ADEPTIO

White Paper, *v1.0.0.1*

June, 2018

Abstract

Adeptio is a fair distribution oriented cryptocurrency with a universal 3rd generation technology, that combines the best features of different coins in order to create an excellent new digital payment asset. With the help of masternodes across the entire globe, network stability is brought to the blockchain using PoS**,** a distributed consensus achieving algorithm (*Proof of Stake*).

Keywords:

1. *Fair-distribution*
2. *Proof of Work; Proof of Stake;*
3. *Hybrid coin*
4. *Masternodes*
5. *Masternode tracking platform*
6. *Transparency*
7. *Scalability*
8. *HyperSend*
9. *Web Wallet*
10. *Android App*

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1. Specifications

Cryptocurrency prefix:	ADE
Premine*:	50 002 coins (*at 1st block*)
Fee**:	0.5% (*per block*)
Algorithm:	Quark (*Proof of Work*)
Block Time:	60 seconds
Proof of Work period:	2 – 345600 blocks *(~240 days after launch*)
Proof of Stake launch:	345601 block *(~240 days after launch*)
MasterNode requirement:	10 000 ADE
Coin maturity:	100 Confirmations
Address prefix:	Capital letter “A”

*50 000 coins from the premine will be used for the initial five MasterNodes, which will ensure network peer availability at the launch of the blockchain. After 1 year of operation, 5 initial, developer maintained masternodes will be wiped out from the chain, meaning the sum of 50 000 coins will be burned.

** As the premine is 0 coins for the developers after the burning of MasterNodes, an implementation of 0,5% developer fee per block helps maintaining the project and it’s growth, while distributing the coins fairly to everyone, including the development team. Using this method, the unfair developer’s coin dump using massive amounts possibility is eliminated, in order to show the reliability and honesty of the project for the community.

2. Brief History

During the “golden” era of cryptocurrency price rise (*late 2017 y.*), altcoin masternodes became surprisingly popular amongst the crypto investors. Many crypto-coins, which provide masternode functionality, have risen, attracting large amounts of investments. This was the next step in cryptocurrency reward system – a properly set up masternode required almost to no maintenance work, comparing the reward system to a hardware crypto-coin miner (*cpu; gpu; asic; fpga; etc.*). The masternode gathers payments from the blockchain itself, processing blocks for specific period of time, before getting a reward. This attractive crypto-making method also gathered the unfair – individuals, who know how to exploit the current crypto coin development system, making them able to scam the community and claim the instantly profited bitcoins or other currency. Since the “golden” era of the bitcoin, many fraudulent masternode coins have risen, seeking for a quick profit. Large amounts of fake coins, which provided untrue information, eliminated the trust on the crypto-related projects. The project “Adeptio” and it’s cryptocurrency, seeks to be honest, user friendly, flexible and trustworthy system, with active development team and always improving project goals.

3. Roadmap

The roadmap consists of a detailed list of small goals, which will be aimed to complete as soon as possible. The project Adeptio will have the goals and their steps updated every quarter of a year.

Quarters:

1st – January to March

2nd – April to June

3rd – July to September

4th – October to December

3.1 Goals

✓ *Completed*
✕ *In Progress*

	Quarter 1:	Goal Status:
1.	*Project vision*	✓
2.	*Project planning*	✓
3.	*Other cryptocurrency analysis*	✓
4.	*Adeptio code tests*	✓
5.	*Adeptio blockchain tests*	✓

	Quarter 2:	Goal Status:
1.	*Bitcointalk announcement*	✓
2.	*Adeptio blockchain launch*	✓
3.	*Linux wallet launch*	✓
4.	*Windows wallet launch*	✓
5.	*Official mining pool*	✓
6.	*Official blockchain explorer*	✓
7.	*Custom Masternode monitoring*	✓
8.	*Masternode All-in-One install script*	✓
9.	*Paper wallet launch*	✓
10.	*Whitepaper promo*	✓
11.	*List on first exchange (Crex24)*	✓

