

# INITIALIZATION DOCUMENT

## I. Introduction

Blockchain technology has grown at a fast pace: there is an increasing number of new industries starting to adopt and integrate the new technology. One of the most notable developments in the recent years must be in the field of NFTs. Seeing that NFTs and phone numbers share some critical similarities in terms of uniqueness and ownerships, our team has come up with a marketplace for phone numbers. This marketplace runs smart contracts on the Ethereum blockchain, and acts as a trustless platform for users to buy, sell and rent phone numbers.

## II. Justification for our implementation

There are a number of key similarities between phone numbers and NFTs. The two most important characteristics that phone numbers hold are uniqueness and unique ownership. And also if you look further into 7 characteristics of NFTs, phone numbers actually cover all categories. Thus, the idea of integrating blockchain technology into running the phone number service seems really reasonable. Blockchain could easily keep track of the number ownership, people can freely trade their numbers through smart contracts, and special numbers could be auctioned for higher prices. And thanks to the advantages of the blockchain technology, all of those activities are held in a fully transparent and decentralized manner. What is more, we have yet seen a phone number marketplace that runs on blockchain technology. Therefore, we all agree that this market would be worth developing as a dapp, and it could have any functionalities a traditional phone number service could provide.

## III. Team

Our team consists of 4 members: Natalia Markoborodova, Alan Barahona Ruiz, Joël Haubold and Minh-Quang Nguyen.

## IV. Planning

As discussed above, we plan on developing a marketplace for phone numbers. The owner of the smart contract can sell their own numbers, as well as provide a middle-man platform for people to buy and sell their numbers. Given below are the functionalities of our marketplace, which are all implemented using smart contracts on the Ethereum blockchain

- Buy available phone numbers
- Buy a nickname
- Rent available phone numbers
- List a phone number that you own and want to sell
- Bid on an auction of phone number

We also use Web3j for wrappers to deploy the smart contract on our local blockchain. And for the front-end, we develop our user interface using Java