

# Eartha Token(EAR)

Decentralized Escrow and Invoice finance with NFTs

## EAR TEAM

The Eartha project is a DeFi / NFT project that solves the problems of start-ups and large enterprises by using Eartha tokens (EAR). In the future, it is a project to establish a new B2B economic zone that does not require trust and is transparent on the blockchain. It provides start-ups and SMEs with a low-cost, easy-to-use, decentralized escrow payment application to replace intermediaries such as banks and credit card companies that interfere with B2B transactions. On the other hand, for large companies, by giving incentives to their back office operations, they will shift from "cost centers" to "profit centers" to increase the value of back office operations and spread tokens in B2B transactions. Large companies have business partners such as start-ups and SMEs, and Eartha Tokens (EAR) benefit both parties to B2B transactions. In the future, we aim to establish a new EAR-based B2B economic zone on the blockchain.

Whitepaper

22 June 2021

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## 1 Abstract

For B2B trade, there are various systems that have been developed over years and organizations that operate them. For example, banks and courts are the ones. They are time consuming and costly and are not always readily available, which means that they substantially do not exist. This situation will not change much in the future.

Small and medium-sized enterprises and startups have the following problems, especially in cross-country trade. Their free trade is often restricted by banks. In addition, even when a business transaction has a legal problem, a court will not provide immediate legal protection. Because of this, many trade cases that each do not involve much money often do not reach successful conclusion, and the quantity is estimated to be several thousands to tens of thousands times or more the statistical trade amount.

Our solution is Eartha token (EAR, ERC-20) that is a blockchain-based decentralized platform, which enables even non-engineer staff members of enterprises to make transparent and binding contracts and settlement easily. EAR is unique token in view of the following factors: order data and invoice data that are necessary in the B2B trade can be linked to each other in the system, and a remittance amount in a virtual currency can be specified using the legal currency of an individual country. In addition, EAR employs a smart contract and is so able to automatically mediate trade without requiring trust in administrators (trustless), being independent of our control.

Components include Eartha dApp, and ERP, EDI and electronic billing service platform (SaaS) which are currently used by enterprises.

We have named it “Eartha(EAR)” (earth+a) to mean that it will renew the history of the earth and the world and will start the new history.

EAR is intended to achieve trustless B2B trade from the initial stage of contract to the final stage of settlement, and solves the problems by removing obstacles in business transactions, which cannot be overcome in a centralized system, in the B2B world where banks and courts do not substantially exist.

EAR creates trading opportunities for small and medium-sized enterprises and

startups with escrow and facilitates cash management with invoice financing using NFT (EscrowNFT, InvoiceNFT). For large enterprises, EAR not only expands trading opportunities by enabling secure collection of payments using escrow but also provides a benefit that is a transformation of an administrative department from “cost center” to “profit center.” By so doing, the expansion of an economic zone is accelerated.

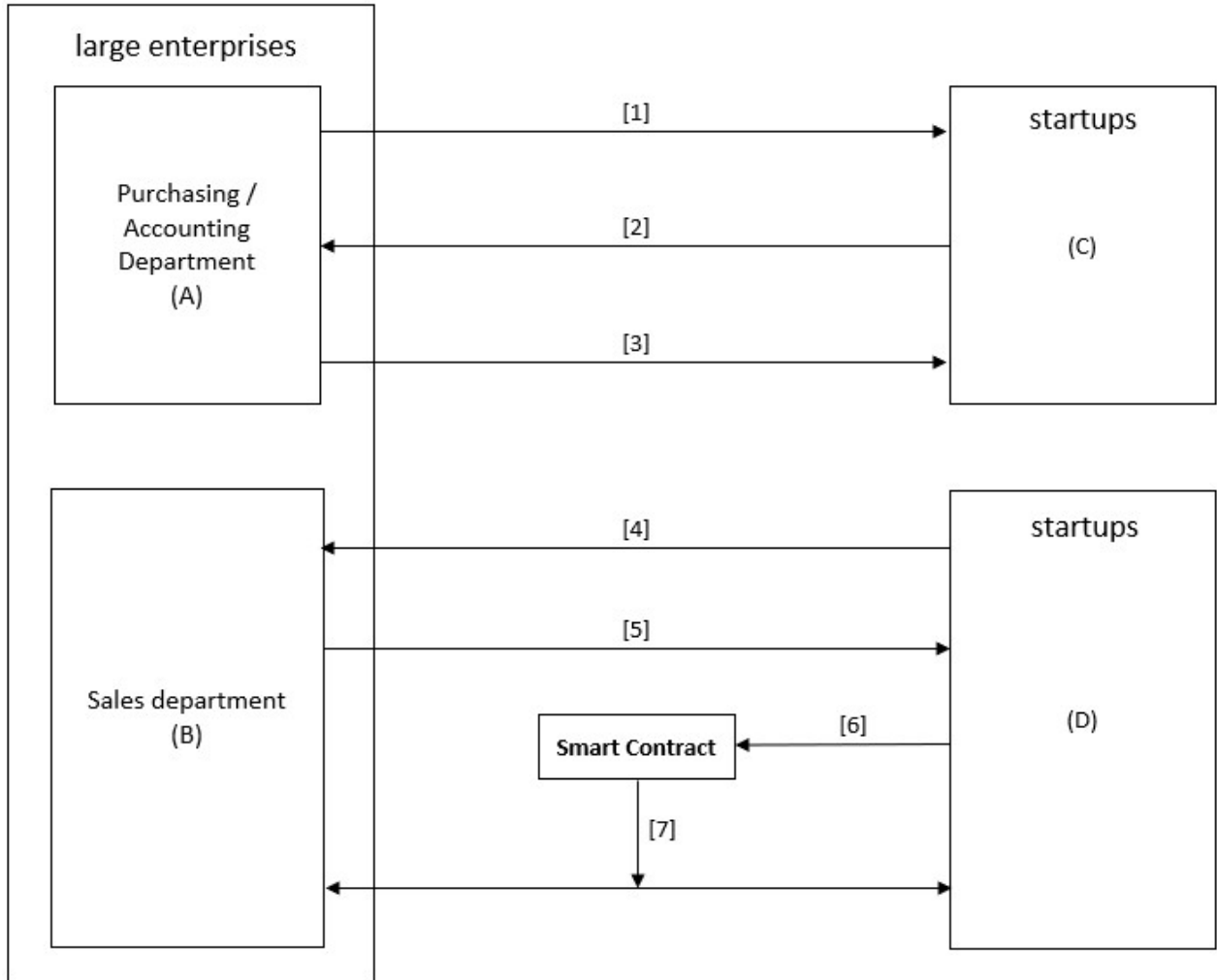
EAR brings benefits to both sides of the B2B trade. We expect to establish a B2B economic zone on the EAR-based blockchain in the future.

