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TECHNICAL WHITEPAPER V1.0

*6 December 2018*

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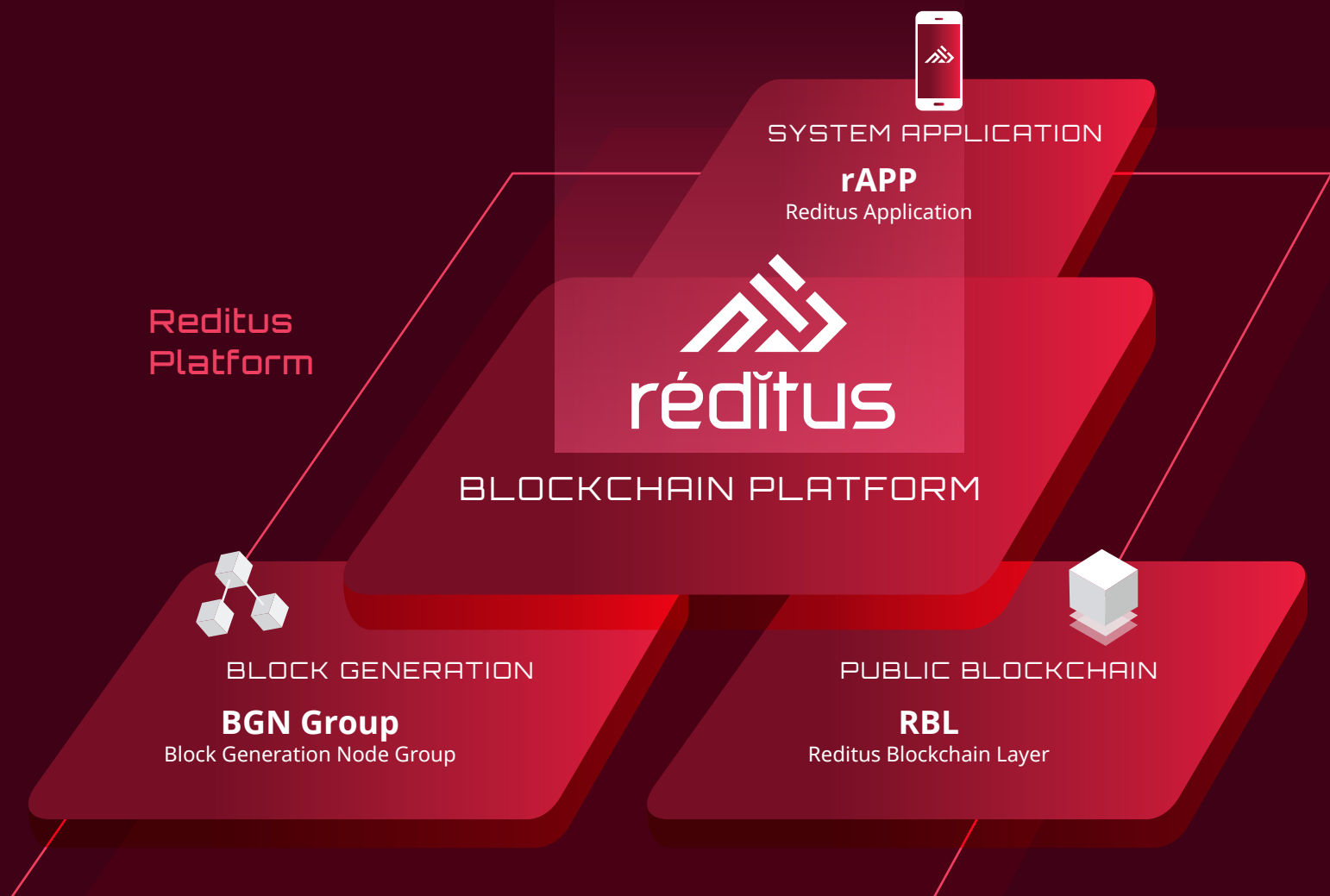
# 1. TECHNOLOGY



