Javvy — a comprehensive solution for buying, selling, & managing cryptocurrencies

White Paper

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Abstract

There are many reasons why cryptocurrency has not yet achieved mainstream adoption. The main reason is that the entire process of buying and managing cryptocurrency is very technical, and current crypto service provider processes and policies put user's private information at risk. There is also a lack of emphasis on the importance of a user-friendly crypto wallet, which should serve as the user's first impression and gateway to cryptocurrency. However, true security means avoidance of web-based crypto wallets and exchanges. Repeated massive data breaches, across the entire financial sector, set the precedent that trusting web-based financial services is a high-risk endeavor.

Potential users are often frustrated and simply give up, because a properly designed process and a fully functional crypto wallet with crypto exchange combination, does not yet exist. The cryptocurrency market is long overdue for a comprehensive crypto solution that encompasses the wallet, exchange, and real-world uses. The Javvy solution is the world's first truly usable, all-in-one crypto solution.

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Risk Disclosure

JVY Currently Associated with the Ethereum Protocol
The JVY token are currently based on the Ethereum protocol. As such, any malfunction, unintended function, unexpected functioning of or attack on the Ethereum protocol may cause JVY to malfunction or function in an unexpected or unintended manner. More information about the Ethereum protocol is available at http://www.ethereum.org.

Exercise Caution with Credentials & Private Keys
As with holding any cryptocurrency, the owner should guard against unauthorized access to their electronic devices and take adequate measures to keep all credentials, seeds, wallet words, and private keys confidential.

Regulatory Action in One or More Jurisdictions
Blockchain technologies have been the subject of scrutiny by various regulatory bodies around the world. The functioning of the Javvy application and the JVY token could be impacted by one or more regulatory inquiries or actions, including the licensing of or restrictions on the use, sale, or possession of digital tokens like JVY, which could impede, limit or end the development of the Javvy application.

However, the unique company structure of Javvy makes it less susceptible to US government intrusion, demands for information, and attempted overreach of authority that may affect the overall service.

Theft and Hacking
Hackers or other groups or organizations or countries may attempt to interfere with the Javvy application or the availability of JVY in any number of ways, including service attacks, Sybil attacks, spoofing, smurfing, malware attacks, or consensus-based attacks.

However, Javvy plans to go to great lengths to educate potential contributors against the dangers of social engineering and other methods that scammers use to steal funds. Additionally, the Javvy application security is designed in such a way as to greatly limit any risk to the user and, by extension, the entire crypto ecosystem.

Security Weaknesses in the Javvy Application
The Javvy application consists of several, community supported, open source software components that are possible targets for malware attacks. There is a risk that the Javvy team or other third parties may intentionally or unintentionally introduce weaknesses or bugs into the core infrastructural elements of the Javvy application, interfering with the use of or causing the loss of JVY and/or other cryptocurrencies.

However, Javvy contracts with highly respected, international security companies to provide periodic, thorough code review audits (as with major new releases or merges of new open source code). Javvy also has an exhaustive internal code review for minor updates and additions, as well as a secondary review of all internally generated code, to prevent internal breaches of security, whether intentional or unintentional.

Disclaimer
Last Updated June 21, 2017

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Introduction

Cryptocurrency, informally referred to as crypto, is a new form of asset that is digital in nature. Crypto can be owned, managed, and used by individuals and/or organizations by controlling a digital private key to post and access encrypted transaction records on the decentralized blockchain ledger. The blockchain ledger serves as a publicly accessible, immutable, and permanent record of transactions that require a consensus of positive confirmations across multiple nodes to validate each transaction.

A crypto asset is completely digital and derives its value from an organic market influenced by supply and demand. These digital assets qualify as a store of value and are notable for their similarities with physical precious metals, due in part to their finite supply, but has the added advantage of being easily divisible and transferable. The added flexibility that cryptocurrencies have over their physical counterparts enables them to be used more readily as a form of payment, leading many to consider crypto as the future of global finance. The continual record breaking increases in value, coupled with the rise in popularity of its rapidly growing use as a financial instrument, has created a new class of highly lucrative financial technology (FinTech) solutions to support the growing demand for crypto. As more consumers accept cryptocurrency as an alternative to traditional financial vehicles, the need for a comprehensive solution to be at the forefront of the massive changes ahead could drive significant profits for the ultimate FinTech crypto solution.

Problem

With finance as the foundation of the global economy and the ever-increasing buzz surrounding the rapid rise of the cryptocurrency market, cryptocurrency is poised as a disruptor and is likely to become the most lucrative invention ever known. Mainstream adoption of cryptocurrencies has yet to take hold, despite nearly a decade of massive funding during which the industry has seen spectacular increases in overall value and utility. A primary reason for this lack of traction stems from the absence of a secure and intuitive user-friendly process for acquiring and managing crypto securely and efficiently.

