

EGEX

Whitepaper

EXECUTIVE SUMMARY

The introduction of Blockchain technology has begun a revolution in the way that companies can connect with each other in a trustworthy manner that can be easily checked.

Drawing comparisons with the way the Internet revolutionized the way corporations communicated and interacted with each other, the blockchain and the blockchain

Smart contracts would change the business environment once again, introducing in an easily automated way the much needed aspect of confidence and tamper-proof verification. As with the Internet, companies that integrate with the blockchain will gradually find themselves able to reduce their payment costs, legal fees and speed up their verification processes. Companies who are not going to lose out to speedier, nimbler and more cost-effective rivals. In financial markets , for example, trade occurs in a fraction of a second. In fact, it can take days to exchange assets and payments, with numerous banks and clearinghouses involved. That can result in mistakes, delays, extra costs and unnecessary risks.

How to incorporate their current data with the blockchain is the challenge that corporations face.

To interact with real world data, decentralized applications need an interface.

The explanation for this is that the formats are radically different.

Blockchain is deterministic, which means that it represents a particular sequence of events that take place in sequential order-a series of transactions-one after another. Accessing data outside the chain would require data points that are not sequential, so it would be impossible to use or make sense of Blockchain. This feature of Blockchain provides it with immutability, but versatility is reduced.

However, the off-chain universe is non-deterministic, meaning that the events are not reported in the particular order that they have taken place, which causes accountability issues. At any point, data points can be generated from and understood, offering greater versatility, but having trouble interacting with the Blockchain.

Coupled with this, we find the growing need for the ability for smart contracts to access data with the advent of Blockchain and smart contracts, as smart contracts can not work without it. Thus, we notice that only a tiny fraction of their capacity is realized by Smart contracts.

Smart contracts have real world implementations in nearly every area possible, with the help of Oracles. The details can be used to execute the contracts and provide use cases once data reaches the Blockchain, which can disrupt industries across the board. Blockchains, as an example, may help reduce the distance from days to minutes, even to zero, for the entire lifecycle of a transaction. By 2022, ledger innovations could save banks \$15-20 billion a year by reducing regulatory, settlement and cross-border costs, according to a study by Santander InnoVentures, the Spanish bank's Fintech investment fund.

EGEX is the first MultiChain Oracles Platform, a ready-made, self-sufficient multi-chain ecosystem that brings together rating-based data sources and offers high-quality data exchange and dispute resolution resources.

In supporting a multichain Oracles network that uses the three fastest growing blockchains-Ether, NEO and EOS, EGEX provides a unique solution.

We are opening the door to allow businesses to enter the ecosystem of the blockchain. EGEX provides a structure and the requisite tools to enable a smoother transition to the Blockchain.

EGEX 's performance in the future will be driven by this need for blockchain solutions. Our vision is for EGEX to become the default standard framework for MultiChain Oracles across a variety of industries, including, but not limited to,

Finance, pharmaceuticals, shipping, ticketing, real estate, manufacturing and the supply chain of hundreds of trillions of dollars worth of markets.

INTRODUCTION

2020 is the blockchain year of big business, and the trend we are gradually seeing is that many off-chain firms are entering the blockchain space and are pursuing financial giants like Goldman Sachs. We see the shipment of data from off-chain to blockchain using Oracle technology as one of the biggest opportunities on the market right now, thanks to many years of experience in IT growth and entrepreneurship. We are building a collection of tools [a framework] required for the implementation of blockchain in the operating processes of companies across many industries in order to turn this opportunity.

THE PROBLEMS THAT BUSINESSES ENCOUNTER WHEN MOVING INTO THE BLOCKCHAIN:

1. Deficiency of experts and ready-made solutions for the implementation of blockchain- any expert with expertise in blockchain suddenly becomes more costly and more difficult to locate. In addition, because the market is so young, there are not so many applications for the introduction of technology.
2. As a consequence, for other consumers, all current solutions, while able to address some of the issues, can not be streamed and standardized.
3. It is difficult to create a system of ratings and interactions between various oracles / data sources on a global scale without a system of standardized blockchain implementation solutions.
4. Absence of a conflict settlement system. The business trust aspect in data sources violates the principles of decentralization, and the lack of a dispute resolution process makes the system incomplete.