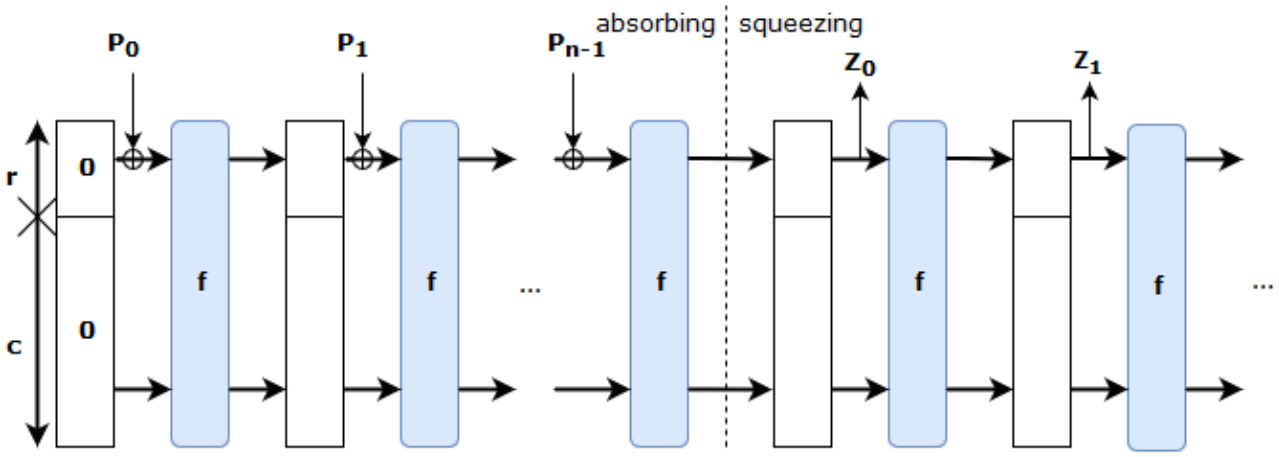
	Quarter 3:	Goal Status:
1.	*Official Website launch*	✓
2.	*Full whitepaper release*	✓
3.	*Official roadmap*	✓
4.	*List on Livecoinwatch*	✓
5.	*List on Coinlib*	✓
6.	*List on Coingecko*	✗
7.	*List Adeptio on second exchange*	✗
8.	*Release new wallet v1.0.0.2*	✗
9.	*Cold Masternode setup guide*	✗
10.	*Launch Adeptio statistics page*	✗

	Quarter 4:	Goal Status:
1.	*Marketing and awareness campaign*	✗
2.	*Start social campaign*	✗
3.	*Launch official blog*	✗
4.	*List on more crypto-exchanges*	✗
5.	*List on Coinmarketcap*	✗
6.	*Hire new people for further development*	✗
7.	*Develop a new modern cryptocurrency exchange (alpha)*	✗

4. Technologies

4.1 The Quark algorithm

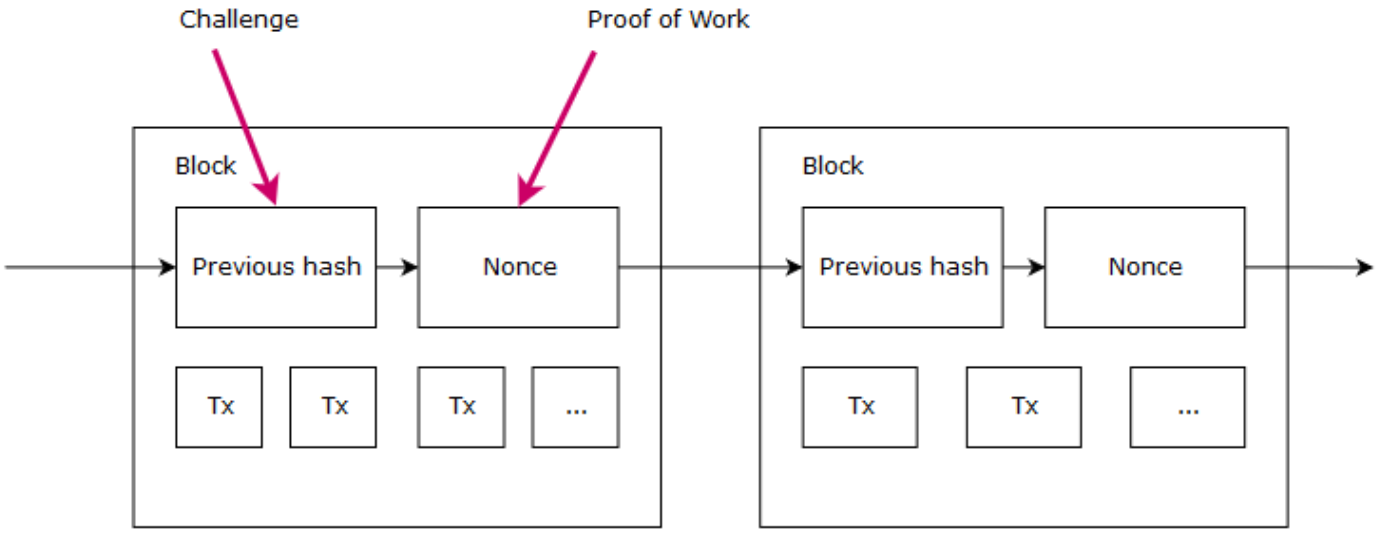
The Adeptio cryptocurrency uses **Quark** hashing function method, which was created because of the expressed need by application designers for a lightweight cryptographic hash function. It was created by Jean-Philippe Aumasson, Lica Henzen, Willi Meier and Maria Nava-Plasencia. The algorithm itself is based on a certain security level, which uses sponge construction to minimize memory requirements, see the picture below.



