



# A commission-free, trustless futures exchange for trading digital currency prices

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## ABSTRACT

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Presenting a commission-free futures exchange that covers operational costs by minting its own native currency, the DGTX token, instead of charging transaction fees on trades. Increasing demand for DGTX tokens from traders who are attracted to commission-free futures markets will outweigh the inflationary cost of minting a small number of new tokens each year.

The exchange also replaces centralized

account balances with an independent, decentralized smart contract on the Ethereum blockchain that holds all account balances. This hybrid model of a centralized matching engine coupled with decentralized account balances gives traders the speed and reliability of off-chain price discovery combined with the trustless security of on-chain account settlement.

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# 1. Introduction

Futures markets give traders the opportunity to trade prices without the high costs and risks of transferring, storing and paying in full for the actual underlying instrument on whose price they are trading. Whether on soybeans, gold, government bonds or Bitcoins, futures markets are a valuable financial tool for facilitating price trading by reducing friction and costs.

But despite lower costs, transaction fees are still significant on high volume, low profit margin futures trading strategies. They act as a massive brake on the potential liquidity of futures markets by converting marginally profitable strategies into losing strategies after commissions.

Transaction fees are eliminated on the **Digitex Futures Exchange** by creating an Ethereum based token, called the DGTX token, and using it as the native currency of the exchange. All profits, losses, margin requirements and account balances are denominated in DGTX tokens, meaning that traders must own DGTX tokens to participate in the commission-free, trustless markets on Digitex. This creates demand for DGTX tokens from traders, enabling the exchange to replace revenue generation from transaction fees by creating and selling a small number of new DGTX tokens each year.

Instead of penalising active traders for providing liquidity, this brand new revenue model imposes a small inflationary cost on all token holders on the understanding that commission-free and liquid markets will create demand for the DGTX token from traders that is greater than the inflationary cost of funding the exchange.

Another boost to liquidity will come from the trustless nature of the Digitex Futures Exchange. Unlike other futures exchanges, traders on Digitex will be able to trade without having to trust the exchange with their money. Account balances are held by a decentralized, independent smart contract on the Ethereum blockchain, not by the exchange. The exchange informs the account balance smart contract of a trader's outstanding margin liabilities and trading profits/losses, thus keeping his account balance up to date, but the exchange does not have physical possession of the funds and at no point does the exchange hold anyone's private keys.

New token issuance is done democratically by all DGTX token owners using **Decentralized Governance by Blockchain**. They will collectively decide how many new tokens to issue and when, in order to cover the operational costs of running the exchange. Maintaining the futures exchange is in the best interests of all DGTX token owners because the exchange creates demand for the DGTX token and gives the token its utility and value.

## 2. Commission-Free Futures Trading

### Revenue Generation by Token Issuance instead of Transaction Fees

The futures trader's Utopian dream of a commission-free exchange is no longer a dream. By creating an ERC-223 compatible protocol token on the Ethereum blockchain, called the DGTX token, and using it as the Digitex Futures Exchange's native currency in which all profits, losses, margin requirements and account balances are denominated, the exchange can eliminate transaction fees on trades and cover costs by creating new tokens instead of charging fees. The relatively small inflation cost of creating extra tokens is more than offset by the demand that is created by traders who must own DGTX tokens to participate in the commission-free, liquid markets that are created by this model.

The size of this demand for DGTX coming from traders during a period where cryptocurrency trading volumes are expected to grow exponentially will be orders of magnitude greater than the small number of extra tokens that must be created to generate this demand. The futures exchange is what gives the DGTX token its utility as a vehicle for trading highly liquid futures markets without any transaction fees. And the only way for traders to participate in those markets is to buy DGTX tokens to cover their margin requirements to open trades.

There will be no new token issuance for the purpose of revenue generation for approximately 2 years after the launch of the Digitex Futures Exchange because the costs of running the exchange will be covered by the proceeds of the DGTX ICO. During this 2 year period new user registrations and trading volumes on Digitex futures markets will likely rise sharply, and all new traders will be competing to buy a limited number of DGTX tokens. Any price rise of the DGTX token caused by this sharp increase in demand will lessen the inflationary impact of the first token creation event by reducing the number of DGTX tokens that must be created to cover upcoming costs.

Around the start of 2021, the Digitex Futures Exchange will start creating new DGTX tokens to cover the costs of operating the Digitex Futures Exchange. These costs will include software development, servers, staff, premises, marketing, support and all other associated costs. Based on the projected costs and the current price of DGTX, traders will vote on how many new tokens to create to cover those projected costs. The vote will be done through Decentralized Governance by Blockchain — 1 DGTX = 1 vote.

New DGTX tokens will be created via a fully audited token creation smart contract. Buyers will send ETH to the smart contract address and automatically receive the correct amount of DGTX tokens in return. There will be a minimum and maximum funding cap. A separate, fully audited smart contract will keep a running total of all token issuance events so that an accurate and verifiable total supply of DGTX tokens is always publicly available.

