Evolution of the Virtual currency Wonderland: Alice and Beyond

Japan appears to have placed its confidence in a future in which blockchain technology (Distributed Ledger Technology (DLT)) competes with established currencies as a mean for settling debts and making purchases. Indeed, over 10,000 Japanese companies, including several large electronics stores (i.e., the electronics superstore Bic Camera, Inc. and Line Corporation) have recently decided to allow some financial transactions to be conducted using bitcoin and other virtual currencies.

In March 2017, the Standards Advisory Council (SAC) recommended that the Accounting Standards Board of Japan (ASBJ) establish guidelines in order to properly audit and regulate exchanges dealing with virtual currencies. Virtual currencies are defined as having a proprietary value which is transferred using a computer system for use in payment or exchange with other virtual currencies. Virtual currencies are not deemed to be equivalent to Japanese currency or an established foreign currency, as well as not being monies contained in prepaid cards or "bonus" point systems for returning to a customer a percent of monies spent by the customer. Additionally, it was established that virtual currencies amounted to assets which could be subject to taxation (if sold and/or converted to cash) and are not considered to be financial assets, inventories held for trading, or intangible assets.

In April 2017, Japan enacted the Virtual Currency Act which while not declaring virtual currencies to be legal tender, did provide the Japan Financial Services Authority (JFSA) with the right to regulate such currencies. Additionally, certain tax regulations were repealed so that foreign investors would be able to purchase bitcoin from Japanese financial exchanges. In addition, in late 2017, GMO Internet Group announced that it would offer to pay employees in bitcoin should they opt in.

While all of these signs point to a future for bitcoin and potentially other virtual currencies in Japan, the road

leading to the current situation has been bumpy and continues to be filled with potential problems, ranging from those which are merely potholes to those which are pits.

Other countries have not been as welcoming of the new technology and have taken steps ranging from issuing warnings regarding virtual currencies, severely restricting the use thereof, or completely banning the use thereof. China has banned almost all financial transactions using virtual currencies, although the People's Bank of China has begun to develop a virtual currency potentially for limited and heavily-regulated use. Korea has taken steps to allow transactions using virtual currencies so long as they are not anonymous, which is one aspect of virtual currencies that appeals to many investors. Some countries such as Switzerland have issued guidelines (which vary depending on the type of token and the usage thereof) regarding anti-money laundering and data protection regulations relating to DLT.

Malta has begun to draft legislation directed to verification of the reliability of an Initial Coin Offering (ICO) and the provisions by which an ICO will be judged to be an asset or a financial instrument. Similar legislation is pending in the United States regarding whether virtual currencies are securities and therefore subject to the laws and regulations under the Securities Act and the Securities Exchange Art. Israel has passed legislation with regards to how profits from ICOs and DLT are to be taxed. The Supreme Court of India stated in November 2017 that virtual currencies exist as something other than currency or commodities and would eventually be subject to regulations, and in December 2017, the Reserve Bank of India again stated that those investing in virtual currencies do so at their own risk.

While some regulations and regulatory agencies have been established, both Japanese banking and security exchanges and the Japanese government seem more willing to rush into the whirlpool of virtual currency than other countries despite Japan's usually conservative wait-and-see approach when it

comes to investment, particularly when such investment is seen as highly volatile. Given the desire to find ways out of the economic stagnation that has burdened Japan since the bubble burst, promoting and investing in virtual currencies may offer a new tax revenue stream from both investors and corporations. Currently, the tax rate on earnings obtained through virtual currency trading ranges from 15% at the low end to 55% at the high end applied in the case when annual earnings are in excess of 40,000,000 yen ($364,000, based on 110 yen = $1 as on May 2018).

One of the earliest bitcoin exchange corporations, Mt. Gox went under in early 2014 after over $390 million (approximately 48 billion yen at that time) worth of bitcoins disappeared from their accounts and customer's accounts. Despite promises of reimbursement, no settlements have been reached and investors have been unable to recoup their losses as a result of this hack.

More recently, Coincheck announced that it would attempt to reimburse customers over 46.3 billion yen ($42 million) after their network was hacked and over 58 billion yen worth ($527 million) of NEM virtual currency was stolen. Thereafter, the JFSA warned other Japanese virtual currency firms to take steps against such hacking attempts in the future.

