



# ST. THOMAS JOURNAL OF COMPLEX LITIGATION

Volume 9

Spring 2023

## **YOU'VE BEEN . . . AIRDROPPED? SERVICE VIA NFTS AS THE NEXT EVOLUTIONARY STEP**

*Hon. John G. Browning*

YOU’VE BEEN . . . AIRDROPPED? SERVICE VIA NFTS AS THE NEXT  
EVOLUTIONARY STEP

By: Hon. John G. Browning\*

**Table of Contents**

INTRODUCTION .....	1
I. SERVICE WITHOUT LEAVING YOUR COMPUTER – A BRIEF HISTORY .....	2
A. <i>Back to the Future: The Fax Machine, Email, and Social Media</i> .....	3
B. <i>Enter the United States</i> .....	6
II. SERVICE VIA NFT– THE AMERICAN EXPERIENCE .....	7
A. <i>LCX Tackled Crypto Theft Head On</i> .....	7
III. SERVICE VIA NFTS ACROSS THE POND .....	11
IV. IMPLICATIONS OF SERVICE VIA NFTS .....	12
A. <i>Data Privacy in the U.S. and Abroad</i> .....	13
CONCLUSION .....	14

---

\* Justice (ret.) John G. Browning serves as Distinguished Jurist in Residence at Faulkner University’s Thomas Goode Jones School of Law. He previously served on the Fifth District Court of Appeals in Texas, after a lengthy career in civil litigation and appeals. He is a graduate of Rutgers University and the University of Texas School of Law. He gratefully acknowledges the loving support of his wife, Lisa Browning, in connection with this (and many) articles.

## INTRODUCTION

So you just had the opposing party served with process using a real, flesh and blood human being—how very quaint and 20<sup>th</sup> century of you. For more than ten years now, courts all over the world have permitted, under the right circumstances, substituted or alternative service to be accomplished using social media platforms. Courts in eight countries, including the United Kingdom (UK) and multiple jurisdictions within the United States, have permitted such service.<sup>1</sup> Some American states, like Texas, have even passed statutes specifically addressing this form of service and setting forth rules governing the practice.<sup>2</sup> As one federal judge in New York observed nearly ten years ago in blessing the “relatively novel concept” of service by Facebook, “history teaches that, as technology advances and modes of communication progress, courts must be open to considering requests to authorize service via technological means of then-recent vintage, rather than dismissing them out of hand as novel.”<sup>3</sup>

The judge’s words have proven prophetic, since 2022 may have ushered in the next step in technology-assisted service of process: perfecting service via the transfer of non-fungible token (NFT) on the blockchain. On June 2, 2022, the Supreme Court of the State of New York granted an order permitting service of court documents via the airdropping of a token on the Ethereum blockchain in the case of *LCX AG v. 1.274M U.S. Dollar Coin et al.*,<sup>4</sup> This “service token” was to be served on the anonymous person(s) controlling an Ethereum address via airdropping, with the token containing a hyperlink to a website on which the court papers were published.<sup>5</sup> Just weeks later, in June 2022, the High Court of England and Wales similarly granted an order permitting the service of court proceedings via the transfer of an NFT on the blockchain.<sup>6</sup> These cases involved victims of cryptocurrency theft and fraud, respectively.

---

<sup>1</sup> Jan L. Jacobowitz & John G. Browning, *Legal Ethics and Social Media: A Practitioner’s Handbook*, AM. BAR ASSOC. 24 (2d ed. 2022).

<sup>2</sup> Tex. Civ. Prac. & Rem. Code § 17.033. Other states, like Utah, have simply listed court-approved social media service as an option in their procedural rules, while some—like New Jersey—have approved the practice in cases of first impression. See *K.A. v. J.L.*, 450 N.J. Super. Ct. 247 (Ch. Div. 2016).

<sup>3</sup> Fed. Trade Comm’n v. PCCare247, Inc., No. 12 Civ. 7189(PAE), 2013 WL 841037, at \*3 (S.D.N.Y. Mar. 7, 2013).

<sup>4</sup> *LCX AG v. 1.274M U.S. Dollar Coin et al.*, Index No. 154644/2022, *Order to Show Cause and Temporary Restraining Order*, (N.Y.S. 2022).

<sup>5</sup> *Id.*

<sup>6</sup> *D’Aloia v. Binance Holdings and Others*, [2022] EWHC 1723 (Ch.).

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

But are these rulings “one off” holdings, or do they represent something more lasting and significant? This article argues that these courts’ decisions to recognize the viability of blockchain as a means of service represents the next evolutionary link in a long chain of embracing technological innovations when it comes to accomplishing alternative or substituted service of process. To illustrate this, the article will begin with a look at how service of process has evolved in recent years to adapt to the ever-increasing impact of emerging technologies on the law. It will progress to a discussion of the background of both the *LCX* and *D’Aloia* cases, and analyze what led to the two courts’ groundbreaking orders. Finally, this article will examine the implications and significance of these recent rulings, as well as analyze both the potential advantages and drawbacks to service via NFT in future litigation.