## 2 Current Situation

As to enterprises, consider an organized enterprise (the purchasing and accounting department and sales department of a large enterprise) and an unorganized enterprise (a small and medium-sized enterprise/startup) separately. B2B trade is often made between the large enterprise and the small and medium-sized enterprise/startup, and therefore the large enterprise takes the leadership of the trade. With a bit of ingenuity, use of virtual currency can reduce a monthly remittance fee to one tenth to one hundredth the monthly remittance fee using a bank. Since the large enterprise is more cost conscious and pays much higher remittance fee than the small and medium-sized enterprise/startup, they were supposed to use virtual currencies actively in the B2B trade rather than B2C, but this is not the case. Among various causes, the following three major causes are considered:

- Large enterprises are trusted and banks are cooperative, and therefore the large enterprises have already reduced their remittance fees significantly with individual contracts.
- Large enterprises have already streamlined procedures through organizing, and therefore there is little incentive to change their settlement procedure to a new one.
- In the current situation, there is no mechanism that easily links an operation system to a virtual currency settlement system.

Now, consider departments of enterprises separately.



- [1] Order
- [2] Order receipt/ Billing
- [3] Payment
- [4] Order
- [5] Order receipt/ Billing
- [6] Payment (Escrow)
- [7] Payment to creditor / Return surplus to debtor

(A) Large enterprises (purchasing and accounting department):

- In-house workflows are not flexible due to legal compliance and others.
- An in-house system is a legacy system, and a large-scale system upgrade is therefore difficult.
- In the settlement at the final stage of trade, they can make payment at lower remittance fee than normal because of an individual contract with a bank, and thus there is no need to change the conventional procedure.

(B) Large enterprises (sales department):

- They check client's credit at the beginning of trade to make sure that account receivables are collectable without fail, and do not start the trade if the client has no credit history (untrustworthy).
- In a contract at the first stage of trade, the existence of a bank is an advantage because they can proceed with the contract smoothly, having a support from the bank. Any situation that is disadvantageous for the bank is avoided.

One reason why use of virtual currency settlement has not spread in the B2B trade is because large enterprises that take the leadership of the B2B trade have completed the implementation of centralized systems in the individual departments, and there is no incentive enough to change the systems.

By contrast, small and medium-sized enterprises and startups which are clients of the large enterprises have the following negative effects.

(C)(D) Small and medium-sized enterprises and startups:

- Small and medium-sized enterprises and startups that are on the billing side have trouble with cash management for a long time until receipt of payments. Note that invoice financing is not user friendly due to the workload of staff members and high service fee.
- Small and medium-sized enterprises and startups that are on the billed side are rejected for trade because of their uncertain financial future.
- They can receive little benefit from banks or other mediators, and it is rather an obstacle. They rarely avoid actions that bring disadvantages to banks.

### 3 Proposals

We propose Eartha(EAR) as token that enables escrow payments using NFT by linking the system or platform (SaaS or the like) used by an enterprise to it or by using Eartha dApp.

