

dMarketplace Whitepaper

Introduction

Welcome to dMarketplace, a revolutionary decentralized e-commerce platform that integrates Web3, blockchain technologies, and AI into everyday life. dMarketplace facilitates the exchange of on-chain assets for real-world products, promoting the use of cryptocurrencies for everyday goods. Our mission is to build an e-commerce platform that elevates the benefits of owning cryptocurrency, encourages the exchange of goods using cryptocurrency, and bridges the gap between Web3 and reality.

dDime (DD)

Overview

dDime (DD) is the core of our platform, serving as the primary medium of exchange. dDime is the first cryptocurrency that offers token cash-back, similar to credit card cashback. Additionally, dDime provides reflection rewards to token holders and implements an automated burn mechanism to control inflation and enhance token value.

Key Features

- **Pay to Earn:** Users earn 2% cash back in dDime whenever they purchase goods on the platform with dDime, encouraging further adoption of the token as a payment currency.
- **Reflection Rewards:** A portion of transaction fees is redistributed to dDime holders, providing passive income through a reflection mechanism.
- **Burn Mechanism:** A small portion of every transaction is automatically burned to reduce the circulating supply and boost the value of dDime.
- **Highly Secure and Transparent:** dDime leverages the Ethereum blockchain to provide an immutable, decentralized platform that ensures secure and transparent transactions through smart contracts and public verification.

Problems to Solve

Limited Use of Cryptocurrencies

Despite being recognized as valuable digital currencies, most cryptocurrencies are not widely accepted for purchasing goods outside the crypto world. This is due to a lack of incentives for using cryptocurrencies over fiat currencies.

High Transaction Costs

Many platforms encourage staking with high-interest rates, but they also introduce high transaction fees, making it costly for holders to use their tokens for everyday transactions. This discourages people from spending their tokens.

Market Volatility

The fluctuation of cryptocurrency prices leads to a focus on speculative trading rather than using cryptocurrencies for everyday purchases.

dDime Tokenomics

Annual Emission

Every year, 5 billion dDime tokens are emitted to support the ecosystem. These coins are distributed as follows:

- Rewards: The majority of the coins are allocated to dDime holders as holding rewards.
- Platform Funding: A portion of the tokens is used to finance the development and operation of the dMarketplace platform.

Incentives for Platform Use

- Purchase Rewards: Users receive a rebate in dDime when they make purchases on the platform. This cashback encourages the use of dDime as a payment method.
- Encouraging Transaction Volume: The cashback and reflection rewards stimulate active use of dDime, increasing the platform's transaction volume.

Burn Mechanism

A portion of each transaction is burned to control inflation and increase the value of dDime. This automated burn mechanism ensures a continuous reduction in the circulating supply.

Initial Supply

The initial supply of dDime is 100 billion tokens. The smart contract ensures a stable token economy.

Transaction Fees and Cashback

Cashback

- Cashback for Senders: Users who make payments using dDime receive a 2% cashback on the transaction amount. This feature incentivizes the use of dDime as the preferred payment method on the platform, encouraging greater adoption and increasing transaction volume.

Transaction Fees

Merchant charge fee

- Fees for merchants: Recipients of payments (merchants), regardless of the cryptocurrency used, are subject to a 6% fee on the amount received. The distribution of this fee is as follows:
 - Payments made with dDime: 2% of the fee is allocated back to the user to reward using dDime as means of payment, while the remaining 4% is invested in platform development.
 - Payments made with other cryptocurrencies: The entire 6% fee is directed toward platform development.

Buying and Selling from the Liquidity Pool

- Fees for Buying: When purchasing dDime tokens from the liquidity pool, a fee of 1% of the purchase amount is charged. This fee is allocated to the fee pool and distributed according to the mechanisms described below.
- Fees for Selling: When selling dDime tokens to the liquidity pool, a fee of 2% of the sale amount is charged. This fee is also allocated to the fee pool and distributed according to the mechanisms described below.

Transaction Fees for Transferring Tokens

- Each transfer of dDime from user1 to user2 incurs a transaction fee of 1% of the total transaction amount. This fee is also allocated to the fee pool and distributed according to the mechanisms described below.

Distribution of Fees

The collected transaction fees of dDime-transactions are distributed as follows:

- 60% is redistributed to dDime holders as reflection rewards.
- 20% of the fees are burned, reducing the circulating supply of dDime to help prevent inflation and potentially increase its value.
 - **Note:** When purchasing products, no dDimes are burned.
- 20% is used to fund the development and operation of the dMarketplace platform.

Economic Calculations and Reflection Mechanisms

dDime tokenomics uses an innovative reflection mechanism to maximize value creation for all token holders. After each product purchase, the sender's account balance is updated taking into account reflections, cashback and fees.

For example, when a customer (user1) pays for a product with dDime to a merchant (user2), the following variables are considered:

$$S' = (S - a + a\alpha) \left(1 + \frac{\gamma a}{M - \delta a - \gamma a} \right)$$

- S: Balance of user1 before the transfer
- S': Balance of user1 after the transfer
- a: Token amount to be transferred
- α : Cashback rate (2%)
- γ : Reflection rate
- δ : Burning rate
- M: Total supply before the transfer

Accumulated Balance Calculation

When calculating the accumulated balance after a period of time with multiple transactions, the ending balance is adjusted based on reflections, cashback, and burns.

The following formula is used for the cumulative calculation of the account balance after multiple transactions:

$$S' = S \prod_{k=1}^m \left(1 + \frac{\gamma a_k}{M - \gamma a_k - \delta \sum_{l=1}^k a_l} \right)$$

- S: Balance of user1 before the transfer
- S': Balance of user1 after the transfer
- a_k : The number of tokens transferred in the k-th transaction
- m: Number of transactions
- α : Cashback rate (2%)
- γ : Reflection rate
- δ : Burning rate
- M: Total supply before the transfer

dMarketplace Platform

AI-Powered E-Commerce

dMarketplace is focused on building a fully self managing, AI-powered and decentralized e-commerce platform that seamlessly bridges virtual on-chain assets with real-world goods. This platform allows customers to shop physical products with cryptocurrency, while merchants can receive fiat currency, making it easier to handle taxes and payroll.

Purchase Process

When a customer places an order, the vendor is notified to prepare the order for shipping. The smart contract confirms the shipment and delivery before releasing funds to the merchant.

Merchant Review System and Dispute Handling

dMarketplace employs AI to assist in resolving disputes. If a merchant fails to resolve a dispute satisfactorily, the system may ban the merchant, and the customer will be refunded.

KYB Process

All merchants must undergo a Know Your Business (KYB) process to verify their legitimacy before listing products on the platform.

Conclusion

dMarketplace is poised to become the largest and most trusted crypto-only e-commerce platform, supporting all major cryptocurrencies, including dDime, as a means of payment. By integrating blockchain, AI, and decentralized finance, dMarketplace aims to increase the mass adoption of cryptocurrency for daily use, ultimately bridging the gap between the virtual and real worlds.