



# WFC

## The Standard of Diamond Exchange :

- The Start of an Exchange Market for Crypto-currencies and Tangible assets

### WHITE PAPER

Mobile App / Web Monetization Platform

Ver.1.0

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## Legal Notice

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We inform all participants of the following.

Information presented in these documents do not indicate contractual obligations.

The purpose of the **WFC Project** is to provide convenient and beneficial platform information to potential customers in the virtual money market and current customers that own WFC coins.

Information offered by DDE henceforward shall allow customers to conduct sound trades from early stages of WFC trading to advanced technical development stages.

These documents are not designed to apply any administrative regulations or to protect customers from overinvestment. However, we will do our utmost effort to abide by regulations of each region and country. In regards to currently unregulated or controversial decisions, we shall put the participants' profits first. Information, calculations, and technical matters specified in the White Paper are to be protected as advance information.

Also, information of results and plans that have been made public may be modified.

Therefore, the results of the project are provided directly and indirectly to the participants in order to minimize their risk, but may be different from projected results of the project plan.

The Pre-Sale of WFC coins is made possible through your voluntary participation.

Please review the project plan as prepared by DDE, and examine the possible requirements, risks, and uncertainties.

In order to participate properly, you must agree to the terms of service use.

Agreement to the terms of service use and provision and guarantee of information are required for the pre-sale and DDE does not take any responsibility for any incident resulting from not agreeing to such conditions.

This is the end of the legal notice from DDE Co., Ltd. that is in charge of the WFC Project.

## **Abstract**

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Forgery and falsification of virtual money based on block chain technology have been verified to be impossible through decentralization and distributed ledgers. This offers an opportunity to numerous people to realize a new world and a new ecosystem.

However, there are two questions that must be answered first.

**Q. Does an ecosystem or a service exist at present, that we can obtain or enjoy through virtual money?**

**Q. If so, are we provided with such abundantly?**

Currently, a core issue for participants in cryptocurrencies is that there is a lack of practical uses or an ecosystem that fully utilizes virtual money. Numerous block chain projects now only focus on decentralizing technology, speed, and such rather than on constructing an ecosystem through actual effective values. This ultimately reveals the current limits that blockchain-based virtual money (cryptocurrency) faces itself.

The WFC Project aims to use blockchain technology to construct a satisfactory ecosystem that provides actual effective values in the current and more advanced future. We also aim to focus on constructing an ecosystem designed for exchanging virtual money for real money and tangible goods rather than focusing on decentralizing technology.

We will continue researching ways to remove as many uncertainties as possible by overcoming diverse technical limits in order to allow participants to enjoy the benefits of this ecosystem safely and easily.

We will now explain the ecosystem being built by WFC, as well as the visions, policies, and team members for the actualization and realization of our technology.

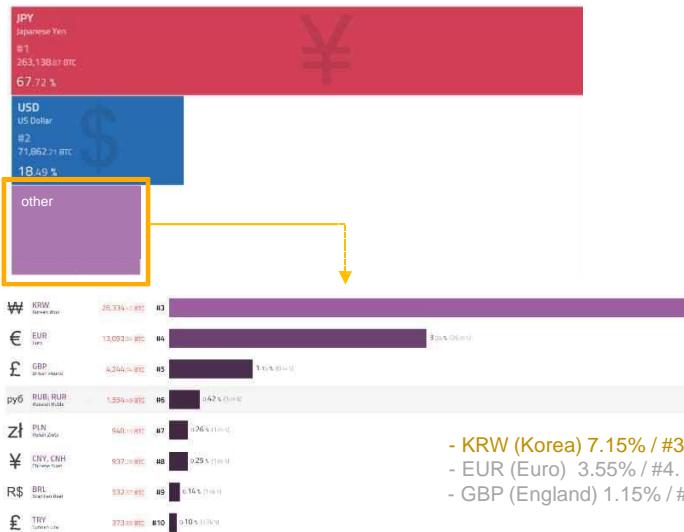
## Introduction, Vision

As block chain technology has realized a decentralized distributed ledger, virtual currencies with various purposes have appeared and platforms called Virtual Money Exchanges, where such virtual money can be purchased, have been developed and established.

Many people looking forward to a world built upon blockchain-based virtual currencies are investing real money to purchase these virtual currencies through Virtual Money Exchanges.

Although there is no doubt about expectations for a new world built upon blockchain, there is a lack of virtual money that can offer real and tangible value.

Exchange volume of Bitcoin in 2018 in each currency



[F.1] The exchange volume of Bitcoin in 2018 in each currency / Source: Coinhills

In essence, virtual currencies must be able to provide real, effective values to their participants. **The WFC Project aims for a hyperconnected society and to construct an ecosystem that achieves effective values of real things through decentralized block chain.**

As the first step, the WFC Project will establish an ecosystem with a virtual currency with value that can be directly traded for actual goods This is the vision of the WFC Project.

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## **Introduction, WFC Project**

### **Background.**

As of a few months ago, around 3,000 kinds of virtual money had been developed and released but only a very small number of companies have managed to develop its use with proper plans.

They all have their own purposes but their use is actually unclear.

We thought deeply about how virtual money could bring value to the everyday lives of many people. As a result and **solution to our deliberation, we focused on Diamond, which is used and its value recognized worldwide as monetary and property assets.**

And this was **the beginning of the WFC Project.**

We will realize a digital trade ecosystem that allows real tangible assets, Diamond, to be easily traded for virtual money in a digital environment and this ecosystem will be constructed with a blockchain network.

### **Prospect of the survival of cryptocurrencies in the future**

**Coins all over the world** Approx. 3,000 coins

**Change of survival** 5%

**COIN's 150 EA**



[F.2] A prospect of cryptocurrencies in the future presented by experts

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## **Introduction, WFC Project**

The core of WFC Project is composed of three main elements.