## I. SERVICE WITHOUT LEAVING YOUR COMPUTER – A BRIEF HISTORY

Courts did not arrive overnight at the point of sanctioning the service of process via NFTs, but they have long been concerned with the efficacy of service. As far back as 1808, Lord Ellenborough questioned the validity of perfecting service “upon proof of nailing a summons at the court door.”<sup>7</sup> Certainly in the United States, notions of service have followed a path that seeks to reconcile the due process interests in need of protection with the pragmatism born of our embrace of technology and our acknowledgment of that technology’s importance to economic growth. In 1878, the U.S. Supreme Court held in *Pennoyer v. Neff* that a defendant, to be considered served, had to be personally served in the forum state.<sup>8</sup> Decades later, the Court upheld substituted service as sufficient where there was “reasonable assurance that the notice will be actual.”<sup>9</sup> By 1950, in *Mullane v. Central Hanover Bank & Trust Co.*, in upholding notice by publication, the Supreme Court held that the means of service had to be “reasonably calculated, under all the circumstances, to apprise interested parties of the pending of the action.”<sup>10</sup> It also had to be “not substantially less likely to bring home notice than other of the feasible and customary substitutes.”<sup>11</sup>

By 1980, the first case to permit service of process to be accomplished electronically came along.<sup>12</sup> In a pattern that has proven to be a hallmark of judicial innovation—embracing technology when confronted by necessity—the New York

---

<sup>7</sup> *Buchanan v. Rucker*, 103 Eng. Rep. 546 (1808).

<sup>8</sup> *Pennoyer v. Neff*, 95 U.S. 714, 734, 736 (1878).

<sup>9</sup> *Int’l Shoe v. Washington*, 326 U.S. 310, 320 (1945).

<sup>10</sup> *Mullane v. Central Hanover Bank & Trust Co.*, 339 U.S. 306, 314 (1950).

<sup>11</sup> *Id.* at 315.

<sup>12</sup> *See New England Merchants Nat’l Bank v. Iran Power Generation & Transmission Co.*, 495 F. Supp. 73, 81-82 (S.D.N.Y. 1980).

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

federal court in *New England Merchants National Bank* confronted the few alternatives available to a group of American plaintiffs looking for a way to sue defendants in Iran.<sup>13</sup> Because normal means of service had been interrupted due to the overthrow of the Shah and the subsequent regime change, the court ordered service of process via telex.<sup>14</sup> The court's rationale has since become the mantra of sorts for courts wrestling with the conundrum of whether emerging communication technologies could, within constitutional parameters, accomplish service:

Courts . . . cannot be blind to changes and advances in technology. No longer do we live in a world where communications are conducted solely by mail carried by fast sailing clipper or steam ships. Electronic communication via satellite can and does provide instantaneous transmission of notice and information. No longer must process be mailed to a defendant's door when he can receive complete notice at an electronic terminal inside his very office, even when the door is steel and bolted shut.<sup>15</sup>

*A. Back to the Future: The Fax Machine, Email, and Social Media*

After *New England Merchants National Bank*, a number of courts—both state and federal—considered the newest technological kid on the communications block, the facsimile. A New York state court opinion, *Calabrese v. Springer Personnel of New York, Inc.*, was the first case permitting service via fax machine.<sup>16</sup> Eventually, however, the ubiquitous fax yielded its position to email. In 2003, a federal court in California flatly rejected the notion of service by email, proclaiming it was “not sufficient to comply with the Federal Rules of Civil Procedure.”<sup>17</sup> Three years later, however, the U.S. Bankruptcy Court for the Northern District of Georgia became the first federal court to authorize international service of process via email.<sup>18</sup> Harkening back to *New England Merchants National Bank*, the court justified its creative approach with a flourish: “[C]ommunication by facsimile transmission and electronic mail have now become commonplace in our

<sup>13</sup> See generally *id.*

<sup>14</sup> “Telex is an international system used especially in the past for sending written messages. Messages are converted into signals which are transmitted, either by electricity or by radio signals, and then printed out by a machine in another place.” *Telex definition and meaning*, COLLINS ENGLISH DICTIONARY, <https://www.collinsdictionary.com/dictionary/english/telex> (last visited 2/23/2023).

<sup>15</sup> *New England Merchants Nat'l Bank*, 495 F. Supp. at 81–82.

<sup>16</sup> *Calabrese v. Springer Personnel of N.Y., Inc.*, 534 N.Y.S.2d 83, 84 (N.Y. City Civ. Ct. 1988).

<sup>17</sup> *Columbia Ins. Co. v. Seescandy.com*, 185 F.R.D. 573, 579 (N.D. Cal. 1999).

<sup>18</sup> *In re It'l Telemedia Assoc., Inc. v. Arjuna Diaz et al.*, 245 B.R. 713, 720 n.5 (Bank. N.D. Ga. 2000).