As of December 2017, there were fifteen virtual currency exchanges which had received approval to operate from the JSFA. These exchanges are allowed to operate so long as the virtual currencies they handle meet strict standards, and while most of these exchanges are limited to trading bitcoin only, one (Xthetha Corp) has been allowed to trade at least eight other virtual currencies.

However, in early March 2018, the JFSA ordered two virtual currency exchanges (Bitstation and FSHO) to cease operations for one month due to compliance issues and misappropriation of data/information. The JFSA found that highly suspicious transactions at FSHO were routinely unreported to regulators. Five other exchanges were given warnings to improve their

business practices or risk the same fate. Another 16 or so exchanges have been permitted to operate while their applications for registration are under review with the JFSA.

The JFSA along with academic and industry experts has also begun to examine the establishment of regulations in regards to margin requirements and the maximum leverage that will be permitted, so that investors caught up in a whirlwind of investment do not overextend themselves.

Blockchain Patentability

Two cases adjudicated by the US Court of Appeals for the Federal Circuit have set the manner and tone by which software patent applications are to be judged in the post-Alice world.

1) Ultramerical v. Hulu No. 10-1544 (Fed. Cir. 2014)

The patent in question was deemed to merely be software executed on a computer (displaying an advertisement prior to providing content) and thus, is deemed to be an unpatentable abstract concept. An advertisement may be considered to be "currency" in this case.

2) DDR Holdings v. Hotels.com 13-1505 (Fed. Cir. 2014)

The patent in question is directed to an invention which improves the manner in which a computer functions. The invention provides a means for solving problems existing in the field of computers and computer networks and not limited to an abstract concept, the invention was deemed to be patentable.

These cases and the ensuing avalanche of invalidations of patents merely associated with an abstract software concept seem to suggest that a blockchain-related invention which does not improve or advance the manner in which a computer or a computer network functions would be barred from receiving a patent by Alice. Accordingly, new blockchain programs will have to be designed as inventions improving prior programs.

Blockchain technology has and will also be used for the storage and distribution of content (i.e., music and other media subject to copyright protection) stored in an immutable ledger.

The positives of this system is that royalties can be more easily distributed to the artist, author, licensee, etc., of the media selected for viewing or purchase by a user and speed the distribution of such content and of updated content to users.

Infringing content may not be so easy to remove from a ledger, as the ledger is in itself largely immutable, however steps can be taken to block a user from seeing content stored in a ledger in violation of copyright or licensing agreements. This becomes even more complicated if the DLT is public, as content can be uploaded by nearly anyone.

Alice and the above Federal Circuit Appeals decisions have not hindered all applications related to blockchain technology from being filed at patent offices worldwide, particularly the USPTO. While many of the large banks, not only in the United States, but worldwide, seem interested in the demise of blockchain-based currencies in favor of the traditional and comparatively stable fiat currencies, many of these banks (i.e., Goldman Sachs and Bank of America) have filed numerous applications related to blockchain technology. Citi (formerly Citibank) has begun internal testing of "Citicoin" and Mitsubishi UFJ Financial Group has scheduled the issuance of the "MUFG coin" and the establishment of a MUFG coin exchange in April 2018.

Mitsubishi UFJ Financial Group has expressed the intention of preventing wild fluctuations in the price of their MUFG coin order to provide stability. The plan is to offer the MUFG coin at a cost of 1 yen per 1 coin, although the coin will be permitted to float. Given that no one can predict with certainty whether a virtual currency will establish itself (or whether numerous virtual currencies will establish themselves, etc) as a currency accepted worldwide or whether virtual currency will ultimately prove to be too unstable and prone to abuses such as hacking and a lack of oversight, and finally find itself unceremoniously tossed in the refuse bin, these banks seem to be adopting the Boy Scout philosophy of "Be prepared".

While referring to the recent advent of virtual currencies and wild fluctuations in price per "coin" as "the wild west" is already a tired cliché, there are obvious reasons for regulating or at least making sure that investors (re: casual investors caught up in the dream of making a bundle quickly) are protected from the dangers associated with virtual currencies. Aside from the risk of hacking, governments see salivating investors who blindly envision their virtual currency investments as being an endless skyrocket to financial freedom, as reminiscent of the roaring twenties which culminated in the collapse of Wall Street and subsequent world-wide depression. While numerous other factors (re: Smoot-Hawley, etc) came into play which deepened the chasm left by the stock market collapse and eventual margin calls, most governments and people desire to see their stock exchanges operating in a steady and predictable manner (as much as a financial market can ever be considered steady and predictable).