

# Taal Distributed Information Technologies Inc. (TAAL, TAALF, 9SQ1)

February 21<sup>st</sup>, 2021

@AwesomeMathUse

There is *a lot* to unpack. Let's start with some numbers:

Market Capitalization: 192.40M (\$CAD)

Issued & Outstanding Shares: 24,819,643

Closing Price of TAAL.CN on Friday February 19<sup>th</sup>: \$7.10/share

## TAAL Business Descriptions

From Yahoo Finance[1]:

Taal Distributed Information Technologies Inc., through its subsidiaries, provides blockchain infrastructure and transactional platforms to support businesses building solutions and applications in Canada, Kazakhstan, and Cayman Island. It also engages in the developing, operating, and managing distributed computing systems for enterprise users.

From the Taal website[2]:

New innovation for the new economy.

Mission: accelerate the adoption of the BitcoinSV vision.

Vision: Disrupt how we transact with each other.

Taal is a pure play on the global adoption of BitcoinSV

Now you're probably wondering what is BitcoinSV (BSV) and why you should care about it. The simple part is what it is: BitcoinSV, or Bitcoin Satoshi Vision, is the only Bitcoin today that follows Bitcoin as laid out by Satoshi Nakamoto in the Bitcoin White Paper[3]. Why should you care about BSV and in turn a pure play investment on it? Well, that's a much longer answer. I hope you'll stick with me as I lay out about three and a half years of research into what I hope will be the best DD (due diligence) you've ever read.

## Bitcoin Satoshi Vision (BSV)

A quick overview of Bitcoin SV:

- BSV has unlimited scalability. It never really hits a scale ceiling. There is no block size cap and blocks as large as 369MB containing 1.3M transactions have been mined on the BSV blockchain[4]. On BSV test networks, blocks over 2GB have been mined.

- Fees are very low and continue to get lower as scale increases. Current rates are roughly 1/20<sup>th</sup> of a cent for a transaction[5], but lower rates can be purchased in bulk from a transaction processor (using an SLA).
- 0-confirmation reliability. Simplified Payment Verification (SPV) enables transactions to be trusted almost instantaneously[6][7].
- SPV + low fees enables small casual transactions and micro-transactions to be practical.
- BSV is Turing complete[8]. The Turing completeness of BSV allows any piece of data to be secured, stored, and transferred cheaply. Any function your computer does, can be secured and integrated with BSV. Essentially it can do everything Ethereum can do but much cheaper, faster, and safer.
- Bitcoin Satoshi Vision aims to follow the Satoshi Vision as outlined by the Bitcoin White Paper[9]. The Bitcoin White Paper is a technical document that outlines the fundamentals of the technology. If you have never read it, I suggest you take the time to. The first time I read it, many years ago, I spent the next few hours googling terms so I could try to understand it. Don't be dissuaded if you have to read it multiple times and google countless definitions to understand it.

### **Brief History**

Let's rewind to 2017, late July 2017 to be exact, when a proposal known as Segregated Witness (SegWit) was due to be implemented on the Bitcoin (BTC) blockchain. Without diving into the technical aspects of this change, we can ascertain that the reason for implementing SegWit was due to the limited block size of BTC, set at 1MB[10]. Segregated Witness, as the name suggests, segregates the witness data (digital signature data) from the BTC transaction itself and no longer requires those signatures to be stored on the blockchain. This effectively increases the number of transactions you could fit in a fixed size block by ~30%. The signatures are propagated separately so you don't actually need to verify the signatures in order to mine a new block. If you don't use SegWit, the signatures do not exist, and if 51% of the miners do not use SegWit, then all SegWit coins can be stolen. If you do use it, you can see the signatures. In other words it allows miners to delete the signatures, but does not force them to. Now anyone who has read and understood the White Paper[9] would quickly flip to the first sentence of section '2. Transactions' which reads "We define an electronic coin as a chain of digital signatures."

...Huh? If SegWit makes it so signatures are propagated separately and you don't need them to mine blocks, how can we have a chain of digital signatures under SegWit? How is it even 'Bitcoin' without the chain of digital signatures as the white paper lays out? Great questions, which is why Bitcoin forked on August 1<sup>st</sup>, 2017[11]. Some smart people figured out that in order to fit more transactions in a block you could just increase the block size cap from 1MB to say 8MB (or more), so that's what they did. Thankfully they forked the protocol before SegWit activation and immediately increased the block size cap to 8MB. They called the 'fork' Bitcoin Cash (BCH). One could argue BTC was the 'fork' as it was the protocol that truly changed with the activation of SegWit. I digress. After August 1st two 'bitcoins' now existed.

