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ENFORCING RIGHTS OVER DIGITAL ASSETS

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For many people, the digital domain is becoming as important as the real world. The virtual environment is no longer just a place for entertainment and leisure. Blockchain transactions are serious business. Digital assets are seen as investments, with as much real value as physical assets. Does the law protect rights in digital assets, such as cryptocurrencies and NFTs? This article discusses recent case law that expands the common law concept of property to digital assets.

Key Words :

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Ⅰ. Introduction

Many jurisdictions recognize the distinction between personal rights and property rights. Personal rights allow a person to claim against another for personal wrongs or to seek personal remedies, such as damages for breach of contract or compensation for a tortious wrong. Property rights enable a person to assert rights over property against the world at large. The rules and exceptions to both types of rights are complex and varied. For instance, a trespass to property also gives rise to claims for compensation. There can also be equitable principles coming into play where there are competing claims to ownership, to balance the rights of the original owner against an innocent third-party purchaser for value.

Nonetheless, the dichotomy between personal rights and property rights remains an important one and has come to the fore as more people invest time and money accumulating virtual assets online.

It has long been recognized in law that property is not limited to physical property. Intellectual property is a prime example of non-physical property that has significant tangible value. Courts have long protected intellectual property rights. In more recent times, expanding support for arbitration has led to a greater appetite for the arbitration of intellectual property disputes notwithstanding early misgivings on the arbitrability of disputes that are not contractual in nature.

In a KCAB-KAAS seminar on Intellectual Property Arbitration for the Korean Arbitration Industry in January 2023, Ms Sunyoung Kim spoke of the increase in intellectual property disputes over patents, copyright and trademarks. Beyond the leading role played by the World Intellectual Property Organization (“WIPO”), leading commercial arbitration institutions like Hong Kong International Arbitration Centre (“HKIAC”) and Singapore International Arbitration Centre (“SIAC”) have specialized panels for IP disputes. The International Arbitration Center in Tokyo (“IACT”) was established in 2018 for technology-related matters, such as patent disputes.

In Korea, the Ministry of Culture, Sports and Tourism (“MCST”) has established the ADR Funds-in-Trust to promote ADR options for copyright and content disputes. In cooperation with WIPO, the MCST published a WIPO-MCST Survey and Report on the Use of ADR Mechanisms for Business-to-Business (B2B) Digital Copyright and

Content-Related Disputes in 2021 to assess and develop ADR mechanisms to resolve disputes over digital copyright and content.[1)]

What then of digital assets? Digital assets such as cryptocurrencies and non-fungible tokens ("NFTs") are, of course, a more recent phenomenon. Hence, one cannot expect a stable and tested legal environment for digital assets such as that in existence now for intellectual property. An article by Whayoon Song, The Future of Korean Regulation on Initial Coin Offerings (2021) George Mason Int'l L.J. 40, gives a good overview of cryptocurrency regulations around the world and recommends a regulation mechanism for Korea.[2)]

Legislation aside, there is a growing body of case law from Singapore, Hong Kong SAR and the United Kingdom that develops the common law meaning of property so that it applies to digital assets.

Ⅱ. UNITED KINGDOM

1. The case of Bitcoins ransom: AA v Persons Unknown Who Demanded Bitcoin on 10th and 11th October 2019

The unusually named English case of *AA v (1) Persons Unknown Who Demanded Bitcoin on 10th and 11th October 2019 and Others, (2) Persons Unknown Who Own/Control Specified Bitcoin, (3) iFINEX trading as BITFINEX, and (4) BFXWWW INC trading as BITFINEX* [2019] EWHC 3556 (Comm) arises from the hacking of a Canadian insurance company by the first defendant, blocking access to its computer systems. The first defendant demanded ransom from the Canadian insurer in the sum of USD950,000 in Bitcoins in return for the decryption software. The Canadian insurer paid the ransom.

Thereafter, the Canadian insurer managed to hire a specialist company to track the transfer of a substantial portion of the Bitcoins to a specified address, linked to the

1) https://www.wipo.int/edocs/pubdocs/en/wipo_pub_969.pdf

2) A note of thanks to Prof. Seungnam Shin, President of KAAS, for drawing my attention to this article.

exchange known as Bitfinex operated by the 3rd and 4th defendants. The insurer was unable to identify the 2nd defendant from the Bitcoin address but this information was likely to be held by the 3rd and 4th defendants, to comply with their Know Your Customer ("KYC") requirement.

The Canadian insurer was insured with the plaintiff AA (anonymized), an English insurer. AA, as the subrogated insurer of the Canadian insurer, brought an action in the English court in restitution and/or as constructive trustee against all four defendants. Its case was that the ransom money could be traced into the accounts with Bitfinex. The Bitcoins were held by Bitfinex as constructive trustee on behalf of AA. AA had restitutionary claims against the 3rd and 4th defendants who were holding the property which belonged to AA, and against the 1st and 2nd defendants, who were the account holders and who had wrongfully extorted that money.[3] AA sought a proprietary injunction respect of the Bitcoins held at the account of the 4th defendant.

