Discoin

Whitepaper

V1.0.4

Introduction

Discodery created the first all-in-one solution that helps all kinds of businesses in their digital transformation.

The Discodery digital solution is an intelligent, assisted and automated tool that allows deploying, without any technical knowledge, a personalized mobile native application (iOS and Android), a custom website and a complete management software.

With this solution, sales, bookings, online payments, coupons codes distribution, instant chat, customer file generation, digital loyalty card creation, task management, employees planning, social media publishing, push notifications, inventory management, SEO optimization… and many other features and just a few clicks away from any business owner.

The solution is distributed as a Software as a Service (SaaS) and is sold as a subscription from Discodery's website. Discodery has its own sales team, but mainly relies on independent partners (called Discodery Partners) which are remunerated on a per-sale commission basis.

Today, Discodery would like to take advantage of the technological advances offered by the blockchain and cryptocurrency concepts to improve its digital solution, strengthen its security and make life even easier for its customers.

This document aims at presenting the concept of the Discoin, its implementation details and its present and future use cases.

Disclaimer

The main objective of this white paper is to present the Discodery digital solution and the related Discoin project. Under no circumstance it should be considered as an investment advice.

However, as this white paper also relate to the Discoin ICO perspective, a mandatory disclaimer seems appropriate at this stage of the document. Here are a few reminders of what you should consider if you are reading this document with the Discoin ICO in mind:

- An investment in Discoin carries with it significant risk. Prior to participation, carefully consider the potential risks and, to the extent necessary, consult a lawyer, accountant, and/or tax professional to evaluate the risk entailed.

- The crypto currency economy is relatively new and incredibly innovative. Crypto currency could be impacted by regulatory actions, including restrictions on ownership, use, or possession. There is no guarantee that the Discoin purchased will increase in value, provide a return, or will have sufficient adoption and liquidity to enable exchange for other assets.

- All possible future risks related to Discoin and its experimental technology cannot be enumerated here. We do not assume responsibility for any losses that may occur. Please exercise caution with all cryptographic assets and do not invest money that you cannot afford to lose.

- We make no promises of possible gains or returns. You can potentially lose all your money if the market price of Discoin drops to zero.

- Due to national regulations, USA, Canada, Iran, Iraq, Syria and North Korea will not be part of the Discoin project and their residents will not be allowed to participate in the Discoin ICO.

If you have any question regarding the regulations impact on our project, feel free to contact us at discoin@discodery.com.

Also note that the current document revision is 1.0.2. It is given as-is and may be updated at any moment. Nevertheless, there is no risk that a future document update would change the basic meaning of what Discoin is. Stay alert for future updates.

Table of contents

About Discodery

Discodery has been founded in late 2017 by three tech lovers, in Hong Kong SAR. Our business is worldwide, and Discodery is registered as a Limited Company (registration number C79790) in Hong Kong (26/F, The Beautiful Group Tower, 77 Connaught Road Central, Hong Kong). We also have offices in Paris (hosting our IT team) and in Barcelona (hosting our sales and marketing team).

Since the beginning of the project, our core work was to develop the Discodery solution, to test it and to find new customers, then to collect their feedback and to improve it continuously.

Our product is an all-in-one, fully-serviced solution that allows any small business owner to get its own website, mobile applications and management software in less than 72h and for a small monthly fee.

But our solution is more than just a website or a mobile application. Our goal is to provide our customers with a complete 360° solution to optimize and develop their business. The solution comes with unique management software, which is the control tower of our clients' digital identity and activity. It provides over 70 key features for them to grow their business online and offline as well as improving their work processes through automation and data.

A unique selling proposition…

The Discodery digital solution is a unique selling proposition on the market:

- It is affordable, meaning that at our price point, we have the ability to reach a much broader audience, which would not be interested otherwise.
- It is all-in-one, meaning that our customers do not have to subscribe to multiple solutions to benefit from the same level of service. We therefore eliminate the multiplicity of subscription and paid services for our customers as much as possible.
- It is fully serviced, as opposed to the do-it-yourself model. It means that our customers do not need any kind of technical knowledge to get started and the learning curve is very easy to overcome.

… for a wide range of industries

Our large set of features makes it a solution suited for all small business owners:

- Restaurants, bars, cafés, bakeries;

- Beauty salons;

- Hairdressers and barbers;

- Massage parlors;

- Supermarkets and grocery stores;

- Liquor stores;

- Doctors, pharmacists and therapists;

- Veterinarians and pets groomers:

- Retails stores:

- Services providers and consultants;

- Etc.

