Orpheus One

A Lunar City of the Future

Overview

Orpheus One is a lunar ecumenopolis, meaning that it covers the whole face of the moon. Founded in 2030, it has become the largest city ever built by mankind. Aside from the terrestrial metal towers of the city, there are expansive orbital infrastructures, the largest of which is the Ring. Inhabitants live on the physical moon as well as the Ring, which are connected by space elevators and mass drivers. Orpheus One is a self sufficient city, with reliable means of energy, water, and food production. The city also manufactures materials and mines asteroids for export. Citizens living on the surface live in ecospheres, self sufficient 'bubbles' that supply everything they need. Residents can travel via a hypersonic maglev system to any of the 12 sectors of Orpheus One.

Natural Resource Use

01 MATTER AND ENERGY – Through the use of antimatter and transmutation reactors, Orpheus One can supply its citizens with almost unlimited energy and resources.

02 GRAVITY – Gravity plays a more subtle role in attracting asteroids and other stray matter into the moon's orbit, which lets Orpheus One mine them for their materials.

Living in Orpheus One

Orpheus One supplies free healthcare, and disease seldom causes death. Residents receive a special brain chip that allows them to telepathically interact with their surroundings. It also uploads people's minds into the cloud, so when their bodies wear out, their minds do not, so a citizen's lifespan is essentially limitless. Even though there is a lot of automated work done in Orpheus One, residents still must work. They perform organizational, research, management, and other jobs which require creativity and independence. There are also many ways in which residents enjoy themselves, including an advanced VR, and forms of laser porting.

Energy Production

Orpheus One incorporates two main types of energy production; solar power and antimatter power plants. Due to the fact that the moon has no atmosphere, solar panels are far more productive and efficient in the production of energy, so they are used on a small scale to power street lights and other public lighting and electric appliances. The main large-scale power production method of Orpheus One is antimatter power plants. antimatter power plants are scattered across the moon to provide cheap, abundant energy for every household and person in Orpheus One. These plants get their fuel, antimatter, from special antimatter factories that are given raw material and through subatomic manipulation of atoms and molecules, create the fuel that powers trillions of lights across Orpheus One.

Infrastructure

The city of Orpheus One has devised many ingenious ways to get to space. There are 4 space elevators on Orpheus One, and innumerable mass drivers scattered on the surface of the metal world. It's space elevators are made of advanced metamaterials, and anchored deep into the crust of the moon, and reaching out up to 200,000 km above the surface. One space elevator is located on top of the Pyramid, seat of Collective power and the home of the LUNAS AI-and the most powerful transmitter in history. Orpheus One has a city-wide system of hypersonic maglev trains that crisscross the gleaming metal towers of the moon every day, bringing goods and people to where they need to be. These trains reach speeds of up to 100,000 mph, and are levitated in a vacuum, to reduce friction. Buildings are all black to conserve and absorb heat, and there are orbital mirrors to stimulate sunlight in the domes.