- A. WFC Tokens**
- B. ADAMANT Tokens**
- C. Digital Diamond Exchange (DDE)**

### **A. WFC Token**

WFC is the abbreviation for World Friendly Coin and its concept is based on the image of contribution to global peace and friendship, and is to be issued as virtual money.

WFC coins will serve as the medium for maintaining and vitalizing the DDE (Digital Diamond Exchange) ecosystem which is to be constructed through the WFC Project. This token is not pegged to any tangible asset including Diamond, but only works as a means to purchase other cryptocurrencies on the DDE platform

WFC tokens are not related to any asset price, and as a utility token, are used only as a means of purchasing virtual currency on the DDE platform.

### **B. ADAMANT Token**

ADAMANT is a token that is only tradable on the DDE platform which is pegged to 0.1 Carat of Diamond as a certificate. ADAMANT token is representative of real Diamond so the price of the token is associated with the price of Diamond at the time of purchase. ADAMANT Tokens can be purchased on the DDE Platform with WFC Tokens.

### **C. DDE : Digital Diamond Exchange**

DDE stands for Digital Diamond Exchange and it is an online exchange where WFC tokens can be used to purchase ADAMANT Tokens (Digital Diamond) or real Diamond.

You can access DDE anywhere with access to an online network to conduct trades or convert Digital Diamond to real Diamond.

DDE plays a pivotal role in the ecosystem to be constructed through the WFC Project.

It will be designed to allow not only WFC Tokens but other safe virtual currencies to be exchanged for real goods as well, and to achieve this we will not only need technical effort but we must establish fairness, transparency, and stability as our core values.

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## Platform structure

WFC is NOT a security



**WFC**



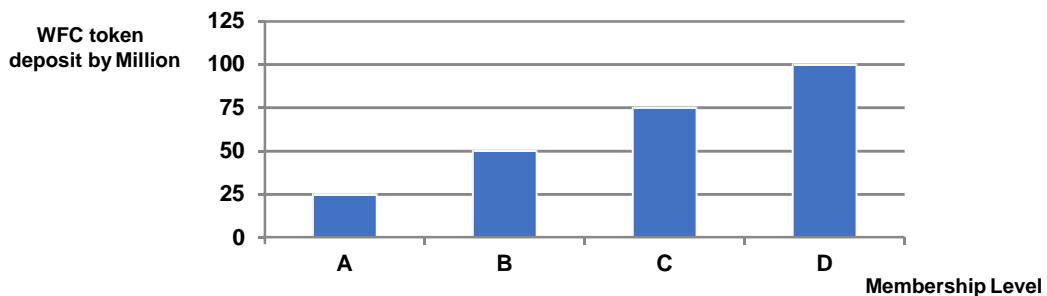
**ADAMANT**

- WFC is an utility token that is used for currency circulation in the DDE DEX platform
- ADAMANT is the Diamond-pegged token, storing the value of Diamond as a token
- The DDE platform will start with Diamond, and eventually expand to other precious metals such as gold, white gold, and platinum.
- Any user with proper KYC certification can buy ADAMANT using WFC up to the amount specified by rules and regulations

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## Platform structure

### DDE is a Platform - Club membership



DDE will enter an exclusive partnership with two diamond mining companies, which is able to officially supply real Diamond to back the digital Diamond.

The DDE Platform will be opened to other suppliers of Diamond as well. In order for a supplier to join the DDE Platform and obtain membership, they must deposit a certain amount of WFC Tokens in the DDE Vault (i.e. 10M WFC). Membership levels shall be based on WFC Tokens with services and benefits varying accordingly.

	Deposit req.	Service fee	Digital Asset Count
A	25M	4%	2
B	50M	3%	3
C	75M	2%	4
D	100M	1%	5

※ This figure is subject to change

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## Platform structure

### DDE is a platform - CC / FC exchange

To achieve higher flexibility and better responsiveness, DDE employs CC Exchange (Crypto-Crypto). The CC Exchange is built upon the DEX platform for its better security and transparency. FC Exchanges (Fiat-Crypto) are generally built with the traditional DB model but the DDE platform is using DEX to construct its FC Exchange.

### New Frontier - PC exchange

DDE takes a step ahead of the cryptocurrency competition by establishing the first PC Exchange (Product-Crypto). While there are several factors and calculations that must be considered in these exchanges, the complex math is handled behind the curtains by DDE, and the user only needs to obtain their goods. Starting with Diamond, the DDE PC exchange will continue to expand.

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## Platform structure

### About the Digital Diamond Exchange Platform

The DDE Platform allows users to store and move their assets securely. Mutual trust and reliability of the trade without an intermediary is made possible through its simultaneity.

The platform is designed to allow transfer of assets stored in a DB within the service to an external DB and blockchain, allowing transfer between users and mediums.

This expansion of functionality is made possible through **the Digital Diamond Exchange which is a dispersive platform for data exchange** and creates conditions for fair trades in the Diamond trade market.

The DDE platform uses WFC tokens as a mediative currency in order to standardize users' asset values. Anyone can trade Diamond fairly and safely with WFC.

### ❖ The Core

- **Dispersed Asset Values**

: By establishing an independent global asset ecosystem and releasing Diamond and Tokens, users are able to securely store and build their assets in a convenient trading environment.

- **P2P Trade**

: Without intermediary intervention, users can trade directly with each other quickly, safely, and at their desired values.

- **Convenient Use All Over the World**

: Although there will be a small fixed charge for transactions, you can change your currency into real Diamond safely through the DDE platform in any part of the world, including Korea and other affiliated countries and regions.

