



The First Audible Cryptocurrency

Blockchain Enabled

Whitepaper

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Abstract

SonoCoin is Swiss blockchain project offering data-over-sound solutions to enterprises based on its native blockchain protocol. The coin's .WAV file format gives anyone the power to transmit value and information using simple methods of delivery such as sound (similar to Shazam), messenger, QR and Bluetooth. SonoCoin's blockchain platform is a "b-to-b-to-c" (b2b2c) model, where SonoCoin opens its blockchain platform to companies allowing the further development of its underlying technology to accommodate the needs of their customer base. SonoCoin's value will be directly linked to the demand for 'gas' needed to process operations on the blockchain. As activity increases on the SonoCoin blockchain, the demand for SonoCoins to process transactions will rise.

Overview

History and Milestones

The SonoCoin project began in early 2016, launched by a software development team with extensive expertise in blockchain technology. A team of engineers, each with deep knowledge in blockchain, programming as well as the data-over-sound industry, remain actively engaged in research to advance the SonoCoin ecosystem.

The development of SonoCoin's native blockchain was the first step on the technical road map. The solution relies on Golang, LevelDB, and C++ software languages. The development of audio transmission and reception capabilities required a combination of advanced telecommunications and programming knowledge. On December 2017 we delivered a fully operational beta version of the SonoCoin blockchain and mobile application.

To date, the SonoCoin project has been privately financed and backed by several sophisticated investors with broad expertise in global capital markets, high technology sectors, and blockchain industries. In addition, SonoCoin has assembled an expert network of senior blue-chip professionals that are committed to take the project to the next level. We truly believe our team of software engineers, corporate advisors and investors to be fundamental to the further development of SonoCoin.

The recent achievements and milestones can be resumed as follows:

2016

- SonoCoin back-end infrastructure development begins

2017

- First prototype of SonoCoin blockchain is launched
- Audible transactions are introduced to the blockchain
- Initial Board of Advisors is constituted
- Corporate structure in place
- First IP and patent applications
- Initial coin pre-sale offered publicly to the community

2018

- Rolled-out MVP and first marketing efforts
- SonoCoin application interface update
- SonoCoin partners with Swisscom Blockchain
- SonoCoin adds University of Geneva Professor Jean-Henry Morin to its Board of Advisors
- SonoCoin adds Alex Alexandrov, Coinpayments founder and blockchain pioneer to its Board of Advisors
- SonoCoin sponsors OpenGeneva, an innovation festival and Geneva-based hackathon
- Presented on the Crypto Valley Association Summit
- Launches the Bluetooth & WIFI data-transmission capabilities
- SonoCoin begins protocol stabilization process
- Protocol related hashing improved
- Improved redundant information from P2P protocol
- Unit tests and integration tests implemented

2019

- Reduced cyclomatic complexity of critical code pieces
- Setup a public test network
- Completed the protocol documentation
- Contribution guidelines for open source collaboration
- Completed overall architecture and implementation details on minor parts of the code
- Initial discussions with media, entertainment and commercial partners
- Partners with MMBA, SonoCoin's strategic relationship for commercial outreach
- Presentations to the technical teams of prospective partners
- First live technology demonstrations and tests
- Ongoing updates and improvements on the blockchain network
- Introduced Broadcast data transmission method

- Negotiations on Proof-of-Concept projects with different commercial partners
- First LOIs/MOUs signed on commercial deals
- Signed LOI with Blufolio Venture Capital Fund
- Signed LOI with Avant Capital Advisers
- Signed agreement with LATOKEN for Initial Exchange Offering and listing

Unmet Market Needs and SonoCoin Solutions

Advertising Industry

In 2019, worldwide digital ad spending will rise by 17.6% to \$333.25 billion. That means that, for the first time, digital will account for roughly half of the global ad market¹. Digital advertising revenue continue to grow while companies leverage technology in an effort to connect with their audience through social media². As advertisers are faced with a growing number of advertising approaches, the ROI assessment of each becomes increasingly important in the decision process.

Rebate Challenge:

Rebate programs have traditionally been in the form of physical coupons and have been deemed inefficient due companies using rebates as sales incentives and not as effective customer engagement tools.

Solution:

SonoCoin looks to revolutionize the advertising industry by introducing the a transfer of coins through television/online ads. Because the unique frequencies can embedded in media files, the SonoCoin platform allows for companies to utilize this for the distribution of information and value.

¹ <https://www.emarketer.com/content/global-digital-ad-spending-2019>

² <https://www.adweek.com/digital/digital-advertising-revenue-grew-21-and-surpassed-tv-ad-spend-last-year/>

Once collected, a customer will have the ability to exchange the company's coins for discounts on goods and services. Marketing campaigns employing this technique are expected to have immediate impact on sales and awareness, while providing companies with concrete end-to-end campaigns analytics.

Mass Event Challenge:

Brands see event sponsorship as a way to increase visibility and strengthen customer relationships. The challenge derives from the difficulty of directly engaging with the customer and accurately measuring the success of the campaign.