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

increasingly global society. The federal courts are not required to turn a blind eye to society's embracement of such technological advances."<sup>19</sup>

In 2002, a landmark decision was issued that would contribute important analysis to the discussion of service in the Digital Age, particularly the need to adapt antiquated notions of service to the dizzying, sophisticated world of modern communications.<sup>20</sup> In *Rio Properties, Inc. v. Rio International Interlink*, the owner/operator of Las Vegas casinos registered a number of trademarks for its properties and also registered the domain name, [www.playrio.com](http://www.playrio.com).<sup>21</sup> At some point, the casino entity learned of a Costa Rican company, Rio International Interlink (RII), an internet gaming business that used the domain [www.riosports.com](http://www.riosports.com).<sup>22</sup> After unsuccessful efforts with cease and desist letters, Rio Properties sued for trademark infringement.<sup>23</sup> But with RII nowhere to be found—except online—efforts at conventional service proved fruitless.<sup>24</sup> After an emergency motion to effectuate alternative service through email to RII resulted in a default judgment, the Costa Rican entity appealed to the Ninth Circuit.<sup>25</sup>

The Ninth Circuit affirmed,<sup>26</sup> pointing out that, given the wholehearted adoption of communication via email and the internet by the business community, as well as RII's own usage of and preference for email communications, service of process through email was entirely appropriate under the circumstances.<sup>27</sup> While acknowledging that it was "tread[ing] upon untrodden ground,"<sup>28</sup> the court reminded the parties of its discretion to take technological advances into account. It concluded that "In proper circumstances, this broad constitutional principle unshackles the federal courts from anachronistic methods of service and permits them entry into the technological renaissance."<sup>29</sup>

This reasoning of the court, and the perpetuation of the *New England Merchants National Bank* approach of giving courts the flexibility to adapt existing notions of service to emerging technologies helped lay the foundation for the next technological advance used to effectuate service of process: social media. As with any form of alternative service accomplished with the aid of technology, due process concerns are at the heart of any fact-intensive determination of whether a Facebook post or tweet will be reasonably calculated to put a defendant on notice

---

<sup>19</sup> *Id.* at 721.

<sup>20</sup> *See* *Rio Properties, Inc. v. Rio Int'l Interlink*, 284 F.3d 1007, 1017-18 (9th Cir. 2002).

<sup>21</sup> *Id.* at 1012.

<sup>22</sup> *Id.* at 1012.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.* at 1013.

<sup>25</sup> *Id.* at 1013-14.

<sup>26</sup> *Rio Properties, Inc. v. Rio Int'l Interlink*, 284 F.3d 1007, 1023 (9th Cir. 2002).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.* at 1017.

<sup>29</sup> *Id.*

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

of a lawsuit and afford that party a chance to respond and/or object. In 2008, Australia became the first country to confront a request to perfect service through social media, though in this case of first impression, the request was rejected due to concerns about the potential for fake Facebook profiles.<sup>30</sup> But just months later, another Australian court revisited the issue, in a case involving an Australian couple who had defaulted on a mortgage.<sup>31</sup> The mortgage lender had filed suit and obtained a default judgment, but was stymied in its efforts to serve the judgment through traditional means. However, after a showing that Corbo and Poyser's Facebook biographical details matched the data provided on their loan applications, Australia's Capital Territory Supreme Court approved MKM's request to send a private message, with the legal documents as an attachment, to each defendant's Facebook page.<sup>32</sup> In this way, the court reasoned, Corbo and Poyser would be alerted to the entry of the default judgment and notified of its terms.

This "shot heard 'round cyberspace" was soon followed by another Australian court permitting service via Facebook, this time in the context of a family law case involving proof of paternity.<sup>33</sup> Later that year, law enforcement in Victoria, New South Wales, used Facebook to serve the Australian equivalent of a restraining order, an intervention order.<sup>34</sup> In the meantime, the *MKM* ruling spawned similar decisions beyond Australia. In March 2009, New Zealand's High Court, in an unreported commercial litigation case involving a company's claims against a minority shareholder for misappropriating funds, permitted substituted service of the elusive shareholder via his Facebook page.<sup>35</sup> And in February 2009, a court in Canada similarly allowed the plaintiff in an employment-related case to service notice of his Statement of Claim via "substitutional service" to the defendant's Facebook page.<sup>36</sup>

More Canadian cases followed.<sup>37</sup> Other countries also followed suit, including South Africa, Ireland, and Singapore. In the first case of its kind in the UK, in September 2009, a judge on the High Court of England and Wales permitted an injunction against an anonymous defamation defendant to be served via

---

<sup>30</sup> Citigroup Pty. Ltd. v. Weerakoon, (2008) QDC 174, 1 (Austl.).

<sup>31</sup> MKM Capital Property Ltd. v. Corbo & Poyser, (2008) No. SC608 (Austl., ACT Sup. Ct.).

<sup>32</sup> *Id.*

<sup>33</sup> Byrne & Howard (2010), FMCAfam 509 (Austl.).

<sup>34</sup> Jim FitzSymons, *Australia: Police Serve an Intervention Order Via Facebook: Social Media as the Next Frontier in Legal Process?*, MONDAQ (Nov. 22, 2010), <https://www.mondaq.com/australia/social-media/116142/police-serve-an-intervention-order-via-facebook-social-media-as-the-next-frontier-in-legal-process>.

<sup>35</sup> Axe Market Garden Ltd. v. Axe, (2009) CIV-2008-485-002676 (HC Wellington) (N.Z.).

<sup>36</sup> See, Knott v. Sutherland (Feb. 5, 2009), Edmonton 0803 02267 (Alta. Q.B.M.).