The hash function family – Quark – consists of three instances, which are u-Quark, d-Quark and t-Quark. Hardware benchmarks show that Quark compares well to previous lightweight hashes. Using optimal algorithm for cryptocurrency hashing not only saves energy costs, but increases efficiency of processing data.

4.2 Proof of Work

The initial phase of the Adeptio coin is based on ***Proof-of-Work*** mining, allowing hardware cryptocurrency miners to allocate their resouces for Adeptio block processing. During this phase, there will be no other way of obtaining Adeptio (ADE) from it's blockchain. After the block 345600 has been reached, the proof of work (PoW) phase will stop and the blockchain will merge into Proof-of-Stake (PoS) phase.



The concept of *Proof-of-Work* provides block processing technique, which includes finding a solution using hardware computing resources. For every block, a challenge is given, containing hashes which were gathered from previous blocks. Once the solution is found, the network quickly accepts the result and broadcasts the solution to all of the blockchain nodes. If any of the block hashes appear to be found in the blockchain simultaneously, the quickest answer to reach 51% of the network nodes, wins. This way, blocks continue to grow in the same way.

4.3 Proof of Stake

Although, the block processing method *Proof-of-Work* is enabled since the launch of Adeptio, this algorithm type will be replaced by ***Proof-of-Stake*** algorithm at a certain point. When the blockchain reaches block number **345601**, *Proof-of-Stake* will become enabled (~240 days after initial start). While the probability of mining a block depends on the work done by the miner, with *Proof-of-Stake,* the resource that's compared, is the amount of adeptio (ADE) an investor holds. For example, someone holding 1% of the circulating Adeptio supply, can mine 1% of the Proof-of-Stake blocks.