A key and fundamental question before the court was whether Bitcoins are property at all. Traditionally, English law viewed property as being of only two kinds, choses in possession and choses in action. Choses in possession are something tangible that could be physically possessed. Choses in action are rights capable of being enforced by action. Bryan J observed that Bitcoins and cryptocurrencies are neither of these.[4]

The analysis does not end there, for Bryan J went on to consider a legal statement by the UK Jurisdictional Task Force ("UKJT") on Crypto assets and Smart contracts ("the Legal Statement"). While the Legal Statement was not a judicial finding, the UKJT was chaired by prominent judges who studied the proprietary status of crypto currencies in detail. At paragraph 83, the Legal Statement observed that "there is no conceptual difficulty in treating intangible things as property even if they may not be things in action", citing patents (namely intellectual property) as an example. At paragraph 84, the Legal Statement concluded that "the fact that a cryptoasset might not be a thing in action on the narrower definition of that term does not in itself mean that it cannot be treated as property."

Bryan J adopted the findings of the Legal Statement in coming to his conclusion that

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3) *AA v (1) Persons Unknown Who Demanded Bitcoin on 10th and 11th October 2019 and Others, (2) Persons Unknown Who Own/Control Specified Bitcoin, (3) iFINEX trading as BITFINEX, and (4) BFXWWW INC trading as BITFINEX* [2019] EWHC 3556 (Comm), at [52].

4) *Ibid.*, at [55].

English law does not limit forms of property to only choses in possession and choses in action:

> *Essentially, and for the reasons identified in that legal statement, I consider that a crypto asset such as Bitcoin are property. They meet the four criteria set out in Lord Wilberforce's classic definition of property in National Provincial Bank v Ainsworth [1965] 1 AC 1175 as being definable, identifiable by third parties, capable in their nature of assumption by third parties, and having some degree of permanence. That too, was the conclusion of the Singapore International Commercial Court in B2C2 Limited v Quoine PTC Limited [2019] SGHC (I) 03 [142].*[5]

Since Bryan J's judgment, the B2C2 case had gone on appeal and the Singapore Court of Appeal had rendered its decision in *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 2. This case will be discussed later below.

Bryan J also noted that there were two English cases in which cryptocurrencies had been treated as property. In *Vorotyntseva v Money -4 Limited t/a as Nebeus* .com [2018] EWHC 2598 (Ch), Birss J granted a worldwide freezing order in respect of a substantial quantity of Bitcoin and Ethereum. In *Liam David Robertson v Persons Unknown* (unreported 15th July 2019), Moulder J granted an asset preservation order over cryptocurrencies. Bryan J therefore held that cryptocurrencies are a form of property capable of being the subject of a proprietary injunction.[6] Applying the principles of proprietary injunction to the facts of that case, Bryan J granted the proprietary injunction sought by AA.[7]

A procedural point which is of general interest given the anonymity of most online operators is the service of court documents on the 1st and 2nd defendants. In that case, their whereabouts were unknown. Bryan J granted permission to AA to serve his order and other documents on the 1st and 2nd defendants by email, by any address provided by them relating to the Bitcoin account that had been identified, and by delivering it to any physical address provided by the 2nd and 3rd defendants in relation to the Bitcoin account.[8]

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5) *Ibid.*, at [59].
6) *Ibid.*, at [60].
7) *Ibid.*, at [63].
8) *Ibid.*, at [75].

With regard to the 3rd and 4th defendants, Bryan J also granted permission for service on them by email given that there was urgency because the Bitcoins could be dissipated or moved at the click of a mouse. As these Bitcoins belonged to AA, it was a proprietary claim and the injunction needed to be placed as soon as possible to preserve their rights and minimize the risk of the property departing to an unknown location.[9)]

2. The case of the NFT auction: *Amir Soleymani v Nifty Gateway LLC*

The auction of an NFT on an online NFT marketplace lay at the centre of the London Circuit Commercial Court case on digital assets. In *Amir Soleymani v Nifty Gateway* LLC [2022] EWHC 773 ("*Soleymani*"), Mr Soleymani had acquired a NFT through an auction hosted by Nifty Gateway LLC on its online NFT marketplace. Mr Soleymani was a Liverpool resident. Nifty Gateway was a limited liability corporation registered and based in USA. Mr Soleymani opened an account with Nifty Gateway for use of its platform, which required him to agree to its terms of use on signing up. He was a frequent user and purchased over 100 NFTs on the platform.

In 2021, Mr Soleymani placed several bids on an auction for a blockchain-based NFT associated with an artwork by Beeple titled "Abundance". Nifty Gateway informed Mr Soleymani that he was a "winner" in the auction and was liable in the sum of his bid. Mr Soleymani was, however, not the sole winner of the NFT.

According to Nifty Gateway, the rules posted online explained that the auction was a ranked auction, by which the ranking of the winner determined the edition number of the artwork received. All accountholders whose bids were among the highest one hundred bids were "winners" of a numbered edition of the Beeple Abundance artwork corresponding to the position of their respective bids. The highest bidder received the first edition, the second highest bidder received the second edition and Mr Soleymani, who was the third highest bidder, received the third edition.

Mr Soleymani claimed he was unaware that the auction was different from a traditional auction where only the highest bidder won the item. He denied liability for

9) *Ibid.*, at [77].

the bid.

Nifty Gateway's terms of use provided for arbitration in New York administered by JAMS and the application of the laws of New York. Nifty Gateway commenced arbitration in New York with JAMS seeking payment of the bidded amount from Mr Soleymani. Mr Soleymani challenged the jurisdiction of the arbitral tribunal and unsuccessfully applied for a stay from the arbitrator.

