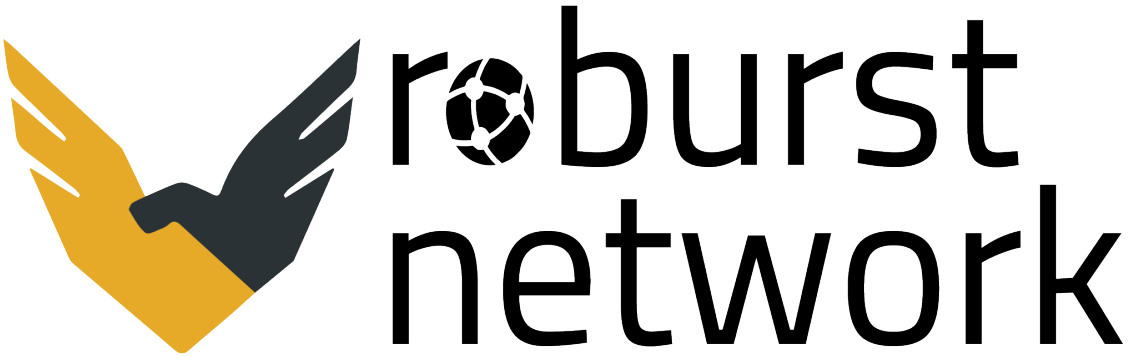
Roburst Network Whitepaper

Brought to you by the Roburst Network Team
2018



Roburst Network

Version 1.0b

Disclamer

By participating in the Roburst Network pre-sale event and/or ICO (Initial Coin Offering) stages or making use of any information in this whitepaper/ Roburst Network websites (excluded 3rd-party websites which uses Roburst Coin as an integrated payment gateway), you agree to the following:

GENERAL WARNING

By using the services provided by Roburst Network, you (the user) as either an ICO (hereinafter - Pre-sale and/or ICO or Crowdsale) participant or customer of Roburst Network products and/or services, fully understand and agree with the following statements:

1. User must understand and acknowledge that Roburst Coin will be provided by Roburst Network seeded genesis block. No alteration of this can be made by any other party.
2. User must understand that Roburst Network carries no liability for the ability to take part in the Pre-sale and/or ICO stages for the reasons that beyond the control of Roburst Network including but not limited to the Pre-sale and/or ICO stages' duration, transaction delays and delegates related issues.
3. User must understand that Roburst Network team will focus on completing the tasks that are listed in our Roadmap and delivering on milestones. However, Roburst Network team undertakes no obligation to act on behalf and in the interests of user in the Pre-sale and/or ICO stages being held in the future.
4. User must understand that by transferring cash and/or other assets to Roburst Network, user makes the final decision on depositing the cash and/or other assets and has no right to issue a refund. There are two cases that we will allow user withdraw cash and/or other assets out of Roburst Network.

    - The minimum capacity is not reached, which means that all deposited cash and/or other assets of user will be returned to your desired wallet.

- Before and after the ICO stages, we will allow user withdraw user's assets out of Roburst Network. However, user must verify user's account to withdraw assets worthing over $25,000.

5. User must understand that the duration of Pre-sale and/or ICO stages may vary based on the remaining coins that Roburst Network offers for those stages. Pre-sale and/or ICO stages may end sooner than our plan. User should receive an electronic mail informing that the ICO stages have been ended.

6. User should acknowledge that any suspicious activity made by user's account could lead to user's account being permanent banned. Roburst Network will provide evidence that prove user's account suspicious activity if needed. User must ask for evidence within 7 days. After that, Roburst Network takes no responsibility for the lost of user account's evidence.

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User must understand that Roburst Network does not act as a tax agent of user; User and Roburst Network carry their tax obligations solely under the applicable laws of the country and location they reside in. Roburst Network is not a tax agent and therefore, shall not provide user's financial information to any third parties. This information will not be disclosed under any circumstances.

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By using the Pre-sale and/or ICO stages for ROC, the Roburst Network platform or Roburst Network websites including but not limited to the transferring assets to Roburst Network, user must confirm that user undertakes and understands all the possible risks that directly or indirectly arise from the activity connected with user's participation in the Pre-sale and/or ICO stages and/or use of Roburst Network services and products.

FORCE-MAJEURE

User understands that Roburst Network will not be liable to User for any breach hereunder, including for failure to deliver or delays in delivery of the Services occasioned by causes beyond the control of Roburst Network including but not limited to unavailability of materials, strikes, labour slowdowns and stoppages, labour shortages, lockouts, fires, floods, earthquakes, storms, droughts, adverse weather, riots, thefts, accidents, embargoes, war (whether or not declared) or other outbreak of hostilities, civil strife, acts of governments, acts of God, governmental acts or regulations, orders or injunctions, or other reasons, whether similar or dissimilar to the foregoing (each a "Force Majeure Event").

FINAL WARNING

Pre-sale and/or ICO participations can be can be considered High-Risk Trading; purchasing financial instruments via a Pre-sale and/or ICO or utilizing services offered on the website may result in significant losses or even in a total loss of all funds invested.

1. No information provided on Roburst Network platform or website should be interpreted as investment advice. It does not constitute an offer or invitation

by Roburst Network to any user to buy or to sell tokens or make any investment.

2. User guarantees that user is a legally capable person of a majority age and complies with legal rules and applicable laws of the jurisdiction where the user lives.
3. By participating in the Pre-sale and/or ICO User confirms that user has read, understood and agree to comply with all restrictions set forth above.

Preface

The evolution of Internet has opened an era of digital life, where many new terms are born. We may have heard of electronic mail, also known as e-mail, electronic commerce, or e-commerce for short. Still, there is one terminology you may have heard but the growth of it can make you surprised: Cryptocurrency. Back in the 2000s, electronic money (or digital currency) was a trend that almost every company at that time would like to have their own kind of currency. But one problem arises as there are more and more currencies being hacked as they are centralized and the security is not at it top. In 2008, Bitcoin reinvented "the digital currency game" by making itself the first decentralized electronic money and by then, keeps on growing larger day by day. For the last 5 years, Bitcoin has grown with a percent change of over 100,000 percent and that's not it. For the first time in the history, a virtual currency can reach market cap of almost one trillion dollars. With Roburst Network and Roburst Coin, we hope to make the same miracle as Bitcoin has been doing, and of course, faster and larger.

I.

Introduction

A brief summary about cryptocurrency and Roburst Network

1. *Blockchain*, *Cryptocurrencies* and why this is an opportunity

The term "*Blockchain*" and "*Cryptocurrencies*" are familiar with almost everybody nowadays, and for the ones who haven't heard of those terms before, Blockchain, in general, is a technology which keeps the property away from getting centralized. Unlike traditional currency that lives on the internet, coin using Blockchain is hard to be hacked and no one can literally control the currency. For technical detail on how Blockchain works, please refer to (1).

Cryptocurrency is a term for any coin that uses the Blockchain technology. We may refer to Bitcoin as an outstanding example of how popular and successful it has become. Bitcoin nowadays is not only a payment method but also an online property that is worth thousands of dollars. Using Blockchain technology makes Bitcoin transaction transparent but remains incognito. Distance becomes useless when comparing to traditional method of transferring and receiving money among countries. But for the fluctuation of the price, we may see it hard to become a traditional way of payment. We do not have a way to keep the price steadily and if the price is steady, nobody would put their money in those currency. That's why we are making a new way of payment, that both serve as a traditional payment method, but also a kind of property everybody wants to have.

Over the year, people tried to come up with new type of cryptocurrency based on almost everything. For example, Initial Coin Offer also known as ICO, is not refer to the currency itself but also a way to raise fund for a startup.

To make it easier to visualize, the chart below will show a comparison of market capitalization of cryptocurrency compared to other cryptocurrency as well as traditional currency.

Figure I.1.1: The Market Capitalization of various cryptocurrencies and traditional currencies

The figure has shown an incredible increase in Market Capitalization of Cryptocurrency when compared to others and the question is, are we too late for this game ? The answer is no. In the world of technology, everything moves so fast that when you are not catching up with the technology, the world leaves you behind immediately. That's why when introducing Roburst Network and Roburst Coin to you, we are confident that this is a promising investment you don't want to miss.