As a result , it is necessary to create a single solution and building blocks for decentralized applications that provide not only the possibility of a simple and inexpensive implementation process for existing business operations (selection of an existing solution and data provider, installation of a node, acquisition of data), but also the protection of the customer's interests in the event of an existing business operation. Without establishing a single registry of all existing solutions and a centralized reputation system based on which a trust relationship can be created, it is impossible to solve such a problem.

OUR SOLUTION

A MULTICHAIN FRAMEWORK FOR CREATING ORACLES

1. EGEX is a platform that enables you to build oracles on the blockchain for secure data exchange between the interacting participants. That would be a system in which you always trust the information received and which provides a reliable link between the blockchain and external data.
2. A collection of intelligent contracts and an off-line node with an interface between them are the commodity.
3. The project's goal is to develop a successful product that will enable off-chain companies to transfer their company onto the blockchain quickly. Network customers can exchange verified data with the help of the framework, resolve disputes, and can build their business as arbitrators, experts and / or data providers.

WHY DO BUSINESSES NEED EGEX?

1. Availability of Oracle Development. In many blockchain networks, the EGEX platform will operate: Ethereum, EOS, NEO. Thus, the issue of infrastructure will be solved: it will be possible to build an oracle or conflict settlement system for any situation without having to pay high commissions and using dev solutions tested. In addition, due to running on many networks, the scope of implementation of smart contracts will broaden.

2. A Financial Transactions Solution. Using the EGEX node, the interaction participants enter into an agreement, and will instruct the banking system to commit the transaction if the node conditions are met. This approach would effectively create contact between partners: when the contract is accepted and its terms are met, payments for products and services are automatically made.

3. Exchange of qualitative and accurate results. The data provider in the node is interested in providing accurate information so that you can be sure that the forecast market, forecast ranking, exchanges or escrow using this system is working properly.

4. Arbitration in conflicts. In the case of a disagreement, on the basis of objective evidence, the expert arbitrator determines to be, on the one hand, an uninterested party and, on the other hand, to be inspired to make the right decision.

5. "To join the" modern markets. A market with a capitalization of several hundred billion dollars will theoretically not only allow "whales" to enhance their positions, but also offer 1,000 local businesses a very good chance of gaining their place in the sun.

6. Qualitatively modern types of organization-autonomous businesses, where financial flow management takes place through the management of smart contracts through oracles.

SYSTEM FEATURES

TWO-LEVEL RATING SYSTEM

The two-level rating theory would allow the developers of oracles to be empowered to provide genuine data and make correct choices. Expert groups (running nodes in the EGEX Network version) will be rated, thanks to the reputation system, which will represent the quality of the operations performed.

The rating scheme is constructed according to the binary principle: the rating of the expert can be equal to either 1 or 0. The expert gets 1 credibility point at the moment of entering the node and depositing a pledge in tokens, his rating becomes 0 in case of giving incorrect data, and the pledge burns down.

COURT DECENTRALIZED.

It is important to eliminate the possibility of fraud and protect the participants from arbitrary decisions in order to establish a decentralized court. For this, all sides must have destinies that are distinct and unknown. A confidential location must actually exist where the parties may provide proof for their case. The arbitrators are chosen by mathematical algorithms that evaluate the credibility of the arbitrators, their sphere of expertise and unique authority in order to ensure the decentralization of the group. Payments to arbitrators are drawn from the losing party's pot. The arbitrator or the plaintiff decides the expense of the dispute. The price may be equal to zero: to obtain a reputation, for example. The supply of records, documentation and testimony is the responsibility of both sides. An auto-loss or a decline in the credibility of the expert by node would be counted in the case of fraud detection by one of the parties. The log-database of all processes with a shared access interface is given to ensure process accountability and incentive for making the right decisions.

