



DIAMEX

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Welcome to the Decentralized Diamond Ecosystem, where we are creating a tokenized diamond exchange, utilizing Real-time Transactions Via Smart Contracts, to facilitate the trading of diamonds worldwide. We create liquidity and return consumer appeal to the diamond industry by standardization and turning diamonds into commodities in analogy with precious metals and oil markets.

Summary

DIAMEX platform is a blockchain ecosystem and associated offline infrastructure for efficient purchase, logistics, and storage of diamonds of specified quality.

The project aims to create liquidity for the diamond industry by launching DIAMEX Standard and its subsequent tokenization.

DMEX Standard is represented by diamonds with the following characteristics:

- Weight
- Color
- Clarity
- Cut
- Fluorescence
- GIA (Gemological Institute of America) Certified
- Strictly natural origin

DIAMEX will accept crypto and fiat currencies for the purchase of tokens backed by DMEX Standard, issued via specialized auctions with the possibility of redeeming the tokens for diamonds in any place of the world in duty-free locations, special distribution centers, and – later – vending/ATM machines, which are all parts of DIAMEX platform.

The DIAMEX project is created in two stages:

1) Launch of the blockchain platform after token creation and series of private sales of the DMEX token, which is the "fuel" of the future ecosystem. For now, the DMEX token is planned to be on the Ethereum ERC20 standard.

DMEX - will be represented as a utility token and will find its use in:

- Internal payment instrument for transaction fees, goods, and services on the platform;
- Customer protection and the platform stability protecting the fulfillment of obligations of platform participants through a special reserve fund and a special prepayment system;
- Cashback and discounts for the purchase, sale, or exchange of diamond tokens into real stones;

2) Launch of blockchain-based multi-signature auction (which is itself a smart contract) system to process the sales of DIAMEX Standard diamonds, as a result of which the platform generates DMEX tokens backed by real diamonds.

Standardization of the diamond market will create a depth as in the case of the market of precious metals or other commodities, such as crude oil. The issuance of a digital token backed by real diamonds solves a number of issues such as:

- Lack of a stablecoin with transparent audit and physical value backing in an extremely volatile and immature cryptocurrency market;
 - Convenient purchase, logistics, storage, exchange, and sale of diamonds on the market conditions without additional credit risk;
 - Effective taxation due to the possibility of non-cash and crypto payment, as well as not having to import physical diamonds into the territory of residency and pay additional fees and VAT
- This document discloses in full detail the problems described above, the methods proposed to solve them with the DIAMEX blockchain platform, as well as details of the creation, generation, distribution, and purchase of DMEX tokens.

Introduction

In 2017-2018, the cryptocurrency market became very popular as an addition to alternative investments. Blockchain technology has allowed us to take a different look at the world of digital assets, significantly reducing transaction costs and providing easy tools for tokenizing physical and virtual entities.

Each of the three listed industries carries a number of unresolved issues and problems, in particular:

- For diamonds – lack of liquidity and transparency in pricing and logistics.
- For cryptocurrencies – lack of stability and maturity in the presence of a high level of transaction risk.
- For the financial and investment market – a small selection of alternative investment forms for portfolio diversification.

The DIAMEX project aims to build an ecosystem that offers a number of revolutionary tools at the intersection of the diamond industry, the cryptocurrency market, and financial investments. Before moving on to a solution, we'll look at each of the directions in detail in order to more subtly and accurately understand the problems that the DIAMEX project is solving.

Problems

Problems of the diamond market

When purchasing a diamond, one must keep in mind the following issues:

- Location of the purchase. Searching for a seller is not an easy task because the market is closed to regular buyers and accessible only to professional dealers.
- Credit risk. You should keep in mind that you give quite large sums of money upfront. The higher the reputation of a broker/dealer, the more expensive the cost of the stone will be for you, which negatively affects its consumer appeal.
- Security and confidentiality of the purchase. Right at the moment when the purchase of a stone is made, the owner does not want anyone to know about it. In addition, in recent decades, developed countries have undergone a process of demonetization. In practical terms, this means that less and less private cash remains on the market. This fact significantly complicates the procedure of buying diamonds with personal funds without the risk of losing the confidentiality of the purchase.
- Logistics and Storage. As diamonds are a precious item, transporting and storing them is an expensive and tenuous procedure, involving a huge number of risks and costs.
- Inefficient taxation. At the time of importation of the acquired diamond into the buyer's country, there is a need to file a declaration, which requires that customs duties and VAT be paid. Given the acquisition of diamonds for cash that has already passed all stages of taxation, this process is seen as extremely unprofitable and inefficient.