Discodery's market and current problems

Currently, Discodery operates in Hong Kong, France, Spain, French-speaking Africa, Mexico and UAE. By end-2019, Discodery is targeting 1000 customers worldwide and should be selling its solution in Central and South America, whole Africa, Australia and Asia by mid-2020.

Regarding the Discodery concept as a whole, digital payments are legitimately at the heart of the solution. Four money exchange channels are today used on a daily basis:

- End customers need to collect money from their own customers as a compensation for their online sales, whether it is from their mobile application or from their website;
- They also have the opportunity to create a digital loyalty program to reward their customers (in the form of discounts or products);
- In the meantime, they need to pay to Discodery their recurring subscription;
- And on its side, Discodery needs to reward the Discodery Partners for their sales.

All these exchanges of money are now possible on the Discodery solution, but are complicated, mainly because of the lack of technical solution in developing countries. We and our customers are also facing difficulties to send and receive money because of high currency conversion fees.

Our vision about Discoin

First of all, when writing a white paper, a fundamental question needs to be asked: **why we, at Discodery, do we think we need our own digital coin?**

- Because we and our customers have a real business problem to solve when it comes to online payments and recurring payments in some markets;

- Because we love doing thing ourselves and are very passionate about the technology behind the blockchain concept as a whole;

- Because we love understanding what we are doing at a technical level;

- Because we want to build our own community that will decide the future technological improvements of our blockchain (and digital coin of course);

- Because we want to introduce new security concepts;

- Because it is a unique opportunity for an initial coin offering, to finance the development of the Discodery project and the growth of our company;

- Because it facilitates the distribution of our first digital coins in the world.

The second fundamental question is: **what are we going to do with our digital coin?**

Our vision is to give access to the Discoin ecosystem to every business owner and every e-commerce platform developer. We defined a clear road map to achieve this goal (see §The Discoin roadmap). Here were the few use cases anticipated at the time of writing this white paper:

- Get access to the Discodery ecosystem (more information about it can be found at https://discodery.com) by instantly paying in Discoins your periodical subscription or by turning on an automatic debit from your wallet.

- Purchase items to enhance your digital environment (domain names, e-mails addresses, custom templates, etc.).

- Get rewarded by sharing about Discodery and the Discoin on your social networks (from your digital environment control panel, the Gravity Board).

- Get rewarded by referring other people to join the Discoin adventure and subscribe to the Discodery ecosystem.

- And really soon, receive customers payments in Discoins from your website or mobile application.

Of course, this list is not exhaustive and will necessarily be completed over time with other use cases.

The Discoin technology

The Discoin is derived from the CryptoNote[1] project, an open-source technology and concepts for the cryptocurrencies of the future.

Features

Untraceable payments

Discoin payments are untraceable thanks to a completely anonymous payment schema implementing a ring signature technology. [2]

This ring signature technology is a more sophisticated scheme of transaction verification that implies several different public keys. In comparison, traditional transaction verification involves only the public key of the signer (the one who initiate the transaction).

In the ring signature algorithm, groups of individuals with their own key pair are established for each transaction. A member of a group can sign a transaction with his own secret key, but the public keys of all the others members of his group are required to validate the transaction. This ring signature algorithm is a one-way process and cannot be reversed. That way, it is technically impossible to determine who the initial signer was among all the individuals of the group.

Unlikeable transactions

Receivers have multiple unique one-time addresses derived from their single public key which makes it impossible to cross-link payments.

With this principle, the CryptoNote algorithm solved the fact that everyone was able to check all the incoming transactions (and thus the resulting balance) of a given public address.

Thanks to a change in the Diffie-Hellman exchange protocol, the sender now uses the receiver's public address and his own random data to compute a unique one-time key for the payment. The sender can produce only the public part of the key, whereas only the receiver can compute the private part.

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[1] The CryptoNote website is available at https://cryptonote.org and the whitepaper is downloadable from https://cryptonote.org/whitepaper.pdf

[2] The features section is mainly extracted from the CryptoNote implementation details exposed at https://cryptonote.org/inside

The receiver is the only one who can release the funds after the transaction is committed. He only needs to perform a single-formula check involving his private key on each transaction to establish if it belongs to him. No third party can perform this check and discover the link between the one-time key generated by the sender and the receiver's unique public address.