UNIFIED DATA STRUCTURE AND A READYMADE SOLUTIONS

REGISTRY

An information card is created and placed in a single registry to link the oracle (new data source) to the EGEX Network, which contains basic data about the data given.

The information card contains the following data on the basis of which the ranking and issuance are determined for the web interface of the registry:

- Data source-short descriptions of the data source;
- Website connections, social networks;
- Form of data;
- Formation date-an expert;
- Hash rate-the cumulative quantity of kb information given over the lifetime by the source;
- The number of errors-per percentage of 1000 units, is constructed according to the log;
- Number of specialists-the real number of data sources for which it works;
- Promise-the amount the specialist will pay for the mistake;
- Cost of kb-the price paid for a data device.

EGEX 'S STRATEGIC ADVANTAGES

VERSATILITY.

Among the latest options, only separate facilities for importing currencies and exchange rates of goods into contracts can be found (2010 Multisignature, 2014 Conflicting Papers, 2015 Pseudo Corporation).

EGEX will allow oracle services to be produced for any reason.

DECENTRALISING.

For importing data from the Internet, Oraclize offers an off-chain solution, but centralization generates the need to trust the oracle, undermining the very concept of smart contracts.

EGEX is a two-level rating system network of autonomous oracles that motivates them to transmit accurate data.

QUALITY SHARING OF DATA.

The Chainlink protocol, according to the market, provides a high quality exchange of data, but they are still very far from building their network according to their road map.

SELF-SUFFICIENT ECOSYSTEM READY-MADE.

Thanks to a single registry of all published solutions, it will take a minimum of time to search for and install the required solution.

ARBITRATION DECENTRALIZED.

If errors in your organization can not be unified and need thorough consideration, you can simulate any contested situation and choose the solution most appropriate for you, including the relation of live experts.

The EGEX framework is therefore a ready-made, self-contained multichain ecosystem that, according to the rating principle, unites experts (data sources) and provides tools for high-quality data exchange and dispute resolution.

PROJECT ARCHITECTURE

EGEX NETWORK ROAD MAP

ETH	EGEX	EOS
Oracle contract	Experts	Oracle contract
Oracle contract	Node - Node	Oracle contract
Oracle contract	API's Expert's	Oracle contract

EGEX communicates with the networks of ETH and EOS: oracles send data to the connected blockchains via a central node. Experts and third party data sources (APIs) are linked to the node and, in accordance with the credibility framework, are ranked within the node. Likewise, the ranking of nodes within the EGEX NETWORK takes place.

EGEX WILL DEVELOP ITS PROPRIETARY NETWORK

Ensuring the secure storage of all contract pledges (without the need for replication in a related blockchain);

Records the votes of oracle experts: therefore, it is impossible to deceive voice data, and calling the contract method in the proprietary network reduces costs (no calls between experts and oracles in each network);

A complete list of all sources connected to the EGEX network is provided.

The node is the fundamental unit of network functioning. The node is the core part of the oracle of the client, which has a contract of its own within the ETH network. The Node measures the experts' votes, thus ranking them among themselves.

Registration of nodes occurs as follows:

The host of the future node sends a pledge in tokens and calls the management contract form of EGEX. A node contract is deployed during the registration process, which is assigned a unique Id and address. This pair of values will fit into the EGEX management contract directory.

You can link third-party data sources (APIs) to the node, in addition to the experts. In a way similar to that of the expert, the API is linked. Each source of data requires a deposit to be made in the node contract and is managed by a reputational mechanism: the higher the API's credibility indicators, the higher the benefit distribution percentage. The pledge "burns" and the data source is disconnected from the scheme if the credibility becomes negative.

Dispute-resolution pipeline:

First, the contract of the network client is linked to the node. The client calls the EGEX control contract method after choosing a node to sign in for the dispute resolution service in the node Id (dispute forms are predetermined by the node and have Id as well).

The management contract assigns the call to the contract of the chosen node, whose address is stored in the directory of the management contract.

The contract address of the client is written in the contract directory of the node.

In the event of a contested case, a call is made to the management contract, which forwards it to the node system.

Calling this procedure triggers the experts' function.