2. The Roburst Network and Roburst Coin

Roburst Coin, in summary, is like traditional cryptocurrency, you can transfer or receive Roburst Coin anywhere anytime. Roburst Coin lives in Roburst Network, a collection of services using Roburst Coin. As we introduce Roburst Coin and Roburst Network, the first service to come with them is the Roburst Trading Bot, a bot that can help you to monitor, predict the cryptocurrency market to invest and make money yourself, a Digital Wallet which helps user manage their transactions easier and quicker. Our vision is to expand the network to other fields such as medical, education, e-commerce and so on. All transaction in the network will be powered by Roburst Coin and will be free of charge, which means no transaction fee when you are using a service from our network.

Third party developer can also implement Roburst Payment Gateway into their applications and websites by using the API provided by Roburst Network. The Roburst Payment Gateway will be described later in this whitepaper. For now, we can take a quick look at how the system should look under a simple view.

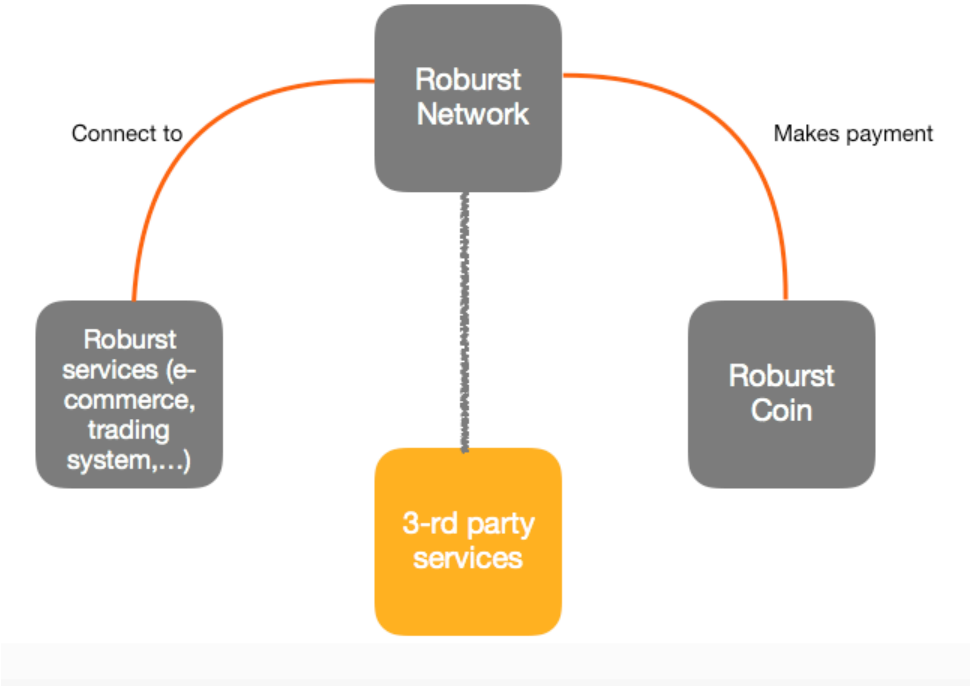


Figure I.2.1: Simple view of how the Roburst Network works within the system

3. The Roburst Trading Bot

For many years, we have seen a significant improvement in machine learning and deep learning. We made use of it for our own project, the Roburst Trading Bot (RTB). RTB is powered by TensorFlow, an open-source deep learning technology operated by Google. Right now, RTB is capable of predicting and trading many cryptocurrencies, including the most popular ones: Bitcoin (BTC) and Ethereum (ETH). RTB can also predict the downtrend of a coin, so that it will give you a strategy for many situations, including the best one and the worst one. Or you can let RTB choose the most optimized way it calculates and the risk you take would decrease by almost 50 percent.

Below is a chart of return value when you buy those cryptocurrencies between Jan 1,2017 and Aug 16,2017, which is roughly 9 months. The highest return value that could reach is 31,620%, indicated that if you buy $1 value of NEO, you will get $31,620 in return.

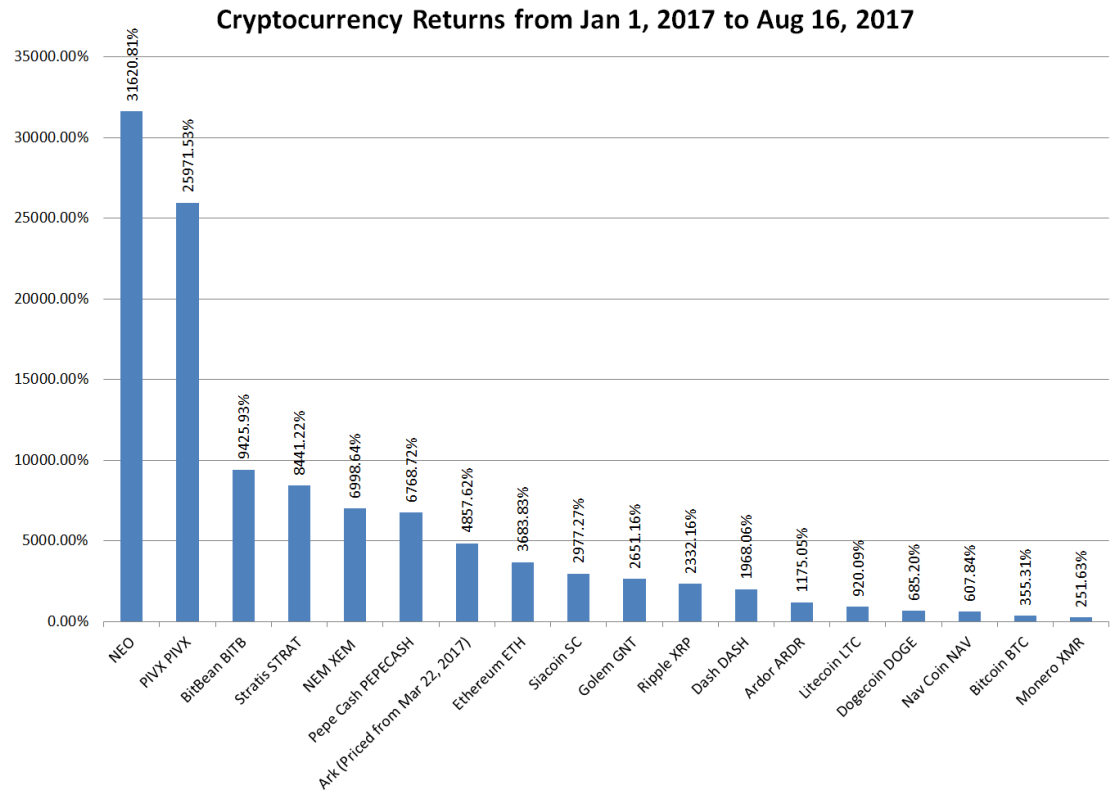


Figure I.3.1: Return value of cryptocurrencies between Jan 1,2017 and Aug 16,2017 (sorted, source CoinMarketCap)

4. Digital Banking and the future of payment

As we have seen in the past decades, cashless payment has become a part of everybody's life. The explosion of Internet has urged companies to develop new methods of online purchase. One of those is the appearance of digital banking, where cash becomes useless. Nobody wants a bag full of money to become a robbery target. With just a card in their hands, they could easily pay for almost everything. Figure I.4.1 below shows that over 4 years, from 2010 to 2014, the market has grown incredibly from 311 billion dollars to 417 billion dollars, using cashless method (according to a study by RBR).

Many new technologies have followed up to make cashless payment become more and more usable. For example, Samsung Pay and Apple Pay require no card but only a phone to make a payment. Using Near-field Communication (NFC) technology, the payment is made painless. The compound annual growth rate for such way of payment is expected to reach 80 percent, which could bring the mobile payments volume to 4 trillion USD by 2020. In 2017, the total users that use cashless payment method at least once a month has reached 150 million users worldwide.