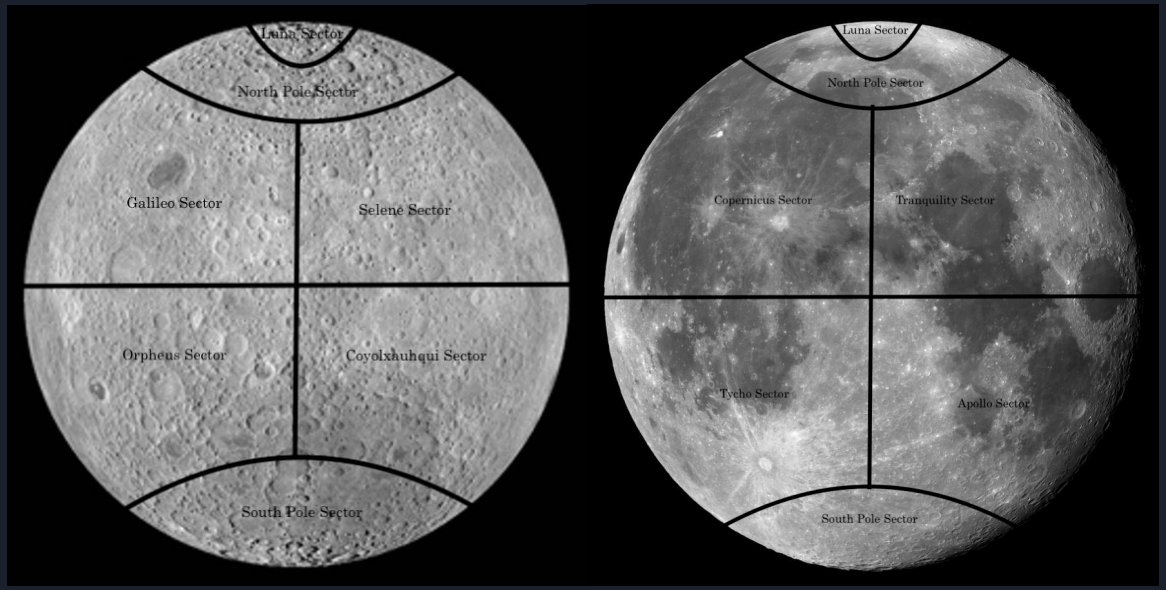
Jobs

The city of Orpheus One is a busy place, and even if there is advanced automation, people must work, both to give their lives purpose in a post-scarcity civilization, and to supply things unique to humans, such as creativity. People are employed to mostly perform organizational, research, management, and other jobs which require a significant degree of intelligence, independence, and creativity. The LUNAS AI and automatons do the rest of the work.

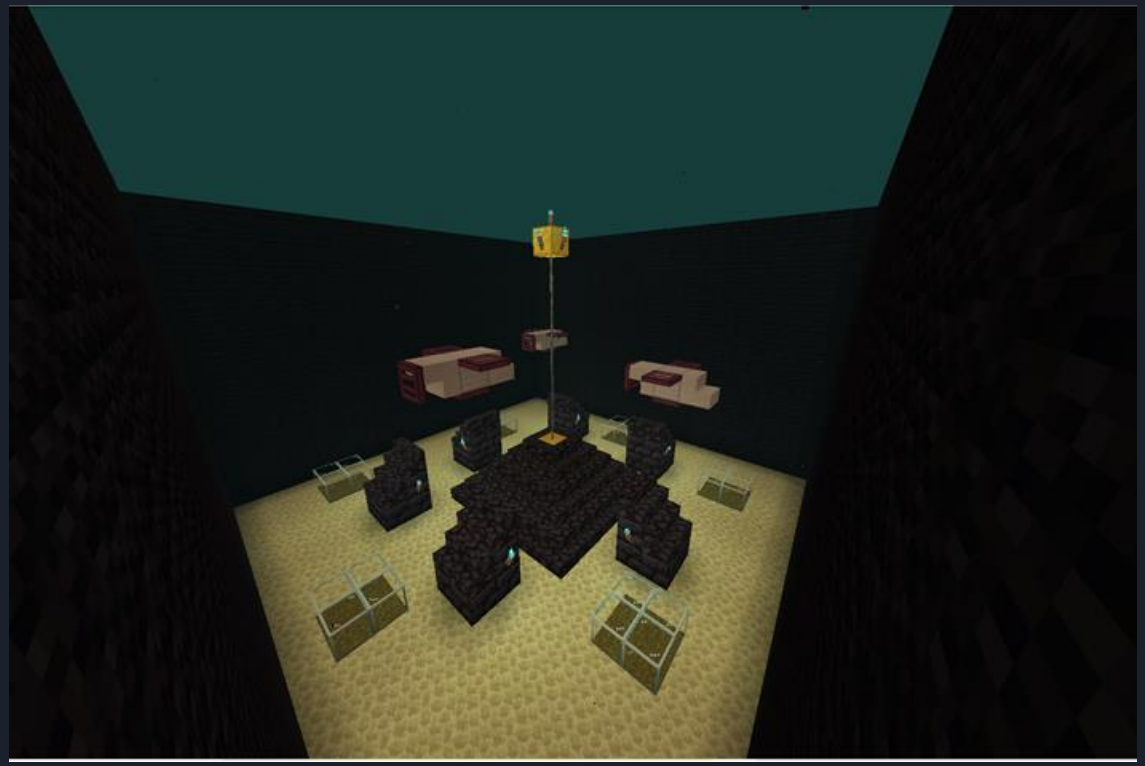
Essentials

The population of Orpheus One, like normal human beings, require food, water, air, and other essentials to survive. Food and water are produced in gigantic quantities by transmutation factories, and air is pumped to everywhere directly from a factory. Radio-tropic fungi are installed in buildings. These Radio-tropic fungi absorb radiation and propagate using that energy. They protect humans inside the buildings from radiation, and also can be eaten as food(they are genetically modified to taste good).