Problems of the alternative investment market

The key problems of funds are related to the opacity of pricing and unclear nature concerning how to show diamonds on the fund's balance sheet:

1. Given the lack of transparency in pricing and the absence of the secondary market, it is unclear how to assess the effectiveness of the investment. This fact also significantly complicates the procedure for the revaluation of open positions and investment decisions.
2. A diamond is a tangible asset that does not have a financial instrument substitute, such as a golden certificate or ETF for gold, and working with non-financial instruments contradicts the declaration of most funds.
3. Strict KYC rules imposed by funds make it even more difficult to find the right vendors in terms of reducing financial and regulatory risks. Funds impose excessive demands on dealers in providing evidence of trustworthiness, and not each dealer may pass such a check.

Problems of the cryptocurrency market

Another industry inextricably linked with the world of finance and investments today is the cryptocurrency market, particularly prevalent with the development of blockchain technology. Cryptocurrencies, being one among many types of alternative investments, also have a number of outstanding issues to date, impeding access to them for major institutional funds and HNWI.

Despite the growing popularity some of the problems can be singled out:

1. The market is still immature and unstable: the volatility of the key currency Bitcoin reaches hundreds of percent over short periods of time, and the alternative currencies, the so-called "Altcoins", can vary in price by hundreds of percent within a few minutes.
2. The market still lacks a "stablecoin" with confirmed audit and universal trust. One of the most popular stablecoins of today is USDT, which has a lot of questions regarding real backing and transparency of the emission to the market.
3. For large funds, there is no real instrument to control its Sharpe ratio – one of the key indicators of fund effectiveness: that is the risk/return ratio, when not only profit is taken into account, but also the appetite for the accepted risk from the fund.
4. During market downturns, using fiat as a "safe haven" entails payments of income tax, and there are no options to convert to another cryptocurrency.

How DIAMEX addresses those problems?

DIAMEX is a complex infrastructural and technological solution based on blockchain technology for the generation, purchase, possession, and subsequent resale of tokens that are 100% backed by real diamonds of a pre-determined quality and specification.

What do we offer?

Creation of liquidity for the diamond market - through the creation of its own standard, which will be commoditized to provide depth for the market of diamonds of a given standard, becoming a new market benchmark. We call our standard the DMEX Standard.

The use of blockchain technology - to increase the transparency of the generation of diamond-backed tokens and the possibility of secondary circulation of these diamonds. Assuming that the data recorded to a decentralized ledger cannot be changed or deleted, the ownership of the token will be accurately stored without the possibility of forgery, and the procedure for issuing and transferring ownership will be determined by independent mechanisms without the participation of a third party.

The opportunity to purchase diamonds using the cryptocurrency - as a means of opposing demonetization and returning the function of private money. The owners of crypto assets will be finally provided with a real physical instrument with high intrinsic value.

What is DMEX Standard?

DMEX Standard consists of diamonds of strict specification with the following characteristics:

- Carat weight - 1-1.05 carat
- Color - Colorless D / E / F
- Clarity - IF / VVS1 / VVS2
- Cut, Polish, Symmetry - Excellent (XXX)
- Fluorescence – None
- GIA (Gemological Institute of America) Certified
- Strictly natural origin

It is anticipated that through cooperation and close partnership with the GIA laboratory, diamonds will be placed in an individually sealed package with DIAMEX branding.

How does the DIAMEX platform work?

The DIAMEX business process starts at the moment when a Company-issuer (herein after - SPV) of DMEX token initiates an auction to deliver DMEX Standard diamonds in the specified volume.

In the beginning, the planned monthly volume is USD 5 million with the planned growth of up to USD 25 million per month during the first year. The auction is considered to be started when the SPV deposits 15% of the auction volume in DMEX tokens to a special smart contract. 10% is to ensure the issuance of a guaranteed cashback to buyers and 5% to pay commissions in favor of DIAMEX.