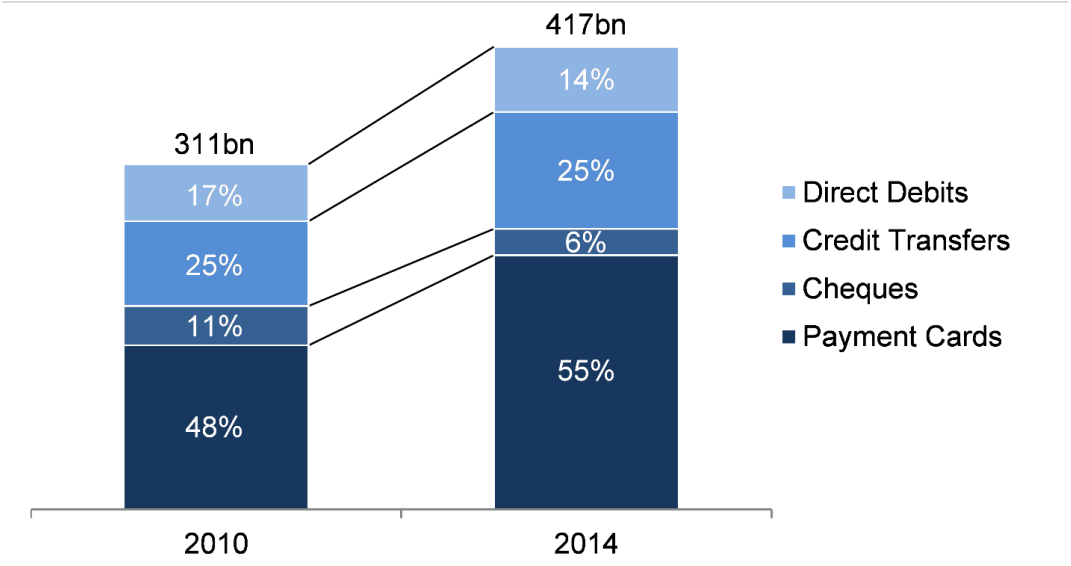


Figure I.4.1: The growth of cashless payment method all over the world from 2010 to 2014

Number of Apple Pay, Samsung Pay, & Android Pay Contactless Users 2017

	2015	2016	2017
Apple Pay	15	45	86
Samsung Pay	3	18	34
Android Pay	2	12	24

Figure I.4.2: The number of users who uses those proximity payment method (in millions, source NFCWorld)

Roburst Network makes its steps into the field by issuing the first smart cryptocurrency (RSC) card that can help you withdraw cash with a small fee at any Roburst Automatic Teller Machine (RATM) or direct payment using the Roburst Point of Sale (RPOS) machine with no fee at all. All of those terms will be described at the latter section.

5. ICO Overview

In order to make the system works and put the transactional process going smoothly, we decided to release the cryptocurrency for early bird investors at an reasonable price. The process will be started in Q1, 2018 and Roburst Network will issued 420,000,000 ROC which will then distribute as our plan with the initial market at 0.00001 bitcoin (BTC) per ROC.

To have an overview of the **ICO stage**, please refer to the table below.

Start date	10:00 AM PST, Feb 24th, 2018
End date	08:00 PM PST, Apr 24th, 2018
Duration	60 days
Number of coin sale (1)	315,000,000 ROC
Initial price per coin (2)	0.00001 BTC
Technical limit number of coin (3)	Unlimited
Hard cap (4)	$50 million USD
Min cap (5)	$10 million USD
Coin distribution date (6)	May 1st, 2018 (worst scenario) Apr 25th, 2018 (best scenario)
Min purchase	1 ROC
Buying limit (7)	100,000 ROC/account/day

Pre-sale bonuses, applied in the first 30 days of the ICO stage (Feb 24th, 2018 - Mar 25th, 2018)

Allowance	+50% tokens	+38% tokens	+27% tokens	+20% tokens
Min purchase	1,200,000 ROC	500,000 ROC	200,000 ROC	50,000 ROC

If your purchase is under 50,000 ROC, you will have early-bird bonus which equal to 10% of your purchase.

For all purchasing from 1 ROC, we apply the extra-referral bonus for those accounts (8). For detail about how our referral system works, please refer to **Section III - ICO**.

(1): The number of coin on sale is included the bounty hunter coin, bonus coin, pre-sale coin.

(2): The price of bitcoin may vary but the initial price does not vary with BTC value. Please note that the selling price may vary with the minimum at initial price.

(3): This is the largest number of ROC Roburst Network can supply to market.

(4): The ICO will stop when the sale reaches the hard cap, all unsold and unallocated coin will be destroyed.

(5): If the ICO do not meet the min cap, all funds will be returned to your wallet.

(6): In case the ICO reaches the hard cap earlier than the end date, we will notify all investor via email the updated coin distribution date.

(7): Buying limit is the number of coin one user in system can buy within a day, this number is not applied to the pre-sale ICO stage.

(8): Every account registering from your referral link will be counted and will increase 0.1 ROC to your wallet per account if the ref account buy ROC token, for more policy please refer to Referral section

(9): All bonus coins can not be withdrawn or transferred to other account during the ICO stage. After ending date, bonus coins will be automatically converted to normal coins.

(10): Active referral account is an account that registered under referral link and have bought at least 0.1 ROC token during ICO stage.

For more information, please refer to **Section III - ICO**.

6. The things that you should read if you are not following the next section

If you are going to read the next section, you can read this chapter at the end, otherwise, this is a thank-you letter from Roburst Network CEO, Samantha Wilson.

Dear investors,

First and foremost, I would like to express my sincere appreciation to all of you for reading this ***Whitepaper***. I assume that you have read the section 1 and got boring of this ***Whitepaper***. As this is just the first step of our plan, we could make mistakes in planning, or the terms in this paper is either too vague for you to understand or too simple that you almost fall asleep while reading it. We apologize truly from our heart.

I must say that I'm not a kind of person who could deliver this message to all of you better than anyone from my team, but deeply in my heart, I really want you to keep reading this, whether you want to invest or not, because this is not something that you should ignore when we are reaching closer and closer to the future of payment. The ***cryptocurrency*** and cashless payment are the most potential factors in it. In the next few months, or worse, years, you will see more and more supportive actions from the Internet, when the privacy of everybody becomes the greatest concern when they go online. This, for some people, may sound a bit bizarre at the moment but it will potentially be a largest investment that someone can make in the future.

Finally, if you think this is the second chance for you since the Bitcoin boom, but you are still afraid to invest in ***Roburst Network*** and ***Roburst Coin***, reach me through my email: samantha@roburst.network. I will reply to you as soon as possible about problems or concerns about Roburst Network.

Regards,

Samantha Wilson, CEO of Roburst Network

II.

Roburst Network

What, How and Why Roburst Network

1. Roburst Cryptocurrency Supply Coin (Roburst Coin)

Roburst Coin is a cryptocurrency developed by *The Roburst Team* with the purpose of a secured method of exchanging and payment over the internet in general and in **Roburst Network** in specific. Unlike Bitcoin, Roburst Coin uses Delegated Proof of Stake Consensus Algorithm, brought to us by BitShares. Many more improvements have been made into Roburst DPoS algorithm, mainly focusing on the voting system, privacy and transaction speed. We call our consensus algorithm intelligent Delegated Proof of Stake, or iDPOS for short.

iDPOS mainly concentrates on fixing those problems which have not been addressed by the original DPOS method, such as being less decentralized, or the votes could be obtained by large stake holders. We will talk more about iDPOS in latter section.

1.1. Roburst Coin

The base token of Roburst Network is called Roburst Coin, or ROC in short. It is dividable into 10^6 sub-units.

1.2. Security

Roburst Coin uses cryptographic hashing just like any other cryptocurrency in the market, but instead of using ECDSA, which found in Bitcoin and many others, we use EdDSA for a faster and more secured.