4.4 InstantSend

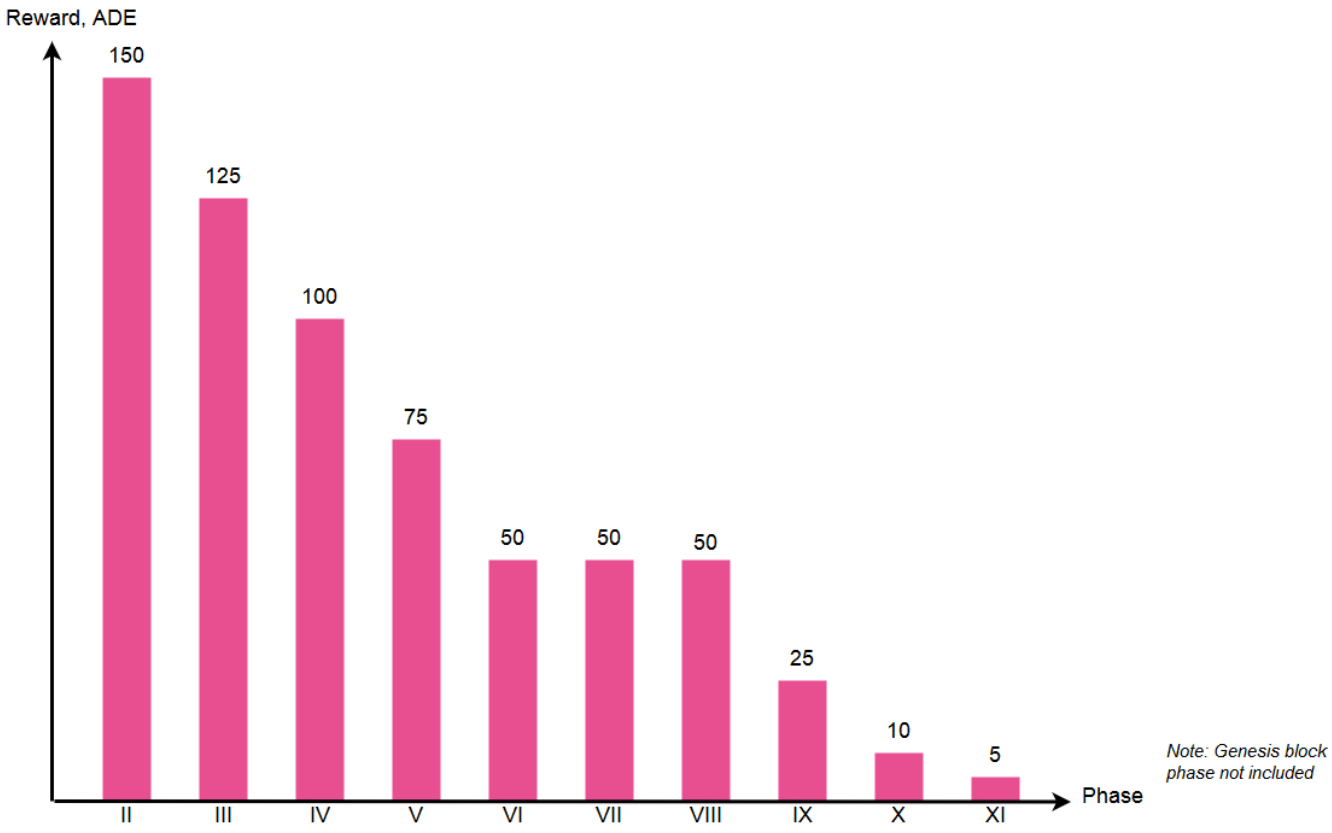
By utilizing masternode quorums, users are able to send and receive instant irreversible transactions. Once a quorum has been formed, the inputs of the transaction are locked to only be spendable in a specific transaction. Transaction lock takes up to four seconds to be set currently on the network. If consensus is reached on a lock by the masternode network, all conflicting transactions or conflicting blocks would be rejected thereafter, unless they matched the exact transaction ID of the lock in place.

5. Reward distribution

The blockchain reward distribution system is separated into several phases, which bring different amounts of Adeptio coins to the network. The genesis block contains 50 001 coin, which are dedicated for initial start. During the first steps of network growth, it is essential to bring 5 Adeptio masternodes online to ensure peer-to-peer communications between blockchain nodes. Adeptio blockchain phases and reward amounts per block, are shown below.

Phase	Block Height	Reward Amount
I	*1*	*50 001 ADE*
II	*2 - 86400*	*150 ADE*
III	*86401 - 151200*	*125 ADE*
IV	*151200 - 302400*	*100 ADE*
V	*302401 – 345600* ***PoW ends***	*75 ADE*
VI	*345601 – 388800* ***PoS starts***	*50 ADE*
VII	*388801 - 475200*	*50 ADE*
VIII	*475201 – 518400*	*50 ADE*
IX	*518401 – 561600*	*25 ADE*
X	*561601 - 604800*	*10 ADE*
XI	*604801 - infinite*	*5 ADE*

Adeptio Reward Distribution



The upper graph indicates every Adeptio blockchain phase from start. Starting from 150ADE reward per block, the graph gradually falls to 5ADE for every block. Five coins are the lowest possible reward amount per block, which will continue infinitely from the last phase.

