Plotland.one

A coordinated worldview

The Plot Team

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Project Overview

The idea of creating an NFT came up fairly early in the process of brainstorming for future projects. With the uprise of NFT projects within the Blockchain Technologies and especially chains like Ethereum and Solana the intention was to gain deeper insight into the technology and create something of use.

The Project is based on the vision of using coordinates as identification for a unit. This equally results in a units key defining its content. The coordinate of a unit can therefore be used for ample future projects, since coordinates have a real world value and define a specific point (or area) of land.

The overall looks of an NFT unit is minimalistic. In its simplistic version, the NFT only contains the coordinates as a value. The vision is to introduce a minimalistic NFT with coordinates to the market, on which future projects can be built on.

55, -6

Theoretical Approach

Defining the Coordinate System

Coordinates are structured in latitude and longitude. Latitude (Lat.) being the structural defining factor for measurements in the North-South axis, ranging from 90 Degrees north, at the north pole to 90 Degrees south, at the south pole, with 0 Degrees being the equator. Longitude (Long.) is the structural defining factor for measurements in the west-east axis, ranging from 180 Degrees west to 180 Degrees east, both being the same latitude and one of two cross over section between west and east measurement, the other being 0 Degrees. Every point on the globe can be defined by the combination of a coordinate containing a latitude and longitude. The syntax of coordinates chosen for the project is the so called decimal degree system (DD).

An example of syntax for coordinates in a decimal degree system is as follows: 52.520008, 13.404954 The first number indicated the latitude, the second the longitude. A positive number indicates north for latitude and east for longitude. South and west respectively would be defined by a negative number, indicated by a minus in front of it. This is an example of a negative syntax: -33.447487, -70.673676

Definition of Area Limitation and Quantification

Because the earth is a spheroid and not flat, the accuracy of a longitude increases the further from the equator you get. The accuracy of the latitude does not increase. Due to this, a limitation needs to be defined in order to guarantee a standard for units. This shall be the Polar Circle for both, northern and southern latitudes.

Because of the obliquity of the earth's ecliptic at around 23,4 Degrees, the polar circles are shifting at around 14,449 Meters per Year, towards the poles (2020). We therefore need to define the polar circles by location and time.

The polar circle is defined in Latitude (N, S) at 66,57 Degrees in 2020 and will serve as reference for measurements within this project.

Thereinafter we can define the total sum of area for the project. For this we divide the area into four quadrants divided at the 0, 0 coordinate. The four quadrants will be described as NW, NE, SW, SE respectively for their position within the system.

Amount of coordinate points on each axis
Lat. = 133 (66*2+1)
Long. = 361 (180*2+1)

With this information, we can calculate the amount of units within a Quadrant and respectively for the entire project.

Amount of Units in NE quadrant (with Lat. 0 and Long. 0)

67 * 181 =**12,127**

Amount of Units in NW quadrant (with Lat. 0)

67 * 180 =**12,060**

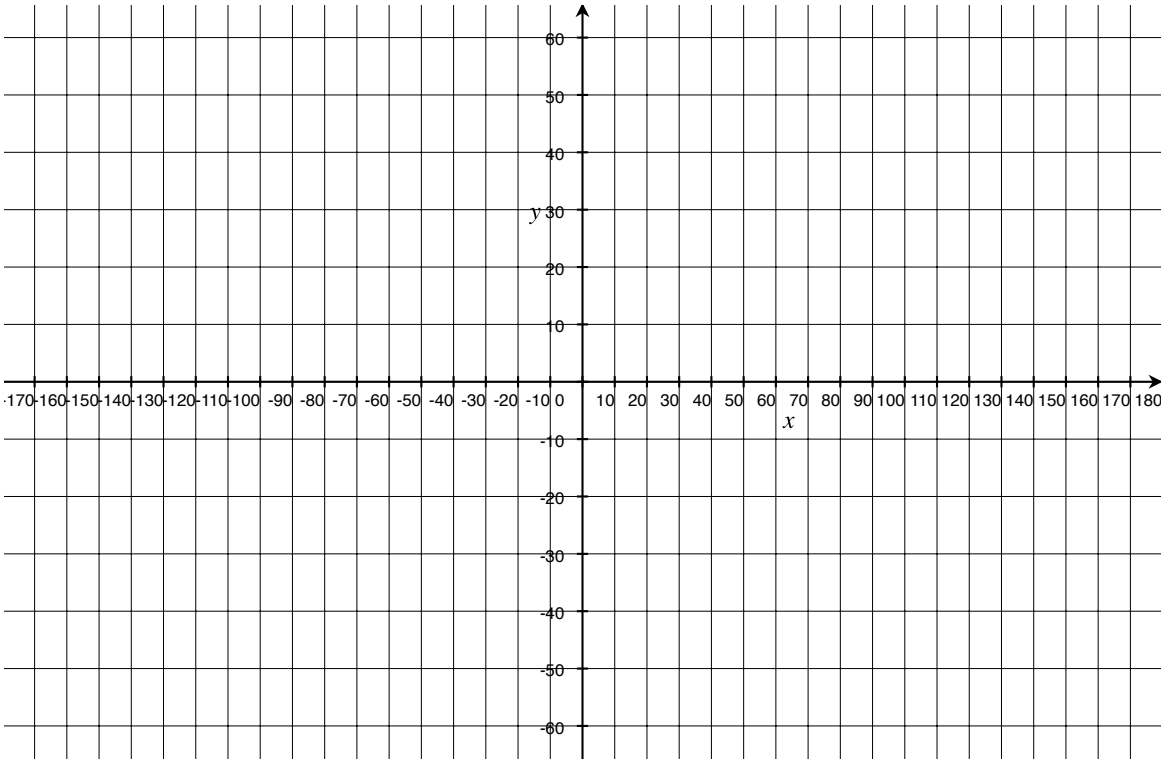
Amount of Units in SE quadrant (with Long. 0)

66 * 181 =**11,946**

Amount of Units in SW quadrant

66 * 180 =**11,880**

That would resume a total amount of **48,013** units.



The four quadrants visualised on a graph.

Technical Approach

The project takes advantage of the Polygon based MATIC network, which combines the best features of stand-alone blockchains (sovereignty, scalability and flexibility) and Ethereum (security, interoperability and developer experience).

Plotland NFT follows ERC-721 token based smart contracts which can be used for minting or transfer of asset by anyone. Since MATIC is integrated with Ethereum, it will be possible to move NFT to the Ethereum network if desired.

The project is set up to be open source and future features will also have to comply. Access to Github and the possibility to contribute are an essential aspect of the project.

The plotland.one website is developed with next.js.