After the work is complete, the node aggregates the outcome and transfers the solution to the network client contract via the delegated call.

ILLUSTRATION

EXPERT REGISTRATION

Network	Offchain
Main Contract <- request+pledge	Replenish the wallet with tokens for the pledge
Oracle Contract	Main Contract request, making a deposit, delegating a call to the contract oracle
Expert Contract	Creation of an expert contract

VOTING

ETH VOTING

Client Contract -> Main Contract (interaction with oracles, nodes and experts)

1. The client addresses the Main Contract to resolve the dispute
2. The dispute is delegated to the contract of the oracle
3. The oracle node randomly selects experts who vote
4. The oracle considers and delivers the verdict
5. The solution is sent to the client through the Main Contract

IMPLEMENTATION AREAS

The EGEX platform enables the issue of trust in different blockchain spheres to be solved.

SECURE CROSS-DATA VALIDATION

Personal data is collected and processed by two firms. If they are not 100 percent trustful of each other, any reconciliation of such data will be very risky for both parties. An oracle is created on the basis of the EGEX system in order to ensure security, which checks this data while ensuring 100 percent protection.

TRANSPARENT INCOME SHARING BETWEEN PARTNERS

Income sharing between partners and business units is a very resource-intensive operation, the cost of which could be minimized by simply developing and linking the Oracle to a smart contract.

In this case, all calculations would immediately take place at the cost of the network.

BETTINGS/ PREDICTION MARKETS

Prediction markets can be seen as exchanges where consumers swap, concluding so-called event contracts, with the outcomes of forthcoming events. These contracts define the probable result of the future case, the dividend payment process, depending on the trading result, as well as the contract expiry date. Such contact suits Blockchain better than anything else. The issues mentioned above, however, may become a significant barrier to obtaining objective information.

With the help of the EGEX framework, a special solution can be developed for a specific forecasting market, thus ensuring reliable data exchange.

ARBITRATION FOR MARKETPLACES AND EXCHANGES ON FREELANCE

The seller and the buyer (the contractor and the client on the freelance exchange) agree on the structured terms of the deal when completing the deal via a smart contract. The money pledged in the smart contract is transferred to the seller if certain conditions are met. But what is to be done when the requirement is formally met in such situations, but the standard of the service does not satisfy the customer? A product or service could not comply with the characteristics declared. There is a need for impartial and unbiased arbitration in such cases, which, on the one hand, will not be of benefit to any of the parties and, on the other hand, will be enabled to achieve a fair outcome. You may use the EGEX system to find an acceptable expert for such situations.

WEBSITES RANKING

Rating websites offer projects the ability to list, which implies posting on the website information about themselves. Via a smart contract, the listing agreement may be concluded, making the presence of details on the website a prerequisite for the transfer of payment. The EGEX platform enables you to create an oracle that will be able to check the fulfillment of this condition and submit the blockchain details so that payment is transferred to the account of the seller.

THE BANCING TRANSACTIONS SOLUTION

If a bank uses the EGEX system, legal entities can, on the basis of a smart contract, enter into an agreement on the provision of services to each other-contracts are registered in the bank node and fiat money obligations are fulfilled when the requirement is met (for example, Visa and Mastercard interaction).

COURT DECENTRALIZED / EVENT

A smart contract with the betting company for a certain person's win on February 28 is concluded by the customer. The activity takes place, but no money is received by the user. Save for the EGEX, the tale could have ended badly. The user visits the website, specifies the jurisdiction, section, smart contract number and installs data into the prototype, where he explains the issue, adds documents, testimonials, specifies the data of the defendant, email, wallet address, etc. The algorithm picks judges and allocates a trial date. Since there is no legal precedent, one of the arbitrators reviewing the case may postpone the date, that is, request additional data or a written statement, or decline to sue, or may make both a positive and a negative decision. Three judges shall meet in the first stage of arbitration; if the decision is taken unanimously, the decision shall

be deemed final; if the decision is not unanimous, the decision shall be deemed accepted, but either party will file for appeal.