1.2.1. Key pair

A Key pair consists of two keys, one is public and one is private. The public key is derived from the private key and cannot convert to the private key. The private key is the information that only should the owner know. The process of generating the key pair is described below:

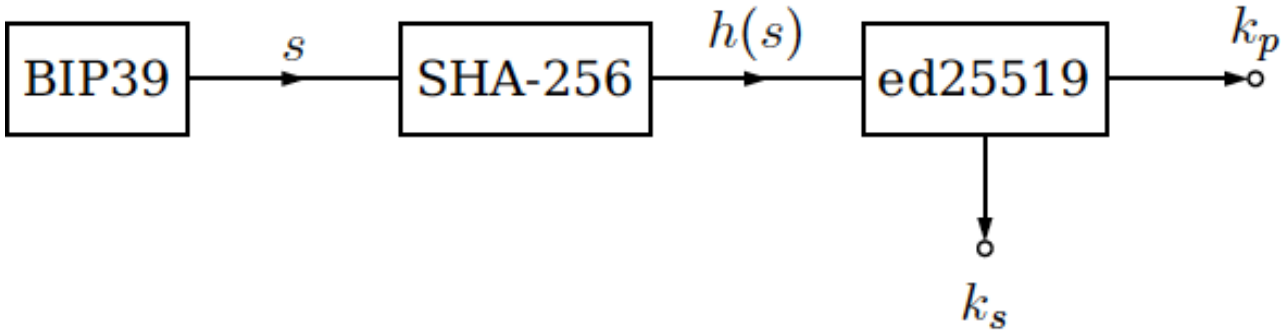


Figure 1.2.1.1: The process of generating a new key pair

When user creates a key pair, a BIP39 mnemonics is created, then hashed into a 256 bits string. This hash then is used as a seed in ed25519 to generate the private key k_s and derives its public key k_p.

With the key pair, user can use the private key to sign the transactions into transaction objects and broadcast it to the network. The node then uses the public key to verify the validity of the signature.

1.2.2. Multi-signature

For users requiring advanced security, Roburst Coin offers multi-signature account, which means that user must have a number of signs to submit a transaction. Users who want to use this feature must submit a group of nk_s and specify the minimum amount of k_s requiring to confirm a transaction is valid. Any transaction originated from the multi-signature account must meet the minimum signature before the transaction is processed.

1.2.3. Wallet address

Address is deprived from the public key. The public key will be hashed into 256 bits string, then take the first 8 bytes of the hash. The wallet address will be the numerical representation of those 8 bytes, endong with letter R, which stands for Roburst.

1.3. Transactions

Transactions within Roburst Coin are divided into 5 types, namely in the table below:

Type 0	Transfer funds to a Roburst Wallet address
Type 1	Register second secret key
Type 2	Register a delegate
Type 3	Submit vote(s) for delegates
Type 4	Multi-signature registration

Figure 1.3.1: Types of transaction in Roburst Network

All types of transaction, regardless of type, need to be signed before being processed by the network. The process of signing a transaction is described by the figure below:

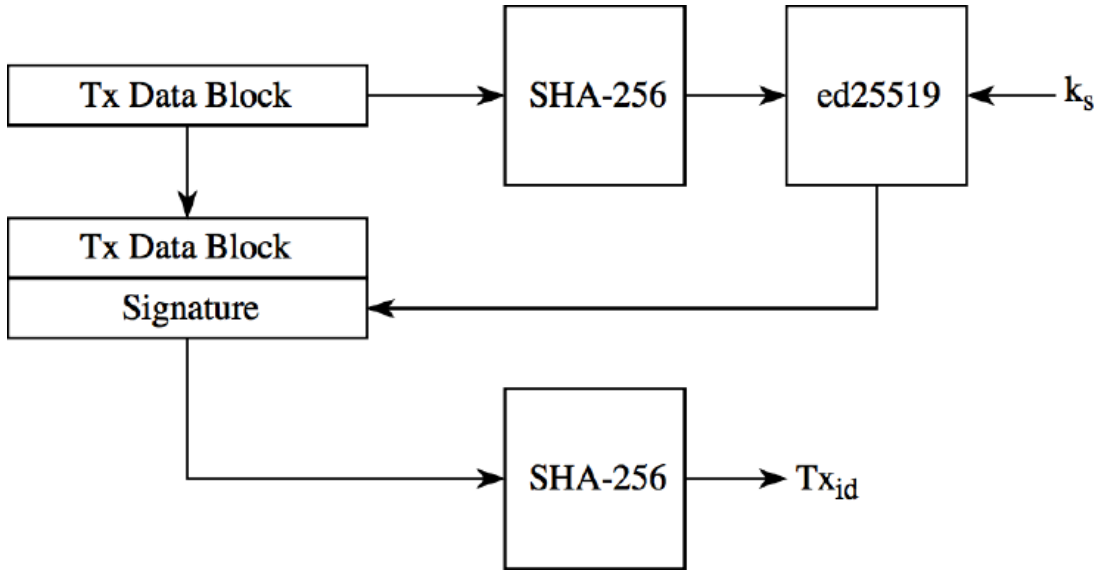


Figure 1.3.2: The process of transaction signing with only one signature

A data block representing the transaction must be generated along with standardized information. Additional information will be differed depending on the type of transaction, but the following field is the must-have for every transaction:

- 8-bit integer identifying the type of transaction
- 32-bit timestamp identifying the time created the transaction

- 256-bit public key of the issuer of the transaction
- 64-bit integer representing the amount of ROC being transferred

1.4. Blocks

A block is composed of block header and a list of confirmed transaction. Delegate which is assigned a slot and has a node running, generates the next block and confirms up to 25 transactions from the pool. Those transactions will be added to the payload of the block and then, signed into the block.

We could illustrate the block header as the following figure:

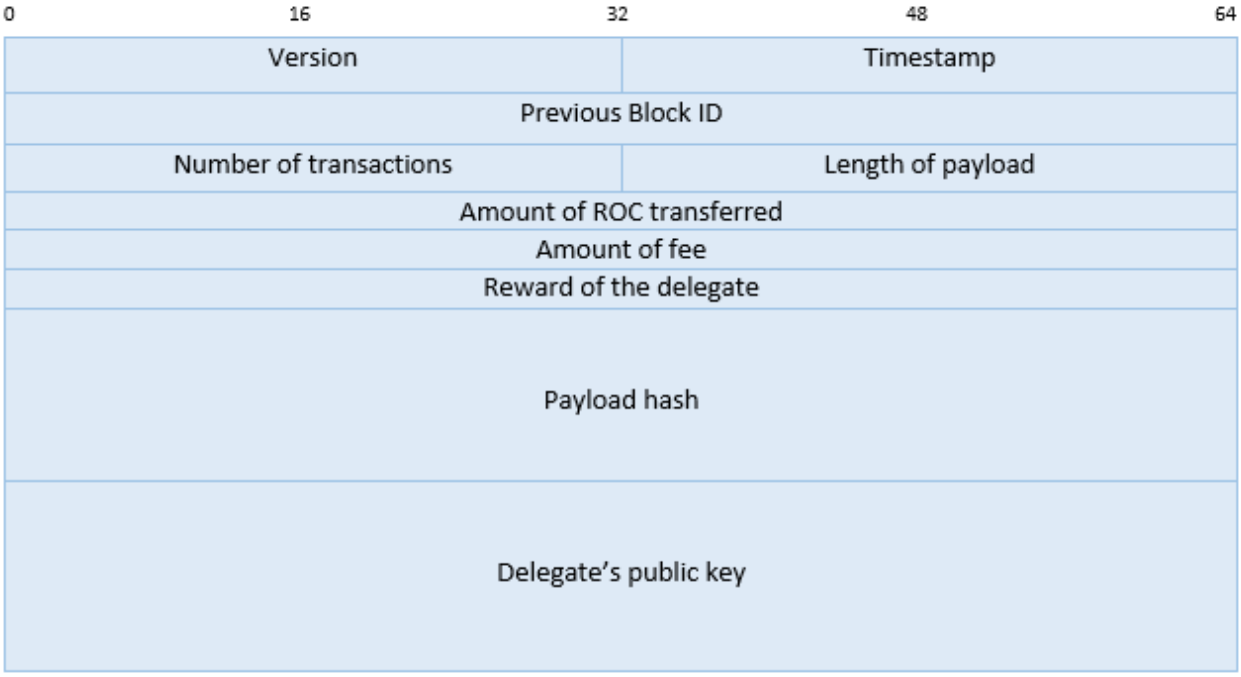


Figure 1.4.1: The block header description

The process of signing a block header is similar to signing a transaction. The block header will be hashed using SHA-256 and signed using the secret key of the delegate. Afterwards, the Blockid will be generated using the same logic as transaction. The following figure describes the process of signing a block header:

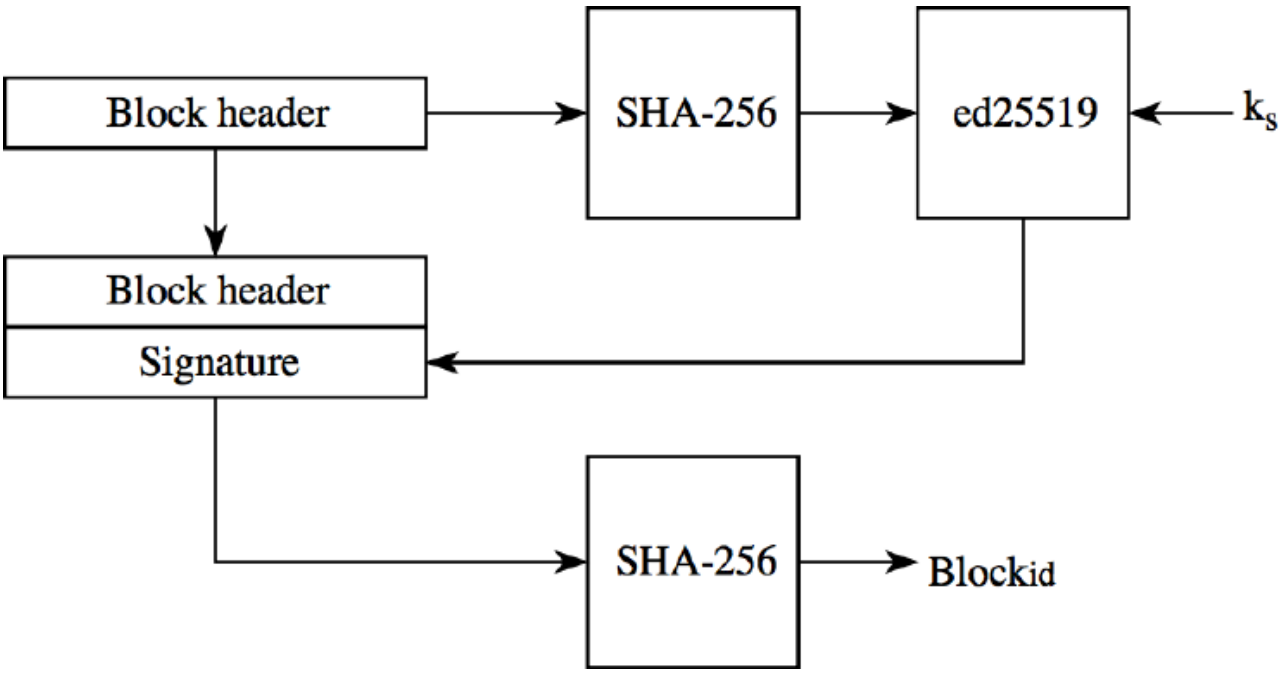


Figure 1.4.2: The process of signing a block header

The maximum of unconfirmed transaction the payload can hold is 25, provided that the payload for the transactions doesn't exceed the max size of each transaction type. The table below shows the maximum size for each type of transaction:

Transaction type	Maximum size (bytes)
Type 0	220
Type 1	149
Type 2	201
Type 3	2326
Type 4	1223

Figure 1.4.3: The maximum size of each transaction type

A block is generated every 10 seconds using the iDPOS consensus. The election process will select an account to give the right generating the next block, called the delegate. 51% of peers is required to maintain broadhash consensus. The generation process will be executed when the broadhash consensus is established.

1.5. iDPOS

Intelligent Delegated Proof of Stake (iDPOS) is an improved method of the original DPOS from Bitshares. iDPOS aims to solve problems which are existing in the current DPOS consensus as well as bring improvements on security and process speed in the network. Delegates generate all blocks in the network and are chosen through competitive election system operated by stakeholders. There are 101 active forging delegates in Roburst Coin network. One stakeholder can vote for up to 101 delegates. The weight of the vote depends on the number of Roburst Coin the stakeholder possesses. Vote transaction must be made if the stakeholder wishes to vote for the delegate (Transaction type 3).

1.5.1. Features

1. Stakeholders are in control

Every stakeholder gets to vote for delegate that will sign the block. Anyone can gain 1% or more of the votes can join the board. Those will become the director board that will take turn to sign blocks. If one misses their turn, stakeholder will take their vote away from them. Eventually, those delegates will be voted off the board and others will join to fill the empty places. Board member will be paid a small amount of coins to make it worth their time ensuring uptime for the network. iDPOS also features a hidden score for every member in the director board, which means that if their score is below a specific number, they will be automatically removed out of the board. This score is rated based on the uptime, the trustworthy of the delegate and many other factors.

As stakeholders remain in control, the network is decentralized. As flawed as voting can be, when it comes to shared ownership of a company it is the only viable way.

2. Eco-friendly

The process of mining in Roburst network takes almost no power consumption compared to the old way, Proof of Work. As more and more people mine the cryptocurrency using the PoW consensus, the energy is wasted in a nonsense way. iDPOS remains decentralized while also takes no power to operate.

3. Pooled mining is Delegated Proof of Work ?

This question has been mentioned many times. When it comes to mining Bitcoin, user has to choose a pool, with each pool can has 10% or more of the hash power. This process is like user's vote for their delegates. As the number of pool decreases, only 5 major mining pool control the whole network, possibly turning Bitcoin into a centralized cryptocurrency, which is always discouraged by telling the user to continuously switching their pool. As one pool goes down, the whole network becomes slow and must wait for the pool back up to return to the original speed, which is dangerous as you may see in the history.

4. Disincentive for attacks

If one delegate decides not to produce a block, this delegate risks getting removed out of the board and will not receive any profit in the future. Delegates can't sign invalid blocks as the block needs confirmation by the other delegate as well.

1.5.2. Scalability

Assuming a fixed validation cost and a fixed fee per transaction, there is a limit amount to decentralization that can take place. If the validation cost is equal to the fee, then the system is centralized and can only serve one validator. Then, if the fee is 100 times the validation cost, then the network can serve up to 100 validators.

The problem arises with the original Proof of Stake consensus system like Nxt. If the system is going to allow everyone to be a validator, then the fee is excessive. In other words, if people don't have 1% or more stake, then they can't become a validator, unless the fees increases. In case the chain assumes that 100 validators is too centralized, they must promote the number to 1,000 validators, which will cost 10 times more than iDPOS. As the chain grows larger, for example $10 Billion, then those with $1 Million worth of coin can join the board. If they want the minimum stakes to be lower, at $1,000, then their fees would be 10,000 times higher than iDPOS.

In conclusion, any system that runs the traditional Proof of Stake, will soon become centralized if they do not change the way the system is operated. At scale, these costs will centralize any system that does not support delegation.

1.5.3. Voting algorithm

The system is designed to work with only up-voting, meaning that there is no anti-vote in the system, which is more efficient and less complexity. People in the system give vote(s) to other delegate(s), during the maintenance interval, the votes will be counted and the result will take effect. iDPOS also promotes Proxy voting, which denotes the process of handling out someone's voting power to someone else. This process can be reverted. Proxy voting helps reduce voting apathy and help active stakeholder react more quickly to business and security concerns. This way, delegates that misbehave will be fired faster. Proxy voting may raise one question that it is too centralized. This process is like pool mining in Bitcoin, but every stakeholder can participate and only the voting power is handed, also the process is revertible. If stakeholder doesn't like the way the system is operated, they can just stop giving the voting power to others.

1.5.4. Delegate round

A delegate round is exactly N blocks in length (with N current is 101, the total forging active delegate). At the beginning of each round, every delegate will be assigned to a slot which will indicate their position in the block generation process. During one round, each delegate will forge exactly one block. If a delegate fails to forge its block, then another delegate will take this block instead and the failed delegate will get the vote from the stakeholder away from them. If one finishes forging the block, the node associated with delegate will sign it and broadcast it to the network. Once it has been done, the next delegate will forge in the slot which they have been assigned.

