IOV

Token Sale

IOV: Bringing Blockchains to the People
The Blockchain Communication Protocol

Abstract

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The Blockchain has brought a number of promises to the world and is expected by many to disrupt and transform financial services, organizations and global exchanges. Those promises will likely impact many industries like Finance, Healthcare, Consumer Goods and Governments. The blockchain appears now to be the solution to fix many technological problems like smart contracts or proof of ownership. Even so, the problem of the most basic and common use of the blockchain, which is to easily and securely receive or send a token like a bitcoin, is yet not solved by the industry.

Within this context, the IOV community is bringing blockchains to the people. We are committed to delivering a protocol and an application that empowers the end-users when it comes to sending, receiving and holding tokens.

Limitations of Existing Blockchains

Major challenges of the blockchain

The Blockchain has brought a number of promises to the world and is expected by many to disrupt and transform financial The usage of a blockchain is not a user-friendly concept designed for most people. It was initially designed for cryptography enthusiasts and professionals. On the other hand, when it comes to the actual end-users and people, blockchain platforms haven't been able to demonstrate a reliable, smooth, simple and secure experience to exchange different values and tokens. A combination of human error issues, the complexity of the experience and the non-interoperability of the chains are a major problem for the end-user. For those reasons, many individuals don't want to use the blockchain and are skeptical about its usability.

Limitations of Existing Blockchains

The blockchain ecosystem is complex for most people

Even if most people are now familiar with the word "blockchain", the majority of the names, concepts and operating details is all rather complex for a user. The blockchain ecosystem is still full of jargon and acronyms that can be intimidating for a user. In order to make cryptocurrencies more mainstream and allow for widespread adoption, it is necessary to simplify not only the user experience but also the access to relevant knowledge and to empower users with the ability to act on the blockchain.

The ability to act on the blockchain involves the concept of wallet, and here lies another issue. A wallet is the typical interface a user uses to interface with the blockchain and each blockchain typically has its own public address format (Bitcoin: 1BvBMSEYstWetqTFn5Au4m4GFg7xJaNVN1 and Ethereum: 0xE93E588821A00a9F2ff3f9E40E224cAA5118f274). These public addresses are not easy to remember due to their cryptographically derived nature.

The blockchain ecosystem is not well connected

Finally, it is very difficult for a company to create a new token and launch a secure ICO, even using the most widespread method of ERC20 tokens. And if a company chooses to launch a blockchain outside of a main network, its blockchain is currently disconnected from the ecosystem.

Limitations of Existing Blockchains

The human error problem

A large number of transactions end up in errors and loss of funds. Even if the blockchain itself is secure to send a digital from one user to another, there is always the possibility of human error. It can be very easy to lose or waste tokens by sending them to an address not present on the blockchain. As of today, nearly 30% of the total Bitcoin created is likely to be lost or put out of circulation, due to human errors.

Exchanging tokens is a painful experience or the interoperability problem

Today, it is quite challenging for the end-user to turn a token to another. The process in most circumstances is extremely dependent on third parties for the exchanges and the effect has been counterintuitive. Some fundamental goals of blockchain were to limit the transactions costs and remove the necessity of the middle man. Meanwhile, exchanges have constantly increased their fees and created dependence on themselves to users. Furthermore, platforms are now blocking some accounts without explanation. The result is an experience similar to a traditional bank, controlling access to accounts and how those accounts can be used.

Solution

IOV's Solution

Our commitment

Delivering a tangible solution to the people. As entrepreneurs, experts in cryptocurrency, and digital technologists, we believe the time has come to deliver the promises of the blockchain to the real world and to re-empower the people with this technology. Our goal is to fix three major problems of the blockchain today when it comes to sending, receiving and exchanging tokens:

- the ease for the user with the IOV wallet and the value address naming
- the safety for the user with the Atomic Cross Swap feature of the IOV wallet
- the ease for the blockchain entrepreneur to connect his new blockchain to the ecosystem thanks to the Blockchain Name System and the deployment tools.

IOV's Solution

The IOV Wallet, the first generation of wallets designed for Everyone

The IOV Wallet will be the first wallet to implement our **Blockchain Communication Protocol**, or BCP. It is able to send, receive and exchange any kind of cryptocurrency from a single address of value. As soon as a blockchain implements the BCP protocol, its token will be transferrable via the IOV Wallet.