## 1.1. PLATFORM INTRODUCTION

The Reditus® platform is a combination of 'the blockchain, the protocol used in the blockchain networks, and the application platform operated through them', and the following are the tasks processed by RMS, the first Reditus Application (rAPP), and the Reditus® platform:

- » Tokenization of receivables, and trade of the tokenized receivables (Reditus® RED Token)
- » Management of collection status and information of the enrolled receivables
- » Trade of Reditus® RED Token and Reditus® IT Coin, and imposition and settlement of trade fees

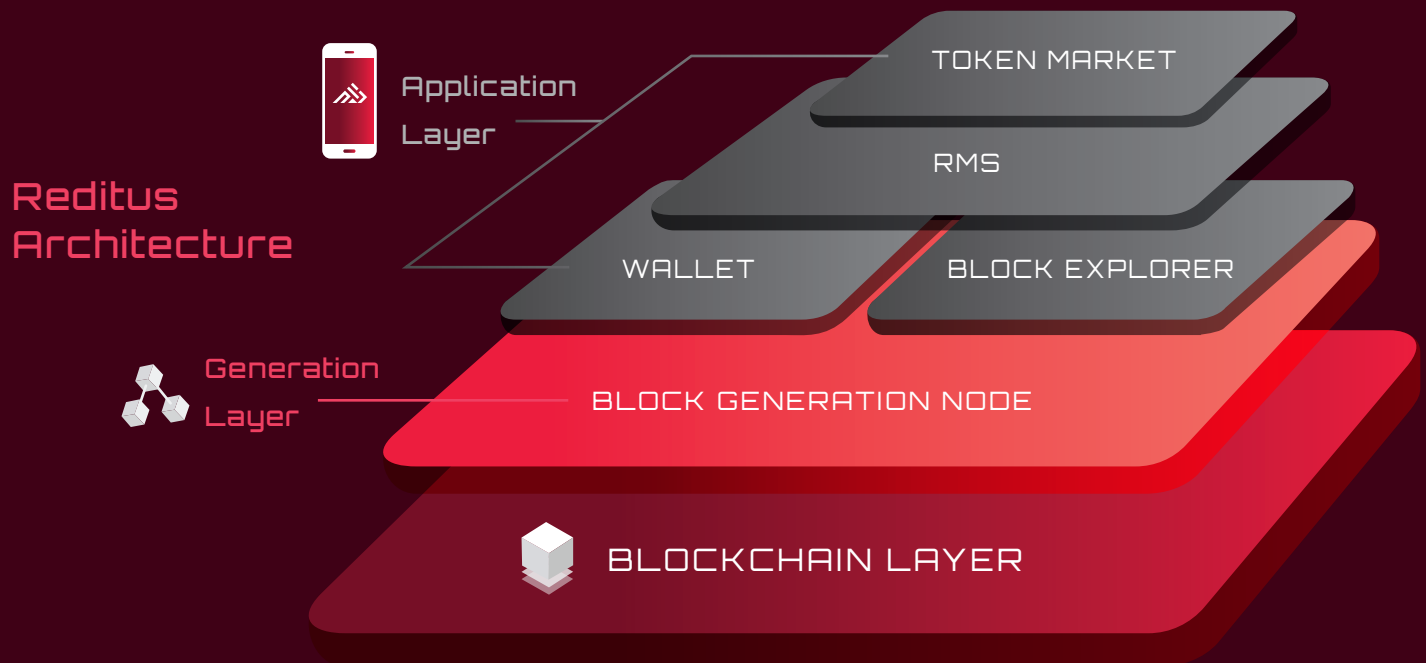


# 1. TECHNOLOGY



## 1.2. PLATFORM ARCHITECTURE

Reditus® has a hierarchical Reditus® Architecture Layer as follows:



### BLOCKCHAIN LAYER

The blockchain layer is the data level at which all data underlying Reditus® is recorded in the distributed ledger. All blocks are connected by a hash algorithm. The blockchain layer assures data integrity.