## The Digitex Protocol Token (DGTX Token)

At the heart of the Digitex Futures Exchange is its protocol token, the DGTX token. To buy or sell futures contracts on the exchange a trader must have a margin balance of DGTX sufficient to cover his potential losses because the tick value of each Digitex futures contract is 1 DGTX token, meaning that all profits and losses are denominated in DGTX tokens. As trading volumes and liquidity increase on the Digitex futures markets the demand for DGTX by traders will also increase. Below are the key elements of the DGTX token:

### DGTX Token

- DGTX is the protocol token that is the native currency of the Digitex Futures Exchange.
- The tick value of every Digitex futures market is 1 DGTX token.
- Margin requirements on each Digitex futures market are payable in DGTX tokens because profits and losses are denominated in DGTX tokens.
- Account balances on the Digitex Futures Exchange, which are held by an independent smart contract, are denominated in DGTX tokens.
- It is the creation of new DGTX tokens after approximately 2 years that allows the exchange to operate without needing to charge transaction fees.
- The DGTX Token Sale/Initial Coin Offering (ICO) creates an initial supply of 1,000,000,000 DGTX (one billion DGTX tokens).
- There is no creation of new DGTX tokens for the first 2 years after the launch of the Digitex Futures Exchange.
- Approximately 2 years after launching, the Digitex Futures Exchange starts to create new DGTX tokens to cover the costs of running the Digitex Futures Exchange.
- New token issuance causes inflation but it also creates high demand for DGTX tokens by subsidizing commission-free futures markets that attract large numbers of traders who must buy DGTX tokens to participate.
- DGTX is an Ethereum based, ERC-223 token that will be freely tradable for Bitcoin, Ether and many other cryptocurrencies on the Digitex platform through integration with trustless, decentralized token trading protocols such as swap.tech, 0xproject.com and bancor.com.
- Traders can eliminate DGTX price risk from their trades with the DGTX Peg System.

The owner of DGTX tokens has the ability to engage in the buying and selling of liquid futures contracts on the price of Bitcoin against the US Dollar, Ethereum against the US Dollar and Litecoin against the US Dollar without incurring any transaction fees on their trades. If the same trader buys and sells similar futures contracts on any other exchange he will incur commission costs. These commission costs can be considerable for very active, short term traders. So the more active the trader, the greater the intrinsic value of DGTX to that trader because every time he buys or sells a Digitex futures contract he is saving himself from paying a commission. A high volume, low profit margin trading strategy that loses money on every other spot and futures exchange due to commissions is converted into a profitable strategy when done on The Digitex Futures Exchange.

## **DGTX Token Supply and Distribution**

During the initial sale, 1 billion DGTX Tokens will be made available. Out of this, 65% is up for sale to the public, 20% goes to Digitex Market Makers, 10% goes to the DIGITEX team and their advisors and 5% goes to referrals. Out of the 10% earmarked for the team and advisors, 100% of that is on a 3-year vesting schedule. Therefore, after the initial auction, only 90% of the total supply will be in circulation.

### **1000M Total DGTX Supply**

- 650M DGTX (65%) DGTX Token Sale
- 200M DGTX (20%) Digitex Market Makers
- 100M DGTX (10%) Team (current and future)
- 50M DGTX (5%) Referrals

### **DGTX Token Sale—650M DGTX (65%)**

650,000,000 (650M) DGTX tokens will be sold in the DGTX Token Sale which starts on January 15th, 2018. Buyers will exchange ETH for DGTX tokens at an equivalent price of USD \$0.01 per DGTX token, meaning there is a hard cap of a maximum of \$6.5M that can be raised.

### **Digitex Market Makers—200M DGTX (20%)**

Digitex market makers are automated trading robots with algorithms that are programmed to break even. With their highly active trading strategy and a large trading bank of 20% of all tokens in circulation, they help create liquid futures markets that have tight bid and offer spreads, even in volatile market conditions.

**Team (Current & Future)— 100M DGTX (10%)**

100,000,000 (100M) DGTX tokens will be paid to the founding team to compensate them for past and future work. These tokens will be vested until 1 year past the first revenue generation token creation event (January 2021), ensuring the team has strong incentives to create a stable, self-perpetuating business model that provides ongoing and consistent demand for DGTX tokens after the Token Sale funds have been spent.

**Revenue Generating Token Issuance Starts in January 2021**

Approximately 2 years after the official public launch of the Digitex Futures Exchange, we will start creating new DGTX tokens to cover the ongoing costs of operating the exchange. The number of new DGTX tokens to be created will be determined by other DGTX token owners who will vote on proposals made by DGTX token owners. Proposals of how many new DGTX tokens to create can be submitted by any DGTX token owner and will be based on the projected costs of operating the exchange and the current market price of DGTX. New tokens will be created through a transparent, fully audited token creation smart contract. Buyers will send ETH to the smart contract address and will automatically receive the corresponding number DGTX tokens in return.

A large number of new trader registrations on the Digitex Futures Exchange in the first 2 years will create a surge in demand for DGTX. The higher price of DGTX means fewer tokens must be created to cover costs, reducing the inflationary effect on the total supply of DGTX.

**DGTX Token Price Projections and Their Effect on Token Issuance Model**

The greater the demand for DGTX tokens by traders on the Digitex Futures Exchange, the higher the price of DGTX will climb. The following table shows some different scenarios and assumptions and their effect on the price of DGTX tokens.

**Assumptions:**

- 2% of traders are whales who buy a total of \$150,000 USD worth of DGTX tokens over a 2 year period.
- 10% of traders are medium sized traders who buy a total of \$15,000 USD worth of DGTX tokens over a 2 year period.
- 88% of traders are small traders who buy a total of \$1,500 USD worth of DGTX tokens over a 2 year period.

- Although the total supply of DGTX tokens is 1,000M, only 700M are available to be bought and sold because the rest are locked up by the Digitex market makers (200M DGTX) and the founding team (100M DGTX, vested).
- The table below calculates the projected price of DGTX by dividing the total dollar amount that traders purchase in the 2 years following launch by the total available supply of DGTX tokens and then adding that amount to the price of DGTX tokens at the final DGTX token sale. This price calculation method is an oversimplified and possibly incorrect assumption that does not take into account many factors, such as current market sentiment in cryptocurrencies. In a cryptocurrency bull market it is possible that the DGTX price will rise considerably more than indicated below. Likewise, if there is a major crash in cryptocurrency prices, the DGTX price could fail to meet the projections below even if the number of traders projections are reached.

