on the World Wide Web. The authors are therefore of the view that the “targeting” approach currently employed in the EU and the US should be bolstered – challenges notwithstanding – so that the *lex loci protectionis* (and hence the

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<sup>72</sup> Pedro De Miguel Asensio, *Conflict of Laws and the Internet* (Elgar Publishing, 2020) at para 4.109. See also Sam Ricketson & Jane C Ginsburg, *International Copyright and Neighbouring Rights: The Berne Convention and Beyond* (Oxford University Press, 3rd Ed, 2022) at paras 20.15–20.36.

<sup>73</sup> See WIPO IP Portal, “Contracting Parties of the Berne Convention” <accessed at [https://www.wipo.int/wipolex/en/treaties/ShowResults?search\\_what=C&treaty\\_id=15](https://www.wipo.int/wipolex/en/treaties/ShowResults?search_what=C&treaty_id=15)>; Cornell Law School Legal Information Institute, “Berne Convention” <accessed at [https://www.law.cornell.edu/wex/berne\\_convention](https://www.law.cornell.edu/wex/berne_convention)>.

<sup>74</sup> Annette Kur & Ulf Maunsbach, “Choice of Law and Intellectual Property Rights” (2019) 6(1) *Oslo Law Review* 43 at 57.

<sup>75</sup> Edouard Treppoz, “International Choice of Law in Trademark Disputes from a Territorial Approach to a Global Approach” (2014) 37(4) *Columbia Journal of Law & the Arts* 557 at 563.

<sup>76</sup> *Football Dataco Ltd v Sportradar GmbH* C-173/11, EU:C:2012:642 at para 39. It should be noted that this case dealt with the *sui generis* database right, rather than copyright relating to authorial works.

<sup>77</sup> See, eg, *Omnibill (Pty) Ltd v Egpsxxx Ltd* [2014] EWHC 3762 (IPEC) at [13].

<sup>78</sup> *Football Dataco Ltd v Sportradar GmbH* C-173/11, EU:C:2012:642 at paras 42–43.

<sup>79</sup> Jane C Ginsburg, “Extraterritoriality and Multiterritoriality in Copyright Infringement” (1997) 37(2) *Virginia Journal of International Law* 587 at 601.

<sup>80</sup> See *Twentieth Century Fox Film Corp v iCraveTV*, 2000 WL 255989 (WD Pa. Feb 8, 2000) at paras 13, 20 and 21.

governing law for the resolution of copyright infringement disputes arising in the metaverse) can be identified with greater ease and clarity.<sup>81</sup>

Ultimately, as a general rule, it is likely that the courts will apply their domestic/national law once they have assumed jurisdiction to hear the parties' dispute(s) concerning copyright infringements that have occurred *within* the courts' territory.<sup>82</sup>

### ***B. Trademark infringements in the metaverse***

Because trademark rights, as established earlier, are granted on a territorial basis,<sup>83</sup> this has led to a rather fragmented approach to trademark protection.<sup>84</sup> Such a localised approach has increasingly come under pressure as the Internet has expanded the reach of brands (and, accordingly, the goodwill of businesses) beyond national borders,<sup>85</sup> and exacerbated the risks of cross-border infringements. The metaverse will no doubt pose its latest challenge.

#### **(1) Issues pertaining to jurisdiction**

The differing jurisdictional structures in common and civil law systems canvassed earlier<sup>86</sup> remain relevant for the adjudication of trademark infringement disputes. There are, however, important differences which relate primarily to the distinction between the validity of these registered intellectual property rights on the one hand, and the infringement of these rights on the other.

In the EU, the Brussels Ia Regulation confers exclusive jurisdiction over any proceedings concerning the validity of a trademark on the courts of the member state in which the trademark is registered, regardless of whether the validity of the right is raised by way of a positive action or as a defence.<sup>87</sup> Infringement claims, however, may be brought in the member states which derive their jurisdiction from Articles 4 and 7(2) of the Brussels Ia Regulation, namely by virtue of the defendant's domicile or the place where the harmful event occurred or may occur. This, however, assumes that the trademark has also been registered in the relevant member state since trademark infringement actions cannot be brought where registered trademark rights do not exist. The CJEU has interpreted "the place where the harmful event occurred or may occur"

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<sup>81</sup> See the authors' recommendations in Section IV(B) below. Other solutions proposed by commentators include the addition of new provisions to the Berne Convention for the sake of clarity: see, *eg*, Paul Geller, "Conflicts of Laws in Cyberspace: Rethinking International Copyright in a Digitally Networked World" (1996) 20(4) *Columbia-VLA Journal of Law & the Arts* 571 at 590–592.