Arguments to this day against increasing the block size above 1MB on BTC have to do with the possibility of ‘spam’ transactions clogging the network[12]. Fast forward a few months to May 2018 and the block size on BCH was increased to 32MB[13]. Great! No problems were encountered after increasing the possible number of ‘spam’ transactions in a block by 32x (not like they could pile up in the mempool anyway...).

After a number of disagreements between the ‘decentralized’ BCH development group (there were a number of competing developers) the BCH chain split in November 2018 into BCH and BSV[14]. Unsurprisingly one of the disagreements was about raising the block size cap, which BSV did to 128MB upon forking[14]. Bitcoin SV protocol underwent the Quasar Protocol Upgrade in July 2019, expanding the block size to 2GB, over 2000x the block size of BTC[15]. On February 4<sup>th</sup>, 2020 BSV underwent the Genesis upgrade which entirely removed the transaction data size limit from a block and put the onus on miners to set their own limits driven by market forces and their own capabilities[16]. Note that if you owned 1 BTC before July 2017 and held it to today you have 1 BTC, 1 BCH, and 1 BSV.

With an unlimited block size, spam is still not an issue. So that begs the question; what is a spam transaction? I would argue spam transactions do not exist. They are a fiction generated by those wanting to limit block size and implement SegWit. Anyone willing to pay a fee to send a transaction is by definition not sending a spam transaction. Spam is free. Bitcoin transactions are not. Taal will be there to process all these so called ‘spam’ transactions!

Ok, enough history. To sum up this segment: by implementing SegWit, BTC broke the chain of digital signatures and thus no longer follows the definition of an electronic coin as defined in the Bitcoin White Paper written by Satoshi Nakamoto.

### **The Curious Case of Satoshi Nakamoto**

Now for Satoshi Nakamoto. Is Dr. Craig S. Wright Satoshi Nakamoto? I think there is a case to be made that he is. Controversial? Yep. Whether or not Dr. Wright is Satoshi is one of the most frequent disagreements within the crypto space. Many just seem to write you off in any discussion and attack his character as a defense. Why is that? I think most are just listening to the loudest voice in the room because it’s the easy thing to do. I have done extensive research, so I will lay out my case for why Dr. Wright could be Satoshi. I hope you’ll hear me out despite the nature of the topic. I have tried to keep this section short. It is an important piece of my investment thesis for Taal, but it by no means makes or breaks my thesis, and I don’t want it to detract from the rest of my thesis should you disagree on this one particular point.

We should start with a very thorough piece written by Unbounded Capital (UC) titled “Why we think Craig Wright is Satoshi and why that matters”[18]. It is not a short read. I strongly recommend you read it.

Hopefully after reading the UC article you are at least thinking that Dr. Wright's claim that he is Satoshi Nakamoto is plausible. From the absurd number of degrees (in many subjects necessary for one to create Bitcoin)[18], to the court case predicated on him being Satoshi(Wright vs Kleiman)[19], and the court case suing twitter user 'hodlnaut' for defamation for calling Dr. Wright a fraud for his claim of being Satoshi (Wright vs. McCormack)[20], to some members of the BTC community backing his assertion and saying he signed for them in private, to the very very substantial risk of continuously claiming to be somebody you are not. I think one of the most interesting aspects is the Tulip Trust, but I will touch on that later.

There is also overwhelming evidence of Dr. Wright having the most complete understanding of Bitcoin of anybody. Nobody seems to even come close. For a starting point of evidence on this I will refer you to the Youtube channel Theory of Bitcoin[21]. In the initial series, aptly titled 'Theory of Bitcoin', Dr. Wright is interviewed for 20 hours (10 episodes of 2 hours) about Bitcoin. The topics covered include networks, law, legal aspects of Bitcoin, script, computation, Turing completeness, economics, information, computer security, game theory, personal responsibility, the history of Bitcoin, and the future of Bitcoin. A more recent series is focused on breaking down the White Paper line by line with Dr. Wright.

For those wanting to read his writings, academic and otherwise, Dr. Wright has a personal website[22]. A strong academic understanding of a broad set of subjects is apparent in his writings.

To my knowledge, nobody else has ever claimed to be Satoshi Nakamoto. This is interesting because many years go when a theory emerged that Dorian Nakamoto was Satoshi, Satoshi re-emerged briefly on the P2P Foundation Forum to announce he was not Dorian Nakamoto[24]. One would think if he wasn't Dr. Wright that a similar statement would have been given by this point over half a decade since Dr. Wright's initial claim.

Dr. Wright was also granted U.S. copyright registrations in May 2019 for the original Bitcoin White Paper and early code[54].

### **A Significant Competitive Advantage**

How does Dr. Wright relate to Taal Distributed Information Technologies Inc.? Good question!

Go to the Taal website and hit the 'meet the team' option in the 'about' menu and scroll to the bottom[24].