A comprehensive human value address

In order to solve the problem of the human error, such as sending a bitcoin to a wrong address, the user can register a human readable address:

Instead of sending a token to an address such as **1BvBCSEYstWetqTFn5Au4m4GFg7xJaNVN2**

Two users would just have to send tokens to each other via addresses such as:
antoine*iov
clarissa*berlin

This feature will make participating in transactions a seamless, easy and trustworthy experience.

IOV's Solution

The Atomic Swap

the possibility to exchange any Token without third-party exchanges

Thanks to the atomic cross swap technology, it will be possible to make blockchain interoperable and to exchange tokens without the need to use a third-party exchange.

Atomic swaps, also known as atomic cross-chain trading, make it possible for two parties to exchange one token for a different one, without the need to involve a third-party. It is a smart contract technology that is cryptographically powered and by leveraging atomic swaps, the risk of one party evading the payment of another is eliminated. This results in a system which makes inter-blockchain transactions secure for all parties involved.

Any wallet implementing BCP will be able to operate atomic swaps with tokens belonging to BCP implementing Blockchains.

IOV's Solution

The IOV Blockchain Name Service and deployment tools

A simple and secure solution to create interoperable blockchains or tokens

For many developers, creating their own ICO can be very difficult and creators of a new token usually face a lot of complexity to execute an ICO successfully.

The IOV community will provide a blockchain template that implements the Blockchain Communication Protocol, as well as sufficient deployment tooling. The IOV goal is simple: Deploying a blockchain or running an ICO should be possible by the press of a button. Being able to create a blockchain from a certified template has several advantages:

- The ICO is safe and secure
- Dedicated blockchain technology can scale up to 2,000 tx/s
- Consensus can be controlled by the issuer of the token
- Accepting several tokens during ICO without adding any complexity
- Seamlessly exchanging ICO token against other tokens later

All blockchains made by the IOV toolset will be automatically compatible with the Blockchain Communication Protocol.

Once created, the blockchain can be registered on the Blockchain Name Service and immediately visible in the ecosystem. This is the DNS-like protocol of the blockchain networks.

IOV Technology

IOV Technology

Key Concepts

The IOV team published the first technical white paper in December 2017, which has been clarified regularly. For a full explanation, please read our technical white paper Annex.

We propose a solution to empower the end-user. With IOV, anyone can easily send, receive or create digital assets. We remove the need to download multiple wallets, by providing a system that includes :

1. A protocol called the Blockchain Communication Protocol, or BCP, which new blockchains and wallet providers can implement to get immediate benefits.

2. A decentralized blockchain database called the Blockchain Name Service, the first DNS for all the active Blockchains. Blockchain Name Service lists all active blockchains, their respective tokens and the IP addresses of their bootstrap nodes. It is the first blockchain implementing BCP.

Blockchain Communication Protocol

Why a protocol?

As a new technology, the blockchains suffer from an important limitation in order to expand.

There is no standard in the blockchain industry and it becomes problematic when blockchains try to be interoperable afterwards. We propose a protocol to make sure new blockchains don't have to start from scratch every time. IOV community defines a set of specifications that blockchains can implement.

They have immediate benefits:

• No need to create a dedicated wallet
• Blockchain can be interoperable within the IOV ecosystem
• Being able to exchange tokens with others with no third party exchange involved

IOV community will provide a developer kit to make the creation of a new blockchain implementing the Blockchain Communication Protocol a seamless experience. Even though some blockchains may require changes to implement the Blockchain Communication Protocol, the system is designed to be backwards compatible with many existing chains. This way, these chains can implement the IOV Protocol without having to break any current transactions.

Benefits of the IOV Technology

Benefits for the end-users of a wallet which implements the Blockchain Communication Protocol

- Have an easy human value address that they can remember, like:
  antoine*iov
- Exchange any kind of tokens without the need for third-party influence, using a unique software that offers great user experience
- Eliminate the error of sending to a wrong address

Benefits for blockchain creators that implements the Blockchain Communication Protocol

- Token natively listed after registration on the Blockchain Name Service
- Token can natively be sent and received with any wallets
- Token can natively be exchanged for a different one via atomic swap
- Blockchain creators can use certified templates provided by IOV to launch their ICO easily and securely

The IOV Blockchain

The IOV Blockchain is a directory of all tokens issued on blockchains implementing the BCP protocol.