DECENTRALIZED COMPANIES

New types of collective activity organization-the Decentralized Autonomous Company (DAC)-started to emerge with the advent of the blockchain. The design of such businesses has so far required the implementation of their own blockchain. In any client network (ETH / EOS / NEO), EGEX will allow the implementation of these blockchains. The budget is obtained in a contract and allocated by stakeholder voting in such companies.

EGEX ROADMAP

2020

3rd QUARTER

- EGEX idea
- First researches
- Private investments

4th QUARTER

- Pre-sale
- Uniswap listing

2021

1st QUARTER

- The earliest version of the product
- The MVP release
- Pre-TGE
- TGE
- Tokens emission, unlocking and distribution

2nd QUARTER

- EGEX light release
- Oracle marketplace
- Unified register of all published Oracles
- Multichain token: the function of an exchange between Ethereum
- EGEX testnet release

3rd QUARTER

- EGEX network release
- Two-level rating system
- Decentralized court

EGEX TOKEN

Because of the EGEX token, which is tightly embedded into the system to ensure optimum turnover, the EGEX mechanism can only act as the value of every cryptocurrency increases exponentially with the amount of agents utilizing it.

IMPLEMENTATION of TOKENS

1. Payment for the collection of accurate data over the EGEX networks.

2. Entering a promise to begin work into the node contract. To become the arbitrator in the disputes or in order to begin the data supply, the expert must insert the EGEX tokens into the node contract. According to the binary rating scheme, the expert gets 1 rating point when joining the network (the insertion of tokens into the intelligent contract). The expert loses the deposit and 1 point of the rating in the event of giving incorrect results.

3. Payment for expertise from experts. The network client pays for the work of the expert with the EGEX tokens and receives a system for conflict settlement / authentic data supply. The commission's allocation is as follows: percent is allocated to the expert executor, percent of the payment to the off-chain node-to the EGEX network, percent.

GLOSSARY

Framework - software tools (a set of libraries) that are used to quickly develop everyday tasks and simplify the creation and support of technically complex projects.

Bancor protocol - standard that allows creating fully liquid smart tokens that calculate their own cost and allow you to convert one token without using the other party.

Oracle¹ - the third party that provides operation of smart contract by supplying data to a block. The emergence of blockchain and smart contracts opens up opportunities for safe and transparent interaction. The fulfillment of the terms of the transaction is controlled by the code, not by the people: as soon as the data enters the blockchain, smart contracts are included, and the conditions are fulfilled. Changing, hiding or cancelling the transaction is not possible.

The problem of oracles is the determination of the correct solution under given conditions (a set of states of the system). However, blockchain do not have access to information outside the chain of blocks, so they cannot independently verify the conditions underlying the smart contracts. To achieve this, there are oracles, which translate information from external sources into the blockchain accessible form. But the problem of trust remains open - the chosen oracles can compete and finding data and correctly processing it becomes more difficult in the rapidly changing information world. This leads to the risk of getting the wrong data.¹

EGEX managing contract - the central contract that registers oracles, carries out routing of users' requests and accumulates fees for services.

¹ <https://cointelegraph.com/explained/blockchain-oracles-explained>

Node - the central component of the client oracle, which ensures the interaction of the software infrastructure of the business unit with the blockchain. In order to support its operation, the node is in contact with other nodes of the EGEX decentralized network and has its own contracts in the ETH, EOS and NEO networks. It is an executable module within the EGEX framework and it functions within the managing business unit infrastructure. Expert - an arbitrator or data provider, including the API.

Two-level rating system - rating system, under which the ranking of the nodes (the first level) and the experts within them (the second level) takes place.

Trust as a core value is the operating principle of a system in which all interaction participants can trust information that they receive (without having to trust the other members of the network) and on the basis of which various agreements come into force, ranging from bank transactions to resolving disputes. In this regard, it becomes obvious that soon the market will need a tool that can organize a transparent and honest data exchange system.

¹ https://www.reddit.com/r/ethereum/comments/7te8qc/decentralized_oracles_the_truth_nothing_but_the/