We give tokens (incentive) to the purchasing and accounting department of a large enterprise. The administrative department that receives the tokens is transformed from “cost center” to “profit center,” which promotes the use of virtual currency settlement. The receipt of the tokens creates an incentive for the purchasing and accounting department to send order data and invoice data electronically to a buyer and for the buyer to increase the opportunity to make virtual currency settlement through escrow. [1][2][3]

We provide escrow for the sales department of the large enterprise to enable secure collection of payments. The sales department is ensured reliable trade, with removing the necessity of global credit control and thus reducing the trading cost. The sales department makes it possible to make business trade with many enterprises and to increase the trading opportunities. [4][5][6][7]

We enable small and medium-sized enterprises and startups that are on the billing side to use invoice financing (securitization of receivables), by using invoice NFT for invoice data. This achieves an improvement in cash management until receipt of payments. [3]

We enable small and medium-sized enterprises and startups that are on the billed side to make payments through escrow without any complicated procedure and at a cost almost the same as the remittance cost, so that they will be able to conclude trade that conventionally cannot concluded due to high cost and little profit. [6][7]

The EAR system has features of not only offering escrow but also giving incentives in trade as a whole including the ordering stage and billing stage before the settlement stage, in order to promote the use of virtual currency in B2B.



## 4 Establishment of B2B economic zone on EAR-based blockchain

In B2B trade, “trust” (financial ability) is important. Especially, sellers cannot provide products and services for companies with low trust score (low financial ability). This is because it is uncertain whether charges are collectable. Buyers also cannot proceed further with trade if they cannot show their financial ability to sellers.

In the current situation, use of escrow takes time and labor, and also costs a high service fee. Especially, in the case where sellers are small and medium-sized enterprises or startups whose trade cases each do not involve much money, the sellers must take risks in payment collection each time trade is made, and so they often abandon the trade. In view of this, an escrow settlement service with which both sellers and buyers are satisfied is needed.

### 4.1 Why EAR?

EAR is token that enables escrow in the B2B trade, and no other tokens can replace it. There are two technical features. The first one is that EAR embeds a smart contract (escrow) in a token in order to minimize the escrow cost, so that the transaction fee is reduced to a half the normal transaction fee. The second one is that EAR embeds, in a token, a program of automatically exchanging a variety of legal currencies into an EAR equivalent amount so as to allow a payment amount (remittance amount) to be specified using a legal currency in order data and invoice data, which enables even non-engineer staff members of enterprises to use EAR. It is also possible to make escrow payments using Eartha dApp.

### 4.2 Token Velocity

EAR is able not only to offer escrow settlement but also to collaborate with the ordering and billing system used by an individual enterprise, take the users of the system as one community, and give a token when a user sends or receives order data or invoice data (35% the total amount of tokens at the maximum). The tokens become incentives for users, so that expansion of the community and acquisition of another new community are accelerated.

The short-term price of EAR increases as the community expands and EAR is more used. On the other hand, it cannot be said that the long-term price increases even

if EAR is more used (Token Velocity problem). However, assuming that EAR with escrow is more used as the community expands, the long-term increase of the EAR price is secured as the use of EAR with escrow increases, which is different from the other tokens. This is because EAR equivalent to the amount of escrow (100% to several hundreds % the settlement amount) is “kept” in a smart contract for several months from escrow to settlement.

In the current situation, escrow is not used much due to time consuming, workload, and high service fee. However, with the development and provision of EAR, even non-engineer members of enterprises are able to use escrow at a cost almost the same as the remittance fee. In addition, EAR more than the transaction fee and gas fee at the time of escrow, 30% the total issuance amount of tokens at the maximum, is given to both a seller and a buyer as a reward for using escrow at the time of settlement after the escrow.

As a blockchain-based mechanism that ensures safe trade for enterprises, EAR has room for spreading and expanding to normal B2B trade in the future, starting with the situation where small and medium-sized enterprises whose trade cases each do not involve much money use EAR to have trade with enterprises in distant countries or to make purchase via EC sites.

#### 4.3 Benefits for large enterprises which take leadership of B2B trade

To establish a B2B economic zone on an EAR-based blockchain, it is necessary to provide benefits for large enterprises that take the leadership of the B2B trade. EAR collaborates with not only the own Eartha dApp but also the system, EDI, electronic billing service (SaaS) used by the purchasing and accounting department of an individual large enterprise, and gives a token when a staff member of the administrative department receives and sends order data or invoice data, so that the administrative department is transformed from “cost center” to “profit center.”