### GENERATION LAYER

The generation layer has Block Generation nodes with block creation privileges, for the general availability of the blockchain and the efficient operation of the application. The layer verifies the entire node regarding the creation of blocks, the verification and distribution of Token Contract, and the issuance and incineration of tokens, and ensures transaction consistency.

### APPLICATION LAYER

Reditus® applications run on top of the blockchain layer and the generation layer, and the main applications are as follows:

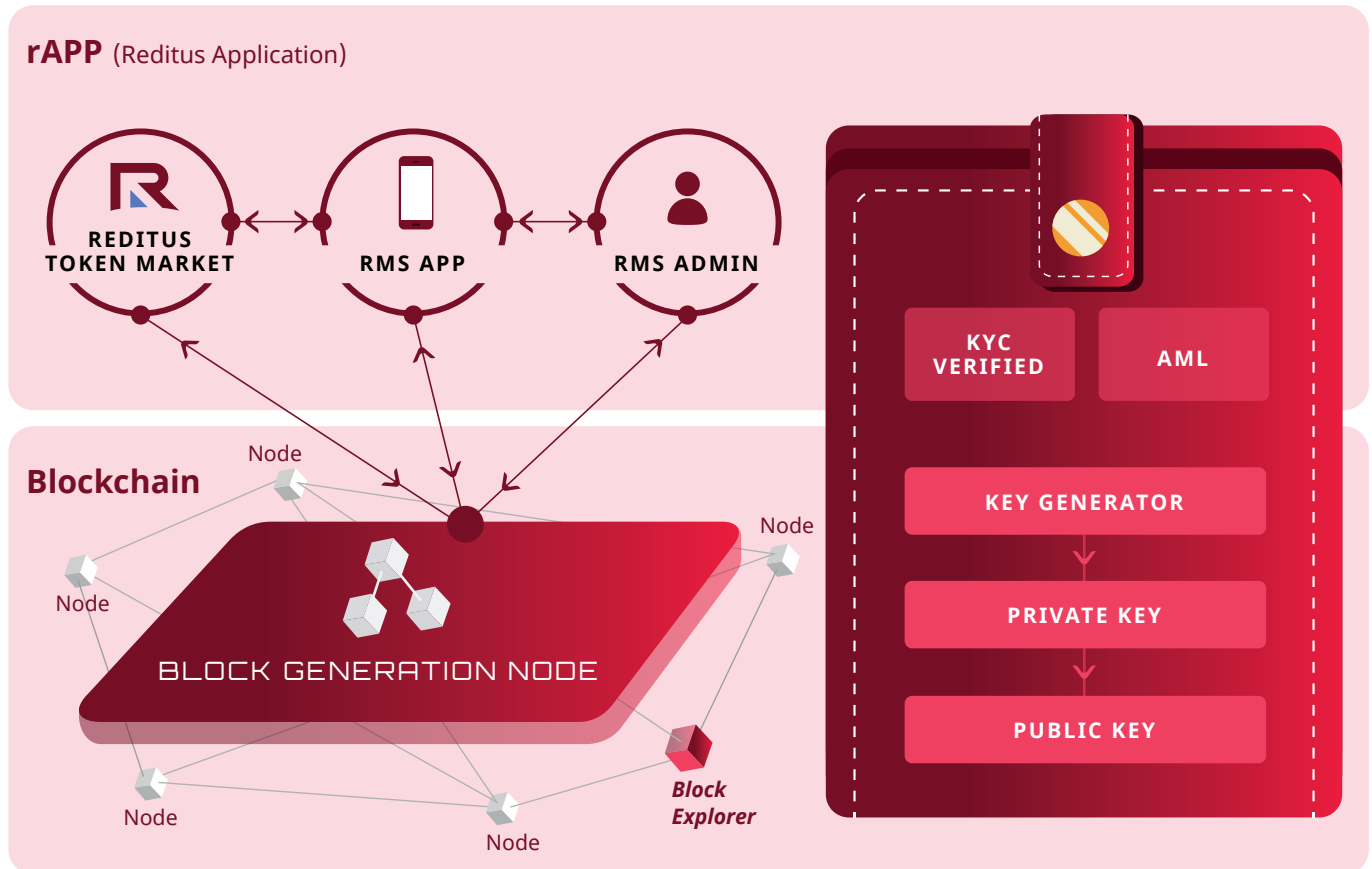
- **Wallet** – an E-wallet to store and transmit cryptocurrencies
- **Block Explorer** – an explorer that allows you to search and check the history of the blockchain
- **RMS** – a system for tokenizing, managing, and operating receivables
- **Token Market** – a market for trading tokens generated by RMS