As the popularity of the decentralized attributes of cryptocurrency continues to spawn ongoing debates and regulations pertaining to its classification and risk of criminal abuse, the already ambiguous process of buying and selling cryptocurrency becomes even more complex for its users. Companies in this industry are struggling to adopt and abide by these new regulations imposed to curb money laundering and the funding of criminal enterprises. Their inexperience, improperly designed systems, and slack privacy policies threaten the safety and security of user identities and funds which result in yet more barriers to mainstream adoption.

Due to inaccurate or non-existent documentation, many crypto service providers are built on business structures and technologies that endanger users. The current status quo is for traditional crypto service providers to require, by way of a one-size-fits-all identification process, substantial personal and private information from every consumer. This process exposes users to increased risk of identity theft, loss of funds, and casts the net of regulation too wide. Prior to the Javvy solution, despite many millions of dollars invested in solving the issue, no adequate solution existed.

Solution

Javvy proposes its crypto solution for users to overcome all barriers to adoption with a regulation-first approach, defining a carefully crafted business infrastructure and multi-tiered risk mitigation policy. The technology framework is then built on that solid foundation. The consumer-facing front-end of the Javvy solution couples, by exclusive integration, a crypto wallet with the world's first distributed, fully automated, cross-currency exchange. The combination of a properly designed crypto exchange with a safe, intuitive, and feature-rich crypto wallet, and a capable team is what sets the Javvy crypto solution apart.

Business Model for Regulatory Compliance

The Javvy business entity is structured to allow the separation of certain technology components and compliance processes across multiple jurisdictions to allow for a much easier and lower risk registration process for all cryptocurrency customers globally. The Javvy compliance team applies its unique knowledge and experience of the regulatory framework to navigate the quagmire of policies to further simplify the user experience while increasing security and ensuring all relevant regulatory requirements are satisfied.

Mobile users can install the Javvy wallet application easily, while desktop users are download the Javvy wallet from the Javvy website and use it anonymously for basic send, receive, and convert operations. The wallet's front-end user interface is designed with the layperson in mind and includes an integrated registration process for users wishing to buy and sell crypto. For the more advanced operations of buying, selling, and using cryptocurrency in the real-world (e.g. international debit card, sending CASH, etc), further simplicity is achieved by implementing a rule based tailored registration process to require only the documentation needed to meet the regulation criteria of the user's country of citizenship.

Technology Architecture

The Javvy solution is ***not*** web-based, avoiding the inherent risks of traditional web-based financial services. Additionally, Javvy's technology is designed to isolate core components, according to regulatory type and AML policy restrictions. By taking this regulatory-centric approach, Javvy is able to provide anyone in the world, who has Internet connectivity and is not barred from cryptocurrency by their country's policy, full access to the cryptocurrency markets. Specifically, the Javvy architecture separates key functions that do not require registration from those that do.

