Ai Blocks

Whitepaper

Draft 1

Basics:

Intro to AiBlocks

AiBlocks is an open-sourced payment networks system forked from Stellar. In reality, Stellar was created to send value across the internet, making it easier to convert digital currencies into local currencies & vice versa. AiBlocks plans to replicate that but make it more focused driven into a particular function in an industry as a whole, in our case, the usage and development of artificial intelligence (Ai). We hope to spur the trading industry, making it easier to be able trade on platforms without borders and restrictions.

Like Stellar, AiBlocks has no owners. All the stakeholders are public. The software will be decentralised, open network and will be able to handle million of transactions each day without a hiccup. Just like all other cryptocurrencies, AiBlocks is faster, cheaper and more economical to maintain on its backend, making it a very energy efficient blockchain network.

What is AiBlocks for?

AiBlocks is there to compliment current systems in the market. It is not aimed to disrupt any other currencies that are out there. It is just a network that allows developers to be creative, to create blockchain based programming, riding on a network that can transact cheaply and quickly on a daily basis. There is an option where you can also build applications / tokens on top of our blockchain. Here is an example.

You might want to represent the British pound (£) on the AiBlocks network. You can create a token to represent that pound in digital tokens and promises to return that same value back to the person once they return the digital token back to the original address. So, like USDT, USDC and many of the stable coins out there, you are able to represent the value of a fiat currency in a 1:1 exchange rate. The people that hold that token can use it to trade cryptocurrency on any exchange that accepts it and deem it redeemable on the value set earlier. Hence, it is a conversion from physical money, governed by a recognised government and this token is just riding on top of the existing ecosystem without creating any new asset class.

The implementations are huge. Why do we say this? Because you can transact in 1 particular currency that everyone agrees to its value anywhere you are in this world. You can be any nationality, holding any sort of currency but transacting it in the British pound (£), standardized value without fluctuations of local, less stable currency. Best of all, everything is online, protected digitally by yourself instead of relying on a third party, like a bank.

How does it work?

To make it easiest to understand for everyone, AiBlocks is a big accounting book with in and out ledgers. Where AiBlocks really function is that, during the creation of these ledgers, in the initial stage, the creator gets to set all the predetermined rules, making it a MUST to follow for anyone that is part of the ecosystem. In the standard blockchain system, there will be independent computers, checking and verifying transactions, keeping all the ledgers in checks and accounts safe. All ledgers are updated every 5 seconds.

By forking the current Stellar network, a unique algorithm, called the Stellar Consensus Protocol (SCP), keeps everything in sync. There are many ways to get agreement across a decentralized system—Bitcoin's visionary proof-of-work method was the first and is still the most famous. But, like many first drafts, proof-of-work left room for improvement. SCP strives to be better by being configurable, fast, and highly energy efficient.

By having the best of both worlds, improving on the Stellar network, we are able to run the core software of AiBlocks, making sure that all nodes are up and running, verifying transactions by the minute. Ensuring all accounts are debit or credited correctly is key, thus having more nodes that are connected to the ecosystem will only bring more benefit to our network. As of now, there are hundreds of nodes running across the globe and you can also be a part of it by downloading and installing our software.

We are also opening the API for everyone to use and access where you don't have to understand the complex system of distributed consensus, you can just read our API instructions and be on your way to creating a brand new token & issuing digital assets.

Where is AiBlocks going?

To put it very simply, AiBlocks wants to unleash the creativity power in the digital economy. Any enterprise, developers and even users can embark on this journey together with us. Sending value across the globe digitally has never been easier.

What is Anchor?

Anchor basics

An anchor connects the AiBlocks network to the traditional banking system. What it does is that it tokenises assets, giving it a digital form and making it easier to transact. An anchor provides on/off ramps as they power apps and services that use AiBlocks to provide borderless access to financial infrastructure. Read on to find out more.

What is Anchor?

Traditionally, banking systems don't integrate with each other. Even if they do, the conversion and transaction fees are really high. This is the case for SWIFT. In certain transactional cases, the person sending the value through may lose up to 20% of its original transacted value. To bridge this, AiBlocks has created a system where ATC can represent fiat currencies in digital form by going through the AiBlocks network and converting it into a digital asset token that promises to keep a 1:1 value with its fiat. AiBlocks will be the vehicle of transactions between all supported currencies inclusive of sending & exchanging of values.

The Anchor capabilities

We will facilitate the moving of fiat value from the traditional system to the digital system in 2 ways.

Issue stablecoins or fiat tokens that represent 1:1 value of the fiat reserve equivalent so that users can redeem fiat again when they need it.
Provide a fiat on/off ramp - what this does is that it will vet through all applications and users to see if they are in line with the country's AML/KYC laws, provide a platform for users to opt in and out of digital assets easily and keep the accounts in check.

These services can be provided by a single entity or 2 entities itself, which enables the token issuer to be the reseller of the digital asset.

The Anchor demand

Anchors will play a bigger role moving forward as digitalisation continues to sweep over the standard norms that are available as of now.