The full cycle of operation of the blockchain ecosystem and the offline infrastructure of the DIAMEX platform is described below:

1. Buyers of the diamond token transfer deposits (bids) to the auction smart contract with desired amounts of purchase: using cryptocurrencies and DMEX or only in DMEX when using fiat currency.
2. Upon completion of the auction bidding, DIAMEX converts the cryptocurrency received to fiat at the current rate and sends the money to the bank account of the SPV under the control of an independent administrator, assigned under the terms of the trust declaration. Simultaneously, an auction reserve fund in DMEX is formed to protect buyers from the default of obligations on behalf of the SPV. The fund is formed from prepaid DMEX for the auction from SPV and a part of the reserve fund DMEX formed at the stage of creation of the tokens and fundraising.
3. The funds go to the SPV account, which employs an agent-partner company or another to purchase and deliver diamonds; while all funds are completely under the control of SPV and the Administrator, and payments to counterparties are made directly by the SPV. The purchase is carried out strictly for a set of stones that correspond to the DMEX Standard according to the DMEX protocol.
4. When the diamonds arrive in safe custody, the Administrator puts the last signature in the auction's smart contract, as a result of which: The DIAMEX platform generates DMEX tokens in exact accordance with the amount of incoming diamonds in the depository.

The use of blockchain technology in the DIAMEX platform avoids a number of problems that would be difficult to solve without the technology:

- Strict audit of token generation;
- Independent possession without the possibility of counterfeiting the original data;
- Existing infrastructure for token exchange and cross-conversion;
- Automated protection of client liabilities;

DMEX ICO/Token

For the development of the ecosystem and infrastructure of DIAMEX, we conduct a multi-round private sale of special token DMEX , which is the "fuel" of the future platform.

The initial token for sale is DMEX, which is an ERC20 standard token. After the finalization and launching of the DIAMEX platform, it may be necessary to make some technical adjustments to the platform's core token in order to meet the platform's requirements of transaction speed, cost, and quantity. To meet such requirements, we reserve the right to convert (and, respectively, burn) all DIAMEX Tokens created as a result of the token sale to tokens with the same name and functionality at the rate of 1:1.

The key features of the DMEX token are:

- Buyer will be able to cover all the transaction associated fees on the platform with DMEX tokens.
- Cashback, percentages will be calculated according to the purchased DMEX token amount on the platform.
- Protection of customers (buyers and auction organizers) at the expense of a special reserve fund and a prepaid system.
- Compensation of surplus in DMEX to cover the difference between the cost of the resulting diamond DMEX Standard type of storage and price.

The first product of the BlueStone platform is DMEX token, 100% backed with DMEX Standard diamonds.

At the initial stage, DMEX emission is carried out strictly through specialized auctions on the DIAMEX platform with the starting price of the ICO stage table.

In view of the fact that the DMEX Standard is represented by a possible set of 9 different stones, we introduce a special index that plays a key role in the pricing of DMEX and is the basis for the correct accounting during the exchange for a diamond at the redemption of DMEX Standard Index (DSI).

Technical implementation

DIAMEX platform protocol intends to build the ecosystem that allows businesses to build decentralized marketplaces on the blockchain, with an initial focus on the Diamond industry and, further, jewelry and watches. The DIAMEX Platform enables buyers and sellers of tokenized assets and services to transact on the decentralized, open web. Using the Ethereum blockchain, the Platform, and its community participants are decentralized, allowing for the creation of services and goods without traditional intermediaries.

Technical Design Overview and Philosophy

This chapter examines our intended technical proposals for designing the DIAMEX decentralized application and the DIAMEX protocols that collectively power the DIAMEX Platform.

The DIAMEX Platform is going to be built on the Ethereum blockchain, the most widely adopted cryptocurrency platform that enables smart contracts to execute on the blockchain at this time.

Critical transactional data such as pricing and availability are stored directly on the blockchain. Other metadata such as descriptions, images, and personal information are stored on the server-side infrastructure and cryptographically linked to the contract. We also investigate technical and economic incentives to store metadata on independent distributed systems such as Interplanetary File Systems (IPFS). This allows for better scaling and minimizes the expensive computing and storage costs associated with doing everything on the chain.