1.6. Network rewards

A node in Roburst Network may get many incentives to keep it running. Block generation reward is the first thing and the other reward is for securing the network as an active delegate in the delegate round.

Roburst Coin rewards block generators a fixed reward per block accepted by the network, every active delegates in the network will receive the block reward.. As more and more blocks are generated, the reward will be reduced. This will be the incentive for delegate to remain activate in the network. The block reward will be decreased linearly in the network, starting at 5 ROC per forging round, every 3,0 00,000 blocks from the the initial reward block.

Beside the block reward, active delegates also receive the round fees as an incentive for all the member of the board. After the round come to the end, all the transaction fee will be split for all of the active delegates. These fees may give the participant an outstanding amount of coins which may be larger than the block reward. If a member of the board failed to do the job, then the member who took the job will have double the round fee, but this member will not be appointed to do other's job in case of there is another one failing to do the job. After N rounds (N is the amount of member in the board), this member will be qualified for doing other's job again. The table below is the transaction fee in the network.

Type	Fee
Type 0	0.1 ROC
Type 1	1 ROC
Type 2	20 ROC
Type 3	1 ROC
Type 4	1 ROC/sign

Figure 1.6.1: Transaction fee varies by type in Roburst Network

Please note that the transaction fee for type 0 in the Roburst Network will be sponsored and will not be charged in the Tx account, but the member of the board still receives the transaction fee for type 0.

1.7. Inflation rate

As the forging reward is introduced, the inflation rate is also a concern in the network as beside the transaction fee reward, delegates also receive an amount of fixed delegate round called forging reward. To make sure the inflation rate is

kept at a small rate, the forging reward will be reduced every 3,000,000 blocks, roughly every 1 year. The forging reward will be stopping at 1 ROC after 4 years of running. The inflation rate expects as the chart below:

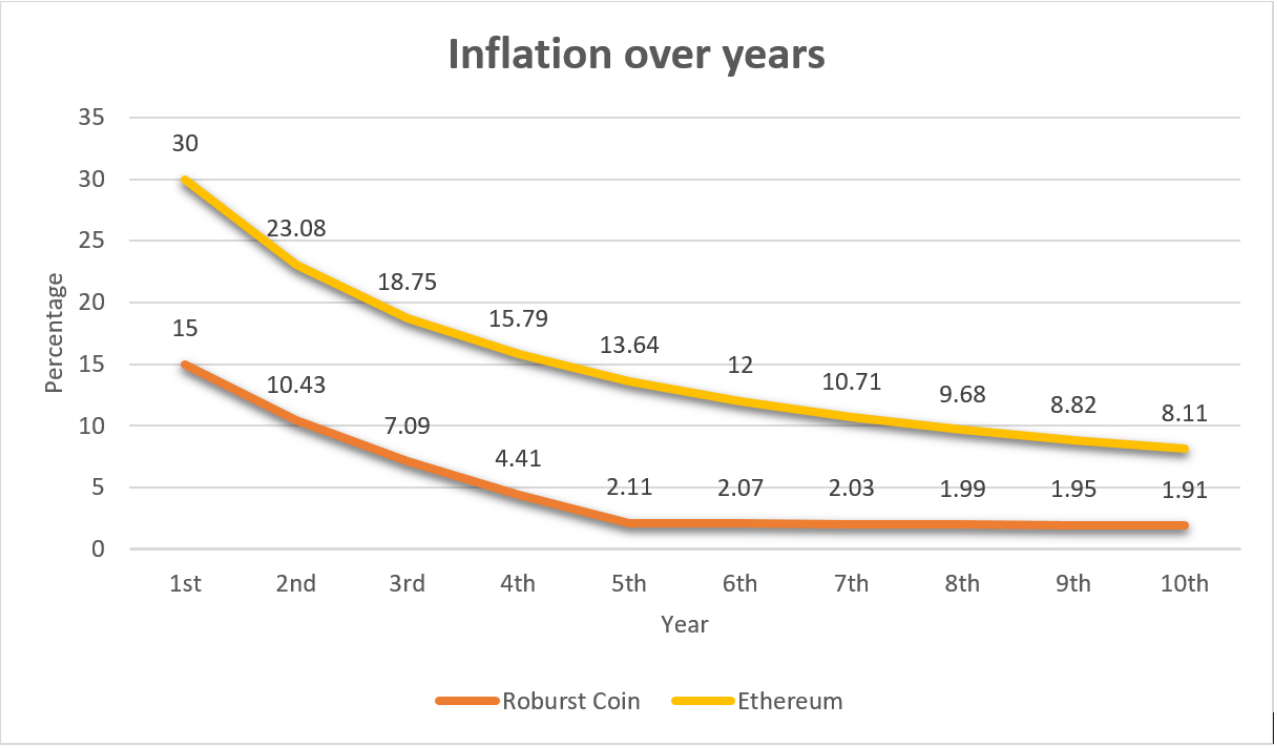


Figure 1.7.1: Inflation rate over years compared with Ethereum

1.8. Transaction pool

As the network grows, the block capacity for 25 transactions may not be able to handle the simultaneous amount of transaction. That's why we introduce the Roburst Transaction Pool which will preserve the unconfirmed transaction overflowed into the next block. The pool will serve as the house for transaction with pending signature. That way, transactions with incomplete multi-signature can wait for enough signature to process and will not affect the block generation process. In order to keep the transaction pool tidy, all pending transactions have a specific time to live in the pool, in this case, we set it for 3 hours or 10800 seconds. That's mean if the pending transactions can not be processed within 1080 blocks, it will be marked as failed transaction and will be removed.

Other usage of the transaction pool is that it will serve as a mechanism for propagating transaction. The node prepares the block will fetch 25 transactions

pending in the pool and perform validation on this block. This block, then, will be broadcasted to other nodes in the network.

2. Roburst Main Network (Roburst Network)

Roburst Main Network or Roburst Network is a link between services that use Roburst Coin as their currency. Roburst Network provides many utilities that help not only users can benefit from it but the developers also have easier way to integrate Roburst Coin into their applications.

2.1. RoburstBridge™

As the Roburst Coin does not support a direct method for side chain or DApp Database, RoburstBridge™ is developed to serve as a method to enable any blockchain to receive and send any information or trigger function through the Roburst Network.

The RoburstBridge™ will create a bridge between blockchain to help people in Roburst Network communicate with other blockchain. For example, creating a loan service where people in Roburst Network can ask for a micro loan and notify it into other chain, for example the Ethereum network and wait for other to contact with people in our network. This method is processed by an Encoded Listener, first introduced by the ARK, enhanced by Roburst Network.

Any existing blockchain can apply this method into their networks with just a few simple steps, provided by the Roburst Network. The work of RoburstBridge™ can be illustrated by the below figure:

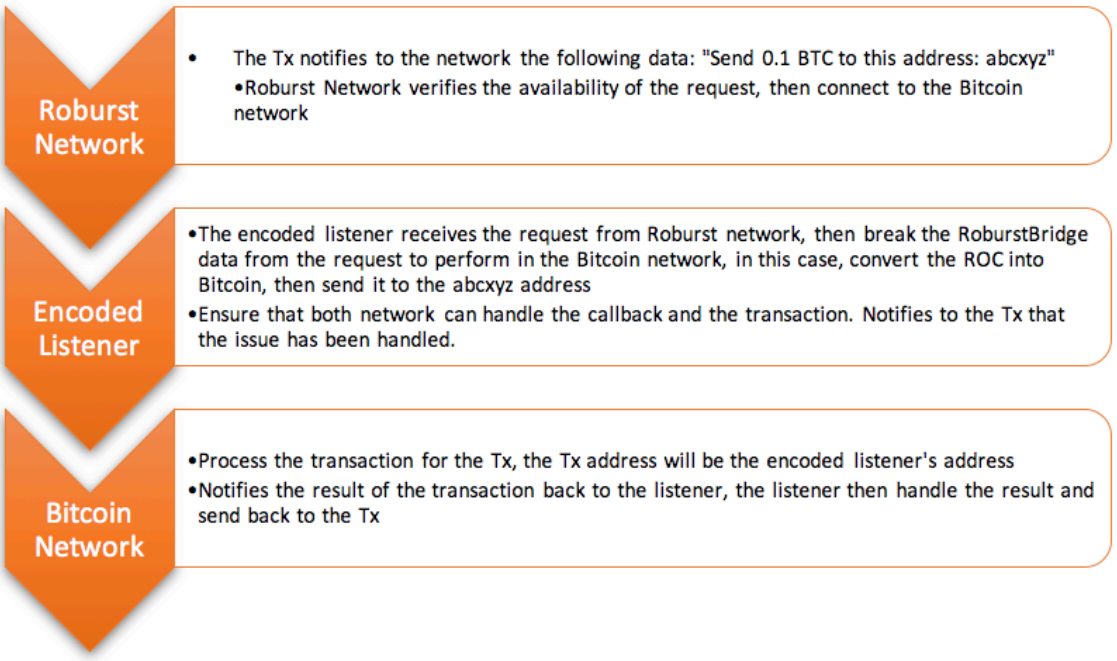


Figure 2.1.1: The flow of how RoburstBridge™ will work in specific case

All the transactions that made with RoburstBridge™ are marked depending on which type the developer sets. For example, if you want to send 1 BTC to other account using Roburst Coin, you must pay for the fee of type 0 (transfer ROC to other account) and will be charged for conversion fee between BTC and ROC. Using the Roburst Trading Bot will not cost you the fee of type 0 as it is one of the Roburst Main Network service and is sponsored by the network itself.

RoburstBridge is the heart of our next system, where trading between cryptocurrencies becomes easier and have less fee. Developers can build applications running on RoburstBridge, issue their own cryptocurrency that could easily interact with the main network like Ethereum Smart Contract, but more efficient and require almost zero energy running the whole system. For more of the following development on RoburstBridge, please refer to the Roadmap.

2.2. Roburst card and cashless payment

Anyone who uses Roburst Coin Mobile Application can create a specific card to make payment in the real world. This is a virtual card that can make payment at

any point of sale that support NFC. The mechanism is using the RoburstBridge™ to convert ROC into the local currency via Paypal or similar services. If the store supports ROC as their payment, customer can simply scan a QR code to make payment and will not be charged any fee.

2.3. Roburst Trading Bot

One of many services that comes early with Roburst Network. RTB supports automatic trading services for those who always busy and want to make passive income. With deep learning, RTB provides a safe choice to invest into the cryptocurrency market without any knowledge of trading. There are two modes that you could choose in RTB, full automatic trading or manual trading. With full automatic trading, we make this as a lending system but with many options for you, including the in-depth look everyday. You can see how much profit you have made and the risk you are taking measure by percentage. With manual mode, you are on your own, but with the advisory system. Every hour, the bot will come up with a new prediction for the upcoming 24 hours price based on the news, social network, previous predictions and also the changes in value of the cryptocurrencies. We support sending predictions via Telegram and Whatsapp, so that you always update without checking our site hourly. Please note that all the trading will happen in Roburst Trading site, we do not support trading bot for other trading sites. This feature requires a fixed amount of Roburst Coin in wallet, if your ROC is below a specific amount, then this function will be disabled. Bonus token is not count in this service.

Figure 2.3.1: Roburst Trading Bot forecasts Ethereum in next 24 hour

2.4. The Roburst Network Team

We are proud to present ourselves as a team that could break challenges, bypass any obstacles that we have encountered on our way to the final product as you see here.

Samantha Wilson

CEO, Co-founder

Ph.D of Economics, University of California

Samantha is a very ambitious person and has a vast knowledge in financial and economic fields. She took interest in cryptocurrency and blockchain technology that she aims to popularize those to the public.

Daniel Lee

CTO, Co-founder

Master of Computer Applications, Massachusetts Institute of Technology

Daniel is one of the most outstanding person we have ever met. He works hard in the field to learn more

about the world of cryptocurrency. His research about the Roburst currently protocol is amazing.

Justin Wilkerson

COO

Bachelor of Business Administration, University of Chicago

Justin is a talented man when it comes to operating large strategy marketing plan. Thanks to him, our plan go more successful than ever.

Ronald Raji

Finance Director

Master of Finance, University of Minnesota

Ronald has experiences working in F.N.B. Corporation as a Financial analyst. The fact that his knowledge in cryptocurrencies is surprisingly good combining with his experience is definitely really amazing.

"...cashless payment will become the next generation of payment that nothing can replace it..."

- Samantha Wilson

Advisors

David Jones

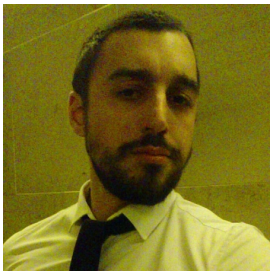
MBA, Co-Founder of EAZL

Michael Suppo

Cryptocurrency Youtuber

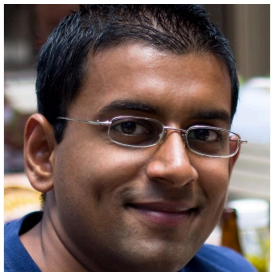
Marshall Hand

Blockchain & Cryptocurrency Analyst & Writer - Blockchain Advocate



Samy Mkacher

Blockchain advisor



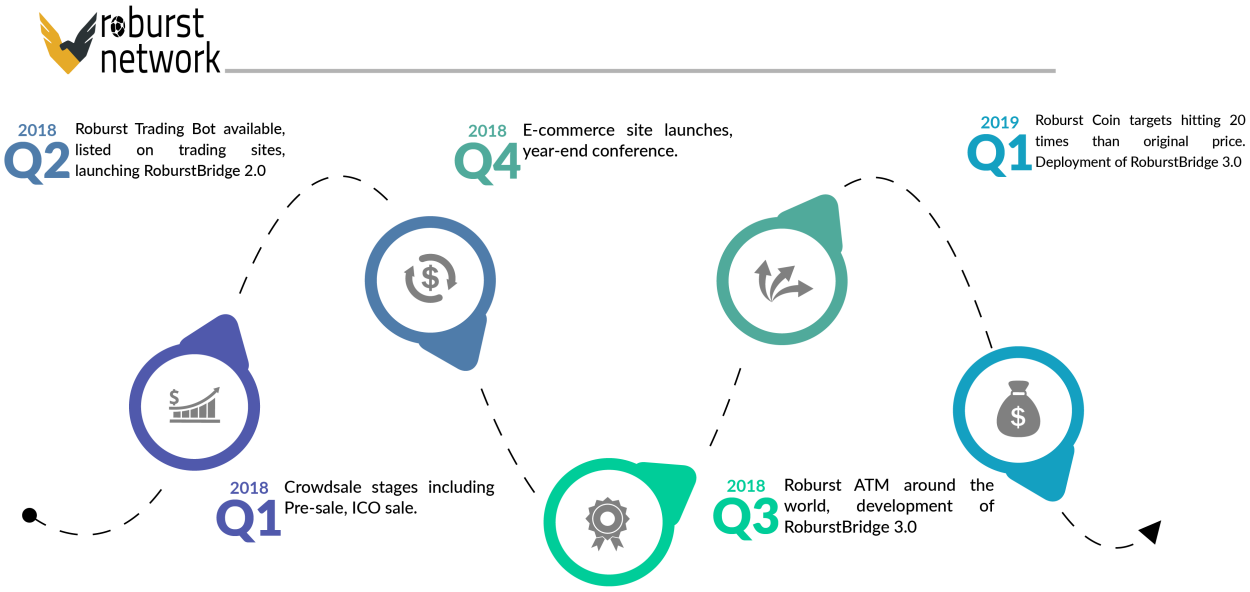
Arvind Narayanan

Assistant professor of computer science at Princeton.

Marc Badia

Assistant Professor of Accounting and Control at IESE school

2.5. Roadmap



This is a compact Roadmap of Roburst Network's plan. This is 1 year plan for Roburst Network and could be changed depends on the upcoming sales. The below figure is our plan in detail. Note that the date may change.