<sup>37</sup> See, e.g., Burke v. John Doe, 2013 BCSC 964, 2013 CarswellBC 1624 ); see also Quast v. Quast (2010) (Ont. Super., per Justice Pierce).

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

Twitter.<sup>38</sup> Other cases in the UK similarly allowed service of process via Facebook.<sup>39</sup>

*B. Enter the United States*

In the United States, substituted service has been used in a wide variety of cases. In a 2010 class action consumer protection lawsuit against electronics giant Best Buy, for example, the federal court considered—but ultimately rejected—requests by the lead plaintiff to approve furnishing notice to the class via Twitter, believing notice by publication in *The New York Times* would have a greater reach.<sup>40</sup> But in a 2011 family court case in Minnesota, the court signed what has been reported as the first instance of an American court authorizing service via a social media platform.<sup>41</sup> In that case, the petitioner Jessica Mpafe had lost contact with her husband and had no physical address where he could be served with divorce papers. Although she believed he had moved back to his native Ivory Coast in western Africa, his Facebook page was the most likely means of informing him of the pending divorce action. Judge Kevin Burke signed an order permitting service, observing that “the traditional way to get service by publication is antiquated and is prohibitively expensive, service is critical, and technology provides a cheaper and hopefully more effective way of finding Respondent.”<sup>42</sup>

While the utility of achieving substituted service via social media is perhaps most obvious in instances where the defendants are located outside the United States,<sup>43</sup> U.S. courts have permitted it in cases involving domestic parties as well. In one New York family law case, for example, the judge ordering such service noted that “it would appear that the next frontier in the developing law of service

---

<sup>38</sup> See, *Service Permissible via Twitter*, HSFNOTES.COM, (Nov. 30, 2009), <https://hsfnotes.com/litigation/2009/11/30/service-permissible-twitter/>; see also *Burke v. John Doe*, 2013 BCSC 964, 2013 CarswellBC 1624 (citing *Blaney v. Persons Unknown*, (1 October 2009) IHQ/12/0653 (Ch.)).

<sup>39</sup> See, e.g., Chris Johnson, *In a U.K. First, Court Judge “likes” Facebook for Serving lgal Claims on Missing Defendant; The World*, THE AMERICAN LAWYER (Feb. 21, 2012), [https://plus.lexis.com/document/?pdmfid=1530671&crd=71862d8f-0943-4f6a-88e3-ba6c899eeb54&pddocfullpath=%2Fshared%2Fdocument%2Flegalnews%2Furn%3AcontentItem%3A55N0-X1H1-JBM3-R07T-00000-00&pdcontentcomponentid=7599&pdteaserkey=&pdslpamode=false&pdworkfolderlocatorid=NOT\\_SAVED\\_IN\\_WORKFOLDER&ecomp=bfbtk&earg=sr0&prid=bb3aa3ed-b5fc-4d4c-a8df-d413a923300f&cbc=0](https://plus.lexis.com/document/?pdmfid=1530671&crd=71862d8f-0943-4f6a-88e3-ba6c899eeb54&pddocfullpath=%2Fshared%2Fdocument%2Flegalnews%2Furn%3AcontentItem%3A55N0-X1H1-JBM3-R07T-00000-00&pdcontentcomponentid=7599&pdteaserkey=&pdslpamode=false&pdworkfolderlocatorid=NOT_SAVED_IN_WORKFOLDER&ecomp=bfbtk&earg=sr0&prid=bb3aa3ed-b5fc-4d4c-a8df-d413a923300f&cbc=0).

<sup>40</sup> *Jermyn v. Best Buy Stores, L.P.*, No. 08-CV-00214-CM-DCF, 2010 WL 5187746, at \*1-2,5 (S.D.N.Y. Dec. 6, 2010).

<sup>41</sup> *In re Marriage of Jessica Mpafe v. Clarence M. Mpafe, Order for Service by Publication on the Internet*, Court File No. 27-FA-11 (Minn. Dist. Ct., Fam. Ct. Div., Hennepin Cty., May 10, 2011).

<sup>42</sup> *Id.*

<sup>43</sup> See, e.g., *Fed. Trade Comm. v. PCCare247 Inc.*, 2013 WL 841037 (S.D.N.Y. Mar. 7, 2013); *WhosHere, Inc. v. Orun*, 2014 WL 670817 (E.D. Va. Feb. 20, 2014).



*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

of process over the internet is the use of social media sites as forums through which a summons can be delivered.”<sup>44</sup> To date, state courts in New York, New Jersey, Texas, Minnesota, and Utah have all embraced social media as an avenue for substituted service, recognizing this next frontier.

## II. SERVICE VIA NFT— THE AMERICAN EXPERIENCE

With the advent of blockchain technology and the rise of cryptocurrency exchanges, society has witnessed the good, the bad, and the ugly of innovation. NFTs, for example, have become perhaps best known as a medium for collectible digital artwork and assets. But these uniquely identifiable packets of information stored on the blockchain may also include smart contracts and associated media (such as text, image files, music, or videos).<sup>45</sup> Other uses being explored for NFTs include ticketing,<sup>46</sup> real estate,<sup>47</sup> and identity verification.<sup>48</sup> But when an anonymous defendant or defendants hacked into the Lichtenstein-based cryptocurrency exchange LCX on January 8, 2022, and transferred \$7.94 million worth of crypto assets to an Ethereum blockchain address under the defendants’ control, the impetus for yet another use for NFTs was created.<sup>49</sup>

### A. LCX Tackled Crypto Theft Head On

---

<sup>44</sup> *Baidoo v. Blood-Dzraku*, 5 N.Y.S.3d 709, 711 (N.Y. Sup. Ct. 2015).