<sup>82</sup> This article will not specifically address situations where a court has accepted jurisdiction (*eg*, because the defendant is *domiciled* in that territory) for disputes concerning copyright infringements that were committed *abroad* (*ie*, in a foreign jurisdiction in breach of a foreign copyright). In this regard, see the decision of the UK Supreme Court in *Lucasfilm Ltd v Ainsworth* [2011] UKSC 39; [2012] 1 AC 208 (especially at [102]–[111]). The authors are inclined to think that a court which has taken jurisdiction under such circumstances will apply *foreign* law, which parenthetically is in line with the *lex loci protectionis* rule.

<sup>83</sup> See Paris Convention for the Protection of Industrial Property, last revised at Stockholm on 14 July 1967, 21 UST 1583, 828 UNTS 305, Art 6(3).

<sup>84</sup> Edouard Treppoz, "International Choice of Law in Trademark Disputes from a Territorial Approach to a Global Approach" (2014) 37(4) *Columbia Journal of Law & the Arts* 557 at 559.

<sup>85</sup> See Marshall Leaffer, "Protection of well-known marks: a transnational perspective" in Irene Calboli & Edward Lee, *Trademark Protection and Territoriality Challenges in a Global Economy* (Elgar Publishing, 2014) at p 17.

<sup>86</sup> See Section III(A)(1) above.

<sup>87</sup> Brussels Ia Regulation, Art 24(4).

pursuant to the repealed Article 5(3) of Regulation 44/2001<sup>88</sup> (which is now Article 7(2) of the Brussels Ia Regulation) to encompass “both the place where the damage occurred and the place of the event giving rise to it”.<sup>89</sup>

Separately, an approach that takes into account a range of “connecting factors” has been adopted by the courts in the UK<sup>90</sup> as well as by the CJEU<sup>91</sup> in the context of cross-border trademark infringements on the Internet to localize the relevant infringing activity and, accordingly, establish the jurisdiction of the court seized. If a court, under this approach, finds that the infringer’s use of a registered mark has “targeted” consumers in that territory, the court will typically assume jurisdiction. The relevant factors in this regard include whether the language of the trader’s website reflects the language of the territory concerned, whether the extension of the Internet domain name is the country-code Top Level Domain (ccTLD) of the jurisdiction,<sup>92</sup> and whether it was foreseeable that damage would result in that country.<sup>93</sup>

A similar approach has also been adopted in the US. The US courts have held that the owner of a trademark must litigate in the country where the right was granted as regards determinations on the validity of the mark.<sup>94</sup> The US courts have also displayed a tendency to invoke the *forum non conveniens* doctrine when infringements occur in foreign jurisdictions (which fall within the scope of trademark protection afforded by foreign territories).<sup>95</sup> Clearly, trademark proprietors must sue in the jurisdiction(s) where registered trademark rights exist and where infringement has occurred.

The reason why issues pertaining to the validity of registered trademarks must be resolved by the courts of the state which had granted those rights is an intuitive one. It flows from the “act of state” doctrine – that because such registered intellectual property rights are granted through acts of the state, they must therefore be limited to the territory of the state.<sup>96</sup> On the other hand, for matters pertaining to trademark infringement, the preference for a “targeting” approach has

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<sup>88</sup> Council Regulation (EC) No 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (repealed).

<sup>89</sup> *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at para 19. In relation to “the place where the damage occurred”, the CJEU held that jurisdiction is to be conferred “on the courts of the Member State in which the right at issue [that is, the trade mark] is protected” (*Ibid.* at paras 27 and 29). As regards “the place where the event giving rise to the damage occurred”, this would refer to “the place of establishment of the [defendant] advertiser” because this is “the place where the activation of the display process is decided” (*Ibid.* at paras 37–38).

<sup>90</sup> See, *eg*, *Lifestyle Equities CV v Amazon UK Services Ltd* [2022] EWCA Civ 552 at [44] *ff*.

<sup>91</sup> See, *eg*, *L’Oréal SA v eBay International AG* C-324/09, EU:C:2011:474 at paras 61–65, which was decided in the context of Directive 89/104/EEC of 21 December 1988 (repealed) and Regulation (EC) No 40/94 of 20 December 1993 (repealed). Note further that “targeting” has been held to be a localization criterion in Article 125(5) of Regulation (EU) 2017/1001 (“EUTMR”): see the discussion in Eleonora Rosati, “The localization of IP infringements in the online environment: from Web 2.0 to Web 3.0 and the Metaverse” (2023) 18(10) *Journal of Intellectual Property Law & Practice* 720 at 733–734.

<sup>92</sup> Andrew Christie, “Private International Law Principles for Ubiquitous Intellectual Property Infringement – A Solution in Search of a Problem?” (2017) 13(1) *Journal of Private International Law* 152 at 173.

<sup>93</sup> *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at para 27.

<sup>94</sup> See *Vanity Fair Mills, Inc v T Eaton Co* 234 F.2d 633 at 646 (2nd Cir. 1956). See also Edouard Treppoz, “International Choice of Law in Trademark Disputes from a Territorial Approach to a Global Approach” (2014) 37(4) *Columbia Journal of Law & the Arts* 557 at 562.