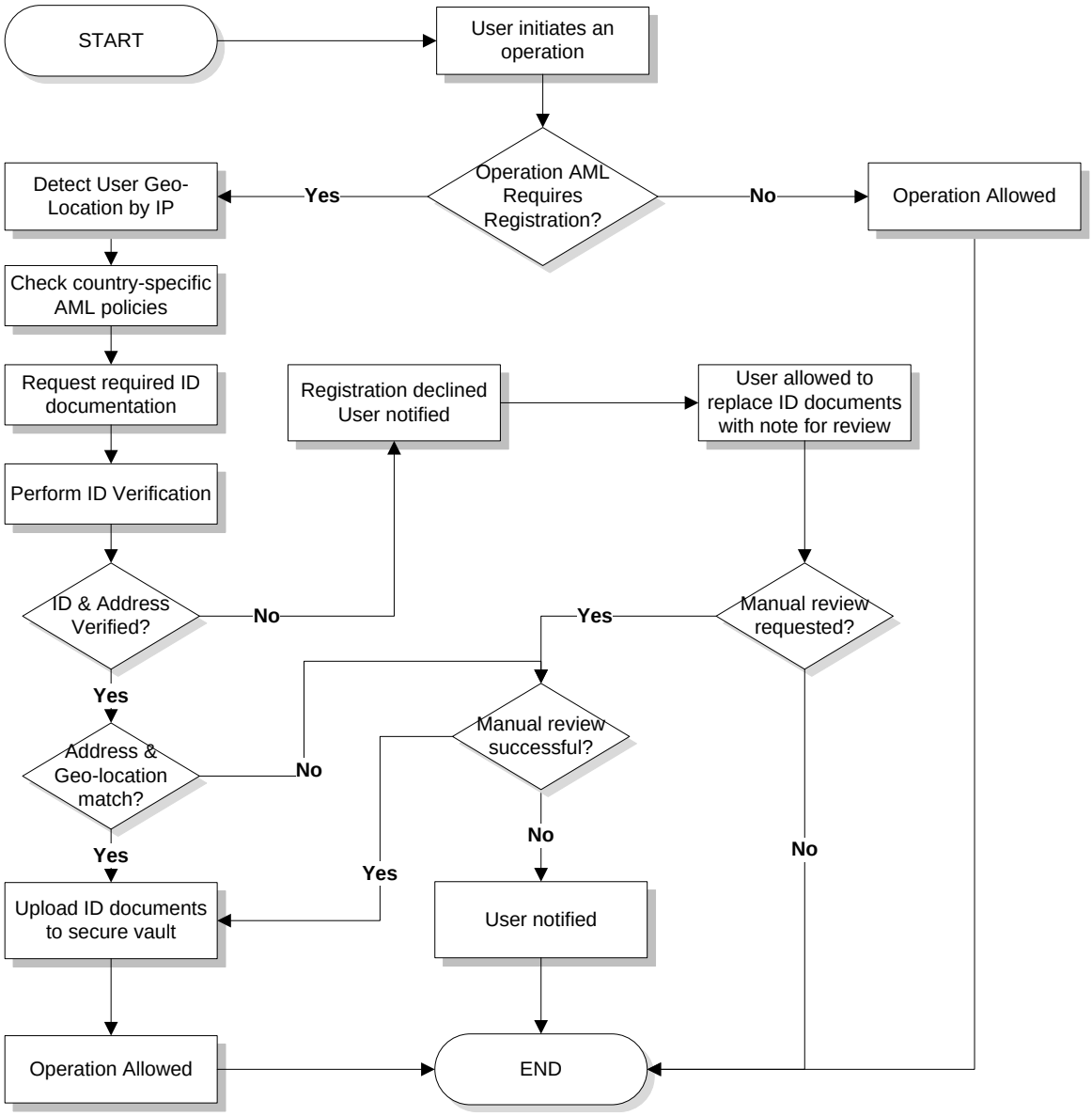
As a result of Javvy's regulatory-centric approach, users do not need to register or have address and identity verified for send, receive, manage, or convert operations. If a user desires to purchase or sell cryptocurrency, they will then be asked to register and provide the minimal ID verification documents, as per their country of citizenship. The mobile apps will provide easy methods to upload pictures of documents and desktop apps will allow for easy upload of scanned documents, all sent to secure Javvy servers for rapid verification.

If there is a problem with verification, a manual review may be scheduled. The manual review generally takes less than a few minutes, up to a few hours. In tough cases, whereas documents are not recognized or the user is a citizen of highly restricted and regulated country, a more stringent review may be scheduled. In this case, the delay may be up to several days and approval may not be given, based on various criteria.

Once ID and address verification is completed, the owner of the verified wallet address will be able to purchase and sell cryptocurrencies through Javvy, as desired, without having to complete any further verification. In most cases, Javvy will not store user's credit card details or banking information, so the payment method will be required to be entered upon each order. The payment method entered ***must match*** that of the ID verification.

The user will be given the option to store their payment information, for convenience, but the risks of doing so will be clearly outlined. Even though the Javvy solution is not a web-based solution, storing any sensitive user data, if the save option is chosen, results in there always being a risk of data breach by unauthorized agents. In every case, Javvy will take every precaution to ensure the safety of user's information stored on its servers, but there will always be a threat of data breach with any information stored in servers accessible online.

Overview of Registration and Rapid ID Verification Process



Detailed description of logic flowchart diagrams:

- Users performing unregulated send, receive, and convert transactions will bypass registration.
- Unregistered users attempting to perform regulated transactions initiate the registration process.
- Geo-location technology is used to ascertain document requirements and validate origin of credentials against the user's location at the time of registration.
- The system performs rapid verification of the supplied credentials, when possible.
- If rapid verification is not possible, the application is flagged for manual review.
- If verification is unsuccessful, the registration is declined with a detailed report.
    - The user may submit further credentials with an explanation for review.
    - The user may also request a manual review.
- If verified, the account is authorized allowing the user to conduct regulated transactions.

Patent Pending 62543097

Javvy received a patent pending for a provisional patent that covers the process and methodology for the automatic, bi-directional conversion of supported national currencies and cryptocurrencies. The novelty of this process is that it is distributed, fully automated, and ties into legacy banking system technology utilizing current banking APIs. Existing providers are limited by the amount of reserves held as deposits needed to clear these transaction types, which impede their ability to scale their customer-base. The Javvy solution overcomes the issue by providing a clear, fully scalable path to buying and selling cryptocurrency easily, eliminating the need for massive cryptocurrency reserves.