<b>Table 1: DGTX Token Price Projections</b>				
<b>No. of Traders</b>	1,000	5,000	10,000	50,000
<b>Whales (2%)</b>	20	100	200	1,000
<b>Medium (10%)</b>	100	500	1,000	5,000
<b>Small (88%)</b>	880	4,400	8,800	44,000
<b>Whales Buy</b>	\$3,000,000	\$15,000,000	\$30,000,000	\$150,000,000
<b>Meds Buy</b>	\$1,500,000	\$7,500,000	\$15,000,000	\$75,000,000
<b>Small Buy</b>	\$1,320,000	\$6,600,000	\$13,200,000	\$66,000,000
<b>Total Buy</b>	\$5,820,000	\$29,100,000	\$58,200,000	\$291,000,000
<b>Available DGTX Supply</b>	700,000,000	700,000,000	700,000,000	700,000,000
<b>Jan 2018 1 DGTX =</b>	\$0.01	\$0.01	\$0.01	\$0.01
<b>Price Increase</b>	\$5.82M / 700M = \$0.01	\$29.1M / 700M = \$0.04	\$58.2M / 700M = \$0.08	\$291M / 700M = \$0.42
<b>Jan 2021 1 DGTX =</b>	\$0.02	\$0.05	\$0.09	\$0.43

## Token Issuance Inflation Projections

The following table shows how many new DGTX tokens would need to be created to cover the next 12 months of operations after January 2021 if the DGTX price was as indicated in the table above. The 12 month projected cost of running the exchange increases in each column to take into account the higher support costs, development costs, security costs and marketing costs associated with supporting the increased number of traders:

January 2021	1 DGTX = \$0.02	1 DGTX = \$0.05	1 DGTX = \$0.09	1 DGTX = \$0.43
12 Month Costs	\$1M	\$2M	\$5M	\$10M
Tokens Issued	\$1M / \$0.02 equalling 50M DGTX	\$2M / \$0.05 equalling 40M DGTX	\$5M / \$0.09 equalling 55.6M DGTX	\$10M / \$0.43 equalling 23.3M DGTX
Percentage of Total Supply	+ 5%	+ 4%	+ 5.5%	+ 2.3%

The worst case scenario in the table above shows that if only 1,000 new traders register in the first 2 years (fewer than 2 new traders per day during a 2 year period where cryptocurrency trading volumes are expected to grow exponentially), resulting in a stagnant DGTX price of \$0.02, the exchange must increase the total supply of tokens by only 5% to cover the projected costs of \$1M for the next 12 months. The effect of a 5% inflation rate on the DGTX price of \$0.02 will be negligible.

In the best case example, where 50,000 new traders are attracted to the commission-free, trustless markets of the Digitex Futures Exchange, resulting in a DGTX price of \$0.43, the exchange can cover the projected operational costs of \$10M for the next 12 months with an increase of only 2.3% in the total supply of DGTX tokens. The effect of a 2.3% inflation rate on the DGTX price would be to reduce it from \$0.43 to \$0.42, but by doing this the exchange has secured another 12 months of operational, development and marketing costs that will attract thousands more traders, creating increased demand for DGTX tokens that far outweighs the inflationary cost of creating that demand.

## Eliminating DGTX Price Risk on Trades: DGTX Peg System

Many traders will consider the DGTX token to be a valuable, long term constituent of their crypto-currency holdings and will therefore be willing to absorb the effects that any short term price volatility of the DGTX token could have on their trading profits. However, traders who are using the Digitex futures markets to hedge risk on

their physical holdings of the underlying instrument cannot tolerate this added element of the DGTX token's price affecting their positions.

For example, a trader who already owns 10 Bitcoins thinks the price of Bitcoin might drop, but he wants to keep physical possession of his Bitcoins. So he hedges his position by selling Digitex BTC/USD futures contracts. Now if the price of Bitcoin drops his losses on his actual Bitcoin holdings are being recouped by the profit on his short futures position on Digitex. But to go short on Digitex he had to buy DGTX tokens to cover his margin requirements, so this trader must be able to ensure that an adverse DGTX price movement won't affect the efficacy of this hedging strategy.

Traders can eliminate DGTX price risk by utilizing the exchange's DGTX peg system. The DGTX peg system is simply a futures contract on the price of DGTX that allows anyone who owns DGTX tokens to lock in a sale price at the current market price, whilst keeping physical possession of their DGTX tokens to use as margin for doing trades on the Digitex futures markets. The price of DGTX can be pegged in this way against ETH and BTC. In the example above, the trader would buy DGTX tokens and then immediately use the DGTX peg system to lock in a sale price at the same price, guaranteeing that he can sell his DGTX tokens at the same price he bought them for whenever he wants. The downside to doing this is that if the price of DGTX rises he will lose money on his peg system trade because he has locked in a lower price.

As a futures contract, the DGTX peg system requires the trader to deposit a margin payment in the currency to which he is pegging the value of DGTX to cover his potential losses on the trade. Because the trader is hedging against DGTX price risk this futures contract does not use the DGTX token as its native currency. To keep the exchange trustless, ETH deposits are paid into the independent account balance smart contract, and BTC deposits are converted into RSK and deposited into a separate account balance smart contract. RSK is a Turing complete sidechain of the Bitcoin network that is a 1:1 peg with BTC that supports smart contracts.

## **Buying and Selling DGTX Tokens**

A highly liquid market in DGTX tokens is essential to the success of the Digitex Futures Exchange. Buying and selling DGTX tokens must be free, quick, easy and as frictionless as possible. Traders must be able to instantly convert a wide range of crypto-currencies into DGTX tokens and back again with little to no spread and with zero transaction fees. Many traders will be happy to buy and hold DGTX tokens long term, but many other traders will buy DGTX tokens only when needed and then convert them back into ETH or BTC as soon as they close their positions.