It is very similar to DNS for domains, as it provides the ability to look up lated blockchains, their associated tokens and its hosts.
The IOV Blockchain will be used by wallet providers including the IOV Wallet. The main function of an IOV Blockchain is to maintain and provide an accurate registry for all accepted token definitions. We designed a simple process for anyone to copy a token definition on the IOV Blockchain, based on the information available on its blockchain

Proof of Stake

The IOV Blockchain utilizes proof of stake and uses state of the art technology regarding proof of stake consensus, such as the Tendermint Byzantine Fault Tolerant engine.

The IOV Token

The IOV Token serves as both the staking and the fee token of the IOV Blockchain. Within the ecosystem, multiple validators need to stake the IOV Token to secure the Blockchain Name Service. IOV Token is required to interact with the IOV Blockchain. For example, order to register or update the token definition of a blockchain, a user needs to send a transaction on the IOV Blockchain with the fee paid in IOV Token.

IOV Technology

Additional tools provided by IOV community when implementing the Blockchain Communication Protocol

The IOV Wallet, which will be the first wallet to implement the Blockchain Communication Protocol.
It can:

- Store: Create a human value address. For example: **antoine*iov** (instead of a public key that is very difficult to remember, such as **1BvBMSEYstWetqTFn5Au4m4GFg7xJaNVN2)**
- Observe: Query multiple balances from multiple blockchains implementing the BCP protocol.
- Transfer: Send a transaction to any blockchain implementing the BCP protocol.
- Exchange: Atomic Swap tokens between blockchains implementing the BCP protocol.

A set of **Deployment Tools and Templates** for the creation of a blockchain, which allow the implementation of the Blockchain Communication Protocol. By using these tools, the creation process of a blockchain will be as simple as clicking on a button.

Value Proposition

The IOV Value Proposition

The mission of IOV is to empower people by providing the ability to send, receive, exchange and create a digital asset, when they want and from anywhere.

The objective is to enable the people to get access to the blockchain. Today, holding a portfolio of a few Bitcoins and Ethers seems pretty difficult and the barriers are numerous. With IOV technology, we want to make the blockchain and the exchanges a reality for the world and a trustworthy, simple and reliable experience.

The IOV project is dedicated to being open source and the technology free to use.

It brings Value to the **development community**: it provides it with a set of standard tools that will make it easier to develop and connect blockchains in the ecosystem.

It brings Value to the **blockchain entrepreneurs**: it allows them to freely connect with the ecosystem when launching a new blockchain, immediately gaining visibility and tradability for their tokens.

It brings Value to the **blockchain users**: multiple BCP wallets will be created, all of them will natively be able to browse blockchains in a human readable way and exchange any tokens from wallet to wallet without any third party involved.

IOV Token Value Proposition

The demand for name ownership

The IOV project brings Value to the **IOV Token owner**:

The IOV Token is the fuel to the IOV Blockchain, the Blockchain Name Service. The Blockchain Name Service registers blockchain definitions, blockchain names, value address names, as well as who owns these names.

A IOV Token is necessary as a stake for the Validators to participate in the blockchain. The fee paid for every Blockchain Name Service update is settled in IOV Token.

Due to the decentralized nature of the blockchain, the ownership of the names can be transferred without any third party intervention. The value address and the blockchain definition associated with each names can be changed by the owner of a name. The ownership of a name is for a limited time period. In all these instances where a name is transferred or renewed, or when the name is redirected to a different blockchain definition or value address, the payment of a fee in IOV Token will be necessary.

We can think of it as a **decentralized market for name ownership**, and the IOV Token is the settlement currency.

Technical Roadmap

Development of the IOV system is progressing on track.

