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# ***Nara***

## **White Paper**

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Version 1.0  
23/09/2021

## VERSION HISTORY

This is the first version white paper of the Nara Protocol, that solves cross-border remittance issues in Africa using cryptocurrencies.

Version Number	Implemented By	Revision Date	Approved By	Approval Date	Description of Change
1.0	Alice Anangi	23/09/2021			N/A
2.0	Antony Gitonga	23/09/2021			Settlement

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## 1.0 Overview

This introductory white paper was published by the Nara Protocol Founding Team in September 2021, prior to launching the Nara Project and the Nara Token.

Nara is a Decentralized Payments and Settlement Protocol (DPSP) that's cryptocurrency enabled for instantaneous money transfer and zero fees solving cross-border intra-Africa remittance challenges in Africa.

This paper serves as a reference to understand the Nara Protocol, its vision, mission, the payments, settlement and remittance challenges currently being experienced in Africa and how the Nara Protocol will be solving these challenges.

The Nara team reserves the right to update and revise the details contained herein based on the latest developments of the project.

## 2.0 Abstract

Nara protocol is an intra-Africa decentralized payment & settlement protocol that solves the biggest issue facing the cryptocurrency community and general public.

Currently there are no African wide payments, settlement and clearing networks. There is the proposed Pan African Payment & Settlement System (PAPSS), but this facility would not be available for cryptocurrency exchanges due to the fact that it's sponsored by AFREXIM Bank. I&M Bank Kenya has a similar protocol, BRISK but it works only between I&M bank subsidiaries in different countries.

Cryptocurrency transfers are known to be an instant, transparent and efficient solution to facilitate cross-border payments. The Nara protocol solves both remittance challenges experienced by money transfer companies and institutions (e.g. banks, remittance companies, exchanges,

saccos) and also provides cryptocurrency liquidity to cryptocurrency bulk traders.

It is a Decentralized Payment and Settlement Protocol (DPSP) that makes payments across various African countries using cryptocurrencies via our Makers channel. The Makers are responsible for processing the deposit and withdrawal transactions on Nara network, thus converting cryptocurrencies to local currency fiat and vice versa, while earning fees for each successful transaction.

### 3.0 Introduction

Cross-border remittance is diverse and multi-layered and can either be categorized as wholesale or retail. Wholesale payments are between financial institutions and are typically interbank transfers and retail payments are normally payments involving individuals (either as payer or payee) or payments involving corporates or public sector (but not involving individuals). These are usually categorized as P2P payments between individuals, businesses (including Micro, Small and Medium Enterprises (MSMEs)) and public sector entities.

For the purpose of this white paper, we will look at ways of resolving remittance channels challenges experienced in retail P2P payments between individuals, businesses, institutions and digital assets exchanges using cryptocurrencies at no cost.

Some of these challenges experienced include:

#### Cost

Costs associated with retail payments vary widely, for example for card payments with card issuer or merchant/ processor fees ranging from 7% - 9% in Africa with charges levied on both sender and receiver. Similarly, remittance fees vary by region, by provider and by how a payment is sent/ received. Remittances are currently typically higher in cost than other payments. A key lever in facilitating intra-Africa cross border remittance is by reducing the cost.

## Speed

Speed varies depending on a number of issues, including time zone differences (West to East slower than East to West), number of intermediaries in the payment chain, pay-out method and real-time gross settlement (RTGS) opening hours. Recent research on SWIFT gpi (Global Payments Innovation) payments indicates that among the factors causing delays in the ultimate crediting of the end-user by the beneficiary bank are compliance checks, capital controls imposed on the sender, the bank's value dating policy and non-operational banking hours. Compliance checks are typically more challenging for cross-border payments compared to domestic payments.

As an example, 92% of payments that use SWIFT gpi MT103 primarily B2B payments are processed in less than one business day (i.e. not including bank holidays or weekends).

Card payments take 2-5 business days to clear through an automated clearing house. FX transactions may be same-day where RTGS hours overlap, or may be 48 hours or longer in other settlements.

## 4.0 How Nara resolves cross-border remittance challenges

Through the Nara protocol, Bits. Africa acts as a "reserve bank", providing the trust and the liquidity required to settle between various players. The system actors in the protocol are Makers and Institutions.

The protocol provides zero transfer fees, highly secure, transparent and fast intra-Africa cross border payments and settlements solutions by the use of African e-currencies that are minted during deposits and burned during withdrawals.

The process is also automated in such a way that every single maker within a specific geographical region where the remittance service is required has an equal opportunity to perform both withdrawals and deposits within a stipulated time frame.

## 5.0 The Nara Protocol Architecture

Nara is basically a fast, efficient, transparent and automated settlement layer that powers Bits.Africa deposits and withdrawals.

Makers are P2P fiat deposits and withdrawal issuers. These are merchants who have completed the KYC verification procedures and are trusted to collect and transact on the Nara protocol.

Makers are to always hold and stake a certain number of bits.africa tokens as collateral to get access to the Nara platform. From the platform they can:

- “Deposit”: Generate electronic currencies
- “Withdraw”: Burn electronic currencies

The Nara Protocol automatically keeps track of the makers’ cash position. The Makers are Nara Agents and for every action the maker performs on the network, they earn a percentage of the fees charged on the customers’ deposits and withdrawals.

For Institutions, just like Makers, depending on the institution's type, they have access to Maker functions. Institutions have full access to the Nara protocol with virtually no limits.

Makers can have access to the protocol via the bits.africa wallet application or the web portal. Institutions on the other hand can have access via an Application Programming Interface (API).

**For Deposits:**

- i. An API request is sent to the protocol
- ii. Nara automatically matches the request to a Maker
- iii. Deposit instructions are issued to the exchange/institution
- iv. Fiat deposit instructions are issued to the customer
- v. The Maker confirms the deposit
- vi. The Institutions/Exchange Bits Wallet is credited
- vii. Corresponding e-currency is minted
- viii. A confirmation message is forwarded to the exchange/institution

**For Withdrawals:**

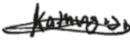
- i. An API request is sent
- ii. Nara automatically matches the request to a Maker
- iii. Withdrawal instructions are issued to the exchange/institution
- iv. Withdrawal instructions are issued to the customer
- v. The Maker confirms processing the withdrawal
- vi. The Institutions/Exchange Bits Wallet is debited
- vii. Corresponding e-currency is burned
- viii. Fiat is distributed to the customer less the fees

**For Settlements:**

- i. Every 24 hours Nara protocol reconciles its books
- ii. Nara treasury determines who owes between the exchange and the protocol
- iii. The difference is settled in USDT between various institutions and countries

**6.0 APPENDIX A: WHITE PAPER APPROVAL**

The undersigned acknowledge that they have reviewed the **Nara Protocol white paper** and agree with the information presented within this document. Changes to this **white paper** will be coordinated with, and approved by, the undersigned, or their designated representatives.

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