Who is listed? Dr. Craig S. Wright!

Dr. Wright is a member of Taal’s advisory board and thus an advisor to the company. This has been the case for quite some time (since November 2018). If you click ‘view profile’ it says “He is the creator of Bitcoin under the pseudonym Satoshi Nakamoto.”

That statement is quite astonishing. It would seem like a slam dunk court case against Taal should it be definitively proven that Dr. Wright is not Satoshi Nakamoto. They are, after all, a public company. Public companies cannot make false or misleading claims. I would think Taal would err on the side of caution in this regard unless the company was satisfied it was not making a misleading claim. Why would they take such a risk by having it listed on their website? I don’t have a factual answer to that, only that maybe they have seen evidence that the public has not.

I consider it a significant competitive advantage for Taal to have such a knowledgeable individual advising the company. It doesn’t really matter whether you agree or disagree with the case I’ve made to support the plausibility of his claim to be Satoshi: his knowledge and understanding of blockchain technology is very evident and that is beneficial to Taal.

### **Taal’s Business Operations and Prospects**

I’ve made a short case to support Dr. Craig S. Wright’s claim that he is Satoshi Nakamoto. I will now make the case for Taal as an early stage blockchain investment opportunity with Satoshi as a guide.

Under ‘view profile’ it also states “Currently, Dr. Wright is Chief Scientist for nChain — the global leader in advisory, research, and development of blockchain technologies. nChain focuses on igniting massive growth and adoption of the original Bitcoin design, protocol, and vision, now living only in the form of Bitcoin SV (BSV), which stands for Satoshi Vision”[24]. nChain, to my knowledge, holds the largest portfolio of Bitcoin and blockchain related intellectual property in the world. This portfolio, to my understanding, is a direct result of the work of their Chief Scientist (Craig Wright). Taal has licensed access to this portfolio of IP for 10 years after signing a deal with nChain Holdings last April for 1M USD[25].

About nChain[25][26]:

nChain Group Holdings Ltd is a leading provider of enterprise-grade blockchain solutions, helping businesses and organizations realize and protect the value of their data. nChain is based in London and boasts one of the largest teams of blockchain developers globally and a leading portfolio of novel blockchain IP. nChain is committed to helping clients maintain competitive advantage in business through more efficient management of data.

Dr. Wright encourages companies to build on BSV where it will be free to use many of nChain’s intellectual property (IP) assets. Royalty-free usage of some of the world’s leading blockchain IP, but only on BSV. Offering free usage of blockchain IP, that he helped to develop, seems unlike something a fraud or scammer would do.

So, Taal has access to a pretty profound portfolio of blockchain IP with which to build. Since nChain is a private company the exact collection of IP is not truly known. Given Dr. Wright's involvement I would reckon at least some of the IP is useful. A partnership with nChain is a good start, but how is that going to make them money?

TAAL was formerly known as Squire Mining, a mineral mining company. They changed the business in 2018. Then, in December 2019, changed the name to Taal Distributed Information Technologies Inc., changed the ticker to TAAL, and performed a share consolidation (10 for 1)[27]. An initial element of their change of business in mid 2018 was to design an ASIC mining chip[28][29][30]. The project was ultimately a failure as the chip did not meet the anticipated design parameters and so the project was abandoned[31][32].

Taal's main business today is the business of transaction processing. The easiest way to understand this is that they are a miner, but their focus is not on block rewards like miners that mine BTC, it is on maximizing network throughput. Like a Visa or Mastercard of the BSV network. Taal's president, Chris Naprawa, has likened Taal to being 'the Amazon Web Services' of blockchain technologies[33]. This seems like a good strategic call given that there is no throughput maximum on BSV from the protocol perspective[16]. The only limitation is hardware. A recent update to the SV node software has increased the ancestral unconfirmed transaction limit to 1000, up from 25 unconfirmed transactions[34]. What this meant is you could only chain 25 transactions in a row before they had to be confirmed in a block. Without diving into the technical details, this opens up BSV for larger scale computational capabilities. Taal is well positioned for explosive growth over the next decade(s). The company is likely to agree with my statement about growth having done ~80% of all hires in the last few months[33]!

Taal has SLA's (Service Level Agreements) with a number of large BSV based projects that are expected to produce a lot of transactions [35]. MoneyButton: A simple P2P payment system. Unisot: A revolutionary enterprise blockchain service provider for global supply chains. HandCash: A user-friendly BitcoinSV wallet. MetaSV: A blockchain explorer and cloud computing provider for BitcoinSV. From the June 23, 2020 release:

TAAL's investment in the future of blockchain processing has accelerated the Company's progression. Within the first month of launching the M/API beta version (May 15 - June 15), TAAL processed over 60% of the BSV network confirmed 22 million transactions ("txns"), an average of over 700,000 daily txns.[35]

A notable use case is being pursued by nChain and EHR Data who aim to put healthcare records on BSV[36]. This puts the patient in control of their healthcare data and records. EHR's initial goal is to start with prescriptions as an attempt to help get the opioid crisis

under control. If a prescription has been filled at a pharmacy and you write confirmation of that to BSV then the script cannot be filled twice. The multi-filling of prescriptions plays a big role in the opioid crisis in the USA.