Double-spending proof

In the CrytpoNote implementation of the ring signature algorithm, a linkability feature has been added to restrict a signer to create more than one ring signature using the same private key, which would indicate a double-spending attempt.

To support linkability, a special marker called a key image has been added to every signature. The key image is the value of a cryptographic one-way function of the secret key. One-wayness means that given only the key image it is impossible to recover the private key. On the other hand, it is computationally impossible to find a collision (two different private keys, which have the same image). Using any formula, except for the specified one, will result in an unverifiable signature. All things considered, the key image is unavoidable, unambiguous and yet an anonymous marker of the private key.

All users keep the list of the used key images (compared with the history of all valid transactions it requires an insignificant amount of storage) and immediately reject any new ring signature with a duplicate key image. It will not identify the misbehaving user, but it does prevent any double-spending attempts, caused by malicious intentions or software errors.

Blockchain analysis resistance

The unique one-time addresses and the ring signature make the whole blockchain resistant to analysis.

Since every ring signature produces ambiguity, there are billions of possible graphs linking addresses with transactions. Moreover, every next transaction increases the entropy of the whole blockchain and creates additional obstacles for an analyst.

Egalitarian proof of work

The proof of work mechanism is actually a voting system. Users vote for the right order of the transactions, for enabling new features in the protocol and for the honest money supply distribution. Therefore, it is important that during the voting process all participants have equal voting rights. CryptoNote brings the equality with an egalitarian proof-of-work pricing function, which is perfectly suitable for ordinary PCs.

Adaptive limits

A decentralized payment system must not depend on a single person's decisions, even if this person is a core developer. Hard constants and magic numbers in the code deter the system's evolution and therefore should be eliminated (or at least be cut down to the minimum). Every crucial limit (like max block size or min fee amount) should be re-calculated based on the system's previous state. Therefore, it always changes adaptively and independently, allowing the network to develop on its own.

CryptoNote has the following parameters which adjust automatically for each new block:

- Difficulty. The general idea of the algorithm is to sum all the work that nodes performed during the last 720 blocks and divide it by the time they have spent to accomplish it. The measure of the work is the corresponding difficulty value for each of the blocks. The time is calculated as follows: sort all the 720 timestamps and cut off 20% of the outliers. The range of the rest 600 values is the time which was spent about 80% of the corresponding blocks.

- Max block size. Let MN be the median value of the last N blocks sizes. Then the "hard-limit" for the size of accepting blocks is 2*MN. It averts blockchain bloating but still allows the limit to slowly grow with the time if necessary. Transaction size does not need to be explicitly limited. It is bounded by the size of the block.

Services

Wallets

As exposed in our road map (see §The Discoin roadmap), the Discoin web wallet is the first released. Shortly after, GUI desktop and smartphone wallets will be released to facilitate the decentralization.

The command line wallet is of course available on our GitHub at https://github.com/discodery/discoin.git.

Exchanges

As exposed in our road map (see §The Discoin roadmap), an integrated exchange platform will be released by the end of 2019 to allow the trading of Discoins (first in EUR). In the meantime, we will work very hard to bring Discoin to several popular public exchanges.

Deep integration

The Discoin is going to be deeply integrated into the Discodery ecosystem, allowing to subscribe to one of the best digital solution with automatic recursive payments and to collect payments from end-customers. Later, the same level of functionality will be featured in the Discoin public payment gateway API.

Mining

Mining is available for everyone who wants to share his computing power. To join the Discoin miners, simply download and compile the Discoin binaries from our GitHub at https://github.com/discodery/discoin.git and follow the README instructions.

A Discoin mining pool is available. Algorithm to use is **cryptonight**.

Endpoints are:

- stratum+tcp://discoin-mining-pool.discodery.com:3333 [Low end hardware]

- stratum+tcp://discoin-mining-pool.discodery.com:4444 [mid range hardware]

- stratum+tcp://discoin-mining-pool.discodery.com:5555 [High end hardware]

Everyone is welcomed to join and grow the Discoin miners community.Everyone is welcomed to join and grow the Discoin miners community.

Payments are made automatically to the Discoin address given to the pool when the miner balance reaches 1000 Discoins.

The mining pool statistics and settings can be viewed and managed at https://discoin-mining-pool.discodery.com.