Apart from making efforts to list DGTX on various exchanges, the Digitex Futures Exchange will integrate 0xproject into its platform, which is a decentralized token trading protocol that allows the instant and trustless trading of any token pair. Digitex will set aside 20% of the proceeds from the Token Sale to use as collateral for creating a liquid market in DGTX tokens, ensuring there is a thick order book of bids and offers for DGTX/ETH and DGTX/BTC on the Digitex trading platform.

With the existence of these very liquid DGTX spot markets, it may become normal behavior for short term traders on the Digitex Futures Exchange to buy DGTX tokens at the start of a trading session, use the DGTX Peg System to lock in their sale price and then cash out a few hours later into their original currency when they have finished trading. This could lead to very heavy traded volumes of DGTX tokens with all the associated benefits that would bring.

Digitex will also play an active market making role in the DGTX Peg System futures markets, ensuring that traders wishing to eliminate DGTX price risk whilst holding futures positions can do so easily with tight spreads, no commissions and little to no slippage.

### 3. Trustless Futures Trading

By replacing centralized account balances with an independent, decentralized smart contract on the Ethereum blockchain, traders can use the Digitex Futures Exchange without having to trust the exchange with their money. This hybrid mechanism of a centralized matching engine and decentralized account balances solves many of the problems associated with purely decentralized exchanges.

#### Decentralized Exchange Challenges

The blockchain is a highly versatile, disruptive technology that promises to shake up the established ways of doing things in ways that we cannot yet imagine. But there are several non-trivial challenges to running a decentralized futures exchange on the blockchain, particularly with regards to efficient trade settlement and order matching:

- Latency of on-chain orderbook prevents real time trading.
- Lack of privacy on-chain can lead to frontrunning on large orders.
- On-chain transactions can be expensive.
- Reliability and scalability of on-chain transactions is still an unresolved issue.
- Margin trading where the user doesn't put down the full value of the contract being traded is not yet possible on-chain.

#### Benefits of Centralized Matching Engine & Order Book vs Decentralized Exchange

Centralized servers have advantages over distributed ledgers for certain applications. Storing order books, settling trades and running matching engines on centralized servers instead of the blockchain can have many benefits:

- Matching engines on dedicated central servers are blazing fast, allowing for real time trading and more sophisticated trading tools and strategies.
- Central servers have complete privacy, preventing frontrunning of large orders
- Transactions on a proprietary central server are off-chain and effectively free.
- Central servers are very fast, extremely reliable and scale well.
- Margin trading on a centralized server is possible and allows traders to maximize their trading account balance using leverage.

## Hybrid Model of Centralized and Decentralized Components

Digitex is the intelligent combination of the speed and reliability of centralized servers with the trustless security of decentralized smart contracts. The Digitex Futures Exchange interacts with the smart contract so that it can update a trader's available balance to reflect that trader's outstanding margin liabilities and his trading profits and losses, but the exchange does not have physical possession of the trader's funds and is unable to do anything else to the funds held in the smart contract.

## The Ultimate Ringfence: Decentralized Account Balances

1. Digitex cannot freeze or seize a trader's funds for any reason, such as outside pressure from authorities, creditors, KYC/AML regulators etc. Digitex can and will resist this pressure legally and without consequence because the exchange simply does not have access to a trader's funds.
2. Digitex cannot mismanage the trader's funds in any way by using those funds for other purposes because the exchange does not have control of or access to the private keys of the trader's DGTX tokens.
3. Digitex does not hold any private keys and so is therefore not a hacking target. In the unlikely event of a security breach of the exchange, Digitex does not hold any funds that can be stolen.

## Digitex Oracle Updates Account Balance Smart Contract

The centralized exchange acts as an Oracle to the independent smart contract that holds the traders' account balances. When a trader wants to withdraw DGTX tokens from his account, the smart contract must first ask the exchange for an update on his trading profits and losses, as well as his current margin liabilities on his current matched and unmatched orders. In this way the smart contract can update his available to withdraw balance. Such updates to a trader's account balance in the smart contract are on-chain, so to minimize gas costs updates are only sent to the smart contract when the trader wants to withdraw.

This communication between the exchange and the smart contract presents a potential attack vector to hackers who might want to hack into the exchange for the purpose of updating the smart contract with incorrect information that lets them withdraw more than they have. The solution to this is to calculate the trader's profit and loss from scratch from all of his matched trades whenever the smart contract asks for an update to a trader's account balance. By doing this it is impossible for a hacker who has somehow gained access to the exchange to send incorrect updates to the smart contract because he will be unable to create the fake matched trades needed (each needing a counterparty and matching timestamps) to calculate his fake profit and update the smart contract with it.

Security can be further enhanced by requiring users of the Digitex Futures Exchange to have the Metamask browser plugin. This ensures that only you have the ability to withdraw from your account balance by utilizing Metamask's secure identity vault which uses signed blockchain transactions to verify you are the same person who made the deposit, but in a completely anonymous way that requires no identifying information whatsoever from you.

## 4. The Digitex Futures Exchange

The Digitex Futures Exchange is a trading environment for the trustless buying and selling of digital currency futures contracts with zero transaction fees. The exchange does not hold any client funds, combining the trustless security of decentralized account balances with the speed and reliability of a centralized order book and matching engine.