Upon being the critical link, connecting the traditional banking system with one that has been tokenized, anchors have created a new economic model for themselves and the market, leveraging on the demand by providing crucial services such as deposit/withdrawal fees, FX spread fees, transaction fees and seigniorage.

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The business models below are just some examples of what anchors can be doing. P2P payments, API based banking-as-a-service offerings, cross border B2B transfers, remittances, international payroll, etc.

Participating as an anchor is easy

Taking part in AiBlocks anchor is very easy. Absolutely no coding knowledge is required as we will take care of that part.

In the open market currently, there are many streamlined softwares that have processes in place because most of them adopt the same ecosystem standards. For more experienced providers looking for additional features, there are sets of dedicated suites of tools that are designed to help anchors launch their services easily and connect with all wallets and apps in the ecosystem.

Speak to us to find out more about how you can be a part of this ecosystem.

Blockchain

Blockchain is a technology created to get everyone in the system to maintain a collective database without the need of a central authority controlling the system. This new way of sharing and reconciling information, was introduced back in the year 2009.

Blockchain Basics

Understanding blockchain is not difficult. Like accounting, it has a set of ledgers, keeping track of things going in and out. Forwarding to the more basic level, it is just a set of data that are interconnected, checking and verifying the changes to the system and syncing with everyone in the chain so that all information is up to date and correct. On a more complex level, all these four things must happen for it to be recorded as safe and correct.

A transaction must occur. The initiator has to indicate the interest of sending data from current point to the next point.
A transaction must be verified. The self governing ecosystem, created during the inception of the blockchain, has to run through a set of rules before confirmation from other reliable sources.
A transaction must be stored in a block. After the verification from various trusted entities on the legitimacy of the transaction and its historical background, then it will be recorded in a public ledger, documenting its digital signatures. In a block there can be hundreds of not thousands of transactions at a time.
That block must be given a hash. Like any other forms of verification, once a block's transactions are confirmed, they will be stamped with a transaction hash. This is like a digital proof / stamp that all transactions have been checked and they are in this file correctly. Sync will be executed to all the other online nodes, permanently stamping its mark on the blockchain without the capability of editing / changes in the future to the particular block.

Security of a blockchain is good. As the blocks are created and transaction hash is stamped to blocks, it makes it more and more difficult to edit the history of it. The way hash is created is by maths function that turns digital information to a string of numbers and letters. In order to change any information of the previous blocks, all transaction hash has to be changed making it virtually impossible to hack.

Elements of AiBlocks blockchain

Computers that would like to be part of a blockchain and participate in verifying transactions can first download the software from the website and install it on a working computer. Then it has to sync with all the current servers that are running the most up to date data. As transactions are executed, the data will then be grouped into a "block". This block would then be verified by multiple other computers, similar to yours, so see if data history and ledgers are in check. If everything is ok, a block hash will be issued. If the network rejects a block, it will then vote again at the next block, till a certain period of time and it expires. After many block confirmations, the

network will then chain all the blocks together according to the date, time and transaction hash, eventually forming a virtual chain of blocks.

The same data and chain is then stored in all computers that are participating in the network, keeping a copy locally. So, these data will then be used and shared with the others, confirming the history of the blocks and transactions in it, verifying if any block has been previously altered or not.

Let's take a look at the possibility of foul play. Say you would like to alter any past transaction that would benefit you in any way. You have to alter the files of the majority of the computers, if not all, to "trick" it to accept your dubious new transaction. You may also try to implement new computers to the tune of at least 51% of the network power, to be able to switch the transaction. This is called a 51% attack. In large networks like Bitcoin, such attacks would take a lot of computing power and are very very expensive. On the Stellar network, it would be impossible because by design, it is meant to not allow this to happen. Eventually, dubious transactions would be voted down and the network would select the right data.

Essential cryptocurrency projects

AiBlocks will not take into account that other blockchains are competitors. No, we look at it as there can be multiple good softwares out there, to solve different problems people have. Here are some of the notable cryptocurrency in the market today.

Bitcoin

The first, oldest and largest cryptocurrency in the market. Its open sourced code is the inspiration for all blockchain networks available today.

Ethereum

It is the second largest cryptocurrency in the market today. Largely, Ethereum is similar to Bitcoin in many ways but the creators added on features where you can build apps on top of their blockchain network. These apps can function for anything that can be represented digitally and they are called Dapps (decentralised applications). Ethereum is also known for its smart contracts, where contracts can execute automatically with a set function or rules at the programming stage.

The network runs on a programming language called Solidity and many are implementing it, using its software because the infrastructure is ready with miners and nodes to keep it secure and running. Ethereum is currently facing expansion issues as the usage has outgrown the network, making it very slow and expensive to transact. Solidity as well, makes Ethereum apps very buggy and exploitable to technological developments.

Stellar

Stellar uses a much more environmentally friendly approach to those power hungry blockchains. The ecosystem is developed such that it would be comparable to the current remittance and payments systems, where confirmation time is short, quick and accurate. Fees are also low as the transactions inter network cost less than a penny.

Reference:
https://www.stellar.org/papers/stellar-consensus-protocol?locale=en