Pre-sale stage starts
February 24th, 2018
Pre-sale stage is open. To join Pre-sale, investors need to complete the whitelist registration provided by Roburst Network.

Pre-sale ends, ICO stages start
March 25th, 2018
Summary of the Pre-sale event, then move onto next stage: the ICO stage.

ICO stages end
April 24th, 2018
ICO stages end. Summarize all stages with sales and unsold coins.

Coin distribution date
May 1st, 2018
Main net launches as well as the coin will be distributed to investors' wallet.

Listed on Trading sites
May 5th, 2018
Roburst Coin now lives on multiple trading sites (at least 5 sites including internal trading site: Roburst Trading Bot).

RoburstBridge 2.0 deployment
June 15th, 2018
First deployment of RoburstBridge 2.0, with the allowance of sidechain creating, transferring crosschain, improvements on security, speed, stability and more.

First ATM in LA
June 20th, 2018
With the help of RoburstBridge 2.0, the first Roburst Coin ATM will be available in Los Angeles, CA.

Development of RoburstBridge 3.0
July 4th, 2018
Starting the process of development the next version of RoburstBridge 3.0, including implement the Lightning Network.

Roburst Coin ATM worldwide deployment
September 5th, 2018
We aim to deploy over 300 ATMs worldwide, first in major cities around the world.

Allowance of public sidechain creating
October 1st, 2018
Everyone can now create their own cryptocurrency based on Roburst Network.

Roburst E-commerce website launches
November 11th, 2018
Roburst Network's E-commerce website that only accepts Roburst Coin.

Worldwide Roburst Network event
December 12th, 2018
First world-wide event held by Roburst Network that summarizes a year in work with Roburst Network.

III.

ICO

An initial coin offering (ICO) is a means of crowdfunding centered around cryptocurrency (Wikipedia)

1. Roburst Bonus Coin (Bonus ROC)

Roburst Bonus Coin is coin that issued by the Roburst Network. Roburst Bonus Coin ***IS*** Roburst Coin but will be limited to the following statement:

1. **CAN NOT** transfer to other account during the Pre-sale and ICO stages.
2. **CAN NOT** trade during the Pre-sale and ICO stages.
3. **CAN NOT** withdraw during the Pre-sale and ICO stages.

After the Pre-sale and ICO stages end, **ROBURST BONUS COIN WILL BE AUTOMATICALLY CONVERTED TO ROBURST COIN**. Bonus ROC will added to your main ROC wallet and can be withdrawn, traded as well as transferred.

Roburst Bonus Coin has the limitation of supply of 84,000,000 Bonus ROC and distributed as Roburst Community Program, Bounty Hunter Program and Marketing Campaign. Once the Bonus ROC runs out, the referral and Pre-sale bonus events will end. We will notify to investors via e-mail.

2. Early-bird investors

Early-bird investors are investors who join the Pre-sale stage with the purchase of 50,000 ROC or over.

The following statements are the benefits of becoming early-bird investors during the Pre-sale stages:

- Can access to Roburst Trading Bot Beta (coming right after the ICO stages end)
- Can use Roburst Trading Bot to generate 24hrs prediction

- No transfer fee within the network (services provided by Roburst Network only)
- No trade fee in Roburst Trading Bot
- Special Telegram channel
- Emergency support (answer within 20 minutes)
- VIP ticket to Roburst Network event
- Priority access to our newest services

3. Pre-sale stage

Roburst Network offers for early-bird investors Roburst Coin at a reasonable price, including buying bonus. Investors will receive bonus Roburst Coin as a reward for purchasing and reward will differ based on the amount of Roburst Coin investors buy. The Pre-sale stage complies with the KYC standards, that's why countries which forbid the ICO sales will not be able to join our Pre-sale event. Roburst Network requires investors to submit your national ID/ Driving license/ Passport or any other similar official documentation to verify the identity of investor. We also require a clear selfie of investor to prevent identity theft.

Investors who fail to provide enough information that we require will not be able to join the Pre-sale stage. Investors can not issue a refund in Pre-sale stage. Investors who want to join with purchasing over 2,000,000 ROC will have extra rewards from Roburst Network. Joining the Pre-sale stage with the purchase of over 50,000 ROC will make you an early-bird investor. The amount of coin sells in the Pre-sale stage is limited to 63,000,000, equal to 20% of the coin seeded for crowdsale. Once running out of coin, the Pre-sale stage will end.

The following figure is the summary of the Pre-sale event:

Start date	10:00 AM PST, Feb 24th, 2018
End date	10:00 PM PST, Mar 25th, 2018
Duration	30 days
Number of coin sale	63,000,000 ROC

Price per coin	0.00001 BTC
Coin distribution date	May 1st, 2018 (worst scenario) Apr 25th, 2018 (best scenario)
Min purchase	10,000 ROC
Buying limit	10,000,000 ROC/account

4. ICO stages

The public sale is divided into 3 stages, each of them will have a different price start at 0.00001 BTC per ROC. Based on the demand of the coin, Roburst Trading Bot will have a specific price for each stage. Investors can join ICO without the need to apply for whitelist. Each stage lasts for 10 days. Unsold coins from the Pre-sale stage will be transfer to this stage. The price for the next stage will be notified to all Roburst Network member 3 days before the next stage starts. The Roburst Early-bird investor program does not apply to this stage.

The following figure is the summary of the ICO stages:

Start date	11:00 PM PST, Mar 25th, 2018
End date	10:00 PM PST, Apr 24th, 2018
Duration	30 days
Number of coin sale	252,000,000 ROC + unsold coins from Pre-sale
Price per coin	>0.00001 BTC
Coin distribution date	May 1st, 2018 (worst scenario) Apr 25th, 2018 (best scenario)
Min purchase	1 ROC
Buying limit	100,000 ROC/account/day

5. Referral

As a part of our marketing campaign, we offer 21,000,000 ROC for investors who refer Roburst Network to their friends. However, in order to prevent fraud

in the campaign, reward will be calculated based on the amount of ROC the referee buys. Especially, if your referee refers Roburst Network for other friends, you will get bonus too. The formula below is provided to calculate the Bonus coin in Referral campaign:

We consider a client buys C coins in level n. System has to reward to the upper-level referrals amount a of bonus coins. a can be determined by:

$$0 \leq a \leq C \lim_{n \to \infty} \sum_{i=0}^{n} 5\% \left(\frac{1}{2}\right)^{i}$$

$$0 \leq a \leq C \frac{5\%}{1 - \frac{1}{2}}$$

a is minimum when $n = 0$ and a gets maximum when n reaches infinity.

For example, if your network has 3 levels, which mean that you refer Friend A and then Friend A refers Friend B, then the network has 3 levels. In that case, if Friend A buys an amount of 1,000 ROC, then you will get 5% of 1,000 equal to 50 ROC. If Friend B buys an amount of 1,000 ROC, then Friend A will get 5% of 1,000 equal to 50 ROC, you will get 2,5% of 1,000 equal to 25 ROC. Likewise, you can earn more bonus coin by referring more people to your network.

Appendix

What is EdDSA ?

EdDSA combines the safest choice available. EdDSA is like Schnorr and unlike ECDSA in that it diversifies the hash input, adding resilience against hash collisions, it avoids inversions, simplifies and accelerates implementations. EdDSA differs from Schnorr in using a double-size hash function, further reducing the risk of any hash-function problems; in requiring Edwards curves, again simplifying and accelerating implementations; and in including the public key as a further input to the hash function, alleviating concerns regarding attacks targeting many keys at once. EdDSA also avoids a minor compression mechanism; the compression mechanism is public, so it cannot improve security, and skipping it is essential for EdDSA's fast batch verification. Finally, EdDSA generates per-message secret nonces by hashing each message together with a long-term secret, rather than requiring new randomness for each message.

BIP39 mnemonic code

This BIP describes the implementation of a mnemonic code or mnemonic sentence -- a group of easy to remember words -- for the generation of deterministic wallets. It consists of two parts: generating the mnemonic, and converting it into a binary seed. This seed can be later used to generate deterministic wallets using BIP-0032 or similar methods.

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