<sup>45</sup> These may be stored “on-chain” (data stored on the blockchain itself) or “off-chain” (data stored on the conventional internet, with the on-chain token simply serving as a signpost to the pertinent media file). See “*Trust the Process? – Privacy and Cybersecurity Issues With Court Service of Process via NFT*,” LOCKE LORD (SEPT. 2022), <https://www.lockelord.com/newsandevents/publications/2022/09/trust-the-process>

<sup>46</sup> See, e.g., NFT-based event ticketing business Seatlab.

<sup>47</sup> The Dubai Land Department has been using blockchain technology since 2017, See *Dubai Land Department achieves a technical milestone with the adoption of Blockchain technology in cooperation with Smart Dubai and other partners*, GOV’T. OF DUBAI (Oct. 7, 2017), <https://dubailand.gov.ac/en/news-media/dubai-land-department-achieves-a-technical-milestone-with-the-adoption-of-blockchain-technology-in-cooperation-with-smart-dubai-and-other-partners/-/>.

<sup>48</sup> Goldfinch Finance has created Unique Identity NFTs for investor verification. See *Unique Identity*, Goldfinch Documentation, <https://docs.goldfinch.finance/goldfinch/>.

<sup>49</sup> David Zaslowky, *Court Orders Service Through Cryptocurrency Token and Directs Counsel to Disclose Identity of Client Alleged to Have Stolen Funds*, BLOCKCHAIN BAKER MCKENZIE (Sept. 21, 2022), <https://blockchain.bakermckenzie.com/2022/09/21/court-orders-service-through-cryptocurrency-token-and-directs-counsel-to-disclose-identity-of-client-alleged-to-have-stolen-funds/>.

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

Cryptocurrency theft is a growing problem. It is estimated that such theft has increased by 516% since 2020.<sup>50</sup> LCX promptly took action, retaining blockchain-tracing investigators to track down the stolen assets and identify the hackers.<sup>51</sup> The investigators determined that the defendants moved quickly to convert the stolen assets into ether (ETH), and then deposit the ETH into Tornado Cash, a popular “mixing” service used to obfuscate stolen assets on the Ethereum blockchain.<sup>52</sup> Using algorithmic forensic analysis, the tracing specialists were able to pick up the digital trail and identify the address receiving the proceeds from the LCX hack.<sup>53</sup> LCX managed to track down and freeze roughly 60% of the stolen funds; while they could not identify the hackers, pinpointing the address enabled LCX (and law enforcement) to trace the thieves’ activities.<sup>54</sup> LCX learned that whoever controlled the address converted the ETH to US Dollar Coin (USDC), a “stable coin” issued by Circle Internet Financial.<sup>55</sup> LCX also learned that, in two large transactions, the hackers had sold \$2.82 million in USDC; that left \$1.3 million in USDC sitting in that address.<sup>56</sup>

LCX filed suit in New York.<sup>57</sup> Knowing that Centre Consortium (the entity that governs USDC’s underlying technology) could deny access to addresses and block them from sending and receiving USDC, step one for LCX’s lawyers at Holland & Knight was to seek a preliminary injunction.<sup>58</sup> This injunction would direct Centre Consortium to invoke its access denial policy in order to prevent the address from transacting in USDC. But one question remained—how could the anonymous defendants be served?

Shortly before the June 2, 2022, court hearing on LCX’s motion for injunctive relief, the lawyers at Holland & Knight were struck by inspiration. Since the defendants had relied on blockchain technology to create a barrier of anonymity,

---

<sup>50</sup> MacKenzie Sigalos, *Crypto Scammers Took a Record \$14 Billion in 2021*, CNBC (Jan. 7, 2022 4:31 AM), <https://www.cnbc.com/2022/01/06/crypto-scammers-took-a-record-14-billion-in-2021-chainanalysis.html#:~:text=Scammers%20took%20home%20a%20record,spike%20in%20theft%20and%20scams>.

<sup>51</sup> *Id.*

<sup>52</sup> LCX Team, *LCX Hack Update*, LCX (Jun. 7, 2022) <https://blockchain.bakermckenzie.com/2022/09/21/court-orders-service-through-cryptocurrency-token-and-directs-counsel-to-disclose-identity-of-client-alleged-to-have-stolen-funds/>.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> Wahid Pessarlay, *Anonymous Hacker Gets Served With Landmark NFT Restraining Order*, COINGEEK (Jun. 13, 2022) <https://coingeek.com/anonymous-hacker-gets-served-with-landmark-nft-restraining-order/>.

<sup>57</sup> *See generally* LCX AG v. 1.274M U.S. Dollar Coin et al., Index No. 154644/2022, *Complaint*, p. 6, (N.Y.S. 2022).

