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# Introduction

The Opishub Project aims to use existing technologies like BOINC and develop new technologies to create an Android phone-based decentralised peer to peer compute network that rewards its users with a purpose-designed cryptocurrency based on their contribution to the network. The token created for this project is the Opis Token and is a BEP20 Token on the BSC or Binance Blockchain.

The overall goal of Opishub is to create an Android application that uses a small amount of processing power from the phones on the networks CPU to solve mathematical and algorithmic compute problems designated by Opis Group Limited. Each node or user on the network will get rewarded in Opis Tokens based on their contribution to the network. A users contribution will depend on the make, model and specification of their particular device. As a long term aspect of functionality, we want users to eventually be able to manually select and decide on the amount of CPU resource they wish to devote to the network. The more processing power a user contributes, the greater the rewards will be.

# Project Stages:

Stage 1: Proof of concept

* Android Application Developed
* BOINC shelled in the Android Application
* Web App Developed
* Data pushing from Andriod Application to Web App
* Web App issuing token creation orders to the Blockchain

Stage 2: Alpha Launch

* UI/UX developed and ready for use

Stage 3: Beta Launch & Testing

Stage 4: Market Ready Product with Research Focus

* Publish on the Andriod App Store

Stage 5: Transition into Cloud Computing Provider

# Core Components of the Project:

## BOINC:

BOINC and its existing technologies will play a massive role in this project. We will be using the BOINC framework for our own compute functionality in the Opishub application. To get to proof of concept stage we will adapt BIONC to perform research that Opishub designates. This will then push the users contribution data to the webapp which will then structure this data and eventually push to the Blockchain which will then reward the user based on their contribution to the network.

BOINC Languages:

Java (Majority)

Kotlin (Minority)

C (Minority)

## Opishub Web App:

The Opishub Web App will be a central repository for all user data relating to their contribution to the network work. It will also serve as user management platform, where users can see the compute contribution statistics, Opis tokens earned and manage their balance.

Web App Framework:

Front-End: Angular

Back- End: Firebase

Languages:

AngularJS + HTML

Aspects of the Web App:

* Central Database for All Opishub User
* Profile for each user
  + Displays Opis Balance
  + Displays contribution to the network (24 hour average + 30 day average)
  + Allows user to refer other users
* Allows users to request a withdrawl of tokens from the Blockchain (Blockchain will then mint the coins and transfer them to a wallet)

## Opishub Android Application:

The Opishub Android Application will be the downloadable Android application by the end-user. This application will house the “BOINC” functionality in a user-friendly manner. Users will input their data into our Android application that will then push that data to both BIONC and the webapp.

The Android Application will be developed in Android Studio, using a mixture of Java and Kotlin.

Android Application Languages:

* Java
* Kotlin

Aspects of the Android Application:

* Allows users to register their details
  + Email address
  + Username
  + Password
  + Wallet Address
* Allows Users to Login
  + Consider API’s into Social Platforms for easy login.
* Pushes user data to both BOINC and the Web App
* Keeps BOINC running in the application when the device is

## The Blockchain:

The blockchain will be where all Opis Token transactions are recorded. This includes the minting of Opis tokens.

* Minting of Opis Tokens
* All Token transactions (The Ledger)

# Research Diagram:

Graphical user interface, application

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The Diagram above represents how the technology will function from a research perspective. The android application will be where users register, this will then essentially create a node for their ddevice on the network. That specific node will perform the compute, BOINC’s framework will then analyse the compute contribution and push that data to the Web App which will display the users compute statistics to them in their user profile dashboard. Once we have the user/node compute statistics we can then push that data onto the Blockchain to issue/mint coins based on network contribution.

# Cloud Computing Diagram:

Diagram, schematic

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The above Diagram represents how we will adapt the technology to form a Cloud Computing Network. The users/nodes will perform compute and push the results of that compute from the Andriod Application to the webapp. The Web App will then structure this data and determine what the contribution to the network was and issue an order to the Blockchain to reward that particular user based on their contribution.