Solution:

Building on top of the SonoCoin blockchain, brands will have the possibility to advertise their products during the event using data-over-sound technology. This will allow advertisers to connect to an audience at venues, stadiums and concerts like never before. Additional layers of interaction with the audience is possible by offering rewards in the form of coins when 'trivia' related gaming experiences in.

Radio, Online-Radio Challenge:

Online radio streaming is on the rise, with 61% usage from all American adults and +10% YoY growth among Millennials³. As competition intensifies, loyalty to stations is often rewarded through engaging listeners in prize contests. This has proven to be costly and time consuming to organize with many listeners not interested in participating.

Solution:

SonoCoin's broadcasting capabilities can simplify the signup process and increase listener retention. Listeners will have the ability to share their details with a radio station and be rewarded accordingly when participating in a competition. To increase engagement among listeners, the radio station could distribute coins periodically to reward listeners for their presence and/or incorporate lottery ticket events in which one or more people are rewarded in coins. The coins collected can be considered as loyalty points for radio stations and easily exchanged for special offers and prizes.

³ <https://www.statista.com/topics/1330/radio/>

Gaming Industry

According to a report released by SuperDataResearch, consumers spent about \$41 billion on the mobile gaming market in 2016, with Pokémon GO and Clash Royale being the most popular⁴. It is estimated that there are approximately 2.6 billion monthly users across all mobile games.

In-Game Currency Challenge:

As online gaming grows exponentially, it creates a global need for payments standardization. Most games have created their own “currency”, for instance the gold coin in World of Warcraft. The use of FIAT currencies is fundamentally inefficient, given that games must incorporate.

Solution:

SonoCoin aims to be adopted by gaming communities as the primary digital currency, based on its versatile and audio characteristics. The universal acceptance of one currency across all gaming platforms and online shops would eliminate the need for secondary conversions into FIAT currencies. For instance, users would no longer need to convert in-game credits into USD to make a purchase from a gaming platform. In-app purchases would no longer require personal information and credit card details, thus removing related risks of fraud. Furthermore, SonoCoin would provide the convenience needed for community based online transactions. Catering to this need could incentivize loyalty to games through the monetization of game-related milestones.

Wager Competition Challenge:

Trust is an issue in society and where money is involved. Trust, or lack thereof, is often grounds for anxiety for both parties involved. In today's world very few transactions take place absent of middleman who provide this critical element of trust. However, these groups of middlemen having been collecting billions of dollars yearly in the form of a fees for performing their service. Blockchain-based solutions for gaming are expected to grow from \$411 million in value from 2017 to an astonishing \$7.68 billion by 2022.

Solution:

SonoCoin is introducing a new betting system to the gaming industry whereby the process is fixed and optimized to eliminate the need for a neutral third party to be involved. The third party is replaced with a detailed set of very specific criteria in a smart contract, that is made directly between the two players involved in the bet. This approach enables the community to create and define its own markets, adding a new social dimension to the betting process. The smart contract will be set up, and it will specify who wins so that winnings are released correctly when the result is announced.

⁴ <http://mediakix.com/2018/03/mobile-gaming-industry-statistics-market-revenue/#gs.zVkaMVs>

eSports Advertising Challenge:

If accessibility is the greatest strength of esports, its biggest weakness is its disorganization in comparison to the NFL, NBA and MLB with predefined game schedules and playoffs. Esports, however, is managed by a multitude of organizations including game publishers and media companies. Esports is the Wild West with a "fractured landscape and lack of cohesive calendar," the Leaders report stated. "For the outsider, it is almost impenetrable to decipher what and when the biggest events are and how they fit into a wider narrative." As a result, advertisers looking to penetrate this niche market are reluctant on where and how to build presence.

Solution:

As brands look to gaming competitions for exposure, understanding the advertising landscape can be challenging. The Director of Global eSports Sponsorships at Twitch highlighted this point by saying, "What gamers care about is altruism, and they want to see brands doing something that benefits the space, not just the brand." SonoCoin's ability to connect brands to audiences online or in large stadiums via sound frequencies enables advertisers to incorporate collectable valuables within the message. An example could be in-game currencies and/or unlockable milestones that can be verified on the blockchain.

Corporate Programs

A recent study by *Bond Brand Loyalty* states that 53% of Americans participate in loyalty programs with a reported 38% satisfaction rate. The same report found loyalty membership growth slowed from 26% achieved in 2016 to 15% the following year⁵. Industry experts blame frustrating registration processes, poor distribution methods and low perception value for deteriorating customer engagement.

Providing customers corporate cryptocurrencies would bypass much of the registration process, facilitate distribution, increase mobility and prevent fraud. SonoCoin's platform allows corporations to build and manage their own corporate currency and wallet using our native technology. Wallets can be easily integrated into a company's existing mobile application and automatically registered to client accounts seamlessly.