<sup>58</sup> *Id.*

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

why not employ that same technology to pierce that barrier?<sup>59</sup> Fortunately, the presiding judge, New York Supreme Court Justice Andrea Masley, had educated herself on blockchain issues and realized that LCX's counsel had provided the court with a mechanism by which the defendants would have notice of the proceedings. She issued the requested temporary restraining order, and ordered the anonymous defendants to show cause why the court should not issue a preliminary injunction directing Centre Consortium to deny USDC access to the thieves' address.<sup>60</sup>

Perhaps most significantly, the court approved of LCX's proposed means of service: airdropping a "service token" containing a hyperlink to a webpage with all the relevant court documents. Judge Masley wrote:

ORDERED that Holland & Knight LLP, Plaintiff's attorneys, shall serve a copy of this Order to Show Cause, together with a copy of the papers upon which it is based, on or before June 8, 2022, upon the person or persons controlling the Address via a special-purpose Ethereum-based token (the Service Token) delivered-airdropped into the Address. The Service Token will contain a hyperlink (the Service Hyperlink) to a website created by Holland & Knight LLP, wherein Plaintiff's attorneys shall publish this Order to Show Cause and all papers upon which it is based. The Service Hyperlink will include a mechanism to track when a person clicks on the Service Hyperlink. Such service shall constitute good and sufficient service for the purposes of jurisdiction under NY law on the person or persons controlling the Address[.]<sup>61</sup>

"Airdropping," of course, is a process by which a digital token is sent to a blockchain address. The owner of an address cannot block the airdrop; whether they like it or not, the anonymous defendants would receive notice of the court proceedings.

Airdropping tokens from one wallet on the blockchain to another party's wallet is hardly new—it is a method used to transfer cryptoassets to existing holders of NFTs, often as a goodwill gesture—as when holders of the notorious "Bored Ape Yacht Club" NFTs were airdropped a proprietary "Ape Coin" token in March

---

<sup>59</sup> Michael A. Mora, *In New Approach, Big Law Firm Uses NFT to Serve Court Papers on Anonymous Defendants*, LAW.COM (June 9, 2022 3:12PM), <https://www.law.com/dailybusinessreview/2022/06/09/in-new-approach-big-law-firm-uses-nft-to-serve-court-papers-on-anonymous-defendants/?slreturn=20230019022042>.

<sup>60</sup> LCX AG v. 1.274M U.S. Dollar Coin et al., Index No. 1546441/2022, *Order to Show Cause and Temporary Restraining Order*, (N.Y.S. 2022).

<sup>61</sup> *Id.*

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

2022.<sup>62</sup> But transmission of tokens on the blockchain was rarely, if ever, used for communication purposes. Yet as LCX's lawyers reasoned, there is no reason it cannot be done—after all, NFTs are simply digital packets of information, which may include links to media files hosted elsewhere online. This new method of service bypasses the weaknesses inherent in serving an anonymous defendant through in-person contact or even in a text message, since the location of the defendants and the smartphones they operate remains unknown.

As LCX's counsel explained afterward, their proactive and innovative use of "Web 3.0" was a necessity due to the nature of the crypto space. Frequently, in cases involving theft or fraudulent transfer of virtual assets, anonymity poses a challenge: the only identifier is the wallet address of the receiving entity. "We enacted a mechanism provided by the court that presumes that he will have notice of this, even if he does not ever access the address," they stated.<sup>63</sup> "If he just sticks his head into the sand and never accesses it again, that's the equivalent of him saying 'I'm not going to open that email and that will prevent me from being served.'"<sup>64</sup>

On June 15, attorneys representing the anonymous defendants filed a notice of appearance, followed soon thereafter by opposition pleadings arguing that LCX had failed to properly serve the order.<sup>65</sup> According to them, the court had improperly authorized alternative service, because there was no required showing of impracticability and because there was no proof that the method chosen was reasonably calculated to provide the anonymous defendants with notice.<sup>66</sup> In a July 22 hearing, Judge Masley rejected these arguments, affirming that service via NFT was appropriate under the circumstances. While traditional methods of service might require a name and address, LCX had no such identifiable information—only the blockchain address into which a portion of the hacked proceeds had been transferred. And while the service token included the capability of showing when the hyperlink was clicked, Judge Masley's order did not require actual proof that the defendants had actually accessed the court documents.<sup>67</sup>

It is easy to understand why the court agreed with LCX that the service token would be a method reasonably calculated to effect service. After all, the token would be delivered to the very address holding the stolen assets. That address contained substantial quantities of valuable digital assets, making it probable that

---

<sup>62</sup> Taylor Locke, *Bored Ape Yacht Club Just Dropped An 'ApeCoin' Token to its NFT Holders. Some Made Tens of Thousands of Dollars in Hours*, Fortune Crypto (Mar. 17, 2022 3:37 PM) <https://fortune.com/crypto/2022/03/17/nft-bored-ape-yacht-club-dropped-token/>.

<sup>63</sup> Mora, *supra* note 58.

<sup>64</sup> Mora, *supra* note 58.

<sup>65</sup> LCX AG v. 1.274M U.S. Dollar Coin et al., Index No. 1546441/2022, *Decision + Order on Motion*, p. 10 (N.Y.S. 2022).