Mr Soleymani then sought a declaration in the English Court that Nifty Gateway's arbitration agreement and the governing law clause were not binding on him under the Consumer Rights Act 2015 and the Civil Jurisdiction and Judgments Act 1982, and alternatively, that the contract arising from his bid was illegal ab initio under the Gambling Act 2005. Nifty Gateway applied to the English Court to either decline jurisdiction or stay the proceedings. Ms Clare Ambrose (sitting as Deputy High Court Judge) agreed with Nifty Gateway and stayed Mr Soleymani's claim, and further declared that the Court had no jurisdiction over Mr Soleymani's claim.

Amongst other things, the English Court found that it was common ground that Mr Soleymani was party to a concluded arbitration clause even if it was disputed whether it could be enforced against him. The arbitration clause covered issues going to its validity and enforceability. Hence, a stay must be granted under section 9 of the UK Arbitration Act 1996 unless the clause is "null and void, inoperative or incapable of being performed" on the balance of probabilities.[10)]

Ms Ambrose added that factual issues going to the unfairness of the arbitration agreement and the governing law clause were closely linked to the factual issues relevant to whether Mr Soleymani was bound by the terms of the auction and liable to pay the sum claimed in the New York arbitration. Given that there was an express choice of New York law and seat, the balance was in favour of leaving the US arbitrator and the New York court to decide issues going to the validity of the arbitration clause and supervise the arbitration. The starting point is that an agreement as to the seat of an arbitration is an exclusive jurisdiction clause in favour of the courts of the seat. This principle, together with section 9 of the Act and the doctrine of *Kompetenz-Kompetenz*, meant that the existence of English law issues raised by Mr Soleymani did not tip the balance in favour of the English Court deciding those issues.[11)]

10) *Amir Soleymani v Nifty Gateway LLC* [2022] EWHC 773, at [99]-[100].

With regard to the question whether NFTs are assets, Ms Ambrose only observed the conflicting positions taken by the parties. Mr Soleymani said that he was trading in digital art whereas Nifty Gateway maintained that an NFT was "merely a unique string of code stored on a blockchain ledger that makes a digital artwork accessible, and marks authenticity." She did not decide this issue as it was not necessary for its ruling on its jurisdiction and stay application before it. However, she observed that it was common ground that trading in NFTs involved digital information which is part of blockchain technology, not merely a physical object.[12)]

That issue, on the standing of NFTs and cryptocurrencies in law, was subsequently firmly taken up and resolved by the Singapore and Hong Kong courts.

Ⅲ. SINGAPORE

1. The case of algorithm trading in cryptocurrencies: *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 2

As noted above, the first instance decision of the Singapore International Commercial Court in *B2C2 Limited v Quoine PTC Limited [2019] SGHC (I) 03* was cited by the English Court in *AA*. A majority of the Court of Appeal upheld the first instance decision, with Mance LJ dissenting.

In that case, Quoine operated a cryptocurrency exchange platform called QUOINExchange ("the Platform"). B2C2 traded on the Platform. Both Quoine and B2C2 engaged in algorithmic trading, in which traders' "computers directly interface with trading platforms, placing orders without immediate human intervention. The computers observe market data and possibly other information at very high frequency, and, based on a built-in algorithm, send back trading instructions, often within milliseconds …"[13)]

11) *Ibid*; at [107], [115]-[116]

12) *Ibid.*, at [34].

13) Alain Chaboud *et al*, "Rise of the Machines: Algorithmic Trading in the Foreign Exchange Market", International Finance Discussion Papers, 29 September 2009 〈http://www.federalreserve.gov/pubs/ifdp/2009/980/ifdp980.pdf〉 at p 1; cited in *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 2; at [1].

In 2017, due to Quoine's failure to make necessary changes to several critical operating systems resulting in illiquidity on the Platform, a number of trades were concluded between B2C2 and two other users ("the Counterparties") in which B2C2 sold Ethereum in exchange for Bitcoin at a rate of 250 times the then going market rate. As a result of the trades, Ethereum was debited from B2C2's account and credited into the Counterparties' account. Bitcoins were credited into B2C2's account from the Counterparties' account.

When Quoine became aware of these trades the next day, it considered the rates to be highly abnormal and unilaterally cancelled the trades, reversing the debit and credit transactions in the traders' accounts. B2C2 sued Quoine for breach of contract and/or breach of trust in cancelling the trades and reversing the transactions.

At first instance, the Singapore International Commercial Court allowed B2C2's claims for breach of contract and breach of trust.

Quoine appealed. Its central defence was that the contracts underlying the trades were void or voidable or unilateral mistake. The novel question before the Court of Appeal was how the doctrine of unilteral mistake should operate where the contracts in question were carried out by the parties' respective algorithms. The breach of trust raises the question whether the cryptocurrency could be regarded as a species of property capable of attracting trust obligations.

The majority agreed with the Judge below that there were no terms in the various contractual documents which entitled Quoine to unilaterally cancel the trades, and that there was no operative mistake on the part of the Counterparties to vitiate the trading contracts.[14] This article is not about the common law doctrine of unilateral mistake, but the case raises a novel question on how to assess the state of mind of a party where trading is done by algorithm rather than human decision-making. To understand how the doctrine applies to contracts made by computerized trading systems, it is necessary to bear in mind the basic principles of unilateral mistake. As explained by the Court of Appeal:

> (a) for unilateral mistake at common law, the non-mistaken party must have had actual knowledge of the mistaken party's mistake, and if this is established, the contract will be rendered void; but

14) *Ibid.*, at [7].