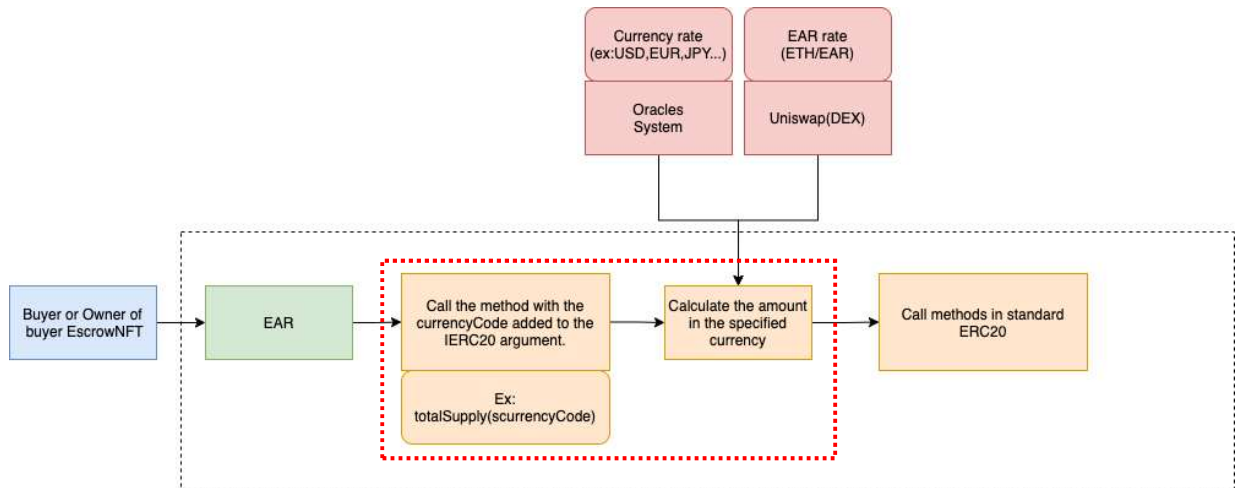
This is a big incentive for the large enterprise that is cost conscious to start using EAR. It is possible to further improve incentives for the enterprise to issue their own EAR-based tokens to expand a community by involving their clients. In addition, administrative staff members of the enterprise are able to make profit by receiving tokens for administrative work, which is conventionally unnoticeable and is not evaluated, so that they will be evaluated properly. It is actually a cashback. In addition, as the staff members have more tokens, they are more motivated to increase the value of the tokens, and therefore they will positively expand the EAR

economic zone by introducing this service to other departments of their own enterprise and their clients. Especially, once a large enterprise starts to use EAR, several hundreds of thousand people, including their staff members and clients join the community, which grows the economic zone at an accelerating pace.

We propose EAR that has the above features, expecting that most settlement in the B2B trade will be made in a decentralized system in the future while constructing and expanding a global B2B trade economic zone that ensures transparency and binding effect on the blockchain.

## 5 Technical features

### 5.1 Extended currency-calculation to ERC-20 standard

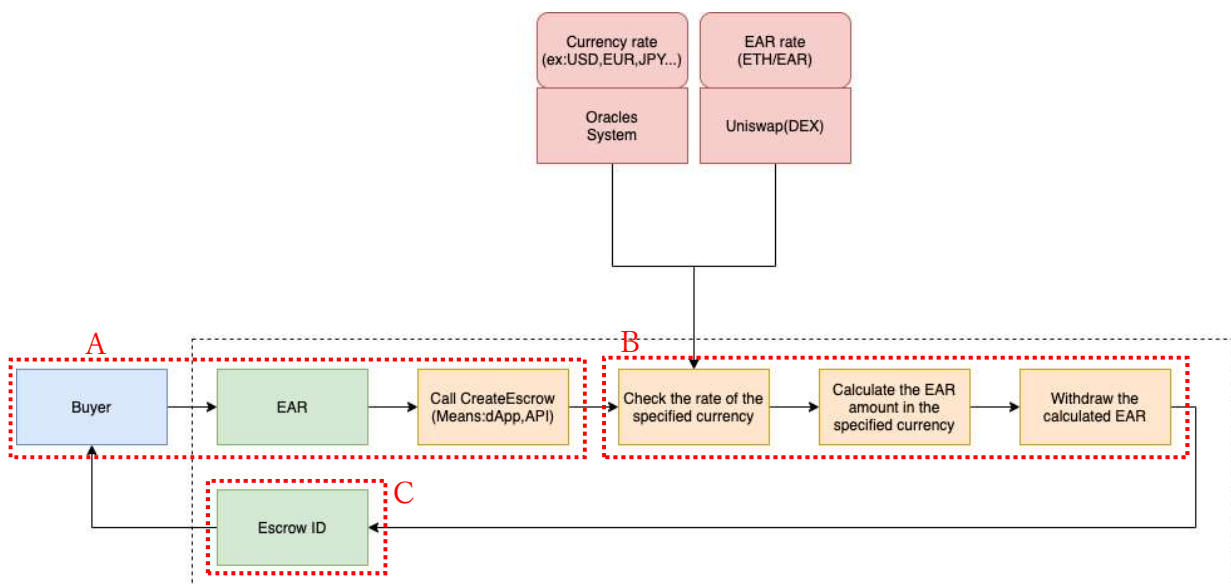


We have extended currency calculations to the ERC-20 standard.

Previously, ERC-20 could only send and check balances in units of each currency.