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

*You've Been . . . Airdropped? Service Via NFTs As The Next Evolutionary Step*

the defendants would return to the address. Finally, that token featured a hyperlink to a website where the process and court order would be published.<sup>68</sup>

### III. SERVICE VIA NFTS ACROSS THE POND

Not long after the New York court entered its groundbreaking service via NFT order, the High Court of England and Wales similarly approved the use of a service NFT to apprise an anonymous defendant of a lawsuit. Like their U.S. counterparts, British courts are no strangers to approving alternative service of process using emerging technologies. For example, in one case a court permitted alternative service of a claim form via WhatsApp and Facebook Messenger.<sup>69</sup> In another case, the court upheld an order for alternative service via WhatsApp on a defendant in New Zealand.<sup>70</sup> The UK's rules of civil procedure (specifically CPR 6.15) go so far as to authorize alternative service via Facebook, Instagram, and the "contact" section of a defendant's website.<sup>71</sup> And in recent cases involving cryptocurrency fraud, British courts have already ordered alternative service via email.<sup>72</sup>

Against such a backdrop, permitting service via NFT seems like a logical next step. In June 2022, in the case of *D'Aloia v. Binance Holdings and Others*, the High Court of England and Wales addressed the anonymous defendant issue, and granted an order permitting service of court proceedings via the transfer of an NFT on the blockchain.<sup>73</sup> Fabrizio D'Aloia, an Italian engineer and the founder of Microgame—an online gambling joint stock company—asserted claims against four cryptocurrency exchanges holding virtual funds of his—Binance, Polo Digital Assets, Aux Cayes Fintech, and Bitkub Online—along with software company Gate Technology.<sup>74</sup> D'Aloia maintained that a crypto scammer running a fraudulent online brokerage had conned him into depositing \$2.33 million in cryptocurrency into two fake crypto wallets operated by the scammer.<sup>75</sup> The order issued by the Court granted permission for D'Aloia to serve the cryptocurrency exchanges by

---

<sup>68</sup> *Id.*

<sup>69</sup> See *CMOC Sales & Marketing Ltd. v. Persons Unknown*, [2018] EWHC 2230 (Comm.).

<sup>70</sup> See *Gray v. Hurley*, [2019] EWHC 1636 (QB).

<sup>71</sup> For an example of a case putting this into practice, see *Pirtek (UK) Ltd. v. Jackson* [2017] EWHC 2834 (QB).

<sup>72</sup> *Danisiz v. Persons Unknown and Huobi Global Ltd. (T/A Huobi)* (2022).

<sup>73</sup> *D'Aloia v. Binance Holdings and Others*, [2022] EWHC 1723 (Ch.).

<sup>74</sup> Dawn Jackson, *The High Court Gives Permission to Serve Court Documents by NFTs. It Also Recognizes Cryptocurrency Exchanges as Responsible for Stolen Cryptocurrency*, LAW NEWS (Jul. 12, 2022) <https://www.lawnews.co.uk/legal-insight/the-high-court-gives-permission-to-serve-court-documents-by-nfts-it-also-recognises-cryptocurrency-exchanges-as-responsible-for-stolen-cryptocurrency/>.

<sup>75</sup> *D'Aloia*, [2022] EWHC 1723 (Ch.).

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

means of an NFT airdropped to the two wallets into which he had initially deposited his cryptocurrency—in addition to service by email.<sup>76</sup>

High Court Judge William Trower reasoned that this alternative method of effecting service was appropriate under the circumstances because “[t]he difficulties that would otherwise arise and the complexities in relation to service on the first defendant mean that good reason has been shown.”<sup>77</sup> He added that service via NFT “is likely to lead to a greater prospect of those who are behind the tda-finan website being put on notice of the making of this order, and the commencement of these proceedings.”<sup>78</sup>

#### IV. IMPLICATIONS OF SERVICE VIA NFTS

Both the *LCX* and *D’Aloia* cases are significant for a number of reasons. First, much like earlier cases in which alternative service via email and, later, social media was permitted, service via NFT on the blockchain breaks down one of the key barriers in bringing a claim—being able to locate the anonymous defendant. Such cases also open the door to potentially wider applications of such technology, with digital service over the blockchain being used for safe, tamper-free disclosure of documents, digital signatures (private key signatures could eliminate arguments of fraud or false signatures), and even dispute resolution on smart contract platforms. Finally, the use of NFTs under the right circumstances removes the need for third-party verification, just as blockchain itself has helped transform the definition of “ownership” as we know it today. In the future, parties might even contractually agree to be served in this manner; conceivably, such a clause could be embedded as code with smart contracts, in which the parties authorize service of court papers on a specific wallet address. In the UK, for example, CPR 6.11(1) allows service “by a method or at a place specified in the contract.”<sup>79</sup>

But perhaps the greatest significance of both of these 2022 cases is that they reflect a continued willingness on the part of courts to tackle the challenges that emerging technologies can present to the legal system, at least in the sense of adapting our means of service to match technology. While the law can never hope to keep pace with technological innovation, it has to at least try. Indeed, in cases with fact scenarios like the *LCX* and *D’Aloia*, the fact that the defendants could not be identified and all the complaining party had was a number left very few options but to proceed with alternative service.

