ForgeNet Cryptocurrency

Whitepaper

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Abstract

The invention of blockchain technologies has been groundbreaking over these past few years but is still very young, conceptually, and still working on adoption all over the world. As people and institutions begin utilizing blockchain technology, it will assist in cryptocurrencies becoming prevalent and allow for massive potential in the financial technology sectors as well as provide opportunity for new start-ups and investors.

With this being said, many still do not understand the value that blockchain and crypto represents or how it works at all. In order to change the way the world uses money we must focus on educating the new or non-user and quite frankly making things easier, engaging in partnerships, and promoting usage world-wide.

Ultimately, there is an extreme need for a secure, anonymous, decentralized digital currency that is not only extremely new-user friendly (and catering to the new-user needs) but well-structured and ready to change based on the community needs.

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Chapter 1
Introduction

Since the introduction of Bitcoin in 2008, the cryptocurrency community has been steadily growing. In all actuality, at a much faster pace than most would have ever expected.

Though, a few glaring issues seem to persist: overall market volatility, slow transactions, high transaction fees, ease of use, and overall mobility of the cryptocurrency being used.

Volatility issues can easily be overcome with mass adoption. The more people who rally behind the usage of cryptocurrencies, the less volatility there will be in the market. By focusing more on a PoS (proof-of-stake) concept we shy away from the need for an unnecessary amount of computational resources, and we remove the “miner mentality” from the equation so that holding onto your ForgeNet coin is more incentivized, thus increasing market stability. Just because the solution to the problem is easily realized doesn’t mean it is easily achieved. We believe that in order to achieve mass adoption that we must make accessibility and usability our main priorities as well.

Slow transaction speeds are a constant topic of debate with multiple reasonable arguments from many viable perspectives. When the need arises, a larger block is the obvious answer. Instead of debating back and forth endlessly, pick what benefits the community the most and go with it.

The aggravation of high transaction fees is fairly self-explanatory. Basically, by not allowing transactions to flow freely by limited block size and by giving miners the power to prioritize transactions that pay higher fees. This in our humble opinions is absolutely unacceptable and does nothing more than hinder a broader public acceptance.

Ease-of-use is overlooked by a vast majority of the current cryptocurrencies that are out. That functionality is more the area of focus. We want to focus on functionality, but also not forget that ease of use is just as important. If our users can’t figure out how to use The Forge Network effectively and efficiently then we aren’t living up to the goals that have been set before us.

Mobility is a staple in the overall vision. Yes, we understand that most cryptocurrencies have mobile wallets. So you may ask what more could a person want to make a cryptocurrency mobile? Well, besides just having a mobile wallet you should be able to be just as effective and efficient as someone who uses a personal computer. We aim to bring the community an all-inclusive app that can do everything that personal computers can do. We aim to bring mobile staking to the community that way no matter where your phone is, as long as you have your wallet staking, then you will be accruing more coins. All of this without bogging down your cell phone’s processing power or draining your battery life at an unreasonable rate.

Chapter 2

Problems in the market

7,600,000,000

people in the world

2,800,000,000

people who own personal computers

2,200,000,000

people who own a smartphone

3,000,000

people who use cryptocurrencies

10,000,000,000

world population in 2056 [1]

The above statistics grow larger and larger every day as more and more people enter into the connected world era. From smart-fridges to smart-watches, accessing a data network and making a transaction (especially with new technologies such as Google Assistant and Amazon Alexa) has never been easier!

Forge is a real opportunity at linking the connected-world with digital currency, and now is the time.

We are aiming our sights at the collective number of personal computer, smartphone, and connected-home users equaling close to 5 billion people worldwide. Our initial marketing

goal is set to have 3 million people involved, solely, in The Forge Network within the first year. Given the right technology and focusing on the right forms of marketing and community outreach, this is easily attained.