We have three overarching goals in our architecture design.

First, we intend to keep everything as distributed and trustless as possible while balancing the need for performance and scalability. We intend to avoid single points of failure of our architecture like relying on a single centralized provider like Amazon Web Services.

Second, we intend to always carefully balance performance and computation efficiency with user experience.

Lastly, we intend to develop the Platform in accordance with the latest security standards, and is subject to a Continual Improvement Process. This applies in particular to the security updates within the DIAMEX Smart Contracts.

The DIAMEX Platform

The DIAMEX Platform is the infrastructure backbone system for DMEX and DMEX Standard tokens, allowing decentralized access for all participants.

DMEX Protocol

The Protocol consists of Solidity smart contracts on the Ethereum Blockchain. These smart contracts define the core functionality of the DIAMEX Platform. The design philosophy of the Protocol closely follows the approach postulated by ConsenSys in their "Ethereum Smart Contract Security Best Practices" on the topic of smart upgrading and smart contract robustness.

DIAMEX Smart Contracts

The DIAMEX smart contracts include the logic and functionality for users to

- Validate and Transfer DMEX tokens.
- Participate in Tokenized Asset Auctions (DMEX Standard token).
- Get delivery of diamonds for the corresponding amount of DMEX tokens.

These smart contracts also implement an oracle of DMEX Standard Index valuation model which transparently defines the price of the diamond entering the system.

In addition, these smart contracts ensure checks and balances to maximize the security of DIAMEX users.

Blockchain Technology considerations

The blockchain technologies that emerged in recent years offer a qualitatively different solution to the problems faced by companies and individuals in the process of managing physical assets.

The concept requires the existence of an agreement between two parties, a smart contract would be meaningless without the consent of both parties to the transaction. This agreement will be verified by complex algorithms. The validation process can happen without the existence of a third-party witness to the agreement. This fosters confidence in both buyers and sellers, creating a robust and active platform that thrives on healthy interaction between all stakeholders.

In fact, open blockchains such as Bitcoin or Ethereum have a number of properties that distinguish them from any centralized database solution typically used to store and provide information. While they cannot be considered uniformly better or worse, some relative advantages might be win-win consensus building, low cost of transactions, data immutability, and security.

With the emergence of the Ethereum platform, the fundamental building blocks are now in place to enable decentralized commerce in the real assets' economy. DIAMEX is launching the DIAMEX DApp, and the protocols to allow buyers and sellers to connect without middlemen.

Market Overview

Target audience and value proposition

The most important advantages created by the DIAMEX platform are:

I. For the crypto industry and foundations - Truly stable coin with transparent audit and generation process, backed by a physical diamond, and opportunity to withdraw from virtual cryptocurrency into a physical asset.

II. For diamond buyers - Possibility of impersonal confidential ownership of diamonds through DMEX Convenient logistics and storage: no need to hold physical assets. Effective taxation since the stone does not cross the border, thus eliminating the need for payment of duties. Another important fact is that it is possible to pay by cashless payment to an organization/fund, rather than buying strictly for cash which has already undergone taxation. The ability to sell the asset at any time on the secondary market. Security of possession through the use of blockchain technology and reliable storage. Reducing credit risks through a special DMEX Reserve Fund.

III. For diamond dealers - Protection of buyers' obligations by means of prepayment mechanisms in DMEX token or cryptocurrency to an auction smart contract; Increase in sales by creating a new depth of the market; Receiving the turnover capital prior to the delivery.

According to market analysis, the total volume of the market for raw diamonds, cut diamonds, and jewelry products is USD 80 billion per year. At the start, we focus on producing tokens strictly for diamonds of a certain quality (DMEX Standard), the projected volume of which on the market allows us to provide a monthly auction depth of USD 25 million. We believe that once the demand for cut diamonds of the new standard can be created and reached, the storage capacity of more than USD 1 billion, the industry will adjust to more mass production of diamonds of this standard, which will lead to multiple increases in volumes and make it possible to compete with the investment attractiveness of the markets of other commodities for the large funds.