Taal sees ample room for growth across multiple industries:

Healthcare is just one example in an ever-lengthening list of industries where Taal are working with nChain to advance the use of the BSV technology platform, the original and only globally scalable public blockchain. Other sectors that are areas of application include:

- Capital Markets
- Banking
- Government
- Energy
- Retail
- Luxury Brand IP protection
- Transportation
- Pharmaceuticals
- Civil Infrastructure
- Distributed Computing

[Taal is] positioned to support and monetize the increase in the volume of transactions expected on the BSV network from these industries that are choosing to adopt the platform.[36]

Taal also has proprietary Bitcoin mining management and pooling software called Taal Orchestrator[37]. This is one Taal's five 'pillars' of revenue[36]:

- Transaction processing using M/API, bulk volume contracts, dynamic rates and client tiering;
- Managed services for hosting of equipment, hash computing and, all-inclusive fleet management, monitoring and performance;
- Blockchain compute services and pilot projects stemming from the filed patent application related to the customized blockchain computing device;
- Blockchain data services; and
- Custom blockchain hardware.

Taal has a corporate presentation that outlines its strategic vision[38][39]. Here are some highlights:

- Enterprise applications creating blockchain transaction are growing at a profound rate.
  - [Taal's] proprietary cloud-based platform solution meets the evolution of new enterprise demand for real-time transactions, unlimited transaction scalability, ultra low transaction fees, and network security & industry compliance on the blockchain

- Blockchain technology is being rapidly adopted by large enterprise globally
- BitcoinSV has the scale and cost advantage to be *the* blockchain for enterprise
- TAAL is building cloud based industry agnostic tools and services to meet the demand for this rapid adoption
- TAAL is a pure play on the adoption of the BitcoinSV Blockchain
- 3 revenue drivers – TAAL infrastructure generates revenue through mining, transaction processing and value added services/software fees, and exposure to BitcoinSV.
- Strong financial profile – predictable recurring revenue
- Strong financial supporters – including Calvin Ayre
- Valuable intellectual property, TAAL Orchestrator, WhatsonChain, and TAAL console
- Forbes says: By 2021, at least 25% of the Forbes Global 2000 will use blockchain as a foundation for digital trust at scale.
- KPMG says: The business value added by blockchain will surpass \$176 billion by 2025 and \$3.1 trillion by 2030
- Gartner says: By 2023, blockchain will support the global movement and tracking of \$2 trillion of goods and services annually
- nChain will be the largest originator of BSV transactions
  - TAAL is their Enterprise Blockchain Transaction Processor of choice
- TAAL can process 27,000 transactions per second (tps) today and will have the capability to process 50,000 tps by the end of 2021 [40].
- Ethereum (ETH) and Hyperledger are promoting Enterprise Blockchain heavily
  - 200k developers on ETH today
  - ETH had \$500M in transaction fees in 2020
  - ETH is ahead on development tools, SDK and API

5g technologies will allow many more devices to be connected that previously were not. Some of these may be able to leverage the power of an immutable global public blockchain. For example, consider the case of autonomous driving and the associated data. If all driving data were public and written to the BSV blockchain for use by all companies, then all companies could use the data from all drivers to make all cars safer. It would no longer be proprietary data but the end result would be a better product for the consumer and a much safer autonomous vehicle. Individual car owners should be given the choice of what happens to the driving data they generate. This would be an amicable option for many as it would help save many lives. Drivers may even be able to generate a small income from the driving data they generate.

One particular thing I like is a patent Taal bought related to Layer0 tokens called StasTokens, named after the creator[41][42]. I've omitted an overview of Layer0 tokens because they are new and sufficiently complex. The reader is directed to the sources for further information. I am excited to see what use cases Taal comes up with for the technology.