Chapter 3

Introducing the Forge Network

The Forge Network is an all-inclusive ecosystem aiming to bring together all of the demands of the community into a single cryptocurrency. A PoW (proof-of-work set to end at block 10,000 to kickstart the network) and PoS (proof-of-stake) hybrid. We will be bringing the users quick transaction speeds along with low fees, private transactions, full nodes and mobile nodes, mobile staking, a thriving marketplace, market stability, and an all-inclusive mobile app. A truly mobile cryptocurrency for a generation that is on the go.

We aren't forgetting those who still use their personal computers. We will still remain focused and up to date on all Windows, Linux and Mac tools. We refuse to cater to any portion of the community over another. Our goal is to make this the go-to for all.

As a cryptocurrency, the decentralized nature makes it even more assuring because nobody stands in as the middleman. Since the Forge Network is a blockchain-based platform, it will only be fair to briefly discuss what blockchain and cryptocurrencies are.

3.1 What is a blockchain?

When people talk about blockchain, at the broadest level, they mean a network of databases spread across multiple entities that are kept in sync, where there is no single owner or controller of the data. The databases tend to be append-only, that is they can be written to, but historical data can't be altered without broad agreement from the participants of the network.

This means that a user or system administrator in one entity can't alter data held on a blockchain without agreement from the other participants. Historically, when multiple parties need to rely on the same data, we have used golden sources of data, held and controlled by trusted third parties. A classic example is the use of a clearing house that is the golden source of data about a trade between two entities. Blockchain can empower groups of parties to agree on events without needing the third party, such is the promise of this new technology

In simple terms, The Blockchain is a distributed database, which utilizes the digital ledger technology that stores transaction records, and shares them among a distributed network of computers. By means of cryptography each participant of the network can access and manage the ledger in a secure way. No central authority in this system is needed. The blockchain maintains a continuously-growing list of records (blocks), each containing a timestamp and a link to the previous one [3].

3.2 About cryptocurrency

A cryptocurrency is a digital currency with operates independently of any central bank, mint, government or organization. There are many advantages to this – it means that the currency cannot be manipulated by people that you do not trust – for example with fiat currencies like the Pound, Dollar or Euro, any time a government chooses to do so, they can change how much the currency is worth – either directly, or by methods like quantitative easing, which reduces debt for the country but badly affects average citizens.

Another advantage is that transactions do not need a “middle man” to approve them, you own your own virtual wallet and act as your own bank – reducing times, fees, and eliminating the possibility of an organization deciding to not give you access to your own money.

Perhaps the best advantage of cryptocurrencies is that they are not affected by world boundaries. The price is the same in every single country, putting everyone on even ground. Combined market capitalization of all cryptocurrencies together is currently only around 540 billion USD, which leaves lots of room for expansion.

As a traditional type of economy, reshaping its form of money flowing into crypto currencies either for the speculative purposes of gaining capital profit or by supporting projects that are built on decentralized platforms. Such trend is widely expected to continue.

Triple digit growth, amazing risk-reward ratios, and promising global perspectives are only a few reasons why cryptocurrencies shouldn’t be overlooked by any investor who’s willing to diversify his/her portfolio and profit from opportunities offered by a booming market.

Chapter 4

Mining process of ForgeNet

Mining is the process of validating a transaction or block in a network by the process of complex algorithms to prove and validate the correctness of the transaction and thereby add the new block to the chain. You would have heard this term “mining” and “miners” more in bitcoin than altcoins.

With Forge Network’s platform, you are able to mine your coins easily and comfortably from your favorite place at all times whenever you want. All you need is a computer, a tablet / smartphone or your laptop combined with an active internet or cellular connection. ForgeNet can be mined with Scrypt algorithm. To earn a reward through PoW mining for ForgeNet users would just simply need to download the ForgeNet wallet for your operating system.

As explained in this whitepaper, PoW mining will only be supported until block 10,000. This is simply to kickstart the network while providing rewards at the same time. ForgeNet is focused primarily on PoS and allowing Forge users to increase their holdings by simply holding them in their wallets.

ForgeNet uses the Scrypt Proof-of-Work (PoW) algorithm along with Proof-of-Stake (PoS) for network security.