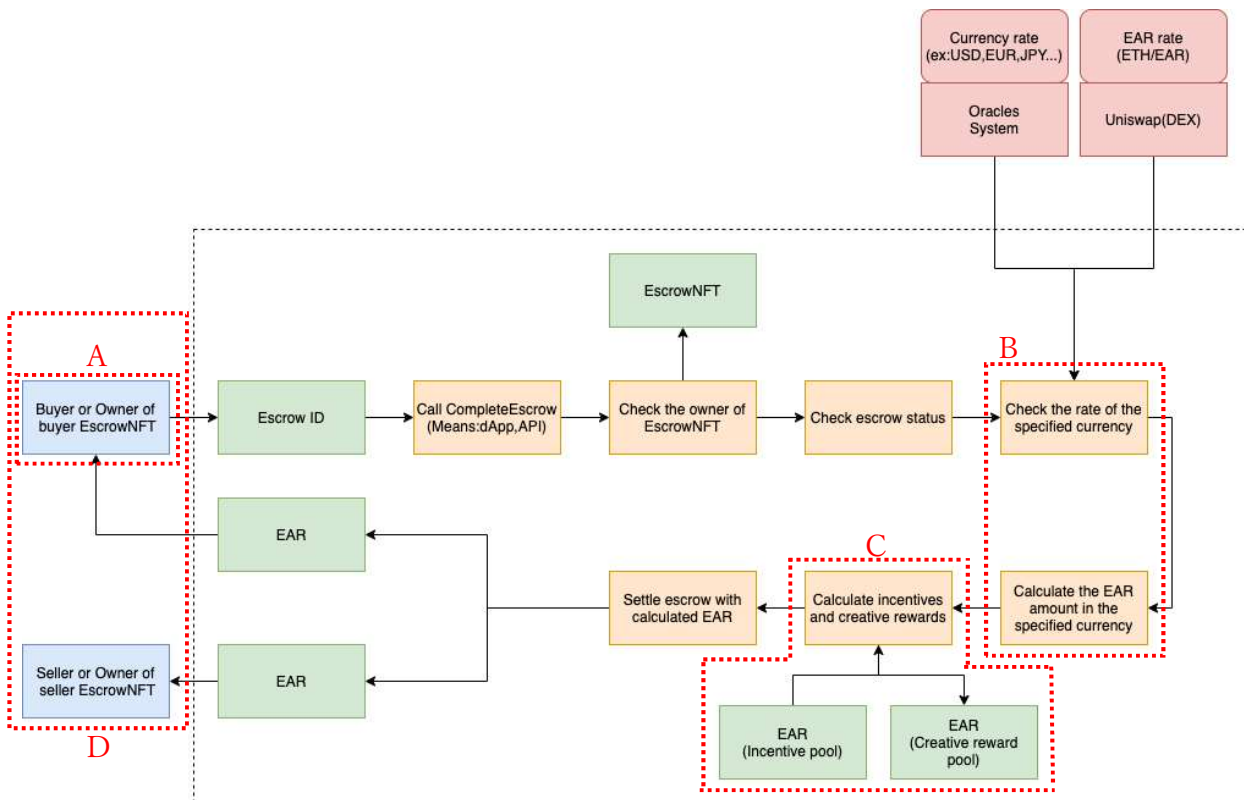
By implementing the currency conversion function inside the token, EAR has made it possible to send and check the balance not only in the unit of EAR but also in the amount after conversion to EUR, JPY, USD, Ethereum, etc.

### 5.2 Create Escrow(Buyer)



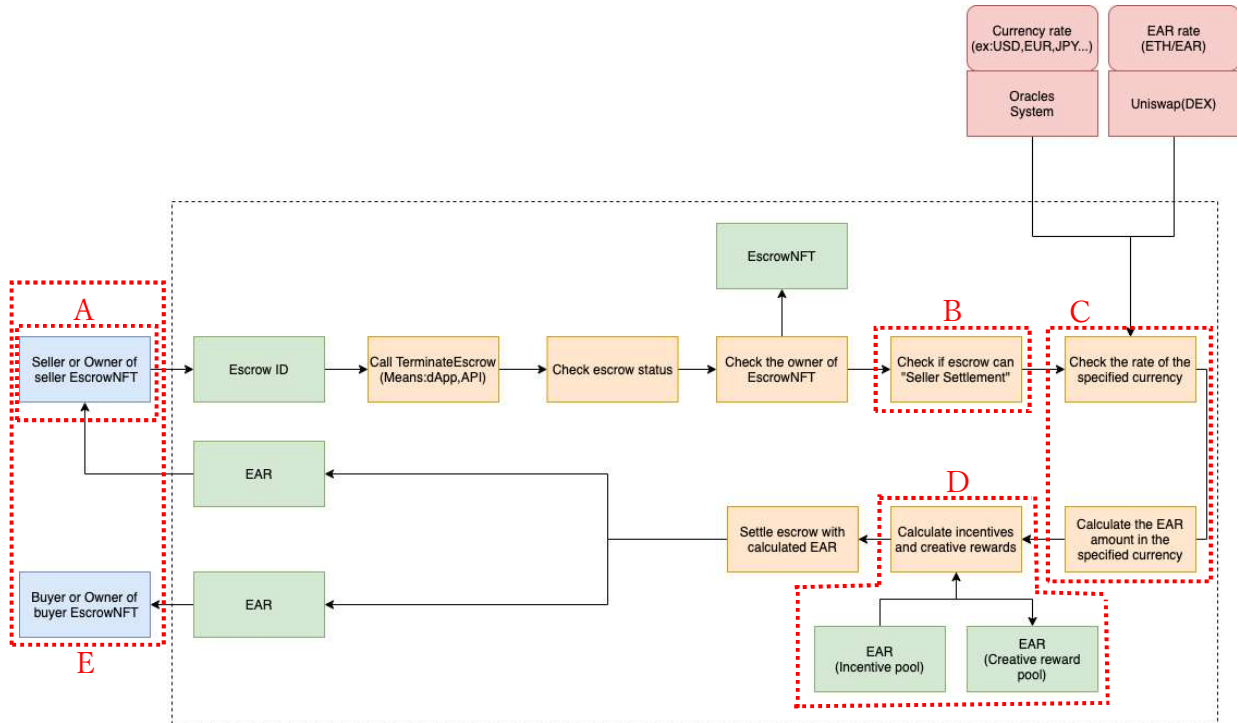
- A) Create escrow in one transaction.
- B) Automatically convert the specified legal tender amount to EAR and save the EAR in escrow (smart contract).
- C) Create an Escrow ID