### Main Features and Benefits

1. Zero Trading Fees
2. Decentralized Account Balances
3. Highly Liquid Futures Markets
4. Automated Market Makers
5. Digitex Native Currency
6. Token Issuance Revenue Model
7. Bitcoin, Ethereum & Litecoin Futures
8. One Click Ladder Trading Interface
9. Large Tick Sizes
10. High Leverage
11. No Auto Deleveraging
12. Sub-Millisecond Order Matching
13. Off-Chain Price Discovery, On-Chain Settlement
14. Decentralized Governance by Blockchain
15. Complete Privacy
16. Blockchain Driven

### Zero Trading Fees

There are no transaction fees of any kind on the Digitex Futures Exchange. Traders can submit Maker orders or Taker orders at any time under any circumstances and pay 0% commissions on all trades forever. Digitex's revolutionary token issuance model makes commission-free trading fully sustainable indefinitely, and it actually thrives as the exchange gets busier, ensuring the long term success of the Digitex Futures Exchange.

### Decentralized Account Balances

Traders do not need to trust Digitex with holding their account balance in order to trade on the exchange. Your account balance is held by a decentralized, independent smart contract on the Ethereum blockchain, not by the exchange. Digitex cannot freeze/mismanage/lose your funds because we physically don't have access to your money. And in the unlikely event that Digitex is hacked there are no funds for the hackers to steal.

### **Highly Liquid Futures Markets**

When you remove the constraints of transaction fees you get highly liquid markets because traders engage in high volume, single tick trading strategies that are not viable on other exchanges due to commissions. Liquidity is further enhanced by the presence of automated market makers, funded with 20% of the total supply of DGTX tokens, that are programmed to break even whilst keeping spreads tight at all times, even in volatile market conditions.

### **Automated Market Makers**

Digitex market makers are automated trading bots with algorithms that are programmed to break even. With their highly active trading strategy and a large trading bank of 20% of all tokens in circulation (200M DGTX), they help create liquid futures markets that have tight bid and offer spreads, even in volatile market conditions, giving traders the confidence of always being able to enter and exit positions which further enhances liquidity.

### **Digitex Native Currency**

The Digitex Futures Exchange has its own native cryptocurrency, called the DGTX token. The tick value of each Digitex futures market is 1 DGTX token, meaning that all trading profits and losses are denominated in DGTX tokens. Margin requirements are payable in DGTX tokens and traders account balances, deposits and withdrawals are denominated in DGTX tokens. Therefore, traders must own DGTX tokens to trade on Digitex's commission-free, trustless futures markets, which creates demand for the DGTX token.

### **Token Issuance Revenue Model**

The Digitex Futures Exchange is revolutionizing futures trading by eliminating transaction fees on trades and instead generating revenue through token issuance of its native currency, the DGTX token. Because the DGTX token is in demand from traders, the exchange is able to create and sell a small number of new DGTX tokens each year to cover costs. The inflationary cost of a small increase in the DGTX supply is offset by demand from traders who must own it to participate in Digitex's commission-free, trustless futures markets.

### **Bitcoin, Ethereum & Litecoin Futures**

Digitex has 3 futures markets: BTC/USD, ETH/USD & LTC/USD. Each futures contract has a large tick size, which eliminates a lot of noise and allows prices to be displayed on a one click ladder style trading interface, even in volatile market conditions. Tick values of futures contracts are denominated in DGTX tokens, meaning that all profits and losses are settled in DGTX tokens.

### **One-Click Ladder Trading Interface**

Digitex futures markets are displayed on an intuitive ladder interface that allows traders to submit buy and sell orders instantly with a single click. With minimal mouse movement and without needing the keyboard, traders never need to take their eyes from the price action. Bids and offers move up and down a central price ladder that allows traders to visualize the market as the price literally moves up and down.

### **Large Tick Sizes**

A distinctive feature of Digitex futures markets are their large tick size. In futures trading, a tick is the minimum price increment that a futures contract can move up or down. For example, the tick size on the BTC/USD futures contract is \$5. This removes noise and allows volatile futures contracts to be displayed on a scalper-friendly one click ladder trading interface without the price constantly disappearing off the top of the page and off the bottom of the page.

### **High Leverage**

Digitex futures markets offer traders very high leverage of up to 100×, allowing them to realise large percentage gains (and losses) from relatively small price movements. But unlike other Bitcoin futures exchanges, Digitex does not cancel your winning trade to protect itself from losses if your counterparty's losing position gets stopped out because he was too highly leveraged.

### **No Auto Deleveraging**

Unlike other Bitcoin futures exchanges that offer high leverage, Digitex will not close you out of a winning position to protect itself from losses when your counterparty's losing trade is stopped out because he was too highly leveraged. It's out of your control whether the counterparty to your trade is at maximum leverage or not and you shouldn't miss out on a profitable move that you correctly predicted because the exchange canceled your winning trade.

### **Sub-Millisecond Order Matching**

Digitex is built on the Erlang/OTP stack, the same programming language as WhatsApp, which was chosen for its real time updating capabilities and its ability to seamlessly handle spikes in activity with extremely low latency. The trading interface updates prices in real time and is completely web browser based with nothing to download. The Digitex order matching engine matches trades in less than one millisecond. The exchange is highly scalable to millions of concurrent users if needed.

### **Off-Chain Price Discovery, On-Chain Settlement**

Digitex is a hybrid futures exchange that combines the speed and reliability of a centralized order matching engine with the trustless security of decentralized account balances on the blockchain. This offers traders the best of both worlds when it comes to speed of execution and the safety of their deposits. Traders enjoy the benefits of real time trading on a blazing fast order matching engine without needing to trust the exchange with their money.

### **Decentralized Governance by Blockchain**

Digitex uses blockchain technology to eliminate transaction fees by minting a small number of new DGTX tokens each year. This token issuance revenue model is governed democratically by its traders, for the benefit of its traders, through Decentralized Governance by Blockchain. This means that all DGTX token owners collectively decide on when, if and how many new tokens are issued to cover the costs of operating the futures exchange.