⁵ <https://blog.accessdevelopment.com/2018-customer-loyalty-statistics>

Loyalty Programs Challenge

Up to 82 % of millennial would be interested in redeeming loyalty points in the form of a gift card or prepaid card with 65% of all millennials preferring digital rewards⁶. Costs for running traditional reward programs are high, generating \$35 billion a year for third-party processors such as First Data Corp, who service prepaid and private-label credit cards tied to corporate loyalty points⁷.

Solution

According to Richard Crone, CEO of payment consultant *Crone Consulting LLC*, Blockchain could cut up to 80% fees of for corporate loyalty programs⁸. SonoCoin's versatile characteristics represent an ideal solution for the distribution of coins to be used as loyalty points. Consumers could eventually store their collected points from numerous reward programs on a single mobile platform.

Gift Card Challenge

The gift card industry has been steadily growing at 5% YoY since 2011 to become an industry worth \$307 billion⁹. Recent growth has been faced with crippling challenges such as double-spending, fraud and damages amounting for \$1 billion in 2017 according to a Consumer Reports article¹⁰.

Solution

As the industry grows, corporations are looking to blockchain for security, ease-of-use and efficiency. SonoCoin white-labelling can provide the characteristics of being highly-transferrable, without the need of traditional cards and inherently prevents double-spending and fraud. Businesses involved in the retail industry are likely to benefit as mobile payments become increasingly popular and integral to cashless societies.

Credit Card Challenge

Rising credit card merchant fees mean higher prices for everyone. The fees are broken down into two parts; the first is the interchange fee set by credit card network which is the percentage of a sale the issuing bank charges to handle the transaction. The second is a fee the card networks Visa and Mastercard charge for each transaction. As of February 2019, the average processing fee for merchants was 2.5%. This amounts to \$25 million in fees for \$1 billion in sales.

⁶ <https://www.prnewswire.com/news-releases/long-live-the-loyalty-program-hawk-incentives-research-finds-millennials-embrace-loyalty-programs-at-high-rates-300656309.html>

⁷ <https://www.bloomberg.com/news/articles/2018-05-30/forget-airline-miles-crypto-coins-are-coming-to-reward-programs>

⁸ <https://www.bloomberg.com/news/articles/2018-05-30/forget-airline-miles-crypto-coins-are-coming-to-reward-programs>

⁹ <https://www.benzinga.com/markets/cryptocurrency/18/06/11959333/the-gift-card-industry-is-growing-can-blockchain-facilitate-th>

¹⁰ <https://www.consumerreports.org/scams-fraud/gift-card-scam-thieves-can-drain-money-off-cards/v>

Solution

SonoCoin looks to offer merchants an alternative method of payment based on blockchain technology to reduce processing fees. A blockchain mobile credit card would be white-labelled to a company for them to be issued to clients. This would include a fully customizable wallet and tokens to be implemented within a company's existing mobile application. Each customer would be allocated X number of tokens at the beginning of a month as credits for an equal amount in local currency (1 to 1). These tokens are to be spent in exchange for goods and services within the company's offerings. Each transaction is executed via QR codes and recorded on the blockchain. Customers are billed at the end of the month and any failure to do so will result in charging the customer's credit card as agreed up in a legal contract. This would significantly reduce the costs for companies and increase brand loyalty with select group of customers. The company's network costs are recovered when the company becomes a 'validator' within SonoCoin's consensus.

Blockchain Rights Management

Digital Rights Management Challenge:

Illegal file sharing still remains a major problem for media companies and is the cause for \$31.8 billion in revenue lost for the TV shows and movie industries combined. Lack of copyright protection affects not only the reputation and earnings of the content industry, but also disincentivizes the creation of new content. If chasing down thieves isn't hard enough, enforcing your legal rights as the owner of the content depends on proving that you are the owner. Simon Murray, an analyst with Digital TV Research, is quoted by saying, "Piracy will never be eradicated, however, it is not all bad news. Piracy growth rates will decelerate as more effective action is taken and as the benefits of legal choices become more apparent." Today, many including some of the biggest media conglomerates such as Sony are actively using blockchain to provide proof of creation on a permanent immutable record.

Solution:

SonoCoin is developing state of the art digital media copyrights management tools by digitally fingerprinting files using unique sound frequencies. Each file can be individually identified by these unique frequencies embedded within a media file. The 'SonoCoin Player' is used to first authenticate and then view or play the media file. When authenticating the file, the player identifies and executes a transaction by connecting to the SonoCoin blockchain. Ultimately, this method allows content owners can fully leverage, control, and monetize all copyright assets that are recorded in the blockchain. Illegal file sharing and other copyright infringements will be impossible due to the transparency of the blockchain details through collection associations as trusted third parties.

Land Registry Records Challenge:

Keeping track of who owns what pieces of land is still a low-tech affair, involving mountains of hand-signed documents, envelopes, and couriers. That is, if a country is lucky enough to have a functioning land registry—the World Bank estimates that 70% of the world's population lacks access to land titling. Getting everyone to agree on every stage of a property transaction, and to record it permanently somewhere, is a feat of security, coordination, and trust.