There are still valid questions to be raised regarding service of process via NFT. For example, when is service deemed effective—upon transmission of the

---

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

<sup>79</sup> UK CPR 6.11(1).

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

token into the defendant's wallet, or not until the recipient clicks on the service hyperlink? According to the approach taken by both the U.S. and U.K. courts, transmission is the necessary step for service to be perfected, but other courts may be more insistent on evidence of the defendant's interaction with the token. This may present a problem, since it is becoming increasingly common for blockchain wallet owners to see malicious tokens being airdropped into their wallets in a Web 3.0 version of phishing.<sup>80</sup> Wary wallet owners can hardly be faulted for their hesitation in interacting with airdropped NFTs or in clicking on hyperlinks from unfamiliar sources. Under such circumstances, how effective will an airdropped token be at providing actual notice of the proceedings or the court documents being served?

#### A. Data Privacy in the U.S. and Abroad

In addition to cybersecurity considerations, there are data privacy ones as well. Information on the blockchain is part of a public ledger, so to speak; anyone in the world may view its contents. The blockchain is also immutable—information on it cannot be deleted. Both of these aspects are fundamentally incompatible with privacy rights under both the European Union's (EU) General Data Protection Regulation (GDPR) and the UK's Data Protection Act 2018.<sup>81</sup> Service via an NFT airdrop may be problematic in cases where the court documents linked to contain witness evidence and confidential or private information (not unlikely in the case of an injunction). Theoretically, the general public can find out about the proceedings once service is perfected using the blockchain. The immutability of data on the blockchain makes it difficult, if not impossible, to delete the content of an NFT. This inability to delete data not only runs afoul of the EU's data privacy laws allowing a "right to be forgotten" (actually, a right to request erasure of one's personal data) and the GDPR's protection of "unique personal identifiers," it also may violate the California Consumer Privacy Act (CCPA).<sup>82</sup> Under the CCPA, data

<sup>80</sup> If malicious tokens are interacted with, they can direct wallet owners to fraudulent websites or even execute smart contracts that will empty the entire contents of an owner's wallet. See Arijit Sarkar, *Ape-Themed Airdrop Phishing Scams are on the Rise, Experts Warn*, COINTELEGRAPH (June 2, 2022), <https://cointelegraph.com/news/ape-themed-airdrop-phishing-scams-are-on-the-rise-experts-warn>.

<sup>81</sup> See generally Eur. Parliamentary Rsch. Serv., *Blockchain and the General Data Protection Regulation – Can Distributed Ledgers be Squared with European Data Protection Law?*, 74 (Jul. 2019), [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/634445/EPRS\\_STU\(2019\)634445\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/634445/EPRS_STU(2019)634445_EN.pdf); see also Rob Sumroy et al., *Blockchain and Data Protection (UK)*, Westlaw (2023), [https://uk.practicallaw.thomsonreuters.com/w-020-5436?comp=pluk&transitionType=Default&contextDara=\(sc.Default\)&firstpage=true&OWSessionId=b7cb9f754c2b4a819608fe02ffa7f4b&skipAnonymous=true](https://uk.practicallaw.thomsonreuters.com/w-020-5436?comp=pluk&transitionType=Default&contextDara=(sc.Default)&firstpage=true&OWSessionId=b7cb9f754c2b4a819608fe02ffa7f4b&skipAnonymous=true).

<sup>82</sup> See generally Eur. Parliamentary Rsch. Serv., *Blockchain and the General Data Protection Regulation – Can Distributed Ledgers be Squared with European Data Protection Law?*, 74 (Jul.

*You've Been . . . Airdropped? Service Via NFTS As The Next Evolutionary Step*

subjects have the right to request the deletion or revision of their personal data.<sup>83</sup> Because of this, it may not be practicable to host court documents on the blockchain; instead, as in the *LCX* case, the token should function as a kind of digital sign post and not contain any personal data itself. Since privacy laws like the CCPA and the GDPR define personal data broadly, the fact that a defendant may be anonymous and only identified by reference to a wallet address will be irrelevant.

## CONCLUSION

Despite these issues, service via NFTs signals a new direction in litigation, or perhaps more accurately, a logical next evolutionary step in service of process—and one of particular use when it comes to anonymous, elusive defendants and cybercriminals. What will the next step be—using the metaverse to serve legal notice on defendants via their avatars in a shared virtual space, or sending a virtual process server to a virtual residence to serve actual court documents? Regardless of what the future may hold, arguably the most significant aspect of these service by NFT cases is the respective courts' willingness to continue an important tradition of embracing new technology and of adapting existing law to take new forms of communication into consideration. Traditional forms of service are not going away anytime soon. Yet as we have witnessed with service of process entering the Digital Age of email and social media, it is critical for lawyers and judges to remain openminded about technology's benefits and clear-eyed about its risks.

---

2019),  
[https://www.europarl.europa.eu/RegData/etudes/STUD/2019/634445/EPRS\\_STU\(2019\)634445\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/634445/EPRS_STU(2019)634445_EN.pdf).

<sup>83</sup> Cal. Civ. Code § 1798.140 (West 2022).