Overview of decentralized, automated, cross-currency exchange

Note: FIAT refers to government-backed currency, such as USD (US Dollar), French Franc, Japanese Yen, etc.

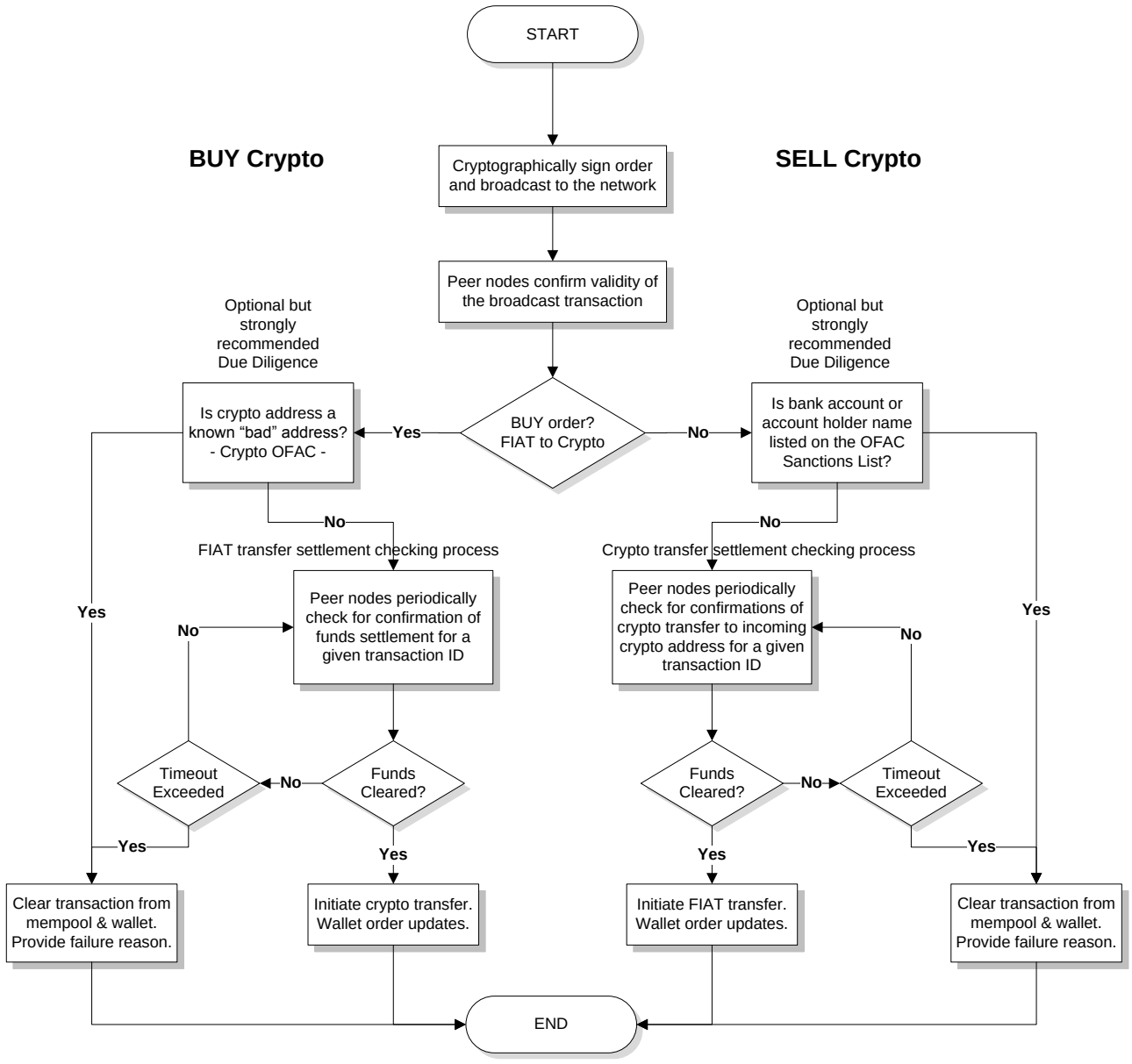


Fig 1. Overview of cross-currency exchange process

Patent Pending 62558597

Javvy received a patent pending for a provisional patent that covers the process and methodology for conversion and settlement of cryptocurrency purchases, using an intermediary layer, the Javvy token (JVY), for the purpose of eliminating the need for holding disparate, volatile cryptocurrency reserves. This is a drastic improvement over current crypto exchanges that merely offer one (1) or two (2) cryptocurrencies (typically, bitcoin and Ethereum) to their users, due to the reserve limitation and extreme value risk. In contrast, by using this patented intermediary interchange process, Javvy will instantly be positioned to support nearly every major cryptocurrency in existence. Javvy users will be able to buy, sell, use, and manage them all, with the underlying framework remaining transparent from a user perspective.