4.1 Proof of Work (PoW)

Proof of Work (PoW) as the name states is the validation of the work that happened and proving it is correct. ForgeNet coin follows this way of consensus to make sure the authenticity of the chain is good.

To understand how it works in simple terms, assume that you are in a math exam along with other students in a classroom. The student who can, not only come up with the correct answer, but also can come up with the complete proof (steps in math terms) of arriving at the correct answer first gets the reward. As we know this needs the student with a lot of brain power which naturally consumes a lot of energy from the body.

Now mapping it to the cryptocurrency world, “math exam” refers to the “transaction”, the “classroom” refers to the “world”, “Student” refers to the “computing hardware/computer” that runs the complex algorithms, “brain power” refers to the “computing power” and the “lot of energy” refers to the “lot of electric power”.

4.2 Proof of Stake (PoS)

Proof of Stake (PoS) is an alternate way of verifying and validating the transaction or block. This will pick the Validator (Equivalent of “miner” in the PoW) by the amount of stake (coins) a validator has and the respective age of the stake. If you have 100,000 FRG coins in a wallet, it will have an age attached to it on how long you have it. Here the 100,000 FRG coins are the stake. If you move your coins from one address (or wallet) to another, the aging gets reset. This amount is like the security deposit which means the Validator holds a significant stake in FRG coin with good aging is more committed and combined with many other factors, will get a higher chance to validate a block. This allows building a trusted and distributed network with loyal Validators (a high stake of coins). The Validators earn the part or whole of the transaction fee. In PoS, it is not “mining” but “forging” which is done by the Validator who will process and forge a block to the chain.

This eliminates the below challenges and believed to have an advantage:

- No need for expensive hardware (a normal computer, tablet, or smartphone running ForgeNet’s wallet will do as long as your laptop or computer is online)
- Energy efficient as it won’t consume high electricity
- More loyal Validators ...As higher the stake, the Validators have for a long time, more chances for the Validator to be picked up for “forging” and earn the transaction fee
- Faster validations

In PoS, each validator owns some stake in the network, ForgeNet coins in the case of ForgeNet, that they bond. Bonding stake means you deposit some money into the network, and in some sense, use it as a collateral to vouch for a block. In PoW you know a chain is valid because lots of work is behind it, while in PoS you trust the chain with the highest collateral.

The following explains the working concept of our mining technology.

The Forge Network allows 10k Proof of Work blocks to be mined to **kickstart** the network.

Buyer deposits Forge Coins into their wallet. **Coin aging** begins (`age = n coins × time held`).

The Forge Network moves to a pure **Proof of Stake** algorithm.

Your holdings help keep the network **secure**.

Unlike Bitcoin, The Forge Networks Proof of Stake algorithm has virtually **no electricity consumption**.

In return you earn **5% interest** on any coins you hold!

Chapter 5

How are we different?

5.1 How ForgeNet Coin is different from Bitcoin

In the world of cryptocurrencies, Bitcoin and The ForgeNet coin share similarities. However, they also have many differences. The dedication to community involvement, the switch to a more economically friendly mining algorithm, i.e. proof-of-stake, which requires virtually no power consumption in comparison to Bitcoin, and the immediate focus on scalability with the incorporation of sidechains and the immediate usage of a 2MB block size, along with the ability to incorporate effective and efficient micro-transactions. Everyone must also remember; this is only the beginning. The vision and possibilities with ForgeNet are limitless.

5.2 How the Forge Network is different from its competitors

As touched on throughout this white paper; The Forge Network is, first and foremost, community focused. At the end of the day, we will not lie to our users and we will remain transparent. We are focused on driving accessibility to the mobile markets while also taking advantage of the early stages of and entering into the Connected-Home. What we offer is bringing as much as possible to the table and centralizing it into one cryptocurrency, all the while, ensuring ease-of-use for everyone.