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## Platform structure

- **Official Transactions at Market Price**

: Diamond and Token conversions and transactions can be made very quickly. Conversion rates are based on official market prices of Diamond exchanges inside and outside South Korea as well as the Virtual Money Exchanges, and not on statistical market prices. Trades are completed immediately with accurate values for both parties.

Authentication is required once in order to make trades to real goods (Diamond).

- **Conversions / Sales into Other Value Entities**

: It can also be transferred to and traded for mobile gift vouchers and gift cards affiliated with WFC.

- **Smart Contract**

: The DDE platform supports smart contracts and users can receive support for various forms of transaction through them. A trade system with affiliated entities may be established or they may be used for authentication or confirmation processes offline.

- **Easy and Simple System**

: The DDE platform does not use a difficult, complex trade system. You can see your own assets being saved and calculated through intuitive, clear UI/UX design and can transfer and trade them in a way similar to common internet payment systems. Focus was put on improving access and usability for people in various age groups.

- **Anywhere at any time**

: You can access DDE anywhere you have access to internet or Wi-Fi and join the system regardless of the user's terminal model.

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## Platform structure, WFC Token

### A. WFC Token Specifications

User can purchase WFC tokens through the Virtual Money Exchange. Purchased WFC tokens can then be used on the DDE Platform to purchase Rough Diamond / Digital Diamond, or to trade with other users. They can also be transferred to another user's wallet.

Issuance term	
<b>Total issuance</b>	1,000,000,000
<b>ICO issuance</b>	180,000,000
<b>The number of tokens sold</b>	180,000,000
<b>Hard cap</b>	JPY30billion
<b>Soft cap</b>	JPY15billion
<b>Project protocol</b>	ERC 20
<b>Currency Accepted</b>	ETH

[F.3] WFC itemized account

WFC tokens are the medium for maintaining and vitalizing the ecosystem constructed by DDE.

It can also be regarded as the power source for all systems connected to DDE.

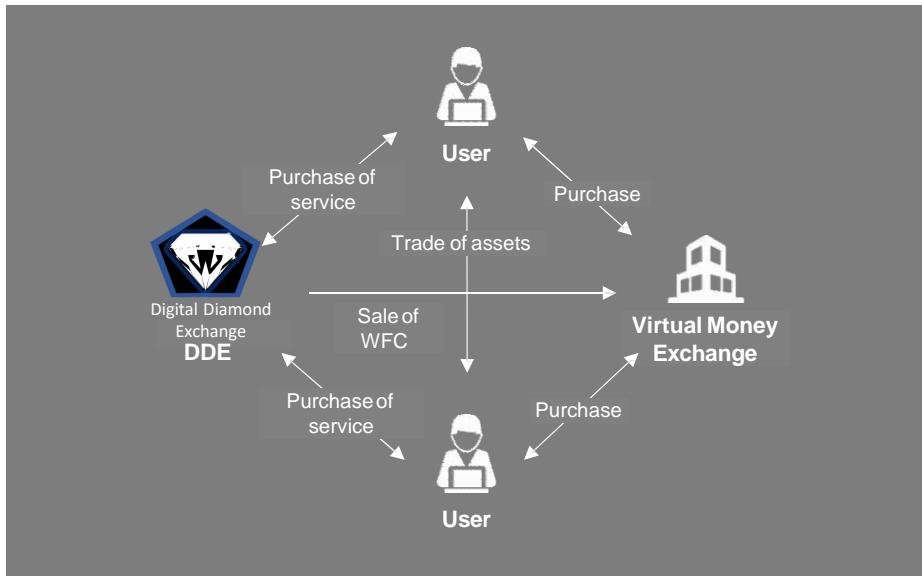
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## Platform structure, Structure of DDE platform

### B. Structure of the Circulation of DDE Platform

WFC tokens are an absolute necessity for the smooth use of the platform.

We can restrict or control the amount of tokens being issued by adjusting the block time.



[F.4] Structure of the circulation of DDE platform

Users of WFC can conduct safe transactions according to their needs, roles, and functions.

Whenever a transaction completes, the company collects a certain amount of cash/WFC as commission in accordance with its policies and regulations

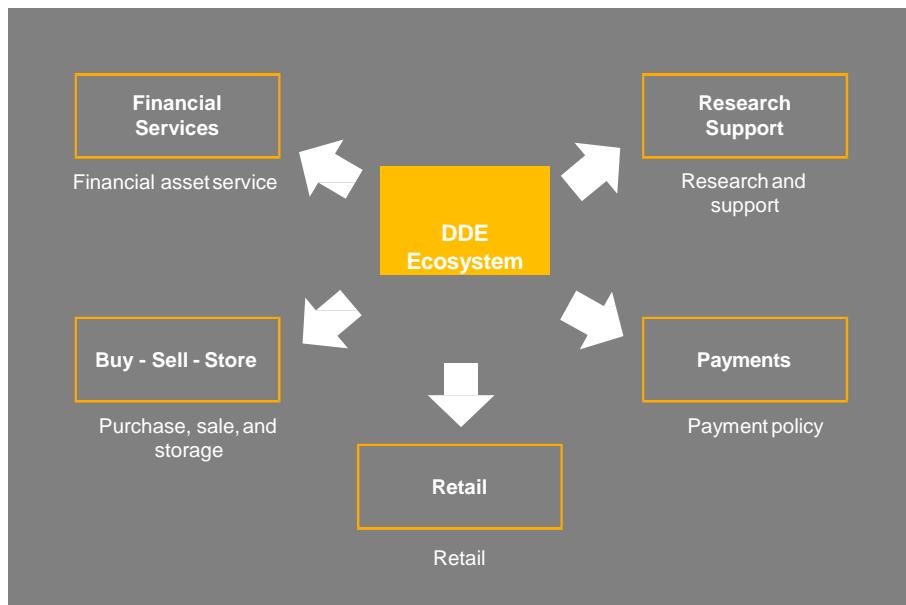
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## DDE ecosystem

### Construction of DDE Ecosystem

DDE is a blockchain-based dispersive ecosystem where various individuals and companies can join freely beyond borders between countries.