> (b) for unilateral mistake in equity, the non-mistaken party must have had at least *constructive* knowledge of the mistaken party's mistake and must have engaged in some unconscionable conduct in relation to that mistake, and if this is established, the contract will be voidable.[15)]

The mistake must be about a term of the contract, and cannot merely be a mistaken assumption about the circumstances under which the contract was concluded, although it remains an open question whether unilateral mistake *in equity* can extend beyond a mistake as to a term of the contract.[16)]

The Judge held that to assess the state of mind of a party in situations where acts of *deterministic* computer programs were in issue, regard should be had to the state of mind of the programmer of the relevant at the time of programming. He rejected the submission that assessment of knowledge must be made by reference to what the contracting parties were likely to have known, intended and agreed had they had face-to-face negotiations at a hypothetical meeting on the "floor of the exchange". The majority of the Court of Appeal agreed with the Judge:

> *Therefore, when it comes to assessing the state of knowledge that is to be attributed to the parties at the time of a contract made by way of deterministic algorithms, the relevant inquiry cannot be directed at the parties themselves, who had no knowledge of or direct personal involvement in the formation of the contract. Rather, working backwards from the output that emanated from the programs, we are driven to assess the relevant state of knowledge by examining that of the programmers …*
>
> *In our judgment, the relevant time frame within which we should assess the knowledge of a programmer or the person running the algorithm would be from the point of programming up to the point that the relevant contract is formed.*[17)]

As to the application of those principles to algorithm trading, the Court of Appeal explained as follows, at [103]:

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15) *Ibid.*, at [80].
16) *Ibid.*, at [82], [92].
17) *Ibid.*, at [97], [98]-[99].

> *In our judgment, keeping the focus on these considerations enables us to address the authors' concern that the state of mind of the programmer when originally programming the algorithm could never have included knowledge of the particular manifestation of the relevant mistake. That is not and should not be the inquiry and we do not think it was the inquiry that the Judge pursued. Rather, the relevant inquiry might be framed thus: when programming the algorithm, was the programmer doing so with actual or constructive knowledge of the fact that the relevant offer would only ever be accepted by a party operating under a mistake and was the programmer acting to take advantage of such a mistake?*
>
> *…If at the point of programming, the programmer contemplated or ought to have contemplated that a mistake might arise on the part of a counterparty to a future contract and designed the algorithm to exploit such a mistake, then it does not matter for the purposes of establishing the requisite knowledge that the relevant mistake had occurred after the algorithm had been programmed.*

After considering the evidence, the majority of the Court of Appeal agreed with the Judge below that B2C2's programmer did not have the requisite knowledge to vitiate the trading contracts on the ground of unilateral mistake. He had not programmed the software with margin trades in mind or with knowledge that market orders to purchase Ethereum at the best available price to exploit the existence of illiquidity on the Platform.[18)]

Mance LJ dissented, taking the view that:

> *The question is whether, where two parties well know that there has been a fundamental mistake as soon as a computerised transaction comes to their attention, where no detriment has occurred and no relevant third party interests intervened, and where the mistake could readily be rectified, the law will enforce the contract regardless. For the reasons I will give, in my opinion, the law should and can in such circumstances hold that the contract is voidable, as Quoine claims.*[19)]

18) *Ibid.*, at [119], [126].

> *… In the present case, where any reasonable trader would at once have identified, as B2C2 did identify, a fundamental computer system breakdown as the cause of the transactions, the considerations weighing in favour of reversal of the transactions outweigh in the balance any errors or faults which led to that breakdown.*[20]
>
> *… There is nothing surprising, impermissible or unworkable therefore about a test which asks what any reasonable trader would have thought, given knowledge of the particular circumstances. That is the proper approach, in my opinion, in the present situation. Whether the unknown activities of two computers in the middle of the night should bind the parties should be judged by asking whether any reasonable trader, on the relevant exchange, knowing what was happening (or what had happened) could or would have thought, in the otherwise prevailing circumstances, that this was anything other than the consequence of a gross and unintended "major database breakdown" or error with equivalent effect. Since this is how B2C2 actually categorised it, the answer is doubly obvious. Of course, this test involves a hypothetical, as the Judge said at [204]. But it does not work on the basis of speculation as to what "might" have happened if a human element had been involved. On the contrary, it provides relief in equity in the present case because any reasonable person, knowing of the relevant market circumstances, would have known that there was a fundamental mistake.*[21]

The Court of Appeal was unanimous in finding that there was no breach of trust because no trust could have arisen over the Bitcoins in B2C2's account. They acknowledged legal commentaries and cases from other jurisdictions, such as Birss J's decision in *Elena Vorotyntseva v Money-4 limited and others* [2018] EWHC 2596 (Ch) and the decision of the Supreme Court of British Columbia in *Copytrack Pte Ltd v Wall* [2018] BCSC 1709 which recognised that cryptocurrencies could be a species of property susceptible to a proprietary injunction (in *Elena Vorotyntseva*) or tracing (in *Copytrack*).

19) *Ibid.*, at [183].
20) *Ibid.*, at [195].
21) *Ibid.*, at [200].