1

POC1 is planned for April 2018 which includes:

- Full technical specification of the Blockchain Communication Protocol
- Testnet with 2 blockchains implementing with the partial implementation of the Blockchain Communication Protocol (send coin, human address)
- The 1st working prototype of the IOV Wallet working which demonstrates basic functionality such as sending/receiving different tokens from a single wallet implementing with the partial implementation BCP

2

POC2 is planned for July 2018 which includes:

- Testnet with 2 blockchains implementing with more complete implementation of the Blockchain Communication Protocol (send coin, human address, atomic swap, multisig, bootstrap nodes election)
- First prototype of the Blockchain Name Service which includes registration and update of Token Definition
- The 2nd working prototype of the IOV Wallet working which demonstrates advanced functionality such as exchanging Token A against Token B with Atomic Cross Swap with a human address of value
- Simple Match making proof of concept website for Atomic Swap.

3

Then, we have a series of milestones adding security and usability to reach production ready phase:

Backend

- Testnet with dynamic validator
- Audit Backend of Blockchain Name Service and Proof of Stake Blockchain
- Blockchain Governance of the Blockchain Name Service
- Light client proof

Frontend

- Blockchain Explorer
- Matchmaker Atomic Swap improved
- IOV Wallet Mobile

Dev Ops

- Deployment tools for developers who want to create their own blockchain and their own ICO.

Partners

- Solidity ETH/IOV Atomic Swap
- Ledger implementing Blockchain Communication Protocol

4

The first production release aims to be at the end of 2018 along with the conversion of the ERC20 IOV Token to the IOV 4 Token living on the Blockchain Name Service. Also, we will be able to connect any blockchains implementing the Blockchain Communication Protocol.

Token Sale

IOV Token Sale

The IOV Token Sale will consist in 3 rounds of sales:

* the Round 0: Pre-Sale
* the Round 1: Pre-Sale
* the Round 2: Public Sale

Hard Cap - Soft Cap

IOV Token Sale has a hard cap of 25 million EUR. The soft cap is 2 million EUR.

Token Metrics

	Pre-Sale	Pre-Sale	Public Sale
Round	0	One	Two
Participation	Invitation Only	Invitation Only	Public
IOV Token Price (EUR)	0.08	0.09	0.10
Start Date	End of March	End of Round 0 + 1 week	TBA after end of Round 1
End Date	The earliest of end of June and Round 0 cap hit date	The earliest of mid of August and Round 1 cap hit date	The earliest of Round 2 Start Date + 2 weeks and Round 2 cap hit date
Round Cap	5m EUR	12.5m EUR	25m EUR
Individual Cap (per KYC)	6 250 000 IOV Token (=500k EUR)	8 333 333 IOV Token (=750k EUR if only bought this round)	10 000 000 IOV Token (=1m EUR i only bought this round)
Settlement Currency	EUR, BTC	EUR, BTC	BTC

For the first 3 days of the Public Sale, the limit will be 50k EUR per KYC.

Timeline

IOV Token Sale Delivery Date

The IOV Token sold during the IOV Token Sale will be transferred to the participants through an ERC20 Token on the IOV Token Delivery Date. It will then be transferred to the IOV Blockchain where it can start being used.

IOV Token Delivery Date: two weeks after either End Date of the Round 2: Public Sale or End Date of Round 1: Pre-Sale if Max Cap has already been reached.

IOV Token ownership structure

After the IOV Token Sale, the distribution structure of all IOV tokens will be represented by the following allocation:

- 65% owned by the IOV Token Sale participants (over up to 3 rounds)
- 12% owned by the security reserve that will be staked by the IOV SAS for operating the Blockchain Name Service.
- 20% owned by the IOV Team + Advisors + Employees
- 3% for by Bounties and Incentive Programs

KYC

IOV company will perform a strict KYC verification for all participants of the IOV Token Sale to maintain compliance with all regulations. A third party provider will be in charge of verifying the identity of the people involved in the IOV Token Sale.

Use of proceeds

Funding raised through the IOV Token Sale will be used to fund the key pieces of open source software of the IOV system which includes:

- The Blockchain Communication Protocol
- The Blockchain Name Service implementing the Blockchain Communication Protocol
- The IOV Wallet implementing the Blockchain Communication Protocol
- Templates and deployment tools for the creation of new blockchains implementing the Blockchain Communication Protocol and blockchain generator
- Initial support service to help the adoption of the tools

Here is the repartition of the proceeds per category:

- 50% Software development • 30% Marketing/Sales
- 15% Admin/Legal
- 5% Ecosystem

Governance

IOV SAS Board: Fund will require the signature of a majority of the board to be used.