We aim to provide equal information, access, and trade opportunities to all customers in our market. We will also allow customers to control and manage their own information.



[F.5] DDE Ecosystem

# Technology Stack

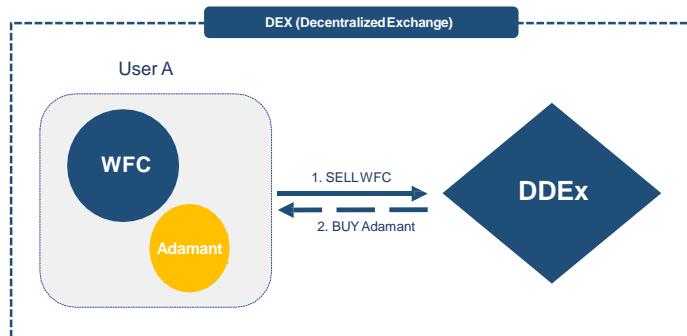
## DEX (Decentralized Exchange)

On the DDE Platform which utilizesd DEX (Decentralized Exchange), third party authentication is not required, allowing more secure and faster virtual currency transaction.

1<sup>st</sup> Step: Sell WFC, purchase ADAMANT

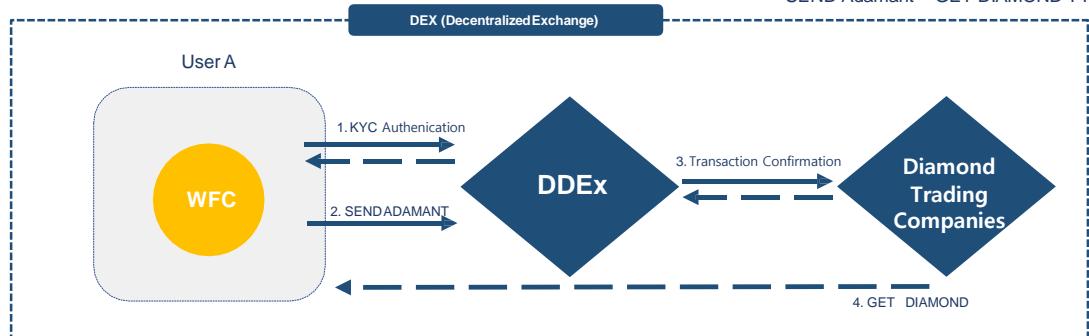
2<sup>nd</sup> Step: Send ADAMANT, receive Diamond

### SELL WFC – BUY Adamant PROCESS



1. Any WFC coins you spend to purchase ADAMANT are retired to keep the DDE economy strong.
2. Purchase ADAMANT are newly issued (mintable) Coins.  
\* You are able to purchase ADAMANT based on its unit value.  
[ 100 ADAMANT purchase request / 50 ADAMANT purchase request ]

### SEND Adamant – GET DIAMOND PROCESS



1. Publicly reliable KYC services are used to manage blacklist.
2. Users verified by KYC will be given the right to exchange ADAMANT to Diamond.  
\* The exchange amont of ADAMANT is controlled by the cash holding amount and the internal policy f the company.
3. Confirm the exchanged amount of ADAMANT.
4. Pick up or request delivery of your Diamond at the Diamond Trading Companies.

[F.6] DEX

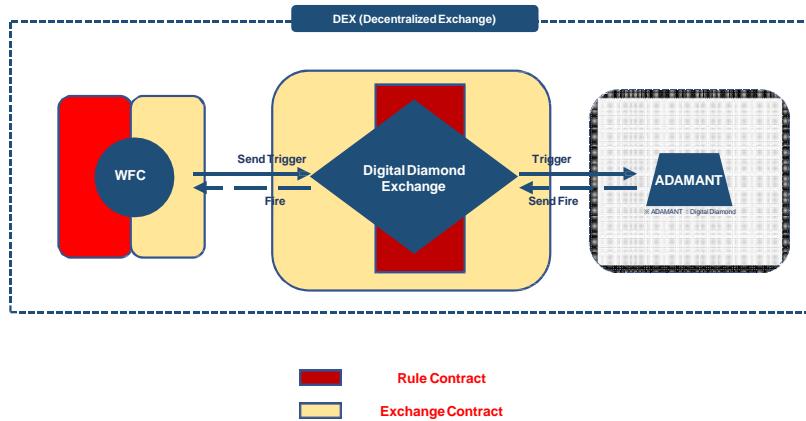
# Technology Stack

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## Smart Contract

The smart contract structure of the Digital Diamond Exchange is:

- **Token Info : WFC Token (ERC 20) and ADAMANT Token (KOMODO)**
- **WFC Rule CONTRACT – EMO, EMS, Circuit Breaker, Blacklist / Whitelist**