The Court of Appeal, however, considered that while there is much to commend the view that cryptocurrencies should be assimilated into the general concepts of property, there are "difficult questions as to the type of property that is involved." They did not express a view on these "difficult questions" because they found that there was no trust for other reasons. The only amount of cryptocurrency that a user was concerned with what was reflected in Quoine's database. This arrangement was more akin to deposits being made with a bank. The account balance that was stated in Quoine's database was the amount Quoine owed a user, and it was up to Quoine to take steps to ensure that it could repay that debt as and when the user called on it.[22)]

2. The case of stolen cryptocurrencies: *CLM v CLN*

Following the Singapore Court of Appeal case in *Quoine*, another case involving cryptocurrency came before the Singapore High Court in *CLM v CLN and others* [2022] SGHC 46. In this case, the plaintiff commenced an action to trace and recover Bitcoins and Ethereums which were allegedly stolen or misappropriated. Some of these were traced to digital wallets controlled by cryptocurrency exchanges with operations in Singapore (the 2nd and 3rd defendants).

The stolen cryptocurrencies had been accessible through two separate digital wallets, controlled by two software applications that had been downloaded onto the plaintiff's mobile phone. The plaintiff was a US citizen. In January 2021, while on vacation in his apartment with seven acquaintances, the plaintiff discovered that his Bitcoins and Ethereums had been withdrawn from his wallet without his knowledge or consent.

The transaction records showed that transfers were made to three different wallet addresses that the plaintiff did not control or own. Further investigations revealed that the first defendants (persons unknown) had dissipated the stolen assets through a series of digital wallets. Some of these were transferred to wallet addresses controlled respectively by the 2nd and 3rd defendants.

The plaintiff sought a proprietary injunction and a worldwide freezing injunction against the first defendants, as well as disclosure orders against the 2nd and 3rd defendants for information and documents relating to the accounts that had been

22) *Ibid.*, at [147].

credited with the stolen cryptocurrencies.

The first question that Lee Seiu Kin J had to consider was whether the court has jurisdiction to grant interim orders against the 1st defendants, whose identities were unknown. The first defendants were described as:

> *[A]ny person or entity who carried out, participated in or assisted in the theft of the Plaintiff's Cryptocurrency Assets on or around 8 January 2021, save for the provision of cryptocurrency hosting or trading facilities.*[23]

On this procedural point, Lee J considered a number of precedents and the Rules of Court that led to his conclusion that the court has jurisdiction to grant interim orders against persons unknown, as long as the description of the defendant was sufficiently certain to identify those who are included in the description and those who are not.[24]

As for the proprietary injunction, Lee J referred to the legal commentaries and foreign case law cited in the Singapore Court of Appeal decision in *Quoine* that acknowledged crypocurrencies as property.[25] In addition, Lee J agreed with the decision of the New Zealand High Court *in Ruscoe v Cryptopia Ltd (in liq)* [2020] 2 NZLR 809 ("*Ruscoe*") which held that crypocurrencies meet the standard criteria for property as outlined by Lord Wilberforce in *National Provincial Bank Ltd v Ainsworth* [1965] AC 1175 ("*Ainsworth*"), at 1248:

> *(a) The first requirement is that the right must be "definable" – the asset must hence be capable of being isolated from other assets whether of the same type or of other types and thereby identified (Ruscoe at [104]). To this end, cryptocurrencies are computer-readable strings of characters which are recorded on networks of computers established for the purpose of recording those strings, and are sufficiently distinct to be capable of then being allocated to an account holder on that particular network (Ruscoe at [105]).*
>
> *(b) The second requirement is that the right must be "identifiable by third parties", which requires that the asset must have an owner being*

23) *CLM v CLN and others* [2022] SGHC 46, at [34].
24) *Ibid.*, at [31], [32].
25) *Ibid.*, at [43].

capable of being recognised as such by third parties (Ruscoe at [109]). An important indicator is whether the owner has the power to exclude others from using or benefiting from the asset (Ruscoe at [110]). In this vein, excludability is achieved in respect of cryptocurrencies by the computer software allocating the owner with a private key, which is required to record a transfer of the cryptocurrency from one account to another (Ruscoe at [112]).

(c) The third requirement is that the right must be "capable of assumption by third parties", which in turn involves two aspects: that third parties must respect the rights of the owner in that asset, and that the asset must be potentially desirable (Ruscoe at [114]). The fact that these two aspects are met by cryptocurrencies, is evidenced by the fact that many cryptocurrencies, certainly BTC and ETH, are the subject of active trading markets (Ruscoe at [116]).

(d) The fourth requirement is that the right and in turn, the asset, must have "some degree of permanence or stability", although this is a low threshold since a "ticket to a football match which can have a very short life yet unquestionably it is regarded as property" (Ruscoe at [117]). In this respect, the blockchain methodology which cryptocurrency systems deploy provides stability to cryptocurrencies, and a particular cryptocurrency token stays fully recognised, in existence and stable unless and until it is spent through the use of the private key, which may never happen (Ruscoe at [118]).[26]

Having found that cryptocurrencies meet the definition of a property right, Lee J proceeded to find that the plaintiff had also satisfied the other requirements of a proprietary injunction.[27] He also granted a worldwide freezing injunction and the disclosure orders as requested.[28] Since the action was commenced, the plaintiff

26) *Ibid.*, at [45].
27) *Ibid.*, at [49].
28) *Ibid.*, at [56], [60].

managed to identify two persons within the first defendants and other companies which operated a cryptocurrency exchange and digital payment services that dealt with the stolen cryptocurrencies. These individuals and companies were joined as defendants to the action.