### REDITUS PLATFORM STRUCTURE

In the Reditus® Architecture Layer, the platform architecture is responsible for the operation of each application and data verification in the BGN (block generation node)

# 1. TECHNOLOGY

## Reditus Platform Structure



Wallet is an intermediary in which the blockchain and the application interoperate

BGN can validate and agree upon the data on KYC and AML that is collected from applications

The Reditus Blockchain consensus structure can create blocks and issue tokens and coins through BG node verification, where PoV (Proof of Value) is used as a verification algorithm. PoV identifies and validates the network's contribution (value) or asset value in order to create new blocks or issue tokens.

In RMS, a Reditus application, PoV for assets is for BG node to verify collected receivables when deposited i.e. in a trust account.

# 1. TECHNOLOGY



## 1.3. PLATFORM COVERAGE (TECHNICAL SPECIFICATION)



### BLOCKCHAIN

The BG node (block generation node) inside (on top of) the Blockchain Layer runs and controls the Reditus Application above the network.



### VERIFICATION ALGORITHM

Reditus uses PoV (Proof of Value) as a verification algorithm that BG node proves network contribution and real (economic) value.



### TOKEN CONTRACT

The Reditus token contract is a record of contracts for the Reditus Application to add new blocks to the blockchain through BG node verification, and through this issue and distribute Token.



### TOKENIZATION

The Reditus Token is a means of trading, which is produced when various rights and interests issued through the Token Contract are standardized. Token, issued through RMS, the Reditus Application, is the stakes of the receivables whose highest value is split.



### HASH ALGORITHM

The Reditus blockchain uses the <SHA-256> hash algorithm to encrypt the connection between data and blocks.



### E-WALLET ADDRESS STRUCTURE

The signature and signature verification algorithm adopted by the REDITUS platform is ECDSA (Elliptic Curve Digital Signature Algorithm). The following describes how an E-wallet address (a public key) is generated:

- A public key is generated using a 256-bit private key and ECC (Elliptic Curve Cryptography) algorithm functions.
- The public key is converted to a hash value of 160 bits (20 bytes) using SHA256 and RIPEMD160.
- The converted 20-byte public key and a 4-byte checksum are combined to create a string (24 bytes). This string is then converted to a hexadecimal number and '0r' is added before the 48 digit string. The 50-byte address value is used as a final e-wallet address.
- \* Function example - `concat("0r", hex( concat ( 20 bytes of hash value, 4 bytes of checksum) ) )`  
Ex) 0r3ae893ae4b22d70432899a3471230face41fe912



# 1. TECHNOLOGY



## »»» NODE

### Supervisor NODE

The supervisor node serves to certify and manage the BG Node, and verify the participants' node. It is a mounted node that can perform all functions such as the creation and propagation of blocks, and the registration and distribution of Token Contract.

### BG NODE

The BG node can distribute and execute the Reditus Application Interface and the Token Contract to issue Token and Coin. It is a core Node that executes PoV (Proof of Value).

### Normal Privileged NODE

The normal privileged node can inquire the details of blockchain transactions, transfer Coin, and propagate blocks. It is a node for general participants and partners, and its application includes Block Explorer.

### Certification Authority

For internode verification, the key exchange and verification system is operated using the <RSA2048> method. No separate certification authority is required for electronic signature.