Solution:

The SonoCoin blockchain solution is a digital registry that can't be tampered with. It provides a mechanism for various parties to agree on a set of facts. It prevents those parties from making false statements, since everyone else can check the facts; it also prevents statements from being changed after they've been recorded, since all parties are alerted to these changes. The system operates on a permissioned blockchain, allowing the land authority and others, like the banks, holding copies of the records to take part. When a land title changes hands, each step of the process is verified and recorded on the blockchain. The system acts as a highly secure and transparent verification and storage service for property transactions.

General Cryptocurrency Challenges and SonoCoin Solutions

Geopolitical regulatory risks

The unanticipated growth and anonymous nature of cryptocurrencies have generated suspicion among institutions, central banks and governments, following allegations that the technology was being used in connection with criminal activities. Regulatory authorities around the world seem unsure how to address blockchain technology, in light of their complex and diverse applications. We have

mitigated the risk of potential governmental limitations on our operations by implementing the project in Switzerland, incorporated under a Swiss corporation where the regulatory framework is friendly and transparent for blockchain ventures.

Complex transactions

Laypeople may be dissuaded from engaging in peer-to-peer transactions and storage of cryptocurrencies using electronic wallets, due to a lack of understanding of the process involved. The

combination of software downloads and safe storage of private keys and complicated addresses, has in some cases led to unintentional (and permanent) loss of funds.

SonoCoin's straight-forward application bypasses the most complicated steps in transactions and back-ups. From a transactional standpoint, users no longer need to take the time of inputting the recipients address ensuring it is correct before sending; this step is replaced by login details with easy to navigate send/receive options along with saved contact lists of past transactions.

Strategy and Vision

SonoCoin is committed to becoming a platform for commercial partners worldwide by offering robust blockchain solutions. Since its inception our team has dedicated its resources to reinventing decentralized peer-to-peer transactions by incorporating data-over-sound technology. Often referred internally as the *Swiss Army Knife of blockchains*, SonoCoin is built as a versatile platform for transactions in the advertising, gaming and copyrights management industries.

The adoption of SonoCoin is in part dependent on the success of its commercial applications in the targeted industries. Our team spends the majority of its time building meaningful relationships with corporates to identify areas where improvements can be made by implementing SonoCoin solutions. This process involves market research, software development, testing and customer feedback.

SonoCoin's growth strategy is centered around the cooperation of industry leaders whereby each entity becomes a stakeholder within the ecosystem. Every member will take part in securing the blockchain network while collectively tailoring the technology with the goal for widespread adoption.

Our initial outreach has resulted in strategic alliances with Swisscom Blockchain AG as technical advisors; Coinpayments.net for IEO marketing and commercial use within their network of +600 online merchants; LA Token as a marketing partner and official exchange listing of SonoCoin following the IEO. These recent alliances have granted SonoCoin access to millions of potential users and have resulted each entity joining the advisory board.

Go-to-Market Plan

Initial proof-of-concept use cases

- Digital Advertisement: Due to SonoCoin's value within promotional campaigns, incentive programs, and increased customer engagement, our team is targeting key strategic prospects with a successful track record in the advertisement industry. Our team has initiated advanced discussions with internationally renowned television channel operators opening the dialogue to possibilities of advertisement augmentation.
- Media: SonoCoin has initiated discussions with different media groups to explore the integration of SonoCoin's technology within their offering. Our team has reached out to radio stations and online podcasts opening the dialogue to use-case possibilities for radio contests.
- Gaming: Corporations have been storming into the blockchain industry investing in promising projects whose focus is to contribute to the overall gaming experience. SonoCoin's inherently simple transactions methods offer gaming communities ease-of-use across all platforms. We have set forth a strategy to enter the mobile gaming industry and have already begun development of APIs for popular consoles.
- Events: Our developers have begun beta testing of the broadcasting feature for future use within concerts, discotheques and festivals. We are in discussions with a well-known American film production company interested in leveraging SonoCoin's broadcasting feature to better connect with its audiences.

Unique Selling Propositions

Cutting-edge technology

SonoCoin allows for cross-device flexibility and bypasses the limitations of traditional wallet-to-wallet blockchain transactions. It simplifies the methods of transaction giving laypeople the power to utilize the network. All of which is fully customizable.

Operational

After over a year of research and development activities our technical team have delivered nearly fully-developed network and back-end infrastructure. SonoCoin is operational and in the process of being tested for commercial use. Available to the community on Windows, Linux, Android and iOS by invitation.

Expert Team

SonoCoin is backed by team of corporate, finance, legal and political professionals in Switzerland. Financed by Crown Capital Group SA a well-established asset management firm that has recently pivoted as a blockchain venture capitalist. SonoCoin has since managed to develop key strategic relationships with the public authorities in Geneva including the economic department team of Geneva and the University of Geneva.

The technological development is the work of four expert cryptographers and sound programmers sourced from an unparalleled scientific hub based in the Russian Federation. Working in conjunction with this team are website designers, client experts and UX/UI developers.