### 5.3 Buyer Settlement



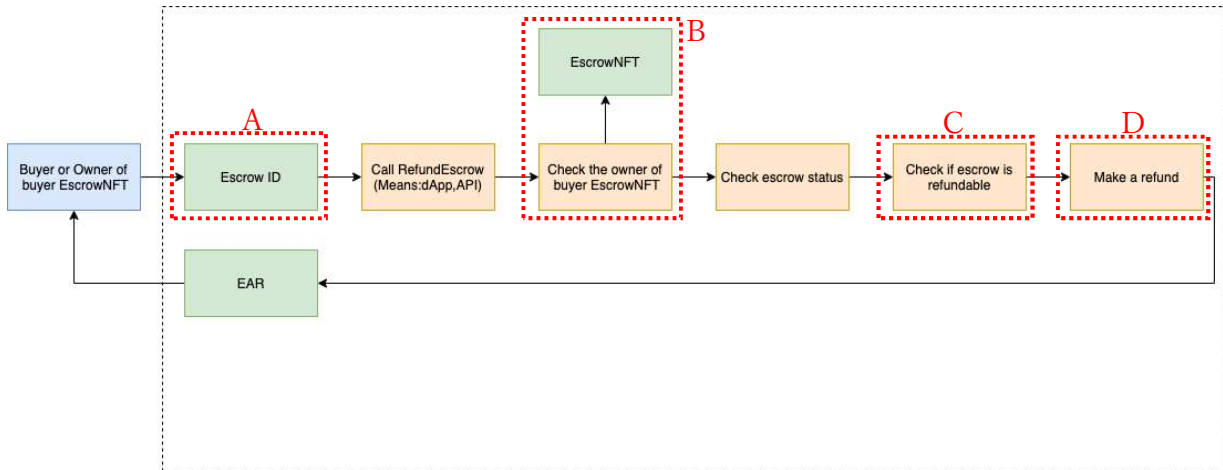
- A) Assumption: Confirm the user is the buyer or the owner of the EscrowEFT created by the buyer.
- B) Get the rate of the currency used for settlement (EUR, JPY, USD, ETH etc.) at the time of settlement. Calculate the equivalent EAR. Pull the EAR out of escrow.
- C) Give an escrow-incentive at the time of settlement (up to the incentive budget). At the same time, the creative reward (commission) is deducted from the payment amount.
- D) The seller usually receives the payment(EAR), but after the seller creates the EscrowNFT, the owner of the NFT receives the EAR.

## 5.4 Seller Settlement



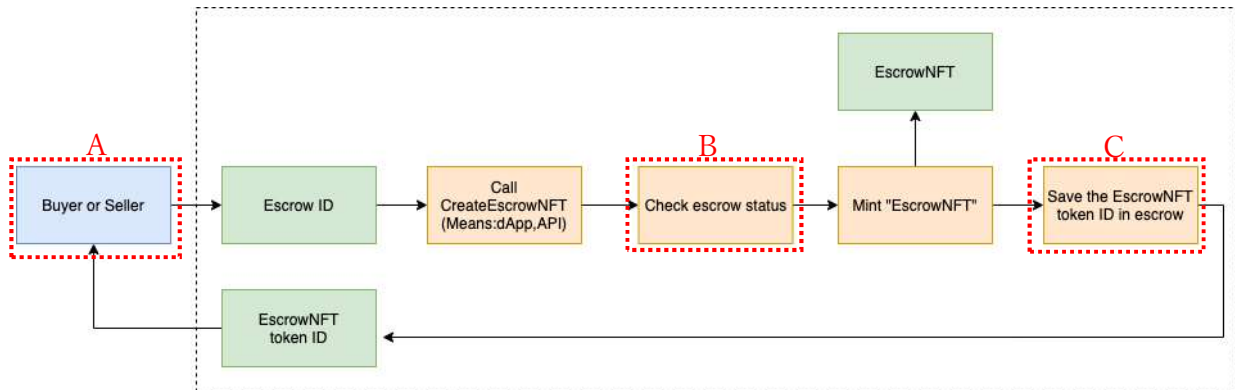
- A) Assumption: Confirm the user is the seller or the owner of the EscrowEFT created by the seller.
- B) Get the date and time that the seller (not the buyer) will be able to settle, as specified at the time of escrow.
- C) Get the rate of the currency used for settlement (EUR, JPY, USD, ETH etc.) at the time of settlement. Calculate the equivalent EAR. Pull the EAR out of escrow.
- D) Give an escrow-incentive at the time of settlement (up to the incentive budget). At the same time, the creative reward (commission) is deducted from the payment amount.
- E) The seller usually receives the payment(EAR), but after the seller creates the EscrowNFT, the owner of the NFT receives the EAR.