### Signing Transaction

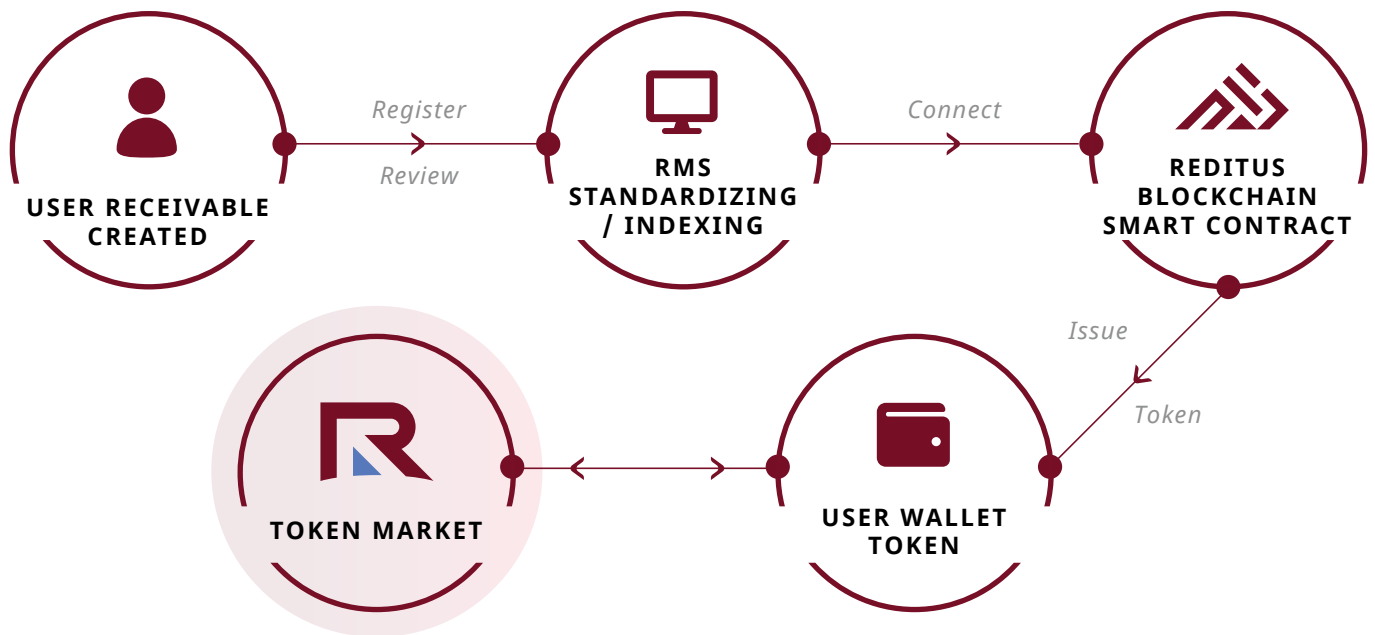
The electronic signature of all transactions employs ECDSA (Elliptic Curve Digital Signature Algorithm, a public cryptographic technology).



## 2. REDITUS® RMS (RECEIVABLE MANAGEMENT SYSTEM)

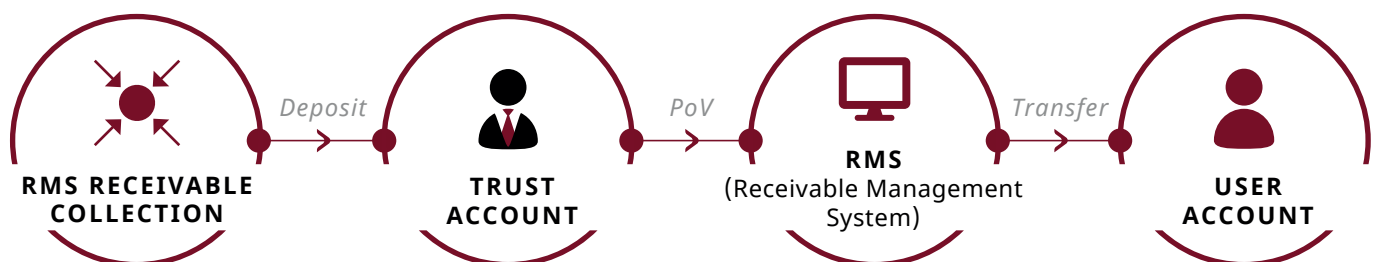


The Reditus® RMS is a system that manages receivables with various forms and right structures, rights for Token based on the receivables, and stakes in the rights. It consists of the Creditor Application for registering creditors, and the RMS Admin Tool for managing a series of processes from the creation, transfer, collection and tokenization of the receivables.