<sup>95</sup> *Vanity Fair Mills, Inc v T Eaton Co* 234 F.2d 633 at 645–646 (2nd Cir. 1956).

<sup>96</sup> Benedetta Ubertaini, “Intellectual Property Rights and Exclusive (Subject Matter) Jurisdiction: Between Private and Public International Law” (2011) 15(2) *Marquette Intellectual Property Law Review* 357 at 361.

been observed to be “persuasively logical”<sup>97</sup> as it would not unduly expose potential infringers to unjustifiable suits in multiple jurisdictions. Indeed, as one commentator has persuasively argued, “it is more appropriate to adopt a targeting approach also under Article 7(2) Brussels I recast, as the CJEU has done with specific regard to jurisdiction rooted within the place of infringement for EUTMs in Article 125(5) EUTMR”.<sup>98</sup>

While the “targeting” approach for grounding jurisdiction therefore appears apposite in respect of trademark infringements on the Internet, it encounters the same problems as the “targeting” mechanism used to ascertain the appropriate choice of law for copyright infringement disputes in the metaverse – namely, incompatible criteria which are not suited for some of the vastly different ways in which users interact with one another in the metaverse. For example, country-specific domain names are unlikely to feature as prominently (if at all) in the metaverse environment. At present, there is *no clear test or guidance* as to how a court may establish its jurisdiction over trademark infringements that occur in the metaverse, particularly with regard to the applicability of the *forum non conveniens* (common law) doctrine<sup>99</sup> and that of Article 7(2) of the (EU) Brussels Ia Regulation. In practice, however, it is likely that a trademark proprietor seeking relief for infringements in the metaverse will sue – on the basis that registered trademark rights exist – either (a) in the territory of the alleged infringer’s domicile/residence (if this information is at all available), or (b) in a common law court by persuading the judge that no other connecting factor exists which would render yet another court a more appropriate forum to try the dispute.

## (2) Issues pertaining to choice of law

Where trademark infringement disputes are concerned, the applicable law is typically the law of the country where protection is sought (the *lex loci protectionis*).<sup>100</sup> This, in general, refers to the law of the country where the right in question is registered, for the simple reason that the law establishing the existence of the registered right should also be the law governing its scope and whether it has been infringed.<sup>101</sup>

While trademark proprietors are likely to seek protection at the place of infringement (so as to minimise any issues concerning jurisdiction and the enforcement of remedies), this might not be a viable option if the proprietor in question does not own a registered trademark in the jurisdiction where infringement has taken place. Trademark proprietors can also appreciate why the intellectual property laws of the country or countries in which their rights have been registered will not have extraterritorial reach to offer them any remedy vis-à-vis infringements

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<sup>97</sup> *Weir Warman Ltd v Research & Development Pty Ltd* [2007] 2 SLR(R) 1073 at [106], where the Singapore High Court agreed with the observations of Buxton LJ in *1-800 Flowers Inc v Phonenames Ltd* [2001] EWCA Civ 721 at [137]–[138]. See also Warren B Chik & Saw Cheng Lim, *Information and Communications Technology Law in Singapore* (SAL Academy Publishing, 2020) at pp 448–452.

<sup>98</sup> Eleonora Rosati, “The localization of IP infringements in the online environment: from Web 2.0 to Web 3.0 and the Metaverse” (2023) 18(10) *Journal of Intellectual Property Law & Practice* 720 at 733.

<sup>99</sup> It is interesting to note that in cases where the identity (hence, domicile and residence) and location of the defendant are unknown, the courts may need to fall back on other connecting factors which are more easily and clearly ascertainable, such as the nationality and/or location of the plaintiff: see *Janesh s/o Rajkumar v Unknown Person* (“CHEFPIERRE”) [2022] SGHC 264 at [27] and [30].

<sup>100</sup> Annette Kur & Ulf Maunsbach, “Choice of Law and Intellectual Property Rights” (2019) 6(1) *Oslo Law Review* 43 at 48.

<sup>101</sup> Annette Kur & Ulf Maunsbach, “Choice of Law and Intellectual Property Rights” (2019) 6(1) *Oslo Law Review* 43 at 48. See also Graeme Dinwoodie, “Private International Aspects of the Protection of Trademarks” (2001) WIPO Forum on PIL and IP at para 63. Cf further, in the context of jurisdiction, *Wintersteiger AG v Products 4U Sondermaschinenbau GmbH* C-523/10, EU:C:2012:220 at paras 27, 29 and 39.

elsewhere. Two courses of action are potentially open to them: (a) to have their trademarks registered at the place of infringement and then bring suit for any continuing act(s) of infringement (though it is acknowledged that this is not a practically expedient solution);<sup>102</sup> or (b) to argue that the defendant’s infringing acts (albeit committed largely abroad) have nonetheless “targeted” consumers in, or had some commercial impact on, the jurisdiction in which their trademark rights are registered. Both approaches – in the ultimate quest for the appropriate choice of law with the *closest connection* to the dispute – require a judicious consideration and application of “targeting” criteria.