Taal also acquired the blockchain search provider WhatsOnChain last fall. A nice tuck-in acquisition. From the news release:



WhatsOnChain owns proprietary Bitcoin SV blockchain explorer technology developed by its founders who created the first-ever BSV block explorer to provide data in an easy and user-friendly manner. A blockchain explorer is a browser for the blockchain, similar to how web browsers like Maxthon or Google Chrome are used for browsing internet web pages. BSV users rely heavily on blockchain explorers to track their transactions. Having an open-source BSV explorer is what makes BSV transparent and immutable, and providing public access to the BSV ledger allows for a decentralized, trustless, and scalable system to ensue. [43]

Taal also invested in Codugh Pty Ltd in June 2020:

The Company's principal asset is Codugh, an on-demand application programming interface ("API") marketplace that incentivises developers globally to post and get compensation for their APIs. Through the Agreements, TAAL has agreed to acquire 20% of the Company, the proceeds of which will be used to further develop, launch, and scale the Company's products and platform. The investment is expected to further the development and commercialization of TAAL's merchant API services layer, which uses the Bitcoin SV (BSV) blockchain infrastructure for its operation and monetization...The Codugh marketplace is successful because of the micropayments feature of the BSV blockchain, which allows consumers to browse and choose an API that suits their needs, and pays the developer every time their API is called... "The global API management market has been predicted to be worth US\$6.2 billion by 2024, but we hope to reach even beyond that, to the global developer community. To build Codugh, we needed to create a truly on-demand system that was powered by microtransactions and could scale massively. This was only possible on BSV. [55]

Taal also wrote a blog post to detail the partnership[56].

### **Tulip Trust, WII, ‘Satoshi Era’ Mined Coins**

The Unbounded Capital article stipulates that Dr. Wright is not a trustee and could not become a trustee of the Tulip Trust until the second half of 2020. A recent debt financing of Taal suggests Craig is now a trustee and has control over the Tulip Trust and its assets. From the Taal Notice of Proposed Significant Transaction (emphasis my own):

On December 17, 2020, the Issuer entered into a loan agreement (the “Note”) with *Wright International Investments Ltd.* (the “Lender”), pursuant to which the Lender has agreed to make an initial advance on December 18, 2020 in an amount equal to US\$3,500,000 (equivalent to C\$4,451,300 based on the Bank of Canada daily exchange rate on December 17, 2020), in the form of Bitcoin SV (“BSV”) (as determined by reference to price indicated on coinmarketcap.com immediately

prior to the advance). The Note provides that the Lender will make a further advance of US\$3,500,000 (or the equivalent thereof in BTC or BSV, as applicable) on January 29, 2021. Funds advanced under the Note will (i) bear interest of 8% annually, (ii) are unsecured, (iii) are repayable 30 days following a demand for repayment on or after January 29, 2023, (iv) may be repaid by the Issuer at any time without penalty, and (v) will be used for general corporate purposes and further developing, launching and scaling of the Issuer's products and platform. The Lender is wholly-owned by Craig Wright, an advisor to the Company. [44][45]

Wright International Investments Ltd is an asset of the Tulip Trust[17]. It is public knowledge (due to a court case) that Wright International Investments Ltd owns over 1M unsplit Bitcoins (BTC, BCH, and BSV). Thus while this does not guarantee that Dr. Wright has control and direction over those coins as of December 17<sup>th</sup>, it very much suggests it, particularly given that the loan is in BTC/BSV.

Relevant excerpt from the Unbounded Capital piece (emphasis my own):

One of the most useful revelations of the Kleiman v Wright discovery has to do with these potential incentives for CSW [Craig S. Wright] to intentionally cast doubt on his role in Bitcoin's creation. The partially redacted release of the oft-cited Tulip Trust (page 27) provides insight into how CSW and his family stood to profit if he delayed providing widely accepted evidence that he is Satoshi. The Tulip Trust is a wide ranging trust which grants CSW and his family access to over one million Bitcoin mined and purchased by CSW between 2009 and 2011 as well as valuable Bitcoin related IP. High level information about the trust's assets have been known for some time. However, the specifics of the assets and the key dates are new information (released in May 2020). Per the terms of the trust, CSW was barred from being provided a copy of the trust document from 10 July 2017 (a few days after the most recent update of the trust) until 15 December 2019. Additionally, CSW was not initially made a Trustee. Per the trust, CSW can only become a trustee with a super majority vote of the members "only after June 2020". **Once the meeting of the members occurs, the trust grants the trustees access to specific assets like the "Satoshi Million" mined Bitcoin listed as owned by Wright International Investments.**

If this information is correct, it becomes clear why CSW would want to cast doubt on his role as Satoshi until he can become a trustee and begin to access and reallocate these assets to maximize their value. What is CSW's incentive to tank the value of his significant BTC holdings (~\$50 billion USD) prior to being able to exit the position? If CSW's sale or reallocation of BTC for BSV is the action that serves as evidence of his role as Satoshi, and this action moves the market, he can capture much more upside than if he provides the evidence years before he can access the assets. [17]

Of further interest is the recent movement of some 'Satoshi era' (2010 or earlier) mined Bitcoin[47]. The noteworthy aspect, aside from that over 236M USD worth of it was

moved, is that only the BTC and BCH were moved. Dr. Wright has communicated in some online chat forums (of which I have only seen screenshots, so this is somewhat speculative) that he would not be selling or moving his BSV and would only sell BTC/BCH to fund development of BSV and other philanthropic endeavours. Given that the BSV was unmoved, this coin movement aligns with the idea that Dr. Wright is Satoshi and is the one moving these coins.