Handling Crypto or TOKEN Fulfillment for BUY Orders

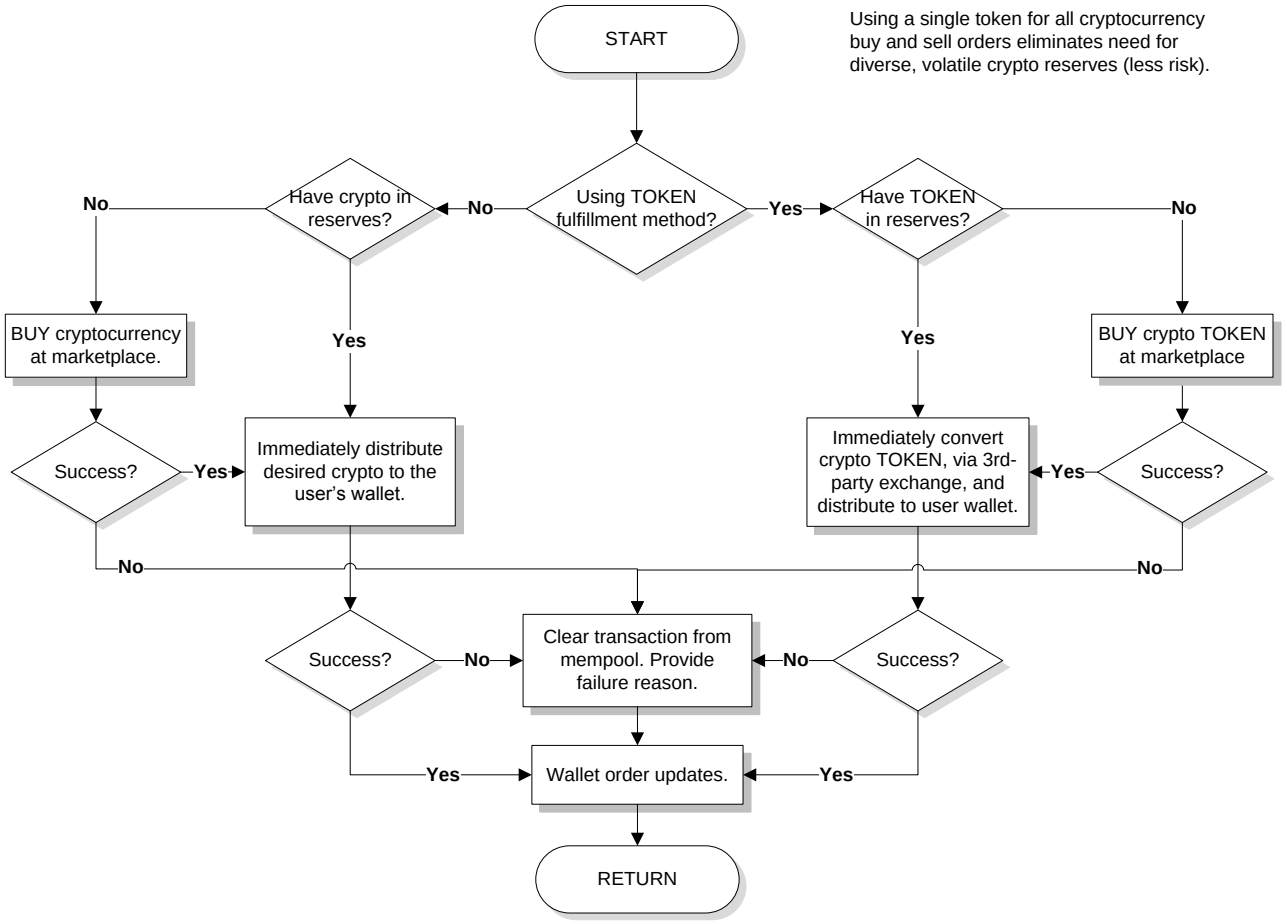


Fig 2. Details of the intermediary layer interchange process

Detailed description of logic flowchart for cross-currency exchange:

- User places an order to buy or sell cryptocurrency.
  - **Fig 2.** Every order will buy or sell the JAVVY token (JVY) inside the wallet.
  - **Fig 2.** Using the JVY token in this way negates the need for us to store massive crypto reserves.
  - **Fig 2.** By default, to keep things intuitive, the wallet will automatically use the wallet's convert function to convert from the JVY token into the desired cryptocurrency.
- Peer nodes validate the transaction via network confirmations.