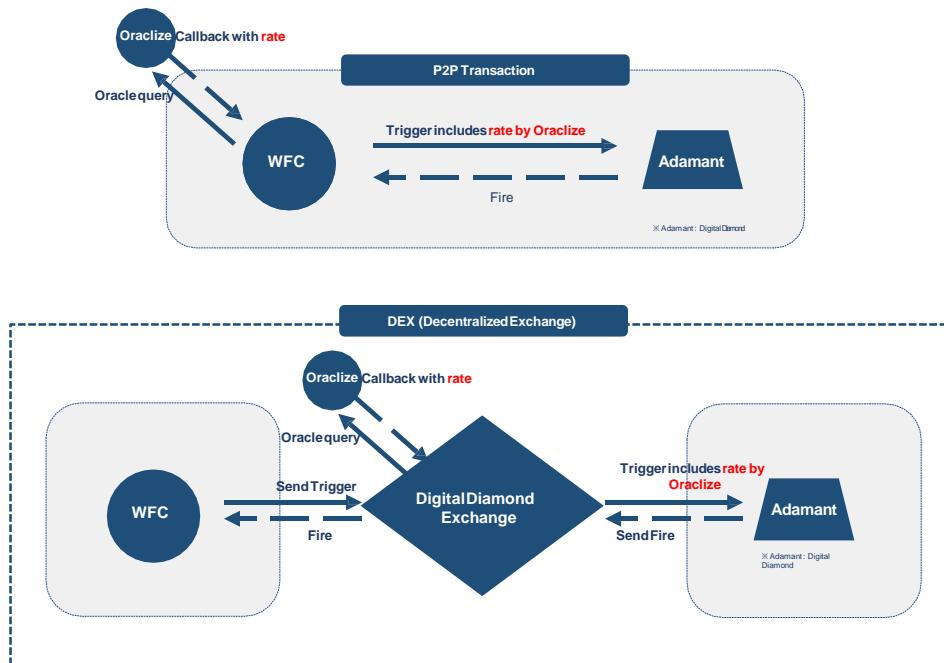


[F.7] DEX Smart Contract

# Technology Stack

## External Reference – Oracle (Oraclize)

Blockchain is a closed system, and data movement within the system is safe and free. However, when referencing external data, it becomes a single point of failure (SPF) and causes a fatal dependency. In the case of digital diamond exchanges, exchange rate information can only be relied upon by external parties. In sure cases, the integrity of the trustless system is guaranteed through Oracle queries.



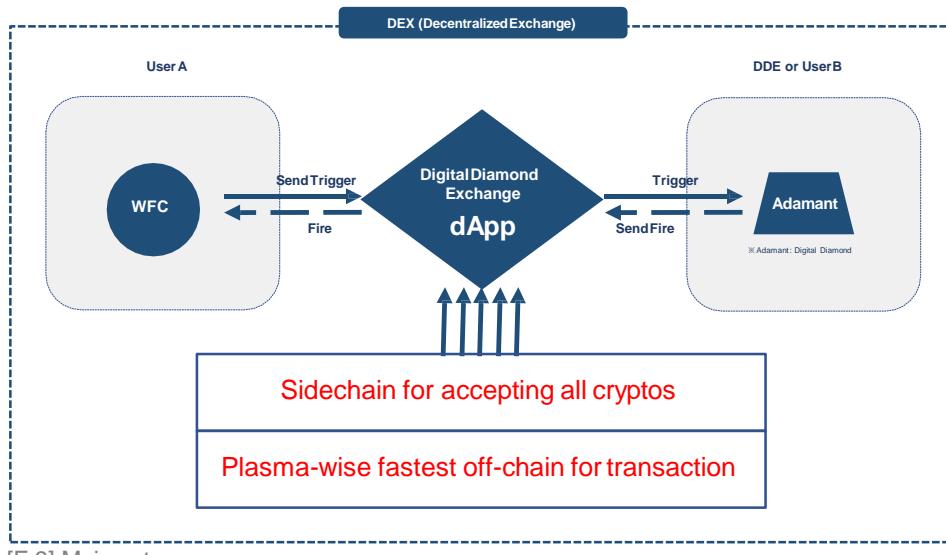
[F.8] DEX Oraclize

# Technology Stack

## Main net

Ethereum, also called Block Chain 2.0, is a smart contract with Turing Integrity added to bitcoin stack languages. This upgrade expanded the world of block chain usability exponentially. Currently, Ethereum has unrivaled market penetration and usability, with its only flaws being the PoW's waste of computing resources and scalability (a low TPS of about 20) issues. In order to solve these two problems, Ethereum is studying various active solutions such as PoS, sharding and plasma off-chain. To this end, DDE is doing its best riding on the shoulder of Ethereum, a giant, in reducing time to market (TTM) and providing value to users.

However, after development of dApp and smart contracts have been completed and stabilized on the Ethereum main net, main net BETA testing will take place for DDE with DDE's self-developed side chain and distributed weighted voting capability. We will evaluate various possibilities to reduce reliance on Ethereum based on the outcome of the results and to realize transactions that are free from TPS.



[F.9] Main net

## Technology Stack

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### PoO (Proof of Ownership)

In order for the owner of a digital diamond to exchange them for real diamond at an offline diamond exchange, the owner must prove that he is the sole owner of the digital diamond. DDE now allows you to implement a modified mnemonic signature sign in your app to help prove ownership easily on your smartphone.

[F.10] PoO for Digital Diamond

# **Value Realization**

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## **A. Realization of Actual Effective Values of Virtual Money**

The WFC Project will develop an ecosystem that allows trade between virtual currency and actual goods, and through this system all participants will be given the opportunity to make reliable and logical transactions.

Here are the reasons.

- ✓ **Working with reliable companies**
- ✓ **Real-time sharing of information of trade / market price all over the world**
- ✓ **Realization of global transactions by constructing a hyper-connected platform**
- ✓ **Assurance of fairness and transparency of all transactions and contracts**

## **B. Values of investment in WFC tokens**

Cheaper purchasing costs than those offered by market can be achieved by making a global hyper-connected level of trade volume. Furthermore, a business contract has been established to exchange diamond offline at wholesale prices, not retail prices.