As regards the latter approach, the US courts had previously been known to apply the Lanham Act in situations where a (non-US) defendant’s conduct *abroad* had a “substantial effect on US commerce”.<sup>103</sup> To this end, the courts did consider factors such as direct sales into the US, products shipped to the US,<sup>104</sup> and the loss of income for US businesses.<sup>105</sup> This analytical framework provided an excellent opportunity for proprietors of US trademarks to argue that US law ought to govern the dispute even for infringing acts occurring predominantly outside the US. In essence, such (foreign) infringing activities were treated as having taken place within the US by virtue of their “substantial effect on US commerce”. More recently, however, the US Supreme Court has sought to clarify, after applying the longstanding presumption *against* extraterritoriality, that 15 U.S.C. §§ 1114(1)(a) and 1125(a)(1) (two provisions of the Lanham Act that prohibit trademark infringement) “are *not* extraterritorial and that they extend only to claims where the claimed infringing use in commerce is *domestic*”.<sup>106</sup> No doubt, the implications of this latest guidance from the US Supreme Court on the extraterritoriality issue – that any (permissible) domestic application of the Lanham Act provisions turns on whether the alleged “infringing use in commerce” *has occurred in the USA* – on lower courts in the future remain to be seen.<sup>107</sup>

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<sup>102</sup> Note also the potential application of the “earlier right” or “prior user” defence contained in the trade marks legislation of the UK and Singapore: see, respectively, s 11(3) of the Trade Marks Act 1994 and s 28(2) of the Trade Marks Act 1998.

<sup>103</sup> *Hetronic International, Inc v Hetronic Germany GmbH* 10 F.4th 1016 at 1038 (10th Cir. 2021). Or because the “impacts within the United States [were] of a sufficient character and magnitude as would give the United States a reasonably strong interest in the litigation”: see *Ibid.* at 1046.

<sup>104</sup> *Hetronic International, Inc v Hetronic Germany GmbH* 10 F.4th 1016 at 1042 (10th Cir. 2021).

<sup>105</sup> *McBee v Delica Co Ltd* 417 F.3d 107 at 125 (1st Cir. 2005).

<sup>106</sup> *Abitron Austria GmbH v Hetronic International, Inc* 600 US 412 at 415 (2023) (emphasis added) – a decision of the US Supreme Court vacating the judgment of the US Court of Appeals for the Tenth Circuit in *Hetronic International, Inc v Hetronic Germany GmbH* 10 F.4th 1016 (10th Cir. 2021). This was the view of the majority expressed by Alito J (in whose opinion Thomas, Gorsuch, Kavanaugh and Jackson JJ joined), whereas Sotomayor J (joined by Roberts CJ, Kagan and Barrett JJ), while concurring in the court’s judgment, disagreed with the majority’s application of the “two-step” extraterritoriality framework, particularly at “step two”: see *Abitron Austria GmbH v Hetronic International, Inc* 600 US 412 at 435–446 (2023). For a critique of this US Supreme Court decision, see Timothy Holbrook & Anshu Garg, “Confusion over Trademark Extraterritoriality ... and Beyond”, *American University Law Review* (forthcoming) (paper available at: [https://papers.ssrn.com/sol3/Papers.cfm?abstract\\_id=4575438](https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=4575438)).

<sup>107</sup> Interestingly, Judge Gregory Williams from the US District Court for the District of Delaware ruled in *Rockwell Automation, Inc v Parcop SRL d/b/a WiAutomation*, CA No. 21-1238-GBW-JLH (D Del. Jul 7, 2023) (“*Rockwell*”) that the US Supreme Court’s holding in *Abitron Austria GmbH v Hetronic International, Inc* 600 US 412 (2023) (“*Abitron*”) did not bar the plaintiff from adducing (circumstantial) evidence at trial of the defendant’s *foreign* infringing conduct as proof of the defendant’s infringing use of the plaintiff’s trademark in commerce in the *United States* (namely, that the defendant had made “counterfeit sales” to customers in the USA). Judge Williams observed that the *Abitron* decision did not address the question of admissibility of evidence of foreign conduct in support of Lanham Act (US-based infringement) claims and further emphasised that the plaintiff in the *Rockwell* litigation – unlike the plaintiff in *Abitron* – was not seeking damages for any of the defendant’s foreign counterfeit sales nor to apply the Lanham Act to the defendant’s foreign conduct.