### **BTC Double Spend 21/01/2021**

I'd be remiss if I didn't mention the recent double spend on BTC[47][48].

It was a double spend. A magic one—while everyone was distracted by the golden bull, the arbitrary change in the meanings of words, the fear of capitulation, and the loss of their precious, precious fiat valuation, they ignored something special—something deeply symbolic. Something that if unintentional by man, must have been a nudge from the Almighty.

It was not just a double spend.

The story broke on the 21st day at 21:21 UTC, in the 21st year of the 21st century on a network of 21 quadrillion units, there was a magically small exploit of US\$21 on the BTC network, and nobody seems to care—at least not yet. [48]

What happened was that two blocks (A&B) got mined at the same time, but each contained different transactions. This is quite normal and occurs somewhat regularly (every few days). Miners then compete to add another block on top of either block A or block B. Whatever block, A or B, has a new block added first becomes the longest chain and the other gets orphaned. The transactions from the orphaned block get put back into the mempool so they can be mined into another block.

In this case, there were **two unique transactions spending the same BTC**. One transaction was mined in block A while the other was mined in block B. Now the only question you have to ask is: which unique transaction was the real one?

My understanding of this exploit is that it is limited to BTC via SegWit so BitcoinSV is not vulnerable.

### **Mandala Networks**

Taal is positioned to be one of 3 or 4 central participants of the small world network that will be built out to support Bitcoin SV. This type of network is called a Mandala Network. I figured I would mention this as Mandala Networks have a lot of interesting properties. Many companies are pursuing them. Two publicly investable examples are

Cloudflare (NET) and Fastly (FSLY). Here is the abstract from a paper on Mandala Networks posted in the scientific journal Nature:

The increasing demands in security and reliability of infrastructures call for the optimal design of their embedded complex networks topologies. The following question then arises: what is the optimal layout to fulfill best all the demands? Here we present a general solution for this problem with scale-free networks, like the Internet and airline networks. Precisely, we disclose a way to systematically construct networks which are robust against random failures. Furthermore, as the size of the network increases, its shortest path becomes asymptotically invariant and the density of links goes to zero, making it ultra-small world and highly sparse, respectively. The first property is ideal for communication and navigation purposes, while the second is interesting economically. Finally, we show that some simple changes on the original network formulation can lead to an improved topology against malicious attacks. [49]

### **FSInsight BitcoinSV Report**

Business Use Cases of the BSV Blockchain[50]. TL;DR:

- Blockchains are delivering new business opportunities
- Bitcoin SV's tech is focused on fostering enterprise adoption for scalable blockchain applications
- 320+ identified companies & services across diverse end markets being built on BSV
- Network stats show BSV being used for low fee micropayment and data storage applications

### **Risks**

The biggest gripe I have with Taal is the involvement of Calvin Ayre. While he has helped financially support the BSV ecosystem as well as Taal, his history is not exactly squeaky clean[51]. In 1996, a provincial (British Columbia, Canada) securities watchdog slapped him with a 20-year trading ban and fined him for "misrepresentations"[52]. He does have controlling interest in the company at present and owns a substantial amount of NVPS (non-voting participating shares) that would be converted to voting shares should his % of voting control drop below a certain % (40% I think)[53]. His controlling interest is both a benefit and risk of investing in Taal in my opinion. On one hand he is a strong financial backer of Taal and invests in many BSV startup projects (which eventually will generate transactions to support Taal's business), but on the other hand he has a couple of black marks on his record.

Another major risk is that Craig Wright is a fraud and is not Satoshi. I of course do not think this is the case and I have laid out why I think that but I'd be remiss if I did not mention that it is a risk.

Another major risk is that this is a new industry in an unregulated space (cryptocurrency) and thus that imposes risks to the business. The goal of Taal and BSV is to be regulated and compliant with regulations and laws as everything they seem to be building is based on the foundations of trust, accountability, and the rule of law. It is a risk that regulation limits their business potential or opportunities.

A crash of the cryptocurrency markets may also negatively impact Taal's business, mainly on a sentiment basis. I think Taal is positioned to survive any such crash due to the scalability of BSV and because they do not solely rely on block rewards from mining as their primary source of revenue. This is because the economics of mining mean that as price drops so does profitability since mining difficulty remains constant unless miners leave the network. The use cases of the BSV blockchain are also not eroded by a drop in price of the asset to use it (BSV). In fact, a drop in price of BSV opens up even more potential use cases as the cost to use the blockchain drops. In this way, BSV is more similar to a commodity than a currency (currency is just one use case).