There are a maximum of eleven phases, although first phase 'I' is not shown above. The first phase consists of one block, containing 50 001 ADE, directed to the developer team, for the masternode set up. After the first block has passed, phase 'II' begins and the blockchain starts growing.

5.1 Blockchain Phase Changes

Approximate phase starting dates, calculated from initial launch by multiplying block heights by 60 seconds.

Phase*	Date**	Block Height***
I	2018 – June – 02	1
II	2018 – June – 02	2
III	2018 – August - 01	86401
IV	2018 – September - 15	151201
V	2018 – December - 29	302401
VI *PoW ends/PoS starts*	2019 – January - 28	345601
VII	2019 – February - 27	388801
VIII	2019 – April - 28	475201
IX	2019 – May - 28	518401
X	2019 – June - 27	561601
XI	2019 – July 27	604801

***** *Adeptio blockchain phases.*

****** *Dates for phase initialization calculated approximately.*

******* *Specified block height for a new phase.*

6. Adeptio Scalability

Adeptio crypto-coin seeks to be universal, highly scalable crypto currency with variety of uses, found in everyday cases. From shopping online to merchant integrations, there are many cases for Adeptio in real world appliances.

6.1 Adeptio payment platform

One of the most applicable cases for Adeptio – an online payment platform, allowing ADE holders to pay online using crypto currency. Although, Bitcoin is widely known for such platforms, Adeptio could also be a potential payment method for services or shoppings online. Because of the most recent technologies used, the Adeptio becomes highly scalable and easily integrated into other platforms.

6.2 Mobile wallets

Smartphones were first released in 1999, in Japan, by a company NTT DoCoMo. Until now, billions of devices were sold and today they take a huge part in a modern person's life. It is essential to integrate Adeptio crypto coin into most widely used operating systems on smartphones – Android and iOS. Not coming right after launch, the smartphone wallets will soon become a prioritized goal to accomplish.

6.3 Monthly rewards

It is widely known, that masternodes can provide constant rewards for being successfully deployed. After certain period, the node receives a specific reward amount of ADE coins, which are defined by block reward phases. Masternode reward system lets the maintainer receive constant payments for contribution to the network, while paying back for node energy costs with an addition. Small, constant rewards builds up motivation for the community to stay online as a part of the network.

6.4 Merchant integration

While everyday cases are the main priority of the Adeptio coin, real world or electronic shops may also be associated with Adeptio. Using merchant API, it is possible to integrate the crypto currency payment methods into various physical or virtual shops. Using merchant integration, a person could easily send ADE to the product seller, while making the receiver to get instantly converted ADE to USD or EUR via exchange platform by latest rates. The possibilities of the API integration are without boundaries.

7. How Adeptio is different

Adeptio is a decentralized open source cryptocurrency focused on privacy, agile innovation and advancement of technology. It uses hybrid consensus mechanism, which is an energy efficient method of securing the network. The crypto coin is designed for long-term operation, it had no ICO's, presales and no airdrops. The genesis block contained an amount of coins, which will be burnt after one year of operation on MasterNodes (50 000 ADE). The Adeptio team pushes their best to create a constantly growing technology, which includes the latest upgrades and advancements of today's cryptocurrency world. When Adeptio will reach certain development stage, more related products will be released by the core team. A crypto-exchange web platform is going to take it's place in the future… Stay tuned!

*The **Adeptio** team.*

2018

Useful links

adeptio.cc – official website

explorer.adeptio.cc – official blockchain explorer

github.com/adeptio-project/adeptio – official github repository

bitcointalk.org – official Bitcointalk announcement

paperwallet.adeptio.cc – official paperwallet

goo.gl/vJGxPL – project fund address; link to explorer

crex24.com/exchange/ADE-BTC – Crex24 ADE/BTC exchange

livecoinwatch.com/price/Adeptio-ADE – Adeptio Stats #1

coinlib.io/coin/ADE/Adeptio - Adeptio Stats #2

development.adeptio.cc – Adeptio Continuous Integration platform

Sources

- *https://bitcoin.org/bitcoin.pdf*
- *https://github.com/dashpay/dash/wiki/Whitepaper*
- *https://en.bitcoin.it/wiki/Proof_of_work*
- *https://en.bitcoin.it/wiki/Proof_of_Stake*
- *https://131002.net/quark/quark_full.pdf*