Rewards and sharing

Mining is of course an easy way to obtain some Discoin as a reward for calculating power, but it is not the only way. Because the Discoin is deeply integrated with the Discodery digital solution, anyone can be rewarded in Discoins by sharing about Discodery or the Discoin and by bringing new customers to the platform.

Blockchain explorer

The Discoin blockchain can be explored at http://discoin-explorer.discodery.com.

The Discoin initial distribution

From the beginning, it was planned to give the Discoin an important but limited supply.

A total of 2,000,000,000 Discoin will be emitted. A relative fast emission curve has also voluntarily been chosen. The objective was to emit 50% of all the Discoins after one year (from May 2018 to May 2019) and reward more prominently the first contributors (miners) of the project after its official launch (June 2019).
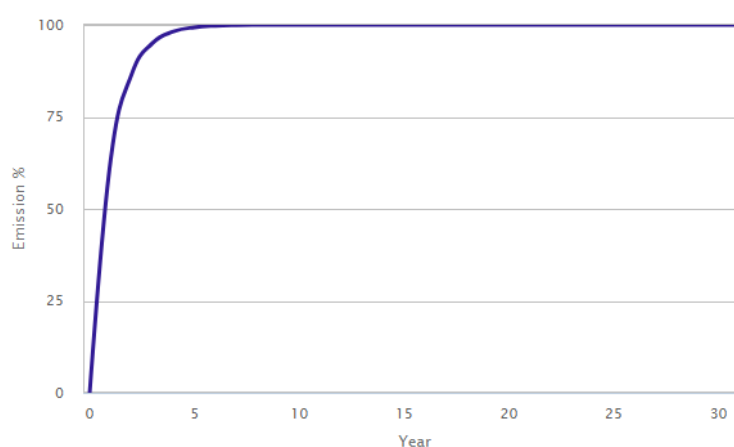
It allowed the Discodery team to pre-mine around 1,000,000,000 coins during one year of thought about the project and development. These coins will be dedicated to the Airdrop and ICO phases of the project and will help rewards several contributors to the project that weren't always paid (in FIAT money) until then.

The Discoin ICO

How and why?

In order to help us grow the Discoin project, the ICO perspective has been considered.

The main goal of the ICO will be to support the launch of the Discoin as a cryptocurrency asset and help Discodery grow around the Discoin by integrating it in its ecosystem and by opening public APIs. The funds are planned to be used this way:

- 40% for the growth of the IT and development team;
- 30% for marketing and advertisement;
- 15% for legal implications around the project;
- 15% for the remuneration of the founding team.

Last but not least, the minimum investment amount has been fixed to €10 and two investment options will be offered from the official Discoin dashboard:

- By credit card, handled by the integration of the Stripe payment platform.
- With a Bitcoin deposit, handled by a random wallet generation for each transaction.
- The ICO has started in June 2019.

Phases and caps

The ICO takes place in two steps:

- A pre-sale, in which Discoins can be bought at €0.0125. This phase has a maximum cap of €250,000. When this cap will be reached, the ICO will automatically enter the next step.
- A main-sale, in which Discoins can be bought at €0.0167. This phase has a soft cap of €2,000,000 and a hard cap of €8,000,000.

After the ICO, the Discoin will be introduced on the market at €0.025 per Discoin.

Rules

The following ICO rules have been established:

- The participation in the ICO is not limited and everyone can choose to participate more than once, in each phase.

- The coins distribution, including bonus, will occur at the end of each ICO phase. Please create at least one Discoin wallet before. You will be contacted by e-mail before the end of the corresponding phase if you invested and did not create a wallet.

- If the ICO does not come to an end, the sums will be reimbursed up to 80% to handle our processing fees.

- Additionally, because the regulations are pretty strict, we will ask every participant in the ICO to fulfill the following conditions:

- Complete KYC before investing. Valid first name, last name, e-mail, phone, personal address and ID card scan are required. The profile validation will be done manually for each investor.

- Due to national regulations, USA, Canada, Iran, Iraq, Syria and North Korea will not be part of the Discoin project and heir residents will not be allowed to participate in the Discoin ICO.

The Discoin Airdrop

During six months after the official launch of the project (June 2019 to late November 2019), an airdrop bonus program will take place from the official Discoin dashboard (available at https://discoinapp.discodery.com).

During this airdrop, each participant that completes successfully his profile will be rewarded with 400 Discoins. A successfully completed profile consists of:

- A registration with a valid e-mail address;
- A filled up profile (first and last names, country, Twitter and Discord username);
- A valid Discoin address.