It is my opinion that BTC will have a quick and painful end that will only take days to transpire. Should this happen, I think BSV will rise from the ashes. Yes, this one point is pure speculation but I felt compelled to include it.

Another risk is that Taal has a small market cap and is not very liquid in its trading. Liquidity has improved substantially in the last few months but is still a risk worth mentioning. I think the risk/reward is very favourable even in the context of the recent move up (Feb 2021).

### **Disclosure**

I am long. This is my highest risk investment but also my largest on a percentage basis. I plan to hold for at least 5 years, but likely will hold for 20+. The long holding period is based on the assumption that I think Taal will pay a dividend to shareholders at some point. The recurring revenue model of a transaction processor should support a dividend in the future. If Taal pays a dividend I will have little reason to sell as the shares will provide cash flow.

### **Disclaimer**

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## References

- [1] <https://ca.finance.yahoo.com/quote/TAAL.CN?p=TAAL.CN&.tsrc=fin-srch>
- [2] <https://www.taal.com>
- [3] <https://bitcoinsv.com/en/why-bsv>
- [4] <https://coingeek.com/taal-processes-another-world-record-block-369mb-mainnet/>
- [5] <https://coin.dance/blocks/fees>
- [6] <https://craigwright.net/blog/bitcoin-blockchain-tech/simplified-payment-verification/>
- [7] <https://craigwright.net/blog/bitcoin-blockchain-tech/merkle-trees-and-spv/>
- [8] <https://coingeek.com/theory-of-bitcoin-part-5-bitcoin-and-turing-completeness-explained/>
- [9] <https://craigwright.net/bitcoin-white-paper.pdf>
- [10] <https://www.investopedia.com/terms/s/segwit-segregated-witness.asp>
- [11] <https://news.bitcoin.com/fork-watch-bitcoin-cash-support-grows-as-aug-1-draws-near/>
- [12] [https://en.bitcoin.it/wiki/Spam\\_transactions](https://en.bitcoin.it/wiki/Spam_transactions)
- [13] <https://news.bitcoin.com/bitcoin-cash-upgrade-milestone-complete-32mb-and-new-features/>
- [14] [https://en.wikipedia.org/wiki/Bitcoin\\_Cash#2018\\_split\\_to\\_create\\_Bitcoin\\_SV](https://en.wikipedia.org/wiki/Bitcoin_Cash#2018_split_to_create_Bitcoin_SV)
- [15] <https://www.prnewswire.com/news-releases/bitcoin-sv-bsv-quasar-protocol-upgrade-continues-massive-blockchain-scaling-lifting-default-block-cap-to-2gb-300886498.html>
- [16] <https://blog.bitstocks.com/bitcoin-sv-what-to-expect-from-the-genesis-upgrade>
- [17] <https://unboundedcapital.com/blog/why-we-think-craig-wright-is-satoshi-and-why-that-matters>
- [18] <https://craigwright.net/about/>
- [19] <https://coingeek.com/kleiman-v-wright-delayed-to-june-2021/>
- [20] <https://coingeek.com/craig-wright-v-peter-mccormack-to-proceed-to-trial-despite-mccormack-abandoning-defense/>
- [21] <https://www.youtube.com/c/TheoryofBitcoin/playlists>
- [22] <https://craigwright.net>
- [23] <https://bitcointalk.org/index.php?topic=504715.0>
- [24] <https://www.taal.com/team/>
- [25] <https://www.newswire.ca/news-releases/taal-secures-critical-technology-on-the-back-of-a-us-1m-licensing-deal-with-nchain-holdings-815576764.html>
- [26] <https://nchain.com/about/>
- [27] <https://www.globenewswire.com/news-release/2019/12/11/1959411/0/en/Squire-Mining-Announces-Corporate-Name-Change-and-Completion-of-Share-Consolidation.html>
- [28] <https://www.globenewswire.com/fr/news-release/2018/08/01/1545398/0/en/Squire-Signs-Design-Service-Agreement-for-ASIC-Chips-Announces-Officer-Changes.html>
- [29] <https://www.globenewswire.com/news-release/2018/10/03/1600530/0/en/Squire-Releases-Positive-Results-From-First-Phase-Testing-Of-New-FPGA-Prototype-ASIC-Microchip.html>