Since time and energy can be saved compared to conducting offline transactions, there are opportunities to reduce transaction costs. For these reasons, there is potential for WFC to be recognized in the virtual currency market and the value of each token to also rise continuously, creating value for WFC as an investment opportunity as well.

# **Utility and Expandability**

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## **A. Primary Partnership Contracted Accomplished**

WFC Project accomplished the Partnership Agreement with DGE (Digital Gold Exchange) with TMTG Token circulation in order to develop ecosystem to create real value with safe and stability as utility token / virtual money pegging real assets, Diamond.

## **B. Secondary Partnership to be contracted**

WFC Project will contract Partnership Agreement with Diamond mining companies to develop the real asset exchange with virtual/digital tokens.

## **C. Additional Expandability**

WFC Project already has major participants their numbers will continue to increase. Any partners that share our vision are always welcome to participate.

In addition, we will construct an environment where data can be exchanged and the standards of information exchange can be discussed. This will help us fulfill industry purposes and needs so that all participants may be profitable.

## **Transparency (Reliability)**

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### **A. Internal Control**

The stability of coins is promoted through the safeguard deposit policy. General investors' profits are protected by preventing excessive sales of coins by major stockholders and associated personnel after the coins are listed on exchanges, through a smart contract system that prevents sale of over 30% of their coins for 1 year (70% safeguarddeposit).

### **B. Mandatory Disclosure**

#### **I . Disclosure of a Deposit-Reserve Ratio (Quarterly)**

When trading WFC coins for diamond, DDE confirms that ADAMANT coins are valid then provides a code that allows the user to quickly receive diamond through diamond trading companies. In order to facilitate the diamond exchange, 10% of all distributed coins shall be secured and maintained as cash in the form of a reserve fund, and a deposit-reserve ratio will be disclosed mandatorily on the DDE website through quarterly audits.

#### **II. Disclosure of Audit Reports, Settlement Reports, and Annual Business Plan (By March 30 of Each Year)**

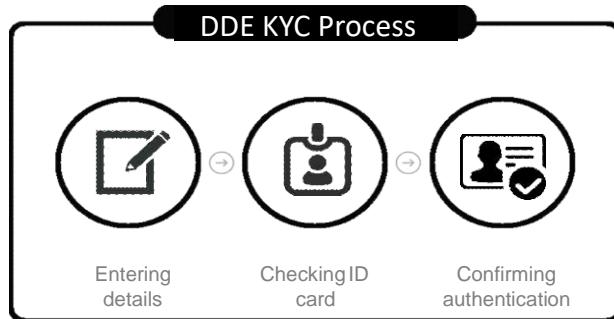
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## Transparency (Reliability)

### C. Compliance

#### I . KYC Authentication Procedure

We strictly secure the transparency of diamond exchange and prevent money laundering through KYC authentication. Only individuals whose identity and residence are verified can trade digital and actual diamond through the DDE diamond exchange. Those who have been authenticated can remove restrictions on trade volume by stages and authenticated individuals can also buy and sell digital diamond with each other through P2P trade.



[F.11] DDE KYC authentication procedure

The following information may be requested to complete the procedure above.

1. First name, last name
2. Email address
3. ETH wallet address
4. The desired quantity of digital diamond to purchase
5. A picture of yourself showing your face identifiable, holding an ID card (Passport, resident registration card) officially issued by a government agency

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## **Transparency (Reliability)**

### **II. Gray Flag: Authentication Procedure at the Point of Exchange**

1. All WFC coins owned by users whose identities have not been verified are included in the gray area and a Gray Flag will be given. Although WFC coins with Gray Flags can be freely traded and are not subject to any disadvantages, they cannot be used to purchase or convert into digital or actual diamond through the DDE diamond exchange.

2. All coins other than surplus portions from a bulk purchase larger than the reserve fund will be converted into gray coins. This does not indicate a restriction on or a problem in the coins but is the result of reflecting the flexibility of digital diamond. DDE always maintains reserve funds at a fixed rate of the supply being distributed and, in case of a sudden increase in demand, replenishes it immediately through Block Deals, OTC trades, etc. Such replenishment can cause delays in order to optimize Nash Equilibrium.

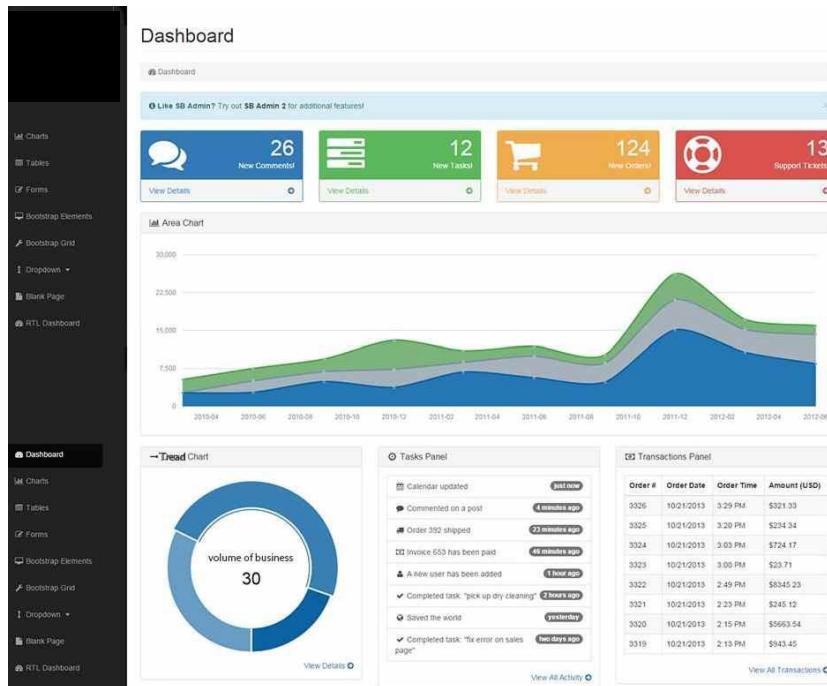
### **III. Red Flag: Through the Monitoring of Illegal Transactions**

Red Flags are given to coins in accounts associated with hacking or theft through the monitoring of illegal transactions and, in this case, WFC coins in the relevant accounts cannot be traded and the accounts will also be locked. Until related disputes are settled, not only digital and actual diamond but also WFC coins cannot be traded even through P2P. This process helps minimize damage to good-willed users by preventing malicious ones from making unfair profits and also contributes to the value of the entire platform.