### **Complete Privacy**

Traders on Digitex can start trading immediately without needing to submit their name or any identifying documents of any kind. As an offshore exchange that accepts only DGTX tokens, Digitex is not bound by intrusive, ineffective and pointless KYC/AML regulations that intrude on our users' privacy and which put them at risk of identity theft by making the exchange a target for hackers seeking personal information. The best way to protect our users' personal data is not to collect that data in the first place.

### **Blockchain Driven**

Digitex is driven by blockchain technology. From the use of its own cryptocurrency to eliminate transaction fees, to storing account balances trustlessly in a decentralized smart contract, and allowing its traders to determine the rate of new token issuance, everything that makes Digitex revolutionary is only made possible by embracing the disruptive power of new blockchain technology that until very recently didn't even exist.

### **Automated Market Makers**

Liquidity begets liquidity. Traders want to trade on liquid markets with tight spreads where they can get filled quickly and with the minimum of slippage. Digitex market makers are automated trading bots with algorithms that are programmed to break even. Not being driven by profit, the market makers do not exist to extract value from traders. With their highly active trading strategy and a large trading bank of 20% of all tokens in circulation (200M DGTX), the Digitex market makers help create liquid futures markets that have tight bid and offer spreads, even in volatile

market conditions, giving traders the confidence of always being able to enter and exit positions which further enhances liquidity.

Digitex market makers are very well capitalized, with a trading bank of 200M DGTX tokens, which is 20% of the total supply. This ensures that a large number of DGTX tokens are actually being used actively for the purpose of trading, with all the beneficial network effects that brings, rather than those tokens sitting dormant in a speculator's wallet. It helps to create very liquid futures markets from day one, which combined with zero transaction fees will attract a large number of traders to the Digitex Futures Exchange.

Large numbers of traders will create a surge in demand for DGTX tokens and a price bump that will convince speculators to take an early profit by selling their DGTX tokens to those traders, thus transferring more tokens from dormancy in wallets to active use on the futures markets. In this way, the Digitex market makers are a catalyst to a highly efficient trading environment where the majority of the ecosystem's protocol tokens are in active use.

A major benefit that comes from the majority of DGTX tokens being in active use by traders is that the governance of new token issuance, which is controlled by DGTX token owners, is being done by interested parties who are actively using the platform. Many of these active traders will be profitable because there are no transaction fees, giving them strong incentives to support the long term success of the exchange and the DGTX token with well considered governance proposals and voting behavior.

## **Futures Contract Specifications**

The exchange will launch with the following 3 futures contracts: BTC/USD, ETH/USD & LTC/USD.

### **Futures Contract: BTC/USD (Bitcoin against the US Dollar)**

**Tick size** (minimum price increment): \$5 USD

**Tick value:** 1 DGTX

**Taker/Maker Fee:** 0%

**Funding Costs:** 0%

**Initial Margin:** 20 DGTX

**Maintenance Margin:** 10 DGTX

**Contract Type:** Contract For Difference (CFD)

**Contract Duration:** 24 Hours

**Settlement Date:** Daily at 00:00 GMT

**Settlement Price:** BitcoinAverage.com spot price of BTC/USD at 00:00 GMT, rounded up or down to the nearest \$5.

**Settlement Process:** Cash settled in DGTX tokens at Settlement Price.

All open positions remain open by being rolled over into the new contract which opens at 00:00 GMT.

#### **Futures Contract: ETH/USD (Ethereum against the US Dollar)**

**Tick size** (minimum price increment): \$1 USD

**Tick value:** 1 DGTX

**Taker/Maker Fee:** 0%

**Funding Costs:** 0%

**Initial Margin:** 20 DGTX

**Maintenance Margin:** 10 DGTX

**Contract Type:** Contract For Difference (CFD)

**Contract Duration:** 24 Hours

**Settlement Date:** Daily at 00:00 GMT

**Settlement Price:** BitcoinAverage.com spot price of ETH/USD at 00:00 GMT, rounded up or down to the nearest \$1.

**Settlement Process:** Cash settled in DGTX tokens at Settlement Price.

All open positions remain open by being rolled over into the new contract which opens at 00:00 GMT.

#### **Futures Contract: LTC/USD (Litecoin against the US Dollar)**

**Tick size** (minimum price increment): \$0.25 USD

**Tick value:** 1 DGTX

**Taker/Maker Fee:** 0%

**Funding Costs:** 0%

**Initial Margin:** 20 DGTX

**Maintenance Margin:** 10 DGTX

**Contract Type:** Contract For Difference (CFD)

**Contract Duration:** 24 Hours

**Settlement Date:** Daily at 00:00 GMT

**Settlement Price:** BitcoinAverage.com spot price of LTC/USD at 00:00 GMT, rounded up or down to the nearest \$0.25.

**Settlement Process:** Cash settled in DGTX tokens at Settlement Price.

All open positions remain open by being rolled over into the new contract which opens at 00:00 GMT.

## Example Trade 1

### BTC/USD Trade on Digitex Futures Exchange

- Bob is a short term, trend following Bitcoin trader. He sees the price of BTC/USD start to rise and he jumps on by buying 500 BTC/USD futures contracts with a single click of the mouse that are being offered for sale at \$10,700.
- The price rises quickly and then starts to come down so Bob immediately hits the bid and sells 500 contracts at \$10,720 with a single click of the mouse.
- The tick size of the BTC/USD futures contract is \$5 so Bob has made a profit of 4 ticks on a 500 contract position which is a 2,000 tick profit. 1 tick is worth 1 DGTX so he has made a profit of 2,000 DGTX.
- The current market price of 1 DGTX token is USD \$0.10 so Bob's profit is  $2,000 \text{ DGTX} \times \$0.10 = \$200$ .
- Bob's initial margin requirement to open his trade was  $500 \times 20 \text{ DGTX} = 10,000 \text{ DGTX}$  (\$1,000). He needed this much in his account to be able to enter the trade. His account balance is held by an independent smart contract, not by the exchange.
- There are zero transactions fees on all trades so Bob's profit of \$200 after commission is \$200.

