

## CRYPTO A.M.

Our series on AI, Blockchain, Cryptoassets, DLT and Tokenisation

PARTNER CONTENT

CITY A.M.'S  
CRYPTO INSIDER

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As there was a price surge which saw it hitting US\$9,113 / GB£7,013 briefly before fluctuating down and up settling above \$8,500. It also didn't go unnoticed that a total of \$1.1bn was moved by a Bitcoin whale for the princely sum of \$80 which boggles the mind compared to any regular banking transaction.



Looking at the market at the time of writing green candles were abundant and BTC was trading at US\$8,654.28 / GB£6,669.05; Ethereum (ETH) is at US\$166.27 / GB£128.32; Ripple (XRP) is at US\$0.2325 / GB£0.1765; Binance (BNB) is at US\$17.20 / GB£13.26 and Cardano (ADA) is at US\$0.04370 / GB£0.03355. Overall Market Cap is at US\$216.33bn / GB£166.66bn (data source: www.CryptoCompare.com)

Yesterday I met with Napoleon AM is the first algorithmic crypto asset manager to be fully regulated by the French AMF (https://napoleon.ai). Which is based in Paris and a pioneer in France in the digital assets space. Napoleon's team comprises former asset managers from the legacy financial markets, computer/data scientists and blockchain experts. Meeting with Head of Sales, Damien Moser he explained that in the Napoleon Bitcoin fund - launched in December 2019 - is the first AMF regulated fund, offering qualified professional investors exposure to the performance of Bitcoin via the CME Futures. He went on to tell me "We have also developed around 15 quantitative strategies on the most liquid cryptos, currently available in the form of managed accounts, that we are planning to launch under properly regulated funds as well in the future."

Today I arrive in Davos for the WEF 2020 which also sees a host of Crypto and Blockchain focused meet-ups following last week's Crypto Finance Conference in St Moritz which coincided with a landmark trade took place that made international headlines. Swiss based BrickMark AG, an innovative, high-growth real estate investment company, announced that it has signed a purchase agreement about the largest ever real estate purchase using tokens, buying a prime commercial property on Zurich's prestigious Bahnhofstrasse. The transaction volume amounts to over CHF130 million. A considerable part of which will be paid in BrickMark tokens. "We are implementing what was once no more than a concept in the real estate industry," said Stephan Rind, CEO of BrickMark. The purchase agreement opens up new dimensions in terms of the size and institutional character of token-financed real estate transactions.

Finally, with thanks to headline sponsors Electroneum, I am delighted to announce that the inaugural Crypto AM Awards 2020 will be taking place on Wednesday, 11th March. The nominations are open and free to register, please use the following link https://www.cityam.com/crypto/crypto-am-awards/ Sponsorship opportunities are still available and if you are interested please contact events@cityam.com

Crypto A.M. shines  
its Spotlight on  
Aeroband

David Galea Sammut and Brendan McKittrick are experts in the aviation industry. Their portfolio of experience has seen them work with over 300 airlines to help them improve their revenues, reduce their costs, and transform their customer experience - 3 tenets they inculcated into the Aeroband brand that they co-founded in 2019 and winner of the "FINTECH Startup of the Year" at Malta AIBC Summit 2019.

They have been long enough in the aviation industry to see the slow demise in airlines' profits due to rising costs and heightened competition. As margins tighten, airlines on the periphery of the comfort spectrum face imminent demise. Twenty-three airlines stopped flying in 2019 alone, including Iceland's WOW and the UK's Flybmi. Although the industry has collectively enjoyed ten years in the black and annual revenues are creeping upwards towards \$900 billion, the average profit margin has slid to 3.1% in 2019 with a modest increase forecasted for 2020.

"The investment in aviation is enormous,

with a single Airbus A350 costing in excess of \$300 million and yet the average profit per passenger is oft quoted as 'not enough to buy a Big Mac in Zurich'" says David. Brendan agrees. "I was the CTIO of one of the world's most successful and largest airline ticket processors. We had over 20 products servicing 350 airlines. We had the largest customer base worldwide for airline revenue accounting and supported a global ticket settlement process handling over

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In Aeroband we know there's a big gap in aviation, and we both had the same idea how to fill it.

Mesh networks have been around since there were military experiments in the 1980s and have become the foundation of the Internet. Wireless Mesh Networks (WMN), however, also now appear to be moving from adolescence to maturity as they become adopted into people's homes to solve issues of patchy coverage and seamless access.