- If the order is a national currency (a SELL order), the OFAC list is checked.
    - If a match is found, the system cancels the order.
    - Otherwise, peer nodes periodically check for a sufficient number of blockchain confirmations.
- If confirmed, the chosen currency is sent to the wallet address. Otherwise, the order is cancelled.
- If the order is for cryptocurrency (a BUY order), a crypto OFAC is checked.
    - If a match is found, the system cancels the order.
    - Otherwise, peer nodes periodically check for bank notification that funds have cleared.
- If the funds clear, a wire transfer is initiated in the chosen currency. Otherwise, the order is cancelled.

Please refer to patents pending 62543097 & 62558597 for more detailed flowcharts and descriptions.

Features

The Javvy solution consists of a cross-platform crypto wallet available on Windows, Linux, Mac, Native iOS, and Native Android.

The Javvy wallet can be downloaded from the Javvy website or installed to a mobile device from the related app store. Nearly every citizen of every country will be able to use the Javvy wallet and exchange. Users will have the capability to manage numerous cryptocurrency assets, see their holdings and transactions at-a-glance. The will also have the ability to send, receive, and convert cryptocurrency, without registering with Javvy.

For those who wish to buy, sell, or use cryptocurrency to fund an international debit card, Javvy provides an easy, friendly, and fast option for registering and verifying identity. Javvy aims to make the process as quick and hassle-free as possible, by tailoring identity document requirements to each user, according to the regulations of their country of citizenship and providing a convenient means to deliver those documents.

Aside from the many features that are currently unique to the Javvy wallet, users will enjoy the peace of mind of using a wallet that places a strong emphasis on security and user-friendly backup options. Institutional and power users will also benefit from the added ability to manage fund access with configurable (2-of-3, 3-of-5, 5-of-6, etc.) “multisig”, securing funds in shared wallets with multiple signatures. International users will gravitate toward the Javvy solution for the convenience of having the wallet translated into every popular language.