## 5.5 Buyer Refund



- A) Specify the Escrow ID
- B) Confirm the user is the buyer or the owner of the EscrowEFT created by the buyer.
- C) Refund operation cannot be performed unless it is permitted at the time of creating escrow.
- D) The refund operation can be performed by the buyer or the user who owns the EscrowEFT created by the buyer.

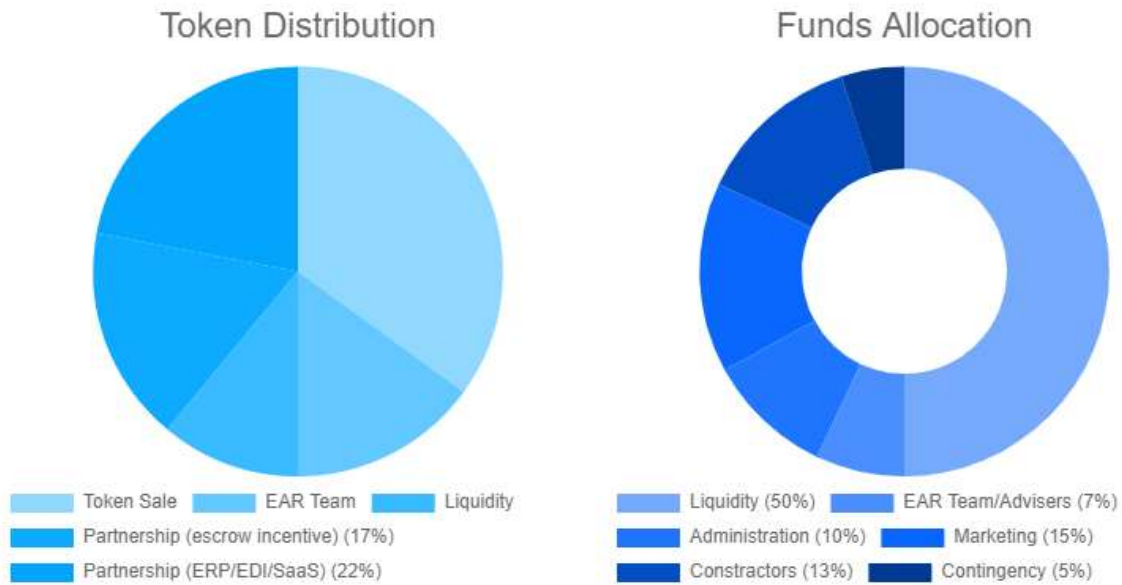
## 5.6 Create Seller/ Buyer EscrowNFT



- A) Assumption: Users who can create NFTs must be seller or buyer when creating escrow.
- B) NFTs can be created between the time of creating escrow and the completion of settlement or refund.
- C) Since the Escrow ID is linked to the EscrowNFT, after the NFT is created, the NFT owner operates settlement or refund to receive or send the funds (EAR).



## 6 Tokenomics



Total Supply: 317,006,803 EAR

Sale (35%): 110,952,381 EAR

Token Sale phase1 (5%): 14,285,714 EAR

- 1 EAR = \$0.007
- Maximum funding amount:  $\$0.007 \times 14,285,714 \text{ EAR} = \$100,000$
- Circulating supply market cap:  $\$0.007 \times 14,285,714 \text{ EAR} = \$100,000$

Token Sale phase2 (9%): 30,000,000 EAR

- 1 EAR = \$0.010
- Maximum funding amount:  $\$0.010 \times 30,000,000 \text{ EAR} = \$300,000$
- Circulating supply market cap:  $\$0.01 \times 44,285,714 \text{ EAR} = \$442,857$

Token Sale phase3 (21%): 66,666,667 EAR

- 1 EAR = \$0.015
- Maximum funding amount:  $\$0.015 \times 66,666,667 \text{ EAR} = \$1,000,000$
- Circulating supply market cap:  $\$0.015 \times 110,952,381 \text{ EAR} = \$1,664,285$

Start/ End

- Token Sale phase1 (5%): 27 Jul. 2021 - 31 Jul. 2021
- Token Sale phase2 (9%): 20 Oct. 2021 - 25 Oct. 2021

- Token Sale phase3 (21%): 26 Oct. 2021 - 31 Oct. 2021

Lockup end date:

- Token Sale phase1 (5%):31-10-2021
- Token Sale phase2 (9%): 31-10-2021
- Token Sale phase3 (21%): 31-10-2021
- Partnership escrow incentive (17%): EAR amount equivalent to \$ 1.0  
\* The actual escrow incentive is the EAR worth \$ 1.5 minus the EAR worth \$ 0.5.  
The amount of escrow incentive is \$ 1.5 and the amount of Creative Reward (settlement fee) is \$ 0.5.
- Partnership ERP/EDI/SaaS (22%):  
15-05-2022 (1%), 15-05-2023 (3%), 15-05-2024 (5%), 15-05-2025 (35%), 15-05-2026 (36%)
- EAR Team (15%): 31-10-2022
- Liquidity (11%): none

## 7 EAR FAQs

### What Is Eartha Token (EAR)?

EAR is the token that powers a decentralized escrow/payment platform designed to fairly reward users for buyer office work (escrow/payment, receiving invoice), while providing Seller office work (sending invoice) with a better return on their office work.

This experience is delivered through the Eartha dApp/wallet used by the user/ERP/EDI/Electronic Billing Service (SaaS), where users can do the same work as before and receive EAR rewards for doing so. On the other hand, buyers can show their solvency, no matter where they are in the world, without the need for credit screening and cut down the hassle and time loss of working for banks and courts.

### What is better for payment using Eartha (EAR) than traditional bank transfer?

Traditional bank transfers only exchange money. With virtual currency payments, you can not only exchange simple money, but also send money including promises and contracts. It's a big difference between the two.

Legal tender and the traditional electronic funds transfer system on top of it, have

been built on deep trust in the state that controls the issuance of currency and the financial institutions that control the money transfer system.

The legal tender-based escrow/payment system using EAR is very different from the conventional electronic funds transfer system.

- (1) Decentralized and binding remittance contract for all (no need for external organizations such as banks, courts, and traders)
- (2) Independent and automatic transaction brokerage away from the operator's hands (condition: foundation of virtual currency system)
- (3) Designing incentives for billing operations before settlement on a legal tender basis

We intend to Drastically change the traditional “contract” framework.

### **Will the value of Eartha Token (EAR) increase in the long run?**

The value of the EAR is expected to increase in the long run.

In general, the market value of Tokens is not only increased by being “used”, but by being “held”. As the value of the Token increases, so does the price.

The EAR, unlike almost all other utility tokens, incorporates into the protocol a mechanism that is “held” rather than “used.” In addition, as a feature of escrow transactions, it is a transaction that encourages not only “use of tokens for a short time” but also “holding for a certain period of time” in settlement.

EAR is supposed to be used mainly for B2B, and compared to B2C usage, the amount of money “held” per transaction is large and the period is long.

For these reasons, the value of the EAR is expected to increase in the long run, unlike almost all other utility tokens.

### **What is EscrowNFT (IKKI) ?**

EscrowNFTs are credits that allow sellers to receive buyers' escrow funds(EAR) and

are debts that allow buyers to settle additional funds or credits that can receive the remaining amount(EAR) at the time of settlement.

Once you (seller) own an EscrowNFT, you will be able to sell a credit without notifying the buyer. The person who bought the credit can get the funds (EAR) from the buyer at the time of settlement. If the buyer does not complete the settlement procedure, after the date that you (the seller) and the buyer have agreed in advance has arrived, the person who bought the credit can settle and get the funds (EAR) from the buyer.

Once you (buyer) own an EscrowNFT, you will be able to sell a debt without notifying the seller. The person who bought the debt can settle or get the funds (EAR) under conditions agreed in advance by you (the buyer) and seller.

Each EscrowNFT is a unique (non-fungible) token lying on the public Ethereum blockchain (ERC-721).

### **Why was it named “Eartha”?**

We have named this token “Eartha” to mean that the history of the “Earth” and the world has been renewed and restarted. “Eartha” is “earth” + “a”. “Earth” means the earth and “a” means the beginning.

### **Who are the Founders of Eartha Token?**

Eartha Token has founders. However, the founders name is hidden. We are a “startup” consisting of 30 members.

At the end of June 2021, IPFS support will complete the decentralization of the system. This guarantees the continuity of the project on the system side. At that time, your trust in us is no longer needed.

### **What Makes Eartha Token (EAR) Unique?**

The early and primary use case for EAR is as a payment token for buyer’s escrow through Eartha dApp. The main use case of EAR several years later is as a token

used for general payment via business system (ERP/EDI/SaaS) used by each company.

One of the main distinguishing features about Eartha Token ,Eartha dApp, ERP/EDI/web Services (SaaS) used by each company ecosystem is the capacity to reward users whose office work is not properly evaluated. These users can make the amount of clerical work visible to others simply by using Eartha dApp or the system of the company they are currently using (EDI/ ERP/ SaaS). As a result, these users will receive better reviews internally. At the same time, looking at the enterprise as a whole, the administrative department, which used to be a cost center, will be transformed into a profit center, providing an incentive for enterprises to start using EAR.

**Who is the operator / administrator of Eartha Token and Eartha dApp?**

There is no operator / administrator. Within the next year, it will be operated transparently, fairly and efficiently by a Decentralized Autonomous organization (DAO).

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