Essentially a WMN is a set of devices that work together with no cables to send and receive information with no need for centralised control.

This network topology helps to solve many current issues and may provide a pathway to our future desires for Augmented Reality, automated cars, Smart Cities and the Internet of Things. In conjunction with blockchain technology, it is also the key to providing access to the Internet for the 3.4bn people who currently have no access.

ISSUES WITH MOBILE  
INFRASTRUCTURE

We have become too reliant on centralised mobile operators and internet providers. When over 30m customers were affected by the most recent O2 loss of service, people's livelihoods were impacted and transport networks ground to a halt, it became abundantly clear we need a better architecture.

Who has experienced black spots for mobile coverage? It can be difficult to get a good signal in the both the centre of cities and rural communities. Did you know that 60% of mobile internet traffic is delivered through home and public Wi-Fi and not through the mobile operator GSM networks? The mobile network infrastructure of today has huge issues keeping up with consumer's insatiable demand for data. Hopes for 5G resolving coverage issues are distant and face significant hurdles in regulation, spectrum allocation, cost structure and hardware compatibility.

## WHAT DO WMNS OFFER?

Although WMNs may not be the answer to all issues we have today in gaining better access to the internet, it is highly likely that they will become an integral

Designed by  
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part of what is required to make it a whole lot better.

There is no single point of failure - where there is a network outage, the network will auto route traffic over a different part of the network. Nodes on the network have intelligence built in to distribute the traffic over alternative routes. The network will self heal and exclude any failed nodes on the network.

It has been demonstrated that there are large cost savings to be achieved with the implementation of WMNs in an increasing number of scenarios. The ability to provide multi radio nodes and improved routing algorithms have helped to overcome early WMN bottlenecks.

WMNs can offer a single network over a large area providing a single login and

seamless connectivity. They also have the benefit of aggregating the total bandwidth available in cases of high demand. In many applications, speed is increased due to the fact that not all packets need to return to a central server.

WIRELESS MESH  
NETWORKS USE CASES

There are particular use cases for WMNs that will benefit greatly from the advanced versions of this technology. As technology is advancing with the advent of better security with Wi-Fi Protected Access 3 (WPA3) and better capacity and density with Wi-Fi 6 (802.11ax), these mesh networks will become more robust and reliable in the very near future.

Community Mesh Networks are becoming more widespread due to factors

such as net neutrality, lack of coverage and large consumer demand. Places where these networks are being implemented include metro networks, in-building coverage and rural or developing world populations.

However, to really advance the use of these networks, key factors need to be resolved in parallel. There needs to be better range and density (improved in Wi-Fi 6), common standards (either Open Source or Industry Standards such as EasyMesh) and also a way for communities to manage the economic model of their network (blockchain).

WMNs can provide excellent flexibility for IoT networks as the addition of new nodes to the network for a larger coverage area is as simple as introducing the device within range of the existing

nodes on the network. This can reduce costs of cabling, equipment and centralised infrastructure. It can also reduce power consumption required as there is less requirement for long range radios due to the range requirement only needing to be to the nearest node instead of a distant hub or base station.

Smart cities of the future revolve around a secure and highly resilient communications network which must enable real-time monitoring of infrastructure, transport, utilities and buildings. Only with a distributed mesh network can the dependency on centralised control be enabled to provide fast response to environmental issues, natural disasters and terror attacks.

Other use cases for WMNs include agriculture, healthcare and transport

networks which would all benefit from the enhanced coverage and reliability of such solutions.

BLOCKCHAIN AND  
WIRELESS MESH NETWORKS

One of the reasons that previous attempts at community networks have not succeeded is due to the lack of commercial management and incentive structure. These organisational structures were neither automated nor secure from fraudulent or disruptive attacks.

With the advent of blockchain technology, a solution is now both feasible and scalable to meet the needs of community networks. It enables a reward mechanism that can incentivise their use and growth. Utilising a distributed ledger technology, the blockchain will provide an immutable record of what activity takes place over the WMN at each node. Smart contracts can be written to provide the agreements between all owners and users of the network to ensure node operators are rewarded fairly for their contribution to the network.

The blockchain layer would also enable the security and privacy required to operate a trustless network allowing users to have assurance that they are not reliant on a third party which may be open to hacking attacks or access to their personal data.