This allows real assets that entered through the exercise of rights to receivables, to be incorporated into the token economy.

The entity (the company) that operates the RMS receives tokens at the time that receivables are delegated and transferred, as a reward for receivable collection activities.





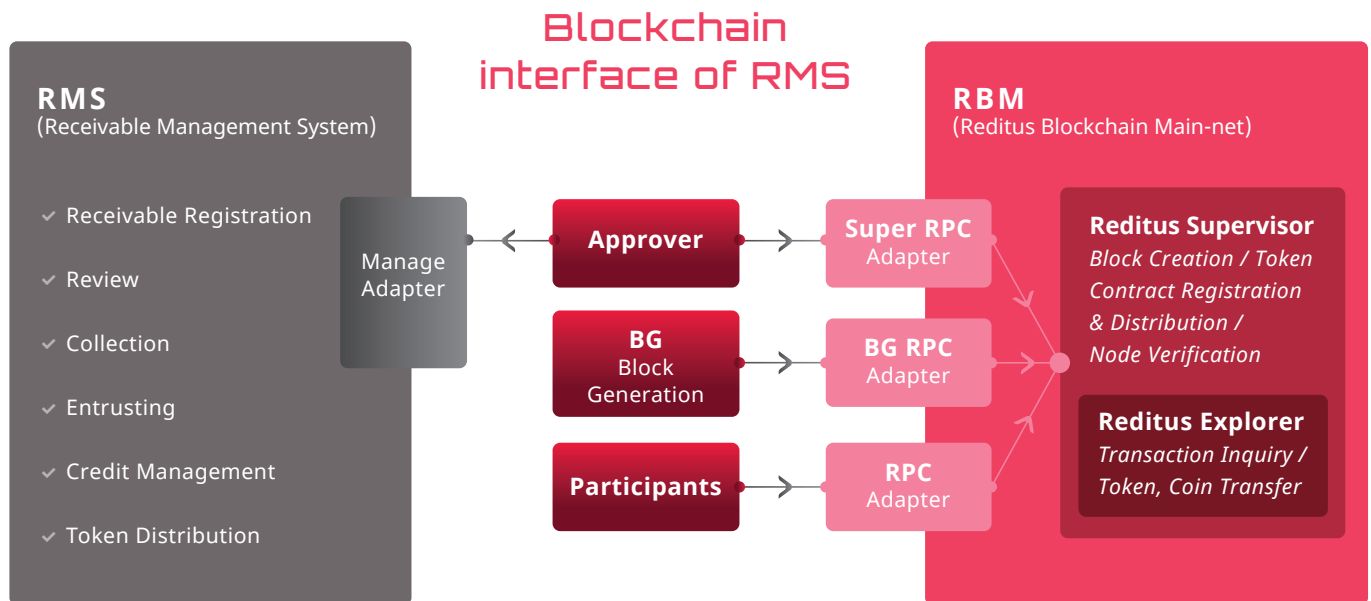
# 2. REDITUS® RMS

( RECEIVABLE MANAGEMENT SYSTEM )



The value (financial asset) recovered in the RMS is allocated to the RED Token holders depending on the amount of the RED Token.

The blockchain interface of the RMS (a Reditus® application), and nodes that affect the interface are as follows:



- **APPROVER**  
 Approver verifies token generation by validating receivables whenever each receivable is created.
- **BLOCK GENERATION (NODE)**  
 Block generation (Node) creates a block every minute, reaches a consensus on block content, and verifies it.
- **PARTICIPANTS**  
 Participants can view the Reditus® blockchain.