## Transparency (Reliability)

### IV. Monitoring of Risk by Monitoring the Flow of Coins :

One of the advantages (or disadvantages) of blockchain is that every transaction is made public. While it is anonymous, the transparency of transactions makes it easy to track down use and hacking (theft or sociotechnological hacking). DDE will offer insights for preventing malicious trades and provide statistical data regarding coin use through a control tower that monitors the entire flow of coin transactions. Information to be disclosed may be restricted.



[F.12] DDE Tracking and surveillance screenimage

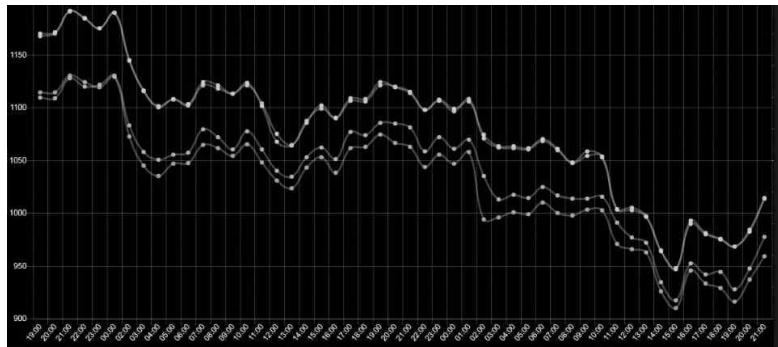
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## Security Policy

### V. DDE Circuit Breaker

The variability of virtual money is as dynamic as the future of blockchain. Since DDE can absorb impact on the market from different variables, it is possible to face unexpected heavy increases in trade volume due to the multiplier effect on demand as a result of its focus on safety and reliability.

In such situations, DDE can trigger a circuit breaker as a safety device to protect the stability of the market and its coin owners. The conditions for triggering this circuit breaker are registered in a smart contract, preventing misuse.



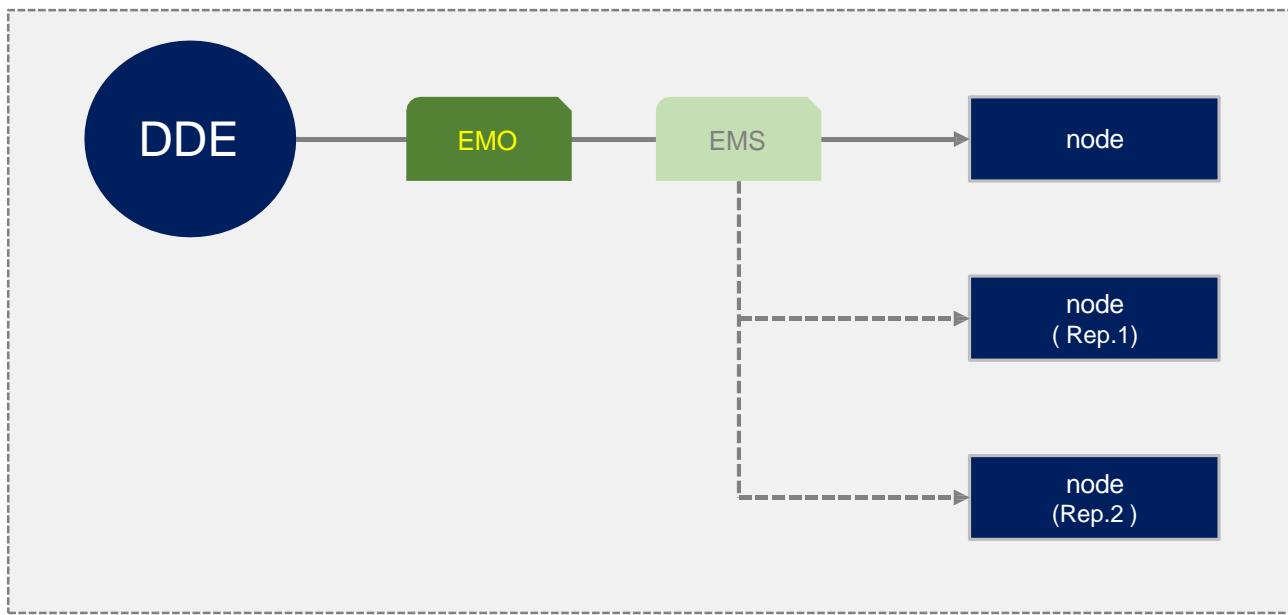
[F.13] DDE Circuit Breaker monitoringscreen

# Security Policy

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## VI. EMS & EMO

The flow of the market and transformation of technology always exceed the expectations of the initial designers. Accordingly, EMS (Emergency Stop) and EMO (Emergency Off) functions shall be realized in a smart contract in order to be fully prepared for initial responses to emergency situations. Since these functions are operated manually, MultiSig is applied in order to prevent certain individuals from controlling it arbitrarily while also requiring approval by a lawyer or legal advisor for operation.