A Blockchain based global WMN could enable a global solution to the current disparate networks that are appearing across the world providing a cheaper censorship resistant network opening access to the Internet to more people than ever before.

© Alan Omnet, Chief Operating Officer of World Mobile Chain, in conversation with James Bowater. For further information visit https://www.worldmobile.io

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## CRYPTOCOMPARE MARKET VIEW

Bitcoin Hits Fresh High As  
Institutional Interest Grows

Bitcoin hit its 2020 high above \$9,000 this week before enduring a correction that saw the cryptocurrency's price drop to \$8,600. Some of its forks - cryptocurrencies created through copies of its blockchain - have performed tremendously so far this year, with Bitcoin SV hitting a new all-time high after an impressive 300% rise.

The triggers behind Bitcoin SV's rally are complex, but those behind the crypto market's overall rise seem clearer: institutional investors are entering the market. Cryptocurrency asset manager Grayscale revealed it had a record-breaking 2019, with \$600 million inflows. Around 71% of its investors were institutions such as hedge funds.

In addition to Grayscale's product, institutional investors have other options. The CME Group launched its options on Bitcoin futures last week and traded 55 contracts - equivalent to \$2.3 million in bitcoin - on its first day. Tim McCourt, global

head of equity index products at the CME, revealed the firm was "pleased with the response from customers and market participants so far," adding it "takes time to grow any new market."

A survey conducted by Zogby Analytics and commissioned by inspection and insurance company Hartford Steam Boiler (HSB) has found that 36% of small and medium-sized businesses in the US are accepting cryptocurrency payments for their products and services, with 59% of those surveyed even adding that they have purchased cryptocurrencies for their own personal use.

Security remains a serious issue when it comes to cryptocurrencies, with hackers more often than not rewarded for compromising the wallets of both individuals and organizations. Those who help make the space safer are seeing their rewards grow as well, however, as it was revealed last week that cryptocurrency-related bug bounties netted hackers nearly \$1 million in 2019.

## CRYPTO A.M. INDUSTRY VOICES

The breaking dawn of multi-jurisdictional  
regulatory regimes

Participation in digital assets continues to grow, prompting policy makers to take regulatory actions to address the borderless nature of this new asset class.

The European Fifth Anti-Money Laundering Directive (AMLD5) came into effect last week, requiring digital asset companies to register with their national regulator and comply with new KYC and AML requirements. The directive includes increased reporting obligations, deepening the pool of information available to financial intelligence units and law enforcement. In the UK, the FCA will supervise AMLD5 registration, and recently published requirements for digital asset exchanges, AIMs, peer-to-peer services providers, token issuers, and custodial wallet providers.

The response from the digital asset industry has been mixed. Companies welcoming regulation anticipate it will catalyse trust and stimulate growth. Traditional finance has been reticent to enter the market without regulatory clarity. Implementation of AMLD5 may be the genesis of the regulatory surety sought by traditional entities, potentially increasing liquidity inflow and access to banking facilities.

However, a delicate balance exists between protecting against illicit activities whilst inviting innovation and stimulating economic growth. Increased compliance costs may adversely impact smaller digital asset firms, possibly prompting some to relocate outside the EU or exit the market altogether. This month three companies, including UK-based BottlePay, ceased trading, citing AMLD5 compliance concerns. Deribit, a crypto futures and options exchange, based in the Netherlands, announced its relocation to Panama.

But the regulatory stakes are rising globally. Multi-jurisdictional regulatory regimes don't end at Europe's borders. Soon, companies who seek to operate without regulatory confines will have even fewer countries to relocate to as additional global standards setters take action.

Comprised of 39 member jurisdictions representing most major global financial centres, The Financial Action Task Force (FATF) sets standards to combat money laundering and terrorist financing. In June

2019, FATF amended its 40 Recommendations, a set of AML countermeasures, to include "Virtual Asset Service Providers (VASP)s" - defined as any person or business who conducts the exchange or transfer of virtual assets for fiat or other virtual assets, or facilitates safekeeping of virtual assets on behalf of another person or company.

Recommendation 10 requires enhanced virtual asset Customer Due Diligence, KYC and AML policies. Recommendation 16 applies what is known as the "Travel Rule", requiring VASP's obtain and hold originator and beneficiary information (e.g. customer name, physical address, date of birth and wallet address) when conducting transfers on a customer's behalf in excess of £1,000/\$1,000. VASP's are also required to have in place mechanisms to freeze suspicious transactions and report them to relevant authorities.