Token Lockup

Founders & Employees: blocked 1 year, then released the second year, 1/12 per month.
Advisors: Released after the 1 year.

Co-Founders & Venture

About the venture

The IOV company : IOV SAS

IOV SAS is a French-based company and has contracted with FieldFisher to assist the company with the ICO. FieldFisher is a law firm with over 1000 employees and 16 offices around the world. FieldFisher has a division specialized in blockchain that has already conducted several other successful projects of Initial Coin Offering.

The IOV company is incorporated in Paris and will have offices in France, Spain and in the United States.

The founders have already taken all possible actions to make the company and the ICO compliant with the existing laws and the French and European regulation. They have started exchanging with the authorities of financial regulations and the objective is to be outstanding at observing best practices recommended by these authorities. IOV has already taken necessary steps to present its project to the French Government's major financial institution AMF, in order to demonstrate its benefit for the public.

Isabella Dell

Isabella Dell is a database and architecture expert who has successfully conducted several implementations of highly sensible projects and infrastructures, from clinical and healthcare applications to blockchains. In 2016, she was the first employee at Lisk, who was the second most important ICO that same year. As a System Architect for the project, she played a pivotal role in the launch of the Lisk main network. In addition to her work in blockchain, Isabella was the Clinical Solution Architect for Wellspan Health and Technical Solutions Architect for Sharp Healthcare, maintaining systems for both health systems which serve over 100.000 patients a year. Her contribution to the blockchain is widely recognized by the crypto-community around the world.

Karim Ganem

Karim Ganem is a serial entrepreneur who has founded several technology companies in France and in the United States. In 2009, he received an award as one the best entrepreneurs, designated by the City of Paris entrepreneur network called Reseau Entreprendre. After founding his first company at age twenty-one, he created Uptogo, the first cloud computing company in Europe. Now based in New York City, Karim has been conducting several successful projects including co-founding Greenweez.com, the largest e-commerce website for green products in Europe. Karim founded Itisnow.org a non-profit organization dedicated to helping children with special needs in the development and growth of their abilities using art and technology. He is also the author of Spark, a book about creativity.

Antoine Herzog

Antoine Herzog is an accomplished international entrepreneur, blockchain enthusiast and open source contributor. Antoine is the inventor of a Bluetooth patent that was acquired by Mobiluck, the first mobile dating application in 2003. Antoine is also the creator of Cercle.co, an open source CRM dedicated to small businesses and entrepreneurs. Over the past 10 years, he developed a number of digital projects, many successful applications and software. Antoine has developed the financial payroll system of the French embassy around the world in use today. Antoine previously ran a company called Pixicause, that helped nonprofit organizations to raise awareness and contributions.

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IOV: A Blockchain Communication System - Whitepaper

Please find the latest version of our Technical White Paper on our website : https://iov.one/

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An IOV Token:

- **is not a financial instrument**, within the meaning of EU Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 relating to markets in financial instruments,
- **is not proof of ownership or a right of control** It does not confer any right on any asset or share in IOV,
- **is not an electronic currency** within the meaning of EU Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 relating to access to and pursuit of the business of electronic currency institutions,
- **does not qualify as a payment service** within the meaning of EU Directive (2007/64/EC) of 13 November 2007 relating to payment services in the internal market, nor within the meaning of the (EU) Directive relating to payment services 2 (DSP 2) N° 2015/2366 of the European Parliament and of the Council of 25 November 2 015, i**s a cryptographic token used through the Protocol**, unregulated, digital asset, issued and controlled by its developers, and used and accepted only by the members of a given community.

Purchasers of IOV Tokens must seek appropriate financial, tax and other legal and regulatory advice from independent financial advisors with appropriate qualifications to determine whether the purchase of the IOV Token is adapted to their own situation and authorised for subscription under their own legal and regulatory rules. Any decision to purchase the IOV Tokens should be based on the information contained in the White Paper and the Terms & Conditions which includes, inter alia, information on certain risks associated with the purchase of the IOV Tokens (**Investors shall pay attention to the Section "Risk" of the T&C to assess the risk linked to the purchasing of the IOV Tokens**).