IEO Differentiation

Unlike most Initial Exchange Offerings, SonoCoin has already developed a functioning front and back-end platform. SonoCoin will issue its native coins on its native mainnet, as opposed to offering Ethereum based tokens. In parallel, the team has secured the initial exchange listing post-IEO, on the LA Token platform. The partnership ecosystem around the project is advanced, with the legal, banking, technology, KYC/AML, and strategic partners on board.

Headquarters in Geneva, Switzerland

With the support of our investors and advisors, we have established our headquarters in Geneva, Switzerland. This will enable us to take advantage of Swiss economic and political stability as well as expertise as a key global financial center and thereby accelerating development and growth of the project.

Recently, the canton of Geneva has positioned itself as a European hub for blockchain-related ventures. To support achievement of this strategic objective, Geneva has created an enabling environment for the establishment and development of cryptocurrency organizations. Moreover, Geneva recently began implementing the Ethereum blockchain technology for the register of commerce, in an effort to increase the efficiency, security, and transparency of public services. SonoCoin is a project that belongs entirely to Crown Capital Group SA. Crown Capital Group SA is a joint-stock company with its registered seat in Geneva and will issue SonoCoins in the course of an Initial Exchange Offering. Crown Capital Group SA is member of the self-regulatory organization OAR-G Organisme d'Autorégulation des Gérants de Patrimoine.

Strategic Partnerships

The SonoCoin technology will be leveraged to provide an alternative form of enhanced remittance. We are targeting businesses active in the retail, gaming, entertainment and advertising sectors. We have already launched discussions – and in certain cases are in advanced stages of negotiations – with potential partners in our target industries. Our strategy is to establish direct partnerships and collaborations with key players with synergies in sound. Once the project has been implemented into the ecosystems of major industry leaders, the focus will be then be adjusted to tailoring the software to specific community needs, while offering each company to ability to create and control their own tokens.

Scalable and User-Friendly

The vision behind SonoCoin is to provide the community with a fully accessible blockchain ecosystem, ease of use, cross-device compatibility, and scalability. The market has seen hundreds of peer-to-peer cryptocurrencies launched in the last five years often with few technological differentiators. SonoCoin is exceptionally unique to other solutions in that it combines the versatility of audible files allowing everyone to benefit from secure, frictionless transactions with minimal knowledge of blockchain. SonoCoin offers a certain level of familiarity for those unaccustomed with traditional methods of blockchain transactions; SonoCoin's unique .WAV file format acts as a self-contained wallet,

identifiable by a public address and secured by a private key. Transfers do not require the recipient's public address but rather can be accomplished freely across any electronic delivery channel, including audio, instant messaging, and email.

Methods of Transaction

The following features are fully-developed

Audible Transactions – The SonoCoin audio file is a sound interpretation of a code that can be recognized and recorded by any device that reproduces sound. Coins are embedded in unique sound waves using standard .WAV files played at frequencies between 6 and 16 kHz and are convertible into any audio format. Once captured, the coin will appear in the user's application and must then communicate change of ownership through the reissuance of the coin. The reissuance of the coin can only be successfully when the file is decrypted by the owner; labelling the same file captured by nearby devices as “spent”. One .WAV file can represent any denomination of SonoCoins and can be split and combined. Each coin file can be password encrypted to ensure the security of the transaction in the case of eavesdropping.

Messenger Transactions – SonoCoin .WAV files can be sent directly from the application via any form of online communication platform including e-mail, social networks and messengers. To finalize a transaction, the .WAV file must be uploaded to the SonoCoin application to communicate change of ownership onto the blockchain.

QR Code Transactions – This feature was developed to provide merchants and consumers a seamless method of exchange. QR codes contain specific data regarding the transaction amount and automatically debits and credits the SonoCoin application without the need of reissuance. These codes are widely used by existing payments providers and therefore easily adopted.

Bluetooth & WIFI - The SonoCoin application scans the Wi-Fi network or Bluetooth network for nearby devices connected to SonoCoin in order to directly send and receive coins.

Broadcast Transactions – Primarily targeted at advertisers, this feature will allow for one SonoCoin file to be equally divided into equal parts among thousands of users. Example: At half-time, beer stands in a football stadium play 1000 SonoCoins offering the first 100 individuals 10 SonoCoin each towards their next purchase. Using ultrasonic frequencies, one could embed SonoCoin in a song, movie, or advertisement without affecting the message perceived by consumers.

The following features are currently [under-development](#)

Inaudible Transactions – Our team is currently developing ultrasonic frequency transactions that cannot be heard by the human ear. This technology has been pioneered by audio data encoding specialist *Chirp* and media giant *Amdocs* for development of push promotions from TV commercials to mobile / tablet device using ultrasonic data transfer. This update is intended to improve discretion and enable advertisers to embed SonoCoins in advertisements for promotional purposes related to the message. Advertisers could benefit by increasing sales through discounts on select products by broadcast coins during the message

NFC Transactions - NFC (near-field communication) is a subset within the family of RFID (radio frequency identification) technology. This enables two electronic devices to establish communication by bringing them within 4 cm of each other. NFC devices are often used in contactless payment systems and smartcards. Implementation will offer users and merchants yet another form of means of exchange.