Over in the EU, it has been held that the law of the member state in which the trademark has been registered will govern the dispute as long as consumers in the territory covered by the trademark have been “targeted”.<sup>108</sup> Where trademark infringements on the Internet are concerned, the relevant “targeting” factors (also alluded to above) include the intention of the website owner and what users may understand from accessing the website,<sup>109</sup> whether direct advertisement was employed by the website owner,<sup>110</sup> and which country’s ccTLD was used in the domain name of the trader’s website.<sup>111</sup>

For trademark infringement disputes arising in the metaverse, the authors posit that the governing law ought to be the law of a particular real world jurisdiction where the courts have assumed jurisdiction (typically because the defendant’s infringing acts can be argued or have been found to have occurred therein). Where it is unclear in which particular real world jurisdiction the defendant’s infringing acts have occurred (as is likely the case where all trademark infringing activity occurs exclusively within the metaverse), then the governing law might plausibly be the law of the place in which consumers have been “targeted” by the defendant’s infringing acts (in line with EU authorities). Flowing from the premise that the governing law is typically the *lex loci protectionis*, the claimant must naturally also possess registered trademark rights in that particular real world jurisdiction. Finally, where the notion of “targeting” is concerned, it has already been observed earlier that the “targeting” criteria employed by the courts in the context of trademark infringements on the Internet may now bear little relevance, if any, for infringing conduct arising entirely in the metaverse. For example, ccTLDs are outright irrelevant for the purposes of metaverse infringements and there may well be no evidence at all of physical products being shipped to any particular jurisdiction in the real world.

### C. Concluding observations in brief

On the whole, the “targeting” approach appears to have assumed a significant and prominent role in the resolution of both trademark and copyright infringement disputes on the Internet, and this observation is likely to hold true for corresponding disputes arising in the metaverse (notwithstanding the difficulties and challenges posed by the incompatibility of certain “targeting” criteria where the latter is concerned). The authors further make the general observation that the determination of where the intellectual property infringement has occurred will likely suffice – in the majority of scenarios – in ascertaining the appropriate choice of law as well as the relevant jurisdiction in which the right holder ought to bring suit.<sup>112</sup>

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<sup>108</sup> See, eg, *L’Oreal SA v eBay International AG* C-324/09, EU:C:2011:474 at paras 61–62.

<sup>109</sup> *800-FLOWERS Trade Mark* [2000] FSR 697 at 705.

<sup>110</sup> *1-800 Flowers Inc v Phonenames Ltd* [2001] EWCA Civ 721 at [138].

<sup>111</sup> See *L’Oréal SA v eBay International AG* C-324/09, EU:C:2011:474 at para 66. See also WIPO, Joint Recommendation Concerning Provisions on the Protection of Marks, and Other Industrial Property Rights in Signs, on the Internet (2001) <accessed at <https://www.wipo.int/edocs/pubdocs/en/marks/845/pub845.pdf>> (“**Joint Recommendation on Internet Use**”) at pp 7–9.

<sup>112</sup> For further reading and deeper insights (particularly in the context of cyber/online infringements of copyright that may take place pervasively and contemporaneously in multiple jurisdictions), see Sam Ricketson & Jane C Ginsburg, *International Copyright and Neighbouring Rights: The Berne Convention and Beyond* (Oxford University Press, 3rd Ed, 2022) at Chapter 20; Jane C Ginsburg & Antonia von Appen, “Where does ‘making available’ occur?”, Chapter 9 in Andrej Savin & Jan Trzaskowski (eds), *Research Handbook on EU Internet Law* (Edward Elgar Publishing, 2nd Ed, 2023); Joseph Lau, “(Let’s) playing by the rules: A choice of law rule for communication of copyright material from video games to the public, through Let’s Plays” (2023) 49 *Computer Law & Security Review* 1; and Eleonora Rosati, “The localization of IP infringements in the online environment: from Web 2.0 to Web 3.0 and the Metaverse” (2023) 18(10) *Journal of Intellectual Property Law & Practice* 720.

#### **IV. Recommendations to overcome the jurisdictional and choice of law challenges posed by the metaverse to copyright and trademark infringement actions**

Following the analysis above, the authors offer two recommendations which aim to facilitate the application of extant rules, *mutatis mutandis*, to copyright and trademark infringements which occur in the metaverse. The first entails a practical pre-emptive measure, while the second concerns embellishments/refinements to the doctrine of “targeting”.

##### ***A. Establishing a clear framework for the registration and authentication of users in the metaverse***

One fundamental challenge posed by the metaverse concerns the potential anonymity of its participants (*ie*, users). It is as yet unclear whether individuals (underlying their respective avatars in the metaverse) may be properly identified and, if so, to what extent. This concern, alluded to earlier in this article, simply mirrors the very same issues that have plagued the Internet, where users commonly employ tools such as virtual private networks to mask their identities. Even if the metaverse is controlled and regulated by a single entity (such as Meta), personal data/information may not be forthcoming or, even worse, may have been falsely provided by infringing users. Moreover, given the opacity of the blockchain, right holders (as third parties) will likely be unable to derive user details from transactions that involve cryptocurrency. Such inability to ascertain the identity of infringing users poses significant challenges for direct/primary infringement claims brought by right holders.<sup>113</sup> For instance, not only will they not know who to direct the claim against, they will also be unable to take advantage of jurisdictional rules pertaining to the infringing user’s domicile/residence or which hinge on the physical location of the infringing act(s) in question.