### Same BTC/USD Trade on CryptoFacilities.com

- Bob buys 10 Bitcoins worth of contracts offered at \$10,700 and then sells them at the \$10,720 bid, making a profit of \$200, in a flurry of mouse clicks and keyboard strokes.
- He must have  $10 \times \$10,700 = \$107,000 \times 16.7\% = \$17,869$  in his account to cover this position. His account balance is held by the exchange.
- Bob's commission on this trade was \$171.36:
  - Buy:  $0.08\% \times 10 \times \$10,700 = \$85.60$
  - Sell:  $0.08\% \times 10 \times \$10,720 = \$85.76$
  - Total:  $\$85.60 + \$85.76 = \$171.36$ .
- Bob's profit of \$200 is actually a profit of only \$28.64 after paying commissions.

### Same BTC/USD Trade on GDAX.com

- Bob buys 10 Bitcoins offered at \$10,700 and then sells them at the \$10,720 bid, making a profit of \$200, in a flurry of mouse clicks and keyboard strokes.
- He must have  $10 \times \$10,700 = \$107,000$  in his account to cover this position. His account balance is held by the exchange.
- Bob's commission to buy and sell 10 Bitcoins was \$535.50:
  - Buy:  $0.25\% \times 10 \times \$10,700 = \$267.50$
  - Sell:  $0.25\% \times 10 \times \$10,720 = \$268$
  - Total:  $\$267.50 + \$268 = \$535.50$ .
- Bob's profit of \$200 is actually a loss of  $-\$335.50$  after paying commissions.

Table 3: Example Trade No. 1

BTC/USD Trade	Digitex Futures Exchange	CryptoFacilities.com	GDAX.com
Margin required	\$1,000	\$17,869	\$107,000
Margin held by	Independent smart contract	CryptoFacilities	GDAX
Profit on trade	\$200	\$200	\$200
Commission on trade	\$0	\$171.36	\$535.50
Profit after commission	<b>+\$200</b>	<b>+\$28.64</b>	<b>-\$335.50</b>

## Example Trade 2

### ETH/USD Trade on Digitex Futures Exchange

- The price of ETH starts dropping so Alice, a short term scalper, hits the bid and sells 250 ETH/USD futures contracts at \$502 with a single click of the mouse.
- The price drops to \$501 offered and stays there for 20 seconds so Alice decides the move down has run out of momentum and she buys 250 contracts at \$501 with a single click of the mouse.
- The tick size of the ETH/USD futures contract is \$1. Alice has made a profit of 1 tick on a 250 contract position which is a 250 tick profit. 1 tick is worth 1 DGTX so she has made a profit of 250 DGTX.
- The current price of 1 DGTX is USD \$0.10 so Alice's profit is  $250 \text{ DGTX} \times \$0.10 = \$25$ .
- Alice's initial margin requirement to open her trade was  $250 \times 20 \text{ DGTX} = 5,000 \text{ DGTX}$  (\$500). She needed this much in her account to be able to enter the trade. Her account balance is held by an independent smart contract, not by the exchange.
- There are zero transactions fees on all trades so Alice's profit of \$25 after commission is \$25.

### Same ETH/USD Trade on BitMEX.com

- Alice sells 25 Ether worth of contracts at the \$502 bid and then buys them at the \$501 offer, making a profit of \$25 in a flurry of mouse clicks and keyboard strokes.
- She must have  $25 \times \$502 = \$12,550 \times 2\% = \$251$  in her account to cover this position. Her account balance is held by the exchange.
- Alice's commission on this trade was \$18.80
  - Sell:  $0.075\% \times 25 \times \$502 = \$9.41$
  - Buy:  $0.075\% \times 25 \times \$501 = \$9.39$
  - Total:  $\$9.41 + \$9.39 = \$18.80$ .

- Alice's profit of \$25 is actually a profit of only \$6.20 after paying commissions.

### Same ETH/USD Trade on Kraken.com

- Alice sells 25 Ether worth of contracts at the \$502 bid and then buys them at the \$501 offer, making a profit of \$25 in a flurry of mouse clicks and keyboard strokes.
- She must have  $25 \times \$502 = \$12,550 \times 20\% = \$2,510$  in her account to cover this position. Her account balance is held by the exchange.
- Alice's commission on this trade was \$65.20:
  - Sell:  $0.26\% \times 25 \times \$502 = \$32.63$
  - Buy:  $0.26\% \times 25 \times \$501 = \$32.57$
  - Total:  $\$32.63 + \$32.57 = \$65.20$ .
- Alice's profit of \$25 is actually a loss of  $-\$40.20$  after paying commissions.

Table 4: Example Trade No. 2

ETH/USD Trade	Digitex Futures Exchange	BitMEX.com	Kraken
Margin required	\$500	\$251	\$2,510
Margin held by	Independent smart contract	Bitmex	Kraken
Profit on trade	\$25	\$25	\$25
Commission on trade	\$0	\$18.80	\$65.20
Profit after commission	+ \$25	+ \$6.20	- \$40.20

### Example Trade 3

#### BTC/USD Trade on Digitex Futures Exchange

- Tom buys 1000 BTC/USD futures contracts at \$10,000.
- Jamie Dimon continues buying Bitcoin aggressively and the price rises fast. Tom sells 1000 contracts at \$11,000.
- The tick size of the BTC/USD futures contract is \$5. Tom has made a profit of 200 ticks on a 1000 contract position which is a 200,000 tick profit. 1 tick is worth 1 DGTX so he has made a profit of 200,000 DGTX.
- The current market price of 1 DGTX token is USD \$0.10 so Tom's profit is  $200,000 \text{ DGTX} \times \$0.10 = \$20,000$ .
- Tom's initial margin requirement to open his trade was  $1000 \times 20 \text{ DGTX} = 20,000 \text{ DGTX}$  (\$2,000). He needed this much in his account to be able to enter the trade. His account balance is held by an independent smart contract, not by the exchange.