Chapter 6

Why we chose the blockchain

A lot of people know blockchain as an innovative technology introduced together with its first use case – Bitcoin, a decentralized peer-to-peer cryptocurrency. However, blockchain technology has since also been used for business and organizational purposes, either with a cryptocurrency of its own as a public blockchain or without one as a private blockchain. While aspects of the technology are seen as something that could be useful for such purposes, there are some concerns as to why a business would want decentralization at all, leading some too, incorrectly, dismiss blockchain technology as a hyped-up trend and nothing more.

Below are a few business benefits attributed to decentralization with blockchain.

6.1 Security

Since records are distributed across multiple areas and are updated as each block is created, there is always a high level of availability of the data. So, even if a large number of nodes fail or are shut down by an attack, the data is still available for people to access. In addition, since the system is regularly updated with the latest block, accessing any of the active nodes means acquiring the latest data, even in the event of a DDoS attack – a highly-desirable trait for network security.

6.2 Distributed Processing

In addition to being able to access the latest block from an active node, the system can also continue to process additional data and add more blocks into the blockchain. So, not only is the data accessible, the system can continue operating as long as there are active nodes in the system. Thus, if an attacker wants to shutdown the system to halt processing, they would need to shut down every node on the blockchain, making it even more restrictive to achieve.

6.3 Partnerships and Consortiums

While partnerships and consortiums are usually created with the best intentions and with all of the necessary legal agreements in an attempt to protect all parties involved, there still lingers the concern of trust, especially in cases when the parties involved are in competition in other areas. Because of the decentralized nature of blockchain, the issue is significantly mitigated as trust is not needed in terms of processing data as well as storing it. Verifying that one has the same information that another party has is relatively easy to do without the need for additional trust among the parties involved.

These are just a few of the benefits businesses can have when using blockchain technology due to its decentralized structure. With the increasing number of businesses looking into solutions that blockchain can provide, we're sure to find even more benefits of decentralization in the near future.

The original Scrypt algorithm was created by Colin Percival, for an online backup service called Tarsnap. The technical definition of the Scrypt algorithm is that it's a 'password-based key derivation function', which means that it derives a secret key from a password.

Percival deliberately designed the algorithm to be computationally intensive to perform, requiring a large amount of memory to perform. The purpose of this was to make brute force attacks more expensive to perform. The idea behind this is that a person who knows their password would be required to pay the computational cost of performing the mathematical operation once, which would be negligible, but a person trying to guess someone's password would have to pay the computational cost many times, significantly adding to the cost and difficulty for the attacker. [2]

Chapter 7

How secure is ForgeNet?

Blockchain, the distributed ledger technology underlying ForgeNet coin, may prove to be far more valuable than the currency it supports. But it's only as valuable as it is secure. As we begin to put distributed ledger technology into practice, it's important to make sure that the initial conditions we're setting up aren't setting us up for security issues later on.

To understand the inherent security risks in blockchain technology, it's important to understand the difference between public and private blockchains.

ForgeNet coin relies on a public blockchain, a system of recording transactions that allows anyone to read or write transactions. Anyone can aggregate and publish those transactions, provided they can show that a sufficient amount of effort went into doing so, which they can demonstrate by solving a difficult cryptographic puzzle. The process by which a network of nodes confirms the record of previously verified transactions, and by which it verifies new transactions, is known as a consensus protocol. In the ForgeNet coin system, because no user is implicitly trusted to verify transactions, all users follow an algorithm that verifies transactions by committing software and hardware resources to solving a problem by brute force (i.e., by solving the cryptographic puzzle). The user who reaches the solution first is rewarded, and each new solution, along with the transactions that were used to verify it, forms the basis for the next problem to be solved.

This decentralization and relative freedom of access have led to some unexpected consequences: Because anyone can read and write transactions, ForgeNet coin transactions have fueled black market trading. Because the consensus protocol is energy consuming, the majority of users operate in countries with cheap electricity, leading to network centralization and the possibility of collusion, and making the network vulnerable to changes in policy on electricity subsidies. Both of these trends have led to an increased interest in private blockchains, which could ultimately give businesses a greater degree of control.