Market Overview and Competitive Analysis

Sound-based payment systems:

Lisnr

LISNR is a high frequency, inaudible technology; a new communication protocol that sends data over audio. LISNR uses inaudible sound waves called SmartTones™, to transmit data. These customizable packets of data can enable proximity data transmission, second-screen functionality, authentication and low-fi device to device connectivity on any LISNR enabled device. They enable this functionality better and more efficiently than bluetooth (proximity), ACR (2nd Screen), and NFC/RFID (authentication).

Alipay

Alipay developed a payment system in the Beijing subway that uses sound waves to connect smartphones with vending machines. The sound wave payment system was introduced with the Alipay Wallet mobile app in January 2018 and uses white noise generated by a smartphone to carry digital information to another device. Initially used for smartphone-to-smartphone transactions, the Beijing Subway launch marks the first time the system has been used with a payment kiosk for consumer transactions, according to Xinhua.

Tez

Google Tez is a mobile wallet based on the Unified Payments Interface (UPI) platform built by the National Payments Corporation of India (NPCI). UPI-enabled wallets permit users to transfer money without requiring the bank account details of the recipient. The UPI ID of the recipient is used as a proxy for the account number and IFSC code, thereby simplifying the process of money transfer.

Drawbacks of Competitive Blockchain Protocols:

Ethereum

The primary problem with Ethereum is scalability. Transactions are still very slow, roughly 15-20 transactions per second. In order for Ethereum to scale, it must transition from a proof-of-work (PoW) to a proof-of-stake (PoS) consensus algorithm in the Ethereum 2.0 upgrade. This is a very serious change — and if it doesn't go smoothly, the whole system can crash.

NEO

While the project is supported by the Chinese government, NEO's technological decisions may be politically influenced. Secondly, Neo is a non-divisible token. It can only be traded in whole number integers, therefore micropayments are currently impossible. Thirdly, Neo is not decentralized. There are 7 masternodes verifying transactions on the blockchain, six of which operated by Neo, one by City of Zion.

EOS

EOS throughput is significantly lower than EOS initially claimed in marketing materials. The blockchain suffers from consensus failures and lacks Byzantine Fault Tolerance, which means that bad actors are theoretically able to process false transactions and form cartels. Block producers are highly centralized and users can only access the network using block producers as intermediaries. Block producers are a single point of failure for the entire system.

[SonoCoin -> Combining sound-based data transfer with blockchain](#)

Innovative use cases: Besides the payment and advertising related use cases, SonoCoin's new revolutionary blockchain platform and audio technology brings new possibilities to transact between individuals.

Data-over-sound: The SonoCoin solution has the uniqueness of transmitting data-over-sound, not only payment data, but any form of information and value can be securely transmitted and secured to the blockchain.

industries. Ultimately, the goal is to have each participating entity secure the SonoCoin blockchain network by becoming a validator.

Roadmap Going Forward

As past achievements were described in the milestones sections earlier on, below there is a resumé of the future goals and potential achievements by end of Q1 2020:

- Initial Exchange Offerings and public launch
- Cryptocurrency exchange listings
- Consensus Audit
- Private Bug Bounty
- Public Bug Bounty
- Code & Protocol Audit Finalized
- Test Net Deployment
- Main Net Beta Release
- Consensus-as-a-Service outreach
- First commercial deal signed within the media sector
- First commercial deal signed in the land/p

- Mobile/Desktop Software Updates (UX)
- Ultrasonic Frequency Transactions development begin
- Smart Contracts development
- Proof of Contribution Consensus

Team Overview

Founder / CEO, Leon Afanasyev

Founder and Director of Crown Capital Group. Former Investment Advisor at Morgan Stanley.

CTO, Vlad Mitrofanov

Previous experience: Software Engineer specialized in Quantum Cryptography. Founder of BitCAD – voice authentication cryptocurrency

Senior Programming Expert, Tim DEV

Cryptography and Security Expert, Master's in Computer Science, Languages: C, C++, JavaScript.

Infrastructure Specialist, Lenar DEV

Master's Degree in System and Software engineering, Languages: C++, JavaScript, Python, STL, *openGL*

Code and Protocol Specialist, Alex DEV

Master's Degree in Mathematics, Languages: C++, JavaScript, Python, STL, *openGL*

Head of Investor and Corporate Relations, Erenik Yzeiraj

Investment Advisor at Crown Capital Group. Analyst M&A/Corporate Finance - BPDG and RAMPartners SA.

Head of Marketing, Evan Dean

Blockchain expert and crypto-trader. Front-end content developer and Founder of the Fintech Forum.

Advisors

Strategy Advisor, Alex Alexandrov

Founder & CEO of Coinpayments.net – a premium Bitcoin, Litecoin, Ethereum and other alternative crypto-currency payment processor, trusted by over 600,000 vendors across 182 countries

Tokenization Advisor, Sven Möller

Head of Tokenization Services at Swisscom Blockchain. Manager – Ernst & Young

Member of Advisory Board, Jean-Henry Morin

Professor of Information Science at University of Geneva *ThinkData.ch*.