3. The case on the foreclosure of the Bored Ape NFT – *Janesh s/o Rajkumar v Unknown Person ("CHEFPIERRE")*

From stolen cryptocurrencies, Lee J went on to consider another type of digital asset, a NFT, in *Janesh s/o Rajkumar v Unknown Person ("CHEFPIERRE")* [2022] SGHC 264.

The claimant[29] owned an NFT known as the Bored Ape Yacht Club ID #2162 (the "Bored Ape NFT"). This was part of a collection of 10,000 other pieces of artwork depicting apes with different unique attributes. The NFTs within the Bored Ape Yacht Club ("BAYC") were extremely popular and were owned by a number of celebrities. These NFTs had significant monetary value and were also status symbols.

Each NFT within the BAYC collection was minted on the Ethereum blockchain together with a unique token ID which served as publicly verifiable proof of its provenance. The claimant claimed that the visual characteristics of the Bored Ape NFT made it the only one of its kind in existence.

The claimant purchased the Bored Ape NFT in 2021. He was a regular user of NFTfi, a community platform that functioned as an NFT-collaterised cryptocurrency lending marketplace. He often entered into loan transactions with other users to borrow cryptocurrencies with NFTs, such as the Bored Ape NFT, as collateral. As the Bored Ape NFT was extremely precious to the claimant, he was careful to specify special terms as part of the loan agreement, namely:

> *(a) The Bored Ape NFT would be transferred to NFTfi's escrow account to be held until full repayment of the loan was effected.*
>
> *(b) In the event that the claimant was unable to make full repayment of the loan on time, he would inform the lender who should provide reasonable extensions of time for repayment.*

29) Under the new Rules of Court 2021, "claimant" is used in place of "plaintiff".

> *(c) At no point should the lender utilise the "foreclose" option of NFTfi's Smart Program on the Bored Ape NFT without first granting the claimant reasonable opportunities to make full repayment of the loan and retrieve the Bored Ape NFT from the escrow account.*
>
> *(d) At no point would the lender obtain ownership, nor any right to sell or dispose of the Bored Ape NFT. The lender could only, at best, hold on to the Bored Ape NFT, pending repayment of the loan.*[30]

The claimant successfully borrowed and paid back numerous cryptocurrency loans using the Bored Ape NFT as collateral on these terms. This ended when he dealt with the defendant, whom he only knew by the pseudonym "chefpierre.eth". Who was behind this pseudonym was unknown, although "chefpierre.eth" posted regularly on Twitter.

On 19 April 2022, "chefpierre.eth" agreed to the claimant's request for a short extension of time to repay the loan. Shortly thereafter, the claimant informed "chefpierre.eth" that he had obtained another loan from another source and asked "chefpierre.eth" to enter into a refinancing loan by which "chefpierre.eth" would deduct the outstanding from fresh funds provided to the claimant.

However, "chefpierre.eth" changed his mind and issued an ultimatum for repayment, failing which he would exercise the "foreclose" option on the NFTfi platform. The claimant was taken by surprise and could not find sufficient funds in time to repay the loan. "chefpierre.eth" exercised the foreclose option and the Bored Ape NFT was transferred from NFTfi's escrow account into his cryptocurrency wallet.

The claimant made part payment, hoping that "chefpierre.eth" would return the Bored Ape NFT once full payment was made, but "chefpierre.eth" returned the part payment and listed the Bored Ape NFT for sale on an online NFT marketplace.

The claimant brought an action against the defendant, "chefpierre" claiming that he had an "equitable proprietary claim" over the Bored Ape NFT, and that the defendant was liable to him in the tort of conversion, breach of contract and unjust enrichment. The claimant applied for an interim proprietary injunction prohibiting the defendant

30) *Janesh s/o Rajkumar v Unknown Person ("CHEFPIERRE")* [2022] SGHC 264, at [11].

from dealing with the Bored Ape NFT and to serve the court papers on the defendant through the defendant's Twitter and Discord accounts and on the messaging function of the defendant's cryptocurrency wallet address.

The first issue that Lee J considered was whether Singapore had jurisdiction in this case. He reasoned that, while the decentralized nature of blockchains may pose difficulties when it comes to establishing jurisdiction, there had to be a court which had the jurisdiction to hear the dispute. On the facts before him, in particular because the claimant was located in Singapore and carried on his business in Singapore, he found that the Singapore court had jurisdiction.[31]

As for the unknown identity of the defendant, Lee J concluded that it is permissible to name a defendant using his pseudonym if his name is unknown, as long the description of the defendant is sufficiently certain so as to identify both those who are included and those who are not, followed his previous decision in *CLM*.[32] In the present case, the defendant was adequately identified as the user behind the account "chefpierre.eth" on Twitter and Discord, and the person to whom the Bored Ape NFT was transferred to.[33]

He also granted the claimant's request to serve the court papers on the defendant by substituted service, using the means requested by the claimant.