A potential solution to this problem is for the controlling entity<sup>114</sup> which operates the metaverse to invest in establishing a clear framework for the authentication of users upon the registration of their respective avatars when joining the metaverse.<sup>115</sup> Needless to say, verified personal information collected by the controlling entity should *not* be shared with any other party, except where necessary – for instance, pursuant to a court order<sup>116</sup> – to facilitate the bringing of legal

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<sup>113</sup> Cf Marianna Ryan, “Intellectual property considerations and challenges in the metaverse” (2023) 45(2) *European Intellectual Property Review* 80 at 83: “What is more, enforcement of IP rights appears to meet one giant obstacle when it comes to the metaverse – the decentralised nature and the use of avatars may make it practically impossible to identify the actual infringer”. As such, an alternative course of action might be for right holders to bring suit against information society service providers and/or other Internet intermediaries whose services have been used to infringe intellectual property rights: see Eleonora Rosati, “The localization of IP infringements in the online environment: from Web 2.0 to Web 3.0 and the Metaverse” (2023) 18(10) *Journal of Intellectual Property Law & Practice* 720 at 734–738.

<sup>114</sup> While the authors recognise the possibility of Decentralised Autonomous Organisations (“DAOs”) operating as the controlling entity of the metaverse (see, *eg*, the Decentraland DAO), this article will assume that traditional corporate vehicles, such as companies, will run the metaverse. Extra-legal remedies and solutions – including the impact/influence of governance tokens on the decision-making and dispute resolution processes – which may be available to right holders in the context of DAOs as controlling entities will therefore not be considered. See further the discussion on “centralized” and “decentralized” metaverses in Eleonora Rosati, “The localization of IP infringements in the online environment: from Web 2.0 to Web 3.0 and the Metaverse” (2023) 18(10) *Journal of Intellectual Property Law & Practice* 720 at 741.

<sup>115</sup> See, *eg*, Ben Chester Cheong, “Avatars in the Metaverse: Potential Legal Issues and Remedies” (2022) 3 *International Cybersecurity Law Review* 467 (especially at Section 3.3.2). Needless to say, this proposal concerning registration extends also to all business and commercial entities with a presence in the metaverse.

<sup>116</sup> See, *eg*, *Odex Pte Ltd v Pacific Internet Ltd* [2008] 3 SLR(R) 18 which concerned an application by Odex Pte Ltd (which was neither a copyright owner nor an exclusive licensee) for a pre-action discovery order to compel a local Internet service provider to disclose the identities of its subscribers who had engaged in high volumes of

claims by right holders (and subject also to the rules expressed in any prevailing data protection law). To prevent dishonest users from providing fraudulent information, the controlling entity may consider entering into a contractual agreement – such as an end-user licence agreement (“EULA”) – with every registered user.<sup>117</sup> These EULAs with clearly stipulated terms of service could give the controlling entity the right, for example, to confiscate the digital assets accruing to the digital wallet linked to the individual user or to freeze transactions relating to that wallet.<sup>118</sup> Such measures of tracking and traceability may well dissuade dishonest users from engaging in misconduct and assist right holders in identifying alleged infringers in the metaverse with greater ease. At the very least, the controlling entity should aim to disable the use of tools which allow users to hide their identities and the locations from which they access the metaverse. While the authors recognise that such an approach may run counter to notions of privacy and confidentiality which proponents of the metaverse often pride themselves on (and which apparently pave the way for unrestrained user interaction and conduct in the metaverse), this, it is submitted, would be a small price to pay in return for greater transparency and accountability as well as a more legally compliant virtual environment and effective enforcement regime for intellectual property rights in the metaverse.

### ***B. Reconsidering and bolstering the relevant criteria for the “targeting” approach***

The authors are of the view that the “targeting” approach remains the most practical and effective mechanism to found jurisdiction and establish the appropriate choice of law for copyright and trademark infringement actions in the metaverse. Nevertheless, the relevant criteria which serve as connecting factors where cross-border infringements on the Internet are concerned ought to be reviewed and updated to comport with the arguably more sophisticated ways in which users interact with one another and other entities in the metaverse. It is submitted that the following three considerations would be relevant and helpful in the “targeting” analysis for the metaverse environment.