A referral program has also been implemented, allowing every participant to share the Discoin airdrop program. Each validated referred profile will give an additional reward of 100 Discoins to the referrer.

Finally, a bonus section will reward every participant a random Discoin amount between 0,25 and 1. The participation is limited to one per day per member.

The accumulated coins will be transferred all the way through the end of the airdrop, once the registrations have been validated. It could take up to one month to limit the risk of fraud. Of course, the Discoin airdrop is limited to one participation per person. Anyone trying to mess with the system will see his account suspended and all his participation in the airdrop cancelled.

The Discoin founding team

The team behind the creation of the Discoin is composed of the five founders of Discodery. Below is a quick presentation of each one of them.

We sincerely hope that our team will grow as the Discoin project will grow. This is why anyone is welcomed to join the Discoin adventure! Feel free to contact us at discoin@discodery.com if you are interested.

Florent DAQUET
Cofounder, CEO

Florent has 10 years of professional experience in development and cybersecurity. After graduating from the French school SUPINFO, he worked during 4 years on big scale web projects and then worked for 6 years as a Senior Security Auditor at Wavestone consulting group. Passionate about new technologies, development, blockchain and cryptocurrencies, Florent is a cofounder of the Discodery project, now leads the IT (infrastructure and development) in the company and is the initiator of the Discoin project. He is particularly regarding on innovation, great code quality and continuous integration of the cybersecurity in all the projects.

Basile DURST
Cofounder, lead developer

Basile comes out of French school 42. He is passionate about new technologies and always curious about discovering new things and new programming languages. He quickly joined the Discodery team to contribute to the development of the front-ends applications and to lead the development of the iOS application (in Swift). He did not only invest his mind and time in the project but also joined the direction board after entering the capital of the company. On the Discoin project, Basile is leading the development of the Discoin front page and dashboard and will lead the development of the GUI wallets.

Nicolas MECHELANY
Cofounder, marketing director

Nicolas already two successful tech startups, a web & marketing agency in Hong Kong and a great platform for small businesses in French speaking Africa (meilleurscommerces.africa). His entrepreneurial experience was a great asset when founding Discodery in 2018. He also has a great experience in web development, in marketing and in sales. He now leads the marketing & sales in Discodery, will actively work on Discoin presence on the web but will also take part in the front-end development for the Discoin web platforms.

Lorenzo MENEGHINI

Cofounder, creative director

Lorenzo is an entrepreneur specialized in digital and local businesses. He is the owner of a bar / nightclub (club-banana-cafe.com) and a print shop (copiesproma.com) generating 1,5M€ turnover each. He is also one of the three cofounders of Discodery, bringing all his experience and ideas for innovation to the digital world. Today, Lorenzo leads the sales and the creative department for Discodery. He works actively on bringing the best user experience and user interfaces for the Discoin on all the digital supports (web/desktop/smartphone).

Mathieu MEYER

Cofounder, lead developer

Mathieu comes out of French school 42. He soon developed a great interest for low level programming languages, especially C and C++, for blockchain(s) and cryptocurrencies in general. He is part of the Discodery adventure from the beginning. His main role was to contribute to the development of the back-end solution (especially in Python and PHP) and to lead the development of the Android application (in Kotlin). On the Discoin project, Mathieu more particularly works on the development of the coin itself.

The Discoin roadmap

The Discoin ecosystem will be rolled-out step-by-step, taking care of delivering great products and features with a great continuous integration. That's why it has been decided of a clear road map. Of course, the team will make sure to not forget to be agile if needed.

Here is the Discoin roadmap from the project beginning in May 2018 to the middle of 2020:

- May 2018: Development started
- June 2018: Public mining opened
- June 2019: Website and dashboard opened
- June 2019: ICO and airdrop launched
- August 2019: Mining pool launched
- October 2019: Integration in the Discodery ecosystem
- December 2019: Built-in exchange opening
- January 2020: GUI desktop and smartphone wallets release
- January 2020: Integration in public exchanges
- April 2020: Payment gateway in Discodery digital solution
- July 2020: Payment gateway public API release

Contact

Feel free to contact us for any question/suggestion or even to get invested in the Discoin project.

E-mail: discoin@discodery.com
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Facebook: https://www.facebook.com/discodery/
Twitter: https://twitter.com/discodery
Linkedin: https://www.linkedin.com/company/discodery/
Instagram: https://instagram.com/discodery