- There are zero transactions fees on all trades so Tom's profit of \$20,000 after commission is \$20,000.

### **Same BTC/USD Trade on BitMEX.com**

- Tom buys 20 Bitcoins worth of contracts at \$10,000.
- His initial margin requirement to open this trade is  $20 \times \$10,000 \times 1\% = \$2,000$ .
- Unfortunately for Tom, his counterparty to the trade was highly leveraged. When the price went up, instead of liquidating Tom's counterparty's position into the market with a stop loss, BitMEX cancelled the trade, stopping Tom out of his winning position at \$10,050 and giving him a profit of \$1,000.
- This is called Auto Deleveraging and is used by BitMEX to protect themselves from losses caused by highly leveraged traders in volatile markets.
- The price of Bitcoin continues rising quickly to \$11,000 but poor old Tom misses the whole move.
- In the words of the BitMEX CEO, Arthur Hayes: "If you want 100× leverage – which obviously you do, because that's why you're here – you accept that we at BitMEX can't put our balance sheet on the line to settle these contracts."
- Better luck next time, Tom.

## Maker and Taker Commission Fees on Other Exchanges

The above examples use the standard Taker fee to calculate commissions on CryptoFacilities (Taker fee: 0.08%), BitMEX (Taker fee: 0.075%), Kraken (Taker fee: 0.26%) and GDAX (Taker fee: 0.25%). It is possible to reduce your commission payments on those exchanges by submitting sell orders above the current trading price and buy orders below the current trading price which will give you the reduced Maker fee.

However, this restricts the traders ability to immediately open or close positions by lifting offers and hitting bids like Bob and Alice did in the above examples. This inevitably leads to missed opportunities and unrealized profits which have the same effect on the traders' bottom line as transaction fees. Even if a trader does most of his trades as a Maker, Taker fees are so expensive that a short term trading strategy that ekes out single tick profits here and there is converted from a profitable strategy into a losing strategy. On the Digitex Futures Exchange traders can Take whatever price they want whenever they want with no commission costs or funding costs of any kind.

As the prices of cryptocurrencies continues to rise, the current universal model of percentage based transaction fees on all other exchanges means that commissions are constantly getting more and more expensive. Ever increasing transaction fees make short term trading strategies that provide lots of liquidity to the markets even more unviable as time goes on, making Digitex more attractive to these highly valuable liquidity providers.

## 5. Decentralized Governance by Blockchain (DGBB)

Blockchain technology is the driving force behind Digitex: the blockchain allows the exchange to eliminate transaction fees through the creation of its own cryptocurrency, and smart contracts on the blockchain hold traders' account balances, allowing the exchange to operate trustlessly. Digitex also uses the blockchain to govern new token issuance efficiently and democratically through rules and voting systems that are encoded into smart contracts. One of the great promises of the blockchain is decentralized governance. On the assumption that DGTX owners will act in their own collective self interest, Digitex can move forwards as a dynamic organization capable of adapting quickly to changing conditions.

### Voting on New Token Issuance

DGTX token owners submit proposals with regards to how many new DGTX tokens should be issued to cover the ongoing operational costs of running the futures exchange.

Current DGTX token owners will act in their own collective self interest when it comes to deciding how many new DGTX tokens to create to cover the costs of operating the Digitex Futures Exchange. They must balance the inflationary cost of creating new tokens against the benefits of a well funded, well managed futures exchange that provides ongoing and increasing demand for DGTX. They must preserve the current value of DGTX by minimizing the creation of new tokens, whilst at the same time creating enough new tokens to cover the development and operational costs of the Digitex Futures Exchange, which will increase the value of DGTX tokens through increased demand from traders.

Voting on proposals takes time and attention and requires users to be constantly active and accurately informed about everything. DGTX token owners can therefore delegate their voting power to a trusted person who votes on their behalf if they don't want to play an active role.

## 6. Summary

The **Digitex Futures Exchange** is a revolutionary new futures exchange model that mints its own native cryptocurrency to replace the need for transaction fees on trades. Commission-free trading will create highly liquid futures markets by attracting high volume, short term traders whose trading strategies are not viable on other exchanges due to commissions. As cryptocurrency prices rise, percentage based transaction fees on other exchanges will also rise, further increasing the appeal of a commission-free futures exchange.

Commission-free markets create demand for DGTX tokens which more than offsets the inflationary cost of creating that demand.

Traders on Digitex can participate in liquid, commission-free markets without needing to trust the exchange with custody of their funds, further differentiating the exchange from the traditional exchanges that require traders to relinquish full control of their account balances to a central third party that can potentially freeze/mismanage/lose those funds.

Through **Decentralized Governance by Blockchain** (DGBB), new token issuance for the purpose of revenue generation is run democratically by DGTX token owners.

Highly liquid, commission-free futures markets on a stable, fast and trustless trading platform, during a period of exponential growth in cryptocurrency trading, will attract a large number of traders, creating huge demand for DGTX tokens. As the price of DGTX tokens increases the exchange must create fewer tokens to cover costs, thereby reducing the inflationary cost of creating new tokens.

### Updates to the WhitePaper

v. 1.1. (10 Jan 2018) — Page 6, 8: Revised the available tokens during the initial sale from 70% to 65%, 5% is now reserved for referrals. Clarified that 100% of the Digitex team's awarded tokens are vested for 3 years.

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