[F.14] DDE EMO／EMS Image

## **Continuous Securement of Trade Stability**

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### **Stability of Transactions of Virtual Money and Actual Goods**

#### **1. Development of an AI trading system**

: Introduction and improvement of the robo-advisor algorithm utilized by the financial industry

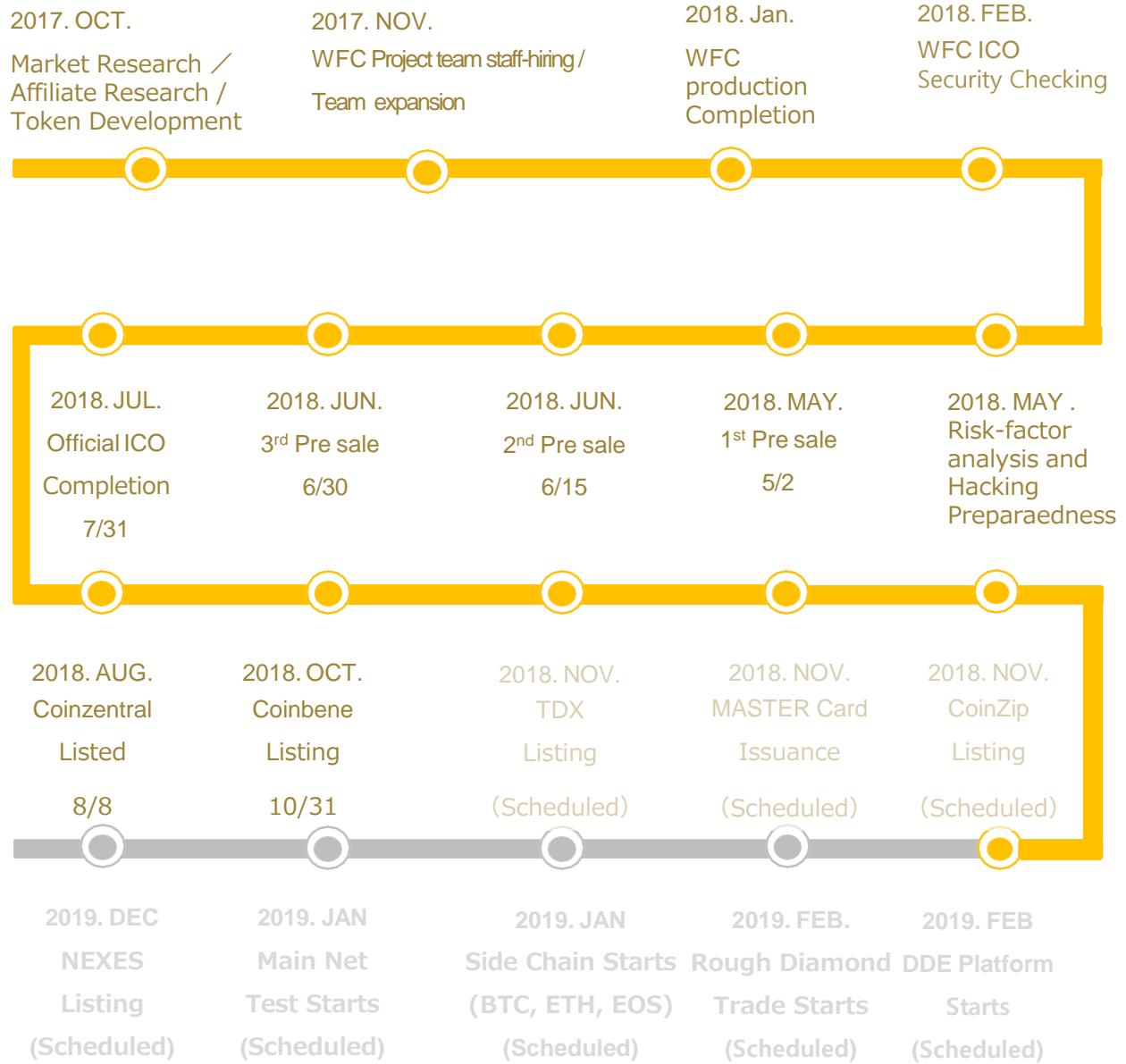
#### **2. Employment of professional securities traders**

: Assure the stability of transactions by hiring several traders for Block Deal and other professional transactions

#### **3. Affiliation and collaboration agreement signed with a domestic robo-advisor solution company.**

# Road-Map

## Road-Map



# Technology Team Member

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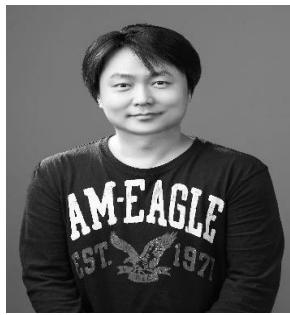
## Key members



### Dong-il. Eom

CTO

- Worked for a HR development team of SAMSUNG SDS
- Developed a MP3 player (Romi & Juli)
- Developed a Wibro information security and secure IP-Phone
- Managed a multiple number of national defense related project
- Currently plays a role as a director of technology development team at Digital Diamond Exchange (DDE)



### Kwang-soo. Kim

Lead Block chain Developer

- Developed an e-commerce platform in U.S.A.
- Developed a monitoring system in Korea
- Developed T-Pay, L-Point/L-Pay improvement projects in Korea
- Currently plays a role in monitoring system and transaction as a leader of technology development team at Digital Diamond Exchange (DDE)

## Partners

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DIGITAL GOLD EXCHANGE



Triple Dice Exchange





# DIGITAL Diamond EXCHANGE - DDE

Mobile App / Web Monetization Platform

# Thanks

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