Primarily used in financial contexts, private blockchains give their operators control over who can read the ledger of verified transactions, who can submit transactions, and who can verify them. The applications for private blockchains include a variety of markets in which multiple parties wish to participate simultaneously but do not fully trust one another. For example, private blockchain systems supporting land and physical asset registries, commodities trading, and private equity distribution are all being tested. As these systems develop and evolve, they, too, may encounter unexpected consequences, some of which will have repercussions for the security of the system and the assets it manages or stores. As in software and product development, considering security at an early stage alleviates the difficulty of making fundamental changes to a product to address a security flaw later on.

Chapter 8

Token distribution

8.1 Premine Expenditure

A total of 8,500,000 FRG will be made available to the public at heavily discounted prices for the pre-sale (Early-Bird) phase before a total of 10,000,000 FRG will be allotted for the Coin Sale. These coins can be staked almost immediately (minimum coin age is 4 hours) so you are earning ForgeNet coins prior to us launching.

8.2 Coin details

Table 8.2: Specifications for ForgeNet Coins

Specification	Description
Token name	ForgeNet Coins
Algorithm	Scrypt
Abbreviation	FRG
Total supply	100,275,000 FRG
ICO supply	10,000,000 FRG
Coin type	Proof of Work
PoW block reward	191 tokens
Maturity	20 blocks
Transaction confirmation	6 blocks
Blocksize	2 MB
Last PoW block	10.000
Early bird date	27th of January
Price	$0.50/FRG
Target timespan	64s
Minimum coin age	4 hours

8.3 Early bird sale

The early bird sale allows early access to early supporters. The following details apply to the early bird sale:

- Date: January 25th - January 27th
- Starts on: 12:01am PST
- Price: $0.50 per FRG

8.4 Initial token sale

Table 8.4: Details of the initial token sale

Date	Price
February 24th - March 3rd	$0.75/FRG
March 3rd - 10th	$0.85/FRG
March 10th - 17th	$0.95/FRG
March 17th - 24th	$1.00/FRG

Chapter 9

Roadmap

9.1 Phase 0.5

- Windows, Linux wallets pre-release
- Coin Sale

9.2 Phase 1

- Functioning coin released to the public immediately following Coin Sale
- PoW and PoS hybrid
- Windows, Linux, and Mac wallets updated and released
- Android and iOS wallets Ver. 1 released (lite wallets until stated otherwise)

9.3 Phase 2

- Updates to transactional security and user anonymity
- Updates to blockchain scalability
    - Sidechains
- Android and iOS wallets ver. 2 released
    - First version of what will now be known as The Forge Network App
    - All-inclusive app designed for user ease and productivity to include:
        - Live Market Tracking
        - Personal Portfolio
        - Up to Date Forge News
        - Wallet
        - Mobile nodes
- Additional Wallet Updates
    - Auto-Update
    - Poll System
    - Social/Messaging System (test)

9.4 Phase 3

- PoW has ended
- Beginning of integration into gaming and gambling
- Android and iOS wallets ver. 3 release
    - Additional feature to be included (eg. the Mobile Marketplace)
- Testing stages of mobile staking

9.5 Phase 4

- Masternodes
- Android and iOS wallets ver. 4 release
    - Connected-Home Integration - Echo / Home
    - Voice Assistant Integration

Chapter 10

Conclusion

Overall, ForgeNet is a mobile cryptocurrency for a generation on the go. With our proof of work (ending at block 10,000) as well as proof of stake hybrid cryptocurrency having a 4-hour minimum coin age for staking, along with a 2MB block and the incorporation of sidechains, we are sure to provide our users with quick transactions and low fees. We also have a zerocoin protocol for anonymity. Also, implementing mobile staking, mobile gaming micro-transactions, a decentralized marketplace, and an all-inclusive mobile app.

We'd like to thank you for taking the time to read our whitepaper and we hope that you are just as excited as we are.

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