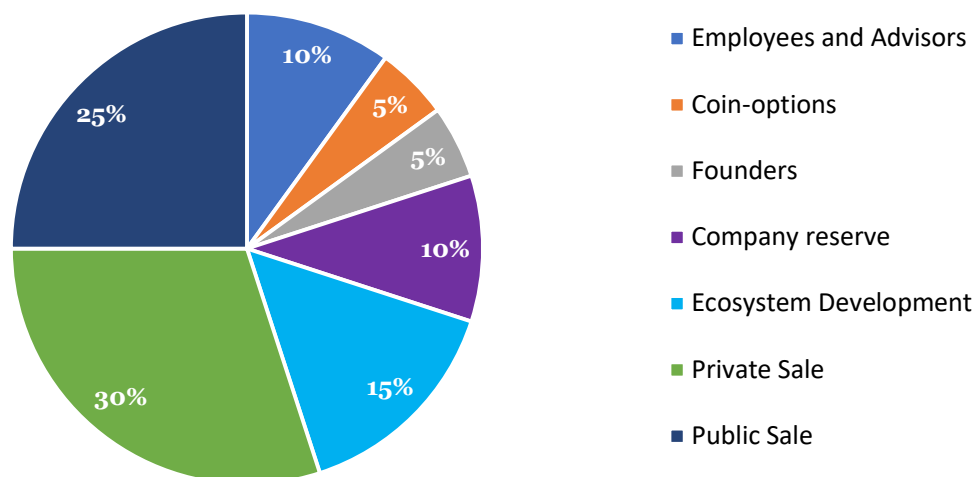
Member of Advisory Board, Arnaud B. Perdrizet

Founder & CEO of World Payment Solutions Senior Advisor to Wirecard Group.

Initial Exchange Offering

In order to build a viable ecosystem around the SonoCoin blockchain Crown Capital Group SA will issue SonoCoins in the course of an Initial Coin Offering (ICO). This will lead to a network of coinholders laying down the basis for an active ecosystem. The funds paid in exchange for SonoCoins will be used for promoting the project and enter into partnership as well as further develop the SonoCoin technology. Crown Capital Group SA commits to undertake all reasonable efforts to lead the SonoCoin project to success.

Coin Sale Model



Coin Allocation Model	Coins	Percentage
Total Coins in circulation	100,000,000	100%
SonoCoin Reserve	30,000,000	30%
Employees and Advisors	10,000,000	10%
Coin-options	5,000,000	5%
Founders	5,000,000	5%
Company reserve	10,000,000	10%
Ecosystem Development	15,000,000	15%

Coin Sales	Coins	Percentage	Price	Amount
Private Sale	30,000,000	30,000,000	€ 1.00	€ 30,000,000
Public Sale	25,000,000	25,000,000	€ 1.50	€ 37,500,000

Coin Allocation Strategy

30% of the total coin supply will be retained in reserve. This reserve will be used for SonoCoin business, ecosystem and software development such as employee salaries and performance-based bonuses, a project reserve and a reserve for original founders – those coins will be locked until Q4 2019. The reserve will be split between employees and advisors (10%), coin-options compensation allocation (5%), founders and stakeholders (5%), a company reserve for the SonoCoin operating and marketing activities (10%) and ecosystem development. Those coins will be locked until Q4 2019.

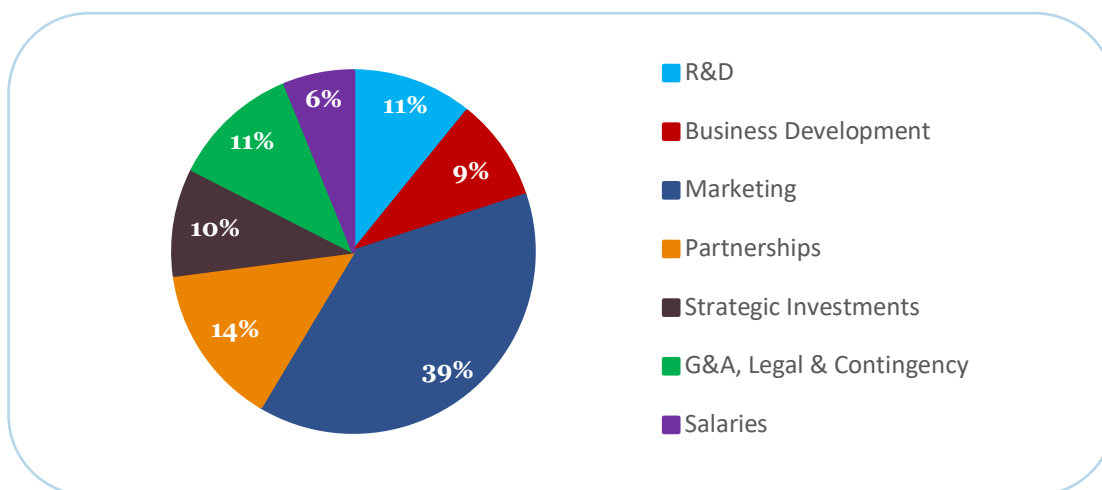
A total of 30% of the coins will be offered during SonoCoin's private sale and an additional 25% to be offered in a public sale. The public sale event is expected to provide important marketing, visibility and awareness to the SonoCoin project in the blockchain community, in addition to the funding.