Lee J examined the technology behind NFTs in considering whether they are capable of giving rise to proprietary rights which could be protected by an injunction. In essence, he found that, in most cases of NFTs for digital artwork, including the present case, all an NFT contains is a link to a server where the actual image itself can be found. An NFT is essentially a string of code which includes the code for the image.[34] He concluded that NFTs, when distilled to the base technology, are not just mere information, but rather, data encoded in a certain manner and securely stored on the blockchain ledger. The information concerned provides instructions to the computer under a system whereby the "owner" of the NFT has exclusive control over its transfer from his wallet to any other wallet.[35]

31) *Ibid.*, at [30].
32) *Ibid.*, at [39].
33) *Ibid.*, at [40]-[41].
34) *Ibid.*, at [49]-[55].
35) *Ibid.*, at [58].

Lee J considered literature and growing judicial support for extending property concepts to protect digital assets, including the Soleymani and AA cases as well as the Legal Statement discussed above. As with his finding on cryptocurrencies in the CLM case, Lee J was of the view that NFTs satisfied the *Ainsworth* criteria and granted the proprietary injunction sought:[36]

1. The right was "definable", meaning the asset must be capable of being isolated from other assets whether of the same type or of other types and thereby identified. This is satisfied by the metadata which is central to an NFT. The metadata distinguishes one NFT from another.

2. The asset must have an owner capable of being recognized as such by third parties. For NFTs, the presumptive owner would be whoever controls the wallet which is linked to the NFT. Similar to cryptocurrencies, excludability is achieved because once cannot deal with the NFT without the owner's private key.

3. The right must be capable of assumption by third parties, meaning that third parties must respect the rights of the owner in that asset, and that asset must be potentially desirable. These requirements are met because the blockchain technology gives the owner the exclusive ability to transfer the NFT to another party, and NFTs are the subject of active trading in the markets.

4. The right and the asset must have some degree of permanence or stability. Lee J noted that the NFT has as much permanence and stability as money in bank accounts, which, nowadays, exist mainly in the form of ledger entries and not cold hard cash.

Although Lee J has now twice concluded that digital assets, namely cryptocurrencies and NFTs, His Honour took care to point out that both these cases (*CLM and Janesh*) concerned interlocutory applications and must be seen in that context. The threshold he applied for interlocutory applications was whether the claimant's case was seriously

36) *Ibid.*, at [69]-[72], [81].

arguable. He did not rule out the possibility of a different conclusion with the benefit of fuller submissions.[37]

4. The case on trust over Tether – *ByBit Fintech Ltd v Ho Kai Xin and Others ("ByBit")*

In *ByBit Fintech Ltd v Ho Kai Xin and Others ("ByBit")* [2023] SGHC 199, the Singapore High Court finally went beyond the "arguable case" threshold in interlocutory proceedings to decide categorically that digital assets or crypto assets are property capable of being held on trust.

That case concerned "stablecoin", a crypto asset in which the issuer represents that it is backed with an equivalent value in fiat or other reserves. The stablecoin in question was called Tether, and it was linked to the United States Dollars. Hence, Tether is commonly referred to as USDT, namely United States Dollar Tether.

ByBit owns a cryptocurrency exchange going by its own name. It remunerates its employees with traditional currency and cryptocurrency. ByBitemploys WeChain Fintech Pte Ltd ("WeChain") for payroll services. In September 2022, ByBit discovered eight unusual cryptocurrency paymens ("Anomalous Transactions") amounting to a total of 4,209,720 USDT (the "Crypto Asset") transferred to four cryptocurrency addresses. It turned out that an employee of WeChain, Ms Ho, was responsible for the transfers to the addresses which were controlled by her and had also paid some cash (the "fiat asset") into her personal bank account. ByBit sued and obtained summary judgment against Ms Ho.

In granting judgment to ByBit, Jeyaretnam J noted, amongst other things, that the Singapore Rules of Court 2021 defines "movable property" as including "cryptocurrency or other digital currency".[38] He observed that crypto assets are not classed as physical assets because we cannot possess them in the way we can possess objects like cars or jewellery, but crypto assets do manifest themselves at the digital level.[39] They can be defined and identified, such that they can be traded and valued as holdings.[40]

37) *Ibid.*, at [69].
38) *ByBit Fintech Ltd v Ho Kai Xin and Others* [2023] SGHC 199, at [30].
39) *Ibid.*, at [31].
40) *Ibid.*, at [33].

Jeyaretnam J concluded that USDT can be called as a category of things in action which has expanded to include incorporeal rights, such as copyrights. He concluded that the holder holder of a crypto asset has in principle an incorporeal right of property recognisable by the common law as a thing in action and so enforceable in court.[41]

JeyaretnamJ then applied the common law concept of constructive trust to the USDT. As the learned judge explained, "*An institutional constructive trust arises over stolen assets at time of the theft, and the remedy of tracing in equity is available in respect of stolen assets.*"[42] Given his finding that USDT is property, he declared that ByBit has a constructive trust over the Crypto Asset and Fiat Asset.[43]

Ⅳ. HONG KONG SAR

The case of the liquidation of a cryptocurrency exchange operator – Re Gatecoin Limited

In the most recent case, *Re Gatecoin Limited (in liquidation)* [2023] HKCFI 914, the Hong Kong court was presented squarely for the first time the question whether cryptocurrencies should be characterized as property, and answered affirmatively.