The first pertains to the language adopted by the user when engaging in infringing conduct in the metaverse. Notably, the language used on websites which were found to have infringed copyright or trademark rights has been considered by the courts in various jurisdictions to be a relevant factor.<sup>119</sup> While the growing usage of English as the *lingua franca* of the world may well mean that this factor will become less relevant over time, the usage of *other* languages specific to countries, regions or communities around the world is highly suggestive of where the potential infringements might have taken place. This is particularly so where the alleged

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illegal uploading and downloading of copyrighted anime videos using the BitTorrent protocol. Although Odex Pte Ltd was found to lack *locus standi* to apply for pre-action discovery, the Singapore High Court allowed a subsequent application by some of the copyright owners themselves to be added as plaintiffs for this purpose. More recently, the Singapore High Court in *CLM v CLN* [2022] SGHC 46 – pursuant to the court’s power under the statute to grant disclosure orders ancillary to a freezing injunction – ordered two cryptocurrency exchanges with operations in Singapore (and which had control over the digital wallets belonging to unidentified defendants) to disclose certain pieces of information pertaining to the accounts that had been credited with “stolen cryptocurrency assets”, which information would also have facilitated the identification of the hitherto unidentified defendants.

<sup>117</sup> Such EULAs are frequently used for virtual worlds in video games (eg, massively multiplayer online role-playing games): see Hannah Yee Fen Lim, “Is it really just a game? Copyright and online role-playing games” (2006) 1(7) *Journal of Intellectual Property Law and Practice* 481 at 482.

<sup>118</sup> See also Law Commission (UK), “Digital Assets: Consultation Paper” (Law Com No 256) (28 July 2022) at para 7.34 ff.

<sup>119</sup> See, eg, *Omnibill (Pty) Ltd v Egpsxxx Ltd* [2014] EWHC 3762 (IPEC) at [13]. See also Andrew Christie, “Private International Law Principles for Ubiquitous Intellectual Property Infringement – A Solution in Search of a Problem?” (2017) 13(1) *Journal of Private International Law* 152 at 173.

infringer, in adopting a language other than English, has engaged in significant advertising or promotion for products and/or services in the metaverse.

The second concerns the development of metrics which can be used to ascertain the extent to which (including the frequency with which) an infringing work or mark may be accessible to – and has in fact been accessed by – users hailing from a particular jurisdiction in the real world. Unlike static websites on the Internet where “views”, “hits” or “clicks” may be easily monitored, the metaverse offers a live, interactive/immersive and synchronous experience with users interacting with the virtual environment and with one another contemporaneously.<sup>120</sup> This makes it relatively difficult to collect and acquire data with respect to the activities of avatar-consumers, particularly if such activities are not monitored or tracked by the platform provider or any other entity. For example, just because users of the metaverse exist or participate in the same virtual space alongside a particular trademark or copyright work does not necessarily mean that (a) the user in question has seen (or had access to) the mark or work, and (b) the user has in any way been influenced by the mark or work (or, to put it another way, that the mark or work has had any impact on the user’s *perception*).<sup>121</sup>

Nevertheless, metaverse-specific metrics ought to be formulated and may then be relied upon to determine if users from a particular jurisdiction have accessed, interacted with or been exposed to the copyright work or registered mark in question. Given that these users will participate in the metaverse through the use of equipment such as virtual reality headsets, right holders can possibly obtain information on the number of users from each jurisdiction who have interacted with the infringing material in question by, for instance, having “trackers” linked to the eye-tracking function on such headsets<sup>122</sup> tagged on to the infringing material itself. In the alternative, innovative developers could design devices or software applications for use in the metaverse which are capable of tracking the number of avatars which come within a fixed virtual distance of the infringing material. These are but examples of novel and relevant metrics which could serve as heuristics to aid in judicial determination as to whether any infringing activity or conduct in the metaverse can, by extension, be argued to have *also* occurred in a particular jurisdiction in the real world.

The third consideration relates to whether infringing goods and/or services are actually offered for sale in the metaverse. If so, it may be pertinent to consider (a) whether consumers in the terrestrial world, apart from their virtual avatars, may also avail themselves of such goods and/or services (for example, physical goods being delivered to consumers from a particular jurisdiction), (b) whether the seller or service provider in the metaverse has indicated any means of contact or contact details that might point to a particular jurisdiction, and (if applicable) (c) whether a particular fiat currency has been specified in exchange for the goods and/or services in question.<sup>123</sup> Such information may be relatively easy to obtain, as the right holder can always gather evidence of this nature by posing as an actual consumer. Nonetheless, such matters ought to be considered in conjunction with the totality of the circumstances

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<sup>120</sup> Matthew Ball, “The Metaverse: What It Is, Where to Find it, and Who Will Build It” (13 January 2020) <accessed at <https://www.matthewball.vc/all/themetaverse>>.

<sup>121</sup> Notably, the relevance of the perception of the user/average consumer has been underscored by the UK Court of Appeal in *Lifestyle Equities CV v Amazon UK Services Ltd* [2022] EWCA Civ 552 at [54]–[55], as well as by the Court of Justice of the European Union in *Christian Louboutin v Amazon Europe Core Sàrl* Joined cases C-148/21 and C-184/21, EU:C:2022:1016 at paras 44–48.