FATF's influence also extends to its Associate Members, which include countries popular with digital asset companies seeking offshore operations. For example, Panama are members of the Financial Action Task Force of Latin America (GAFILAT) and the British Virgin Islands are members of the Caribbean Financial Action Task Force (CFATF).

FATF Non-compliance may result in serious consequences, such as being added to their Grey list, which can lead to sanctions, difficulty obtaining loans from other countries or the IMF and World Bank, and reduction or boycott of international trade.

What does this ever-growing global focus on digital asset regulation mean for the industry? Systemic governance will require an operational and culture shift for many players whose genetic roots stem from libertarianism and core beliefs valuing truly decentralised finance. For others, regulatory oversight is a welcome, necessary and unavoidable requirement for the market to mature, mainstream and increase in relevance within the global monetary system.

Teana Baker-Taylor is Managing Director of Looking Glass Labs, a consultancy specialising in commercial strategy, regulatory affairs & public policy for blockchain, digital assets & fintech.



## BLOCKCHAIN FOR IDENTITY

Troy Norcross, Co-Founder Blockchain Rookies

The UK Government has been working hard to provide a central identity platform. They started in 2016, and as of October 2019, they decided to enlist the support of private companies to assist them. These companies include Barclays, Digidentity, Experian, Post Office, SecureIdentity. And let me say that it's nothing short of a trainwreck.

It isn't necessarily because the private sector companies are incapable. It is far more the case that the government has so many different versions of identity that even with a single source, there is no alignment. HMRC can't align their data with DVLA who can't align their data with the passport office, the

benefits system or the Electoral Roll. Every system has its own database for identity. The data is dirty, not rationalised and unusable outside the point of data collection.

As an example, I am a customer of Experian. Even with all of my details on file, they were unable to link my address from the identity service to 15 years of my credit file - to a satisfactory level to meet the standard requirement of the government. (I'm still trying to get this sorted out after 4 weeks!)

Self Sovereign Identity (SSI) is the next major frontier for Blockchain. SSI provides an identity which is independent of any single company or government and can be recognised for a

multitude of purposes ranging from government identity, to KYC (Know Your Customer) for banking, to uses for conveyancing, education, benefits - even access to bars and clubs. The identity is owned, managed and controlled by the individual. Data is stored safely and securely, and blockchain provides proof without storing any personal information. Having a public blockchain for identity (like Bitcoin is a public blockchain for money) is one of the most exciting prospects for this emerging technology.

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Australia is in the grips of an ongoing bushfire emergency  
- Over 2,000 Homes destroyed  
- Over 1 billion animals and wildlife have perished  
- Over 25 million acres are scorched

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Brendan McKittrick  
Chief Executive Officer &  
Co-founder of Aeroband

\$200 billion in ticket value annually" recalls Brendan, "The processes are archaic and prone to disputes and expensive handling costs. I wanted to do something a bit more focused on value, more agile and at the cutting-edge of technology. Starting Aeroband with David was absolutely perfect, and I think we've hit on something

very special."

Brendan and David believe blockchain technology enables smarter behaviours by brokering the trust which competitors alone lack. In this industry it's hard to get airlines to collaborate up to the point where they share information. Large intermediaries have positioned themselves in the middle to

be the brokers of that information, and whilst they have done a good job, they end up taking the lion's share of the profit, which means the airline doesn't get much at the end, just over \$6 profit per passenger in 2019 to be more specific, according to IATA.

"In Aeroband we know there's a big gap in aviation, and we both had the same idea how to fill it," explains David. "Airlines could settle ticket debts directly between each other and reduce disagreements, cutting out the middleman greatly reduces costs. Cargo operators could track parcels through a trusted network, where the consumer can see the information is verified and guaranteed and cannot be changed because it's immutable and time stamped. Add IoT to this value chain and a whole new generation of sellable and sophisticated products emerge." Brendan adds, "Through collaboration and aggregation the industry can offer a more desirable premium product to the passenger or cargo customer, and the blockchain through a distributed ledger and smart contracts removes the need for an expensive intermediary to achieve this. It's a complete game changer and restores the airlines ownership of the customer."

Contact Aeroband at info@aeroband.com and to read more about Aeroband and AEROBLOC see Katy Micallef's article in BLOCK Magazine (Issue 3) https://maltablockchainsummit.com/magazine/or go to their website at https://www.aeroband.ltd