Gatecoin was a Hong Kong company that operated a cryptocurrency exchange platform. To use the platform, customers had to open an account and deposit cryptocurrencies or fiat currencies (legal tender issued by governments such as USD, GBP, EURO) for trading or withdrawal purposes. When Gatecoin went into liquidation, the liquidators applied to the court for a number of directions, including the characterization of cryptocurrencies and fiat currencies held by Gatecoin and the allocation of these currencies to the customers. These questions will enable the liquidators to know whether the currencies were held by Gatecoin on trust for any of the customers.

Linda Chan J embarked on an examination of the nature of cryptocurrency and

41) *Ibid.*, at [34], [36].
42) *Ibid.*, at [42].
43) *Ibid.*, at [44].

blockchain technology, as well as the manner in which Gatecoin operated the platform.[44)]

Linda Chan J held that the cryptocurrencies should be characterized as property, applying the *Ainsworth* criteria just as the Singapore courts and English courts have done. Her Honour noted that literature such as the Legal Statement and case law from numerous jurisdictions such as England, BVI, Singapore, Canada, USA and New Zealand leaned towards expanding the concept of property to cryptocurrencies. Hence, she concluded that cryptocurrencies are "property" which are capable of forming the subject matter of a trust.[45)]

However, on considering the terms and manner in which Gatecoin operated the platform, the currencies were not held on trust by Gatecoin for the customers, but held by Gatecoin in its own right as Gatecoin's assets.[46)]

Ⅴ. CHINA

For this section on China, the author relies on the update published by law firm, Dahui in its Newsletter dated June 7, 2023.[47)]

Unlike many countries which are trying to regulate and clarify their laws on cryptocurrencies and other digital assets, China has taken a simpler approach. It has imposed a blanket ban. Cryptocurrencies are not recognized as legal tender. Crypocurrency exchanges are illegal. Overseas cryptocurrency platforms cannot operate and offer services to PRC residents.

This ban on cryptocurrencies has put into doubt transactions and contracts involving cryptocurrencies. In *Gao Zheyu v Shenzhen Yunsilu Innovation Development Fund and Li Bin*, the Supreme People's Court upheld the setting aside of an arbitral award by the Shenzhen Arbitration Commission that ordered a respondent to pay a claimant the equivalent of a number of Bitcoins value in USD, and convert the USD into RMB.[48)]

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44) *Re Gatecoin Limited (in liquidation)* [2023] HKCFI 914, at [12]-[23].
45) *Ibid.*, at [47]-[59].
46) *Ibid.*, at [41]-[43].
47) The writers of the case summary are Yi Dai, Julian Chow and Yiru Xing.
48) Supreme People's Court Guiding Case No. 199 dated 27 December 2022.

The underlying transaction had been an Equity Transfer Agreement which the respondent was to pay certain sums of monies and return Bitcoin assets that the respondent was managing on behalf of one of the claimants. When the respondent reneged on his contractual obligations, the claimants commenced arbitration with the Shenzhen Arbitration Commission demanding that he return the USD value of the Bitcoins managed by him. The Arbitration Commission issued an award finding that the respondent was in breach of contract and calculated the USD payable by reference to the Bitcoin price on a cryptocurrency exchange on the date of the award.

The Shenzhen Intermediate Court set aside the award on the grounds that it was contrary to public interest and violated national virtual currency regulations. The Supreme People's Court upheld the setting aside. The Dahui Newsletter summarized its key findings as follows:

- *The People's Bank of China, the China Securities Regulatory Commission, and other departments have issued a number of documents expressly stating that Bitcoin is not legal tender. These documents clearly state that Bitcoin cannot and should not be circulated in the market as currency, and token trading platforms are not allowed to provide services such as setting prices for tokens or virtual currency.*
- *Such documents prohibit the exchange, trade, and circulation of Bitcoin, and indicate that individuals that engage in Bitcoin speculation may be suspected of engaging in illegal financial activities, disrupting the financial order, and affecting financial stability.*
- *The arbitral award is, in essence, tacit support for the exchange and trade of Bitcoin for legal tender, which is inconsistent with the spirit of the aforementioned documents and contrary to the public interest.*

Ⅵ. CLOSING REMARKS

Many countries are trying to keep up with commerce and technology in updating legislation to regulate the digital world. Where the legislative process is not fast enough to resolve problems arising from the technology, courts, in particular common

law courts, have endeavored to expand existing concepts to avoid a lacuna. Barring China, the laws and courts in most countries try to support digital commerce and digital assets.

As discussed at the opening, laws have already moved towards facilitating the arbitration of intellectual property disputes. For instance, section 52D of the Singapore Intellectual Property (Dispute Resolution) Act 2019 supports the arbitrability of intellectual property disputes by providing that (1) the subject-matter of a dispute is not incapable of settlement by arbitration under this Act only because the subject-matter relates to an IPR (Intellectual Property Right) dispute; and (2) an award is not contrary to public policy only because the subject-matter in respect of which the award is made relates to an IPR dispute. A similar provision is found in the Hong Kong Arbitration (Amendment) Ordinance 2017.

In time, we will perhaps see similar laws in more jurisdictions expressly supporting the enforcement of rights in digital assets, such as cryptocurrencies and NFTs. Nonetheless, for the moment, contracts relating to digital assets and cryptocurrencies that provide for the arbitration of disputes must take into account not only whether digital assets and crypocurrencies are recognized under the governing law of the contracts. As the Shenzhen case demonstrates, the enforceability of such rights and any awards pronouncing on such rights will also depend on the public policy laws of place of arbitration and enforcement.

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