<sup>122</sup> See, eg, Scott Stein, “Watching Me, Watching You: How Eye Tracking is Coming to VR and Beyond” (CNET) (21 February 2022) <accessed at <https://www.cnet.com/tech/computing/watching-me-watching-you-how-eye-tracking-is-coming-to-vr-and-beyond/>>.

<sup>123</sup> See WIPO, Joint Recommendation on Internet Use at p 8.

because (a) the fact that infringing goods and/or services may be delivered to (and/or rendered at) a particular jurisdiction does not, *ipso facto*, imply that a close connection with that jurisdiction exists, and (b) transactions in the metaverse, more often than not, will involve cryptocurrency or NFTs rather than the flow of digital funds.<sup>124</sup>

While the “targeting” approach must obviously evolve in tandem with rapid developments that shape the metaverse and its associated technologies, the authors submit that the various considerations proffered above will help guide right holders and the courts in identifying, with greater clarity, the appropriate jurisdiction and choice of law for the resolution of intellectual property disputes arising in the metaverse.

## V. Conclusion

Prospero famously declares in *The Tempest* that “[w]e are such stuff as dreams are made on”.<sup>125</sup> With the dawn of the metaverse, such exhortations may now be realised in more ways than one. Not only will we be able to exist, live, work and play in a distinctly virtual world, all possibilities and eventualities as well as the overall user experience within such an environment will also be limited *only* by our own imagination.<sup>126</sup> Promises of grandeur aside, the metaverse will no doubt challenge the field of intellectual property law – traditionally described as one of the most territorial branches of commercial law<sup>127</sup> – by, *inter alia*, dissolving national and physical borders, as well as offering its users a cloak of anonymity and the opportunity to toggle between the real and virtual worlds.

In this article, the authors have sought to provide a preview of some of the challenges which the metaverse will invariably pose for the enforcement of copyright and trademark rights. It is suggested that these difficulties may well be ameliorated through the adoption of certain preemptive measures, which include (a) the establishment of robust frameworks in identifying users who participate in the metaverse, and (b) the formulation<sup>128</sup> of clear and coherent criteria for determining the requisite links between intellectual property infringements that occur in the metaverse and the appropriate jurisdiction and choice of law for the resolution of such disputes.

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<sup>124</sup> Azad Abbasi, “The Metaverse And NFTs: What Agencies And Brand Leaders Should Know” (Forbes) (6 January 2022) <accessed at <https://www.forbes.com/sites/forbesagencycouncil/2022/01/06/the-metaverse-and-nfts-what-agencies-and-brand-leaders-should-know/?sh=511c05bc4200>>.

<sup>125</sup> Shakespeare, *The Tempest* (Simon & Schuster, 2004) at Act IV, Scene 1.

<sup>126</sup> See, eg, Stylianos Mystakidis, “Metaverse” (2022) 2 *Encyclopedia* 486 at 491–492.

<sup>127</sup> Alexander Peukert, “Territoriality and Extra-Territoriality in Intellectual Property Law” in Gunther Handl, Joachim Zekoll & Peer Zumbansen, *Beyond Territoriality: Transnational Legal Authority in an Age of Globalization* (Brill, 2012) at p 223.

<sup>128</sup> Preferably by a supranational organisation (such as the World Intellectual Property Organisation), rather than to wait for the appropriate case to go before the courts. Insights may also be gleaned from such “soft law” projects as the American Law Institute’s *Principles of Intellectual Property* (specifically, “Principles Governing Jurisdiction, Choice of Law, and Judgments in Transnational Disputes”), the Max Planck Institute for Innovation and Competition’s “Principles on Conflict of Laws in Intellectual Property” (prepared by the European Max Planck Group on Conflict of Laws in Intellectual Property) and the International Law Association’s “Guidelines on Intellectual Property and Private International Law” (the “Kyoto Guidelines”) – see, respectively, <<https://www.ali.org/publications/show/intellectual-property-principles-governing-jurisdiction-choice-law-and-judgments-transnational-disputes>>, <<https://www.ip.mpg.de/en/research/research-news/principles-on-conflict-of-laws-in-intellectual-property-clip.html>> and <<https://www.law.kyushu-u.ac.jp/programs/english/kyoto-guidelines/>>. See also the HCCH-WIPO Report on Identifying Actual and Practical Issues of Private International Law in Cross-Border Intellectual Property Dealings (December 2022) at: <https://www.wipo.int/export/sites/www/about-ip/en/judiciaries/docs/hcch-questionnaire-report-annex.pdf>.

As with dreams, however, the metaverse might just never come to be.<sup>129</sup> But if and when it does materialise, intellectual property law must stand ready to embrace it.

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<sup>129</sup> For instance, the future success or otherwise of the *Metaverse Standards Forum* (<<https://metaverse-standards.org/>>) – with its lofty ideals of bringing standards organisations and companies together “to foster the development of interoperability standards for an open and inclusive metaverse” – remains an open question for now.