- [30] <https://www.globenewswire.com/news-release/2018/10/11/1619730/0/en/Squire-Joins-Forces-with-Electronics-Giant-Ennoconn-to-Manufacturer-Next-Generation-Mining-Rigs.html>
- [31] <https://www.globenewswire.com/news-release/2019/01/22/1703844/0/en/Squire-Updates-Market-on-ASIC-Chip-Development.html>
- [32] <https://www.globenewswire.com/news-release/2019/03/25/1760008/0/en/Squire-Announces-Definitive-Agreement-for-First-Step-of-CoinGeek-Blockchain-Cloud-Computing-Transaction.html>
- [33] <https://www.youtube.com/watch?v=bfCFKDADoU0>
- [34] <https://coingeek.com/the-bitcoin-sv-node-software-releases-v1-0-7/>
- [35] <https://www.prnewswire.com/news-releases/taal-onboards-nine-clients-to-transaction-processing-business-executing-on-strategic-vision-301080565.html>
- [36] <https://www.taal.com/blog/2020/a-look-into-our-strategic-partnership-with-nchain/>
- [37] <https://www.taal.com/pool-management/>
- [38] <https://www.taal.com/company-presentations/>
- [39] <https://www.taal.com/files/TAAL-CorporateVisionDeck.pdf>
- [40] <https://www.prnewswire.com/news-releases/taal-announces-agreement-to-establish-north-american-bitcoinsv-hosting-capacity-to-support-large-scale-enterprise-clients-301174886.html>
- [41] <https://www.taal.com/blog/2020/the-resolution-of-the-bitcoin-tokenization-experiment/>
- [42] <https://www.newswire.ca/news-releases/taal-files-second-patent-for-layer-1-token-technology-to-enable-smart-contracts-built-on-bitcoin-sv-and-in-direct-competition-to-ethereum-erc-20-tokens-875697373.html>
- [43] <https://www.newswire.ca/news-releases/taal-continues-on-its-promise-of-expanding-enterprise-blockchain-infrastructure-service-with-acquisition-of-whatsonchain-861313972.html>
- [44] [https://webfiles.thecse.com/CSE\\_Form\\_10\\_-\\_Notice\\_of\\_Proposed\\_Transaction\\_Dec\\_2020\\_Loan.pdf](https://webfiles.thecse.com/CSE_Form_10_-_Notice_of_Proposed_Transaction_Dec_2020_Loan.pdf)
- [45] <https://www.newswire.ca/news-releases/taal-announces-debt-financing-892976046.html>
- [46] <https://news.bitcoin.com/21-bitcoin-block-rewards-from-2010-wake-up-236m-worth-of-satoshi-era-btc-spent-in-10-months/>
- [47] <https://coingeek.com/responding-to-antonopoulos-on-the-btc-double-spend-analysis/>
- [48] <https://coingeek.com/double-spend-newspeak-and-the-case-for-magic-numbers/>
- [49] <https://www.nature.com/articles/srep09082>
- [50] <https://fsinsight.com/2020/07/28/crypto-special-report-bsv-business-use-cases-of-th/>
- [51] <https://www.forbes.com/sites/nathanvardi/2017/07/14/former-online-gambling-billionaire-calvin-ayre-pleads-guilty-to-misdemeanor-charge/?sh=5ebcd14053e3>
- [52] <https://www.theglobeandmail.com/technology/calvin-ayre-working-on-his-second-billion/article4171683/>
- [53] <https://www.newswire.ca/news-releases/calvin-ayre-acquires-additional-common-shares-of-taal-distributed-information-technologies-inc--838222178.html>
- [54] <https://www.globenewswire.com/news-release/2019/05/22/1840754/0/en/Squire-Advisory-Board-Member-Dr-Craig-Wright-Granted-U-S-Copyright-Registrations-for-Original-Bitcoin-White-Paper-and-Early-Code.html>

[55] <https://www.newswire.ca/news-releases/taal-enters-definitive-agreements-with-codugh-in-support-of-marketplace-that-will-accelerate-delivery-of-5-year-strategic-vision-859826438.html>

[56] <https://www.taal.com/blog/2020/what-does-the-codugh-partnership-mean-for-taal/>

### **Additional Technical Resources**

<https://coin.dance>

<https://www.whatsonchain.com>

<https://bitcoinblocks.live>

<https://www.mattercloud.io>

<https://vapor.network/>

<https://starfish.computer/#/>

<https://bitsocket.network/#/>

<https://planaria.network>

<https://bitbus.network>

<https://b.bitdb.network>

<https://bitcom.bitdb.network/#/>

<https://github.com/unwriter?tab=repositories>

<https://www.reddit.com/r/TaalTech>

The sidebar of this subreddit has a lot of apps you can try out (if you have BSV):

<https://www.reddit.com/r/bitcoincashSV/>

### **A Few Apps/Services I Find Interesting**

<https://powping.com>

<https://tonicpow.com>

<https://cityonchain.com>

<https://weathersv.app/find>