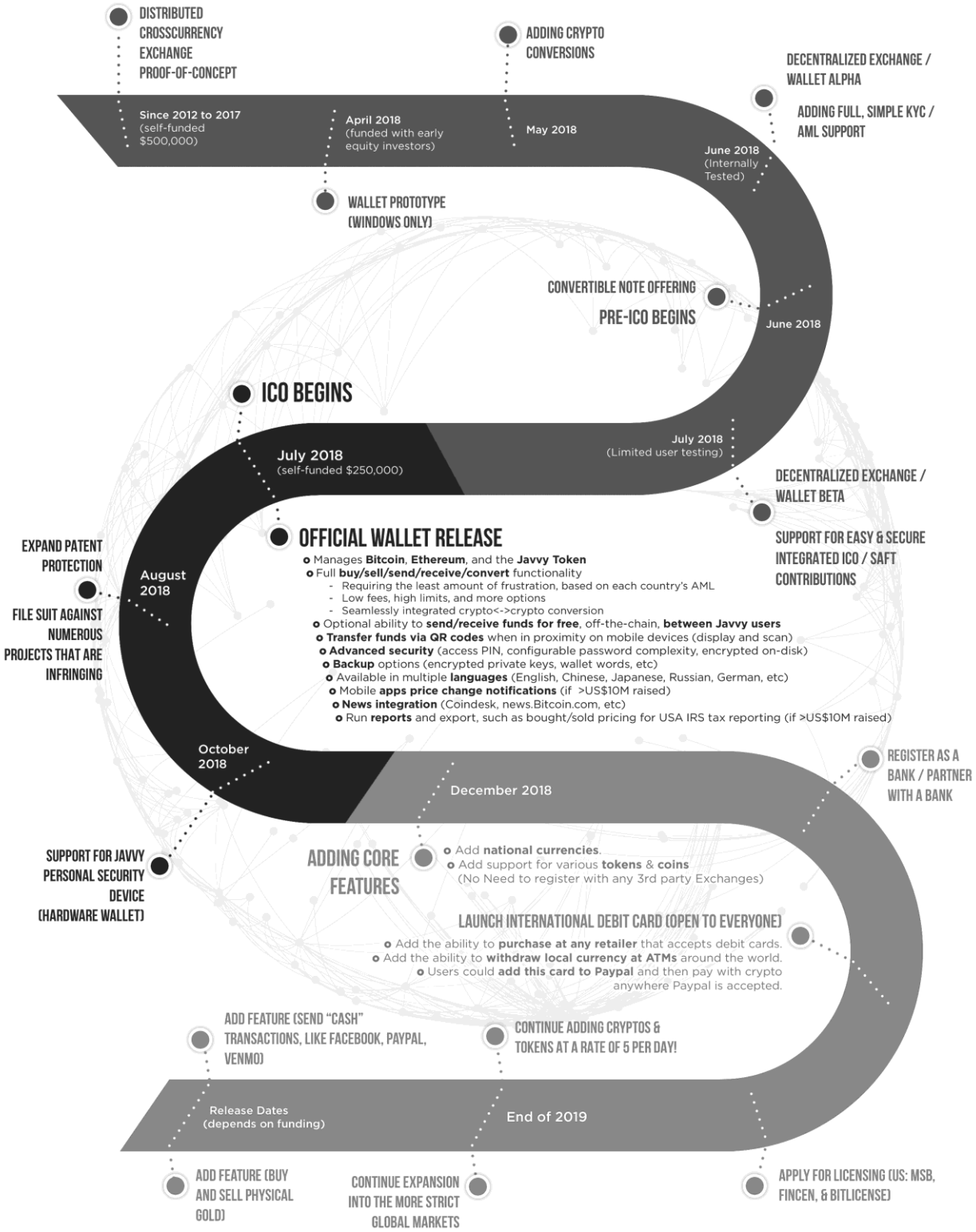
Goal

Javvy plans to disrupt the cryptocurrency industry by providing a superior alternative to traditional web-based crypto exchanges and wallets. By building a comprehensive, secure, and intuitive crypto wallet with buy, sell, convert, and management capabilities, Javvy aims to deliver the ideal solution.

Javvy approaches cryptocurrency from a compliance and regulatory ***first*** perspective, and is powered by a team with decades of extensive regulatory, compliance, programming, and security experience.

The cryptocurrency market is still in its infancy. As a result, lack of information and the absence of easily identifiable best practices, has led crypto users to resort to combining feature-poor, and often insecure, crypto utilities to obtain and manage their cryptocurrency. We, the Javvy team, decided that there is a better way. We are consolidating the full functionality of cryptocurrency into a previously non-existent, comprehensive solution with a focus on security, simplicity, and keeping the control of cryptocurrency where it belongs, in the hands of its owners.

Javvy Crypto Solution Development Roadmap



Introducing the JAVVY (JVY) Utility Token

Ethereum enables the creation of ERC20 tokens, which can be used in an incentive system to replace intermediaries. In the Javvy system, JVY tokens will play a key role in providing a common framework for buying into and selling out of cryptocurrency. Users will buy and sell the Javvy token (JVY), first, and then have the option to hold, sell, or convert it to nearly any other cryptocurrency in existence.

For users who choose to buy-and-hold the Javvy token, the price differential provides an opportunity to convert to other cryptocurrencies, later, for less than a real-time transaction directly into a given cryptocurrency would cost. Users who buy and convert immediately should not have any noticeable “price skew” before completion of the conversion.

Token Technology

Our tokens will be of a standardized ERC20 form, so it can be easily integrated by any other party who wishes to do so. All this code will be publicly available in our repositories and can be audited by anyone who wishes to do so.

Javvy Token (JVY) Transactions

A connection with the Ethereum Mainnet will be handled using Parity, which will serve as our Ethereum node. This will ensure that our connection to the network is always synchronized, and transactions can be processed and validated fast and securely. A React and Web3 stack will be used as our front-end bridge and interface to monitor all events in real-time.

Javvy Token (JVY) Technical Details

Token Name	JAVVY
Token Compliant	ERC20
Token Technology Platform	Ethereum
Token Blockchain Explorer Link	https://etherscan.io/token/0x6dC896e52DeF34fF23Ab0B07250e12B9Fd9fe9E7
Token Decimal Points	18
Token Smallest Unit Name	JVYbit
Token Symbol	JVY
Token Total Supply	Exact amount will be decided by contribution.

About Token Sale

We are launching an open Ether (ETH) capped token sale to raise funds for the Javvy project to deliver a fully functional finished product and add more features in the platform (see roadmap). We will be raising a minimum 1,000 Ethers and a maximum 100,000 Ethers (both inclusive) during the token sale as well as presale. The number of tokens issued per ether will depend on the ethers raised as per below table. You can buy JAVVY tokens using any amount of ethers including the fraction of ethers like 0.0023 ETH etc. We will be offering a discount to early buyers which will decay with the number of ethers contributed during the token sale. Those

who buy tokens in the early rounds of the pre-sale will benefit from bonus tokens being issued. You can also join us in the pre-sale by contacting us directly with a minimum commitment.