The estimated coin sales will result in a **soft cap of €12,500,000** and **hard cap of €67,500,000**. If the soft cap will not be reached, the founders and existing shareholders of Crown Capital Group SA will provide the additional funds to continue the project.

Any unsold coins during private and public sales will be allocated to SonoCoin's Ecosystem Development reserve, a fund of coins used to engage, incentivise and develop SonoCoin's global community, including bug bounty program, software developer community, academics researchers, commercial partners, financial partners, media partners, etc.

After the end of the lock-up period in beginning of 2020, the coins from the reserve will be sold in the markets based on the following schedule: 5% of the monthly trading volume to be offered during the following month in equal amounts daily.

Private and Public Use of Proceeds



Public and private sale proceeds will be divided accordingly as shown above. Up to 39% of the crowdfunding sales will be allocated to building solid and sustainable marketing campaigns to build the necessary awareness among cryptocurrency communities and targeted industries. Considering the current readiness of the SonoCoin technology, we believe it is important to allocate the majority of the proceeds to the go-to-market strategy. A combination of advertisement techniques like TV advertisement, digital marketing, events & conferences, social media, community development, sponsorships, etc., along with the marketing team's salaries will constitute the SonoCoin marketing strategy.

Once the marketing strategy in execution, SonoCoin will allocate 14% of funds to actively pursue corporate partnerships to aid the adoption and acceptance across various targeted industries.

Strategic investments within synergistic ecosystems is another crucial pillar of our commercial ecosystem build-up strategy, accounting for 10% of proceeds. Business development reserves are projected to finance investor and commercial road shows, prestigious business development advisors, conference presentations and overall international business outreach.

SonoCoin will be launched and operated out of Geneva, Switzerland. Being one of the most prestigious international cities with a solid business, technology and financial infrastructure, the cost of talent in Switzerland is relatively high compared to other global centers. Nevertheless, we believe the canton of Geneva represents one of the most advanced and dynamic cities in the world in terms of cryptocurrencies and blockchain, coupled with the stability, safety and security of the overall Swiss environment. Therefore, only administrative and senior management salaries will represent 6% of the total use of proceeds, without taking into account sales & marketing personnel or software engineers.

Ultimately, SonoCoin envisions to couple its scientific hub in Russia with a research & development unit in Geneva, in order to foster the development of the technology as planned in the roadmap. Combining these expertise and hubs together is expected to result in a successful and efficient milestone delivery.

Partnerships & Advisors

Swisscom Blockchain Partnership

Swisscom Blockchain AG is a leader in providing ICO advisory services in the Swiss market. Thanks to their technical and advisory services our fund raising will benefit from an infrastructure, that guarantees security of funds and compliance.

Workstreams & Phases

We have onboarded Swisscom Blockchain in order to provide a first certification of our blockchain network. Required activities are code auditing, protocol stabilization, but also infrastructure provisioning.

Protocol Release

Swisscom Blockchain's team will be closely reviewing the code for any errors. Their aim will be to mitigate the risk of potential vulnerabilities by building circuit breakers that pause transactions in

the case anything goes wrong. The protocol release will be closely monitored and remain prepared for effective upgrades and bugfixes.

Bug Bounty

A bug bounty program allows for a mass approach to identifying issues in the code without placing too much at risk. The bug bounty pays coders to view a limited release and find faults.

LA Token IEO & Listing

SonoCoin is currently preparing its Initial Exchange Offering (IEO) along with LATOKEN cryptocurrency exchange. The IEO will begin in August 2019, all relevant information will be communicated via an official SonoCoin pres release.

LATOKEN is a rapidly growing crypto exchange focusing on providing liquidity supply for new utility and security tokens:

- 350+ crypto pairs already traded
- 400,000 traders already registered
- Low trading and withdrawal fees
- New trading pairs added every week

Coinpayments.net Partnership

Our team is fortunate to welcome the leader in alt-coin payment processing. SonoCoin plans to leverage the Coinpayments ecosystem and services to further promote our upcoming ICO. It is our firm belief that Mr. Alexandrov's combined expertise and extensive network will provide valuable insights.

Ilex Alexandrov is a pioneer in the blockchain industry having started-off as Forex trader and EA platform developer prior to launching his successful Coincable.com venture supplying bitcoin mining hardware. As Founder and CEO of Coinpayments.net, Mr. Alexandrov has facilitated real-world use for cryptocurrencies by processing payments on behalf of thousands of merchants worldwide. Today, Coinpayments' is a trusted name in the industry boasting over 2,000,000 vendors across 182 countries.