Token Sale Plan

Token Sale Start Date & Time:	**July 4th, 2018, 13:00:00 UTC**
Token Sale End Date & Time:	**July 19th, 2018, 13:00:00 UTC**
Token Sale Duration in Days:	**15 Days** (or until CAP reached)
Max Funding Cap in Ethers:	**100,000 Ethers** (up to 100,000,000 JVY Issued)
Minimum Funding Target in Ether:	**1,000 Ethers**
Token Price:	**Slabs based on funds received**
Incentive:	**Using JVY to buy/sell/convert all major cryptos will receive 50% discount on fees.**
Refund if Token sale fails to raise minimum?	**Yes, Only if ICO crowdsale fail.**
Token Issuance	**Instantly. But will be transferable among buyers or outside only after successful crowdsale.**
Escrow for the raised fund?	**Yes, via ConsenSys (3-of-5) MultiSig Wallet**

Token Pricing

#	Ether committed (Including presale)	Stage	Tokens PER Ether
1	0-20,000	Token Sale	1,250 JVY
2	20,001-50,000	Token Sale	1,100 JVY
3	50,001-100,000	Token Sale	1,050 JVY
4	100,000+	Token Sale	Sale will stop

Distribution Model

ICO Sale	**100,000 Ethers** (Max)
Operational Use	**10% of sold tokens**
Future Talents	**4% of sold tokens**
Founding Partners	**5% of sold tokens**
Bounty Program (Partner)	**1% of sold tokens**
Advisors	**5% of sold tokens**

Fund Escrow Arrangement

When the Javvy token sale completes successfully, those tokens will be enabled for transfer among the members instantly. Tokens can be pre-purchased through the ICO site, earned through a series of bonus / bounty / referral programs, or via JAVVY platform.

Funds will become available under the milestones described under 'Project Funds Release'. To promote trust in the Javvy project and execute a successful Token sale, we have established an escrow arrangement using a multisig wallet for Ether.

Ether Multisig Wallet: We will be using standard Ethereum multisig wallet contract created through the Ethereum Parity Wallet. All transactions will require 3 out of 5 below signatories to sign the transaction.

Escrow signatories will be:

Brandon Elliott, CEO, JAVVY, https://www.linkedin.com/in/neosysconsulting/
[Ethereum Address: ---] 0x00B933dFC7F69533979E54D0f9F52E617621ABE6

Frank Grogan, CMO, JAVVY, https://www.linkedin.com/in/frankgrogan/
[Ethereum Address: ---] 0x003441d603F3de917B916cd92A6E4e65D90644Ab

Kirubel Girma, Lead Developer, JAVVY, https://www.linkedin.com/in/kirubel-girma-6581a8a6/
[Ethereum Address: ---] TBD

Attila Jancsina, Developer, JAVVY
[Ethereum Address: ---] 0x0032e8244600728f21725a82899Ce4d8D8Ffb389

Leah Elliott, Public Relations, JAVVY
[Ethereum Address: ---] 0x001442cB0DD6247a71d369639b23e60A35b7Dcf7

The trusted signatory advisors in total will receive 0.5% of the amount raised at ICO in ETH, divided evenly among them, but with the minimum of 20 Ethers each. This will be treated in the P&L as part of 'cost of raising capital' and the escrow fees shall be paid out the day after the ICO has officially closed. These fees will be paid only if the sale closes successfully.

They shall be calculated as follows:

Total raised during ICO x 0.5% = total escrow fees.

The remaining balance will constitute the funds the Escrow Signatories will release to the project.

Fund Release

The ICO Balance after escrow fees will be released via multisig on a 3-of-5 arrangement.

Funds will be released in 3 stages when the following milestones are met:

1. JAVVY Token post Token Sale complete: 50% funds released
2. **Milestone 1:** JAVVY exchange confirmed as operational: 25% funds released
3. **Milestone 2:** JAVVY wallet application live in beta: 25 % funds released

There are 2 circumstances under which REMAINING funds raised will be returned to purchasers.

1. The first milestone not been met after a period of **365** days following completion of the ICO.
2. None of the Escrow agents are able to establish contact with any member of the JAVVY or their project team, by any means, for a period of **90** days.

Usage Plans along with Timeline

The continued advancement and development of the Javvy crypto wallet, Javvy exchange, and additional features will be funded according to the timeline and the amount of funding raised. Javvy plans to release a fully functional crypto wallet within 4-6 months of successful ICO completion, but please refer to the roadmap for more specific timelines. There will be some use of funds toward salaries in the first year, with the expectation that revenues will cover salaries in future years. Marketing will likely be the largest on-going expense due to the importance of capitalizing on being the first product of its kind on the market.

However, the bulk of funds will be used for holding cryptocurrency and national currency (fiat) reserves. With larger amounts of funding raised, considerable funds would be used to attract more (and expensive) personnel to further goals, to obtain licensing or acquire patents, and/or integrate and develop very desirable, new features for Javvy, and all cryptocurrency, users.