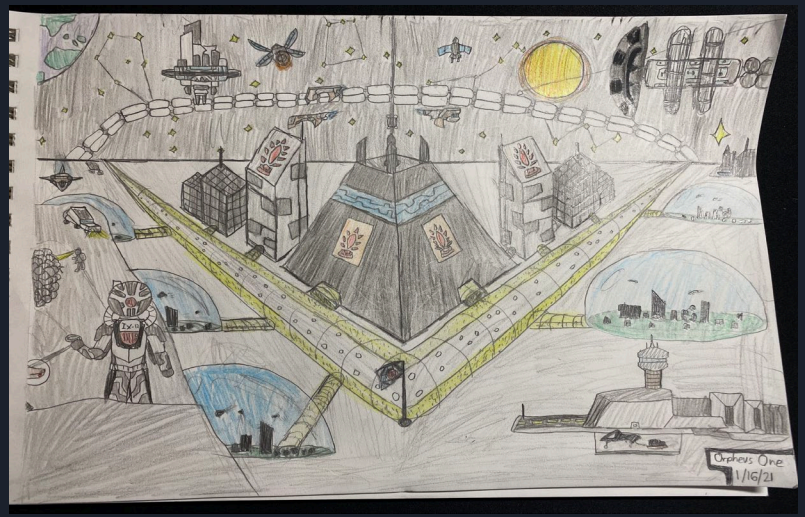
The Sectors of Orpheus One



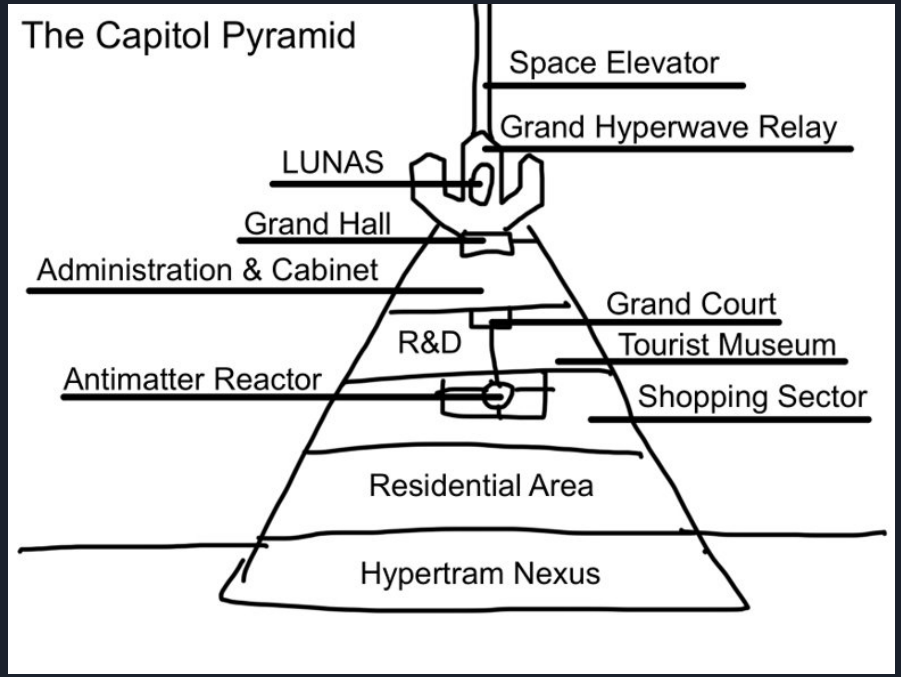
Minecraft Model of Orpheus One Capitol



Art



The Capitol Pyramid



Our Orpheus One City Build

Our city is built to 10,000:1 scale(1 cm equals 100 meters), except for the Pyramid, which is 40,000:1 scale(1 cm equals 400 meters), which means the pyramid should be 4 times bigger, and the towers are 50% taller than they should be, this was due to materials and practicality. The buildings are all black because they absorb heat and light to use to power and heat the building. The pylons at the corners are all not part of the actual city, and the elevator is actually 200,000km above the surface. Our city features a ergonomic, geometrical design made to make the most use of sunlight.

The Future

In Orpheus One, we showed how humanity could advance in the next century we have megastructures, advanced technology, AI, immortality-it really makes you think about what we could do in a few **million** years. Just some food for thought.

Thanks For Watching!

Special thanks to Mrs. McGovern and Ms. Eidell. Orpheus One was made by Ethan Zhou, Varun Katrick, Sarah Koschmeder, Patrick Li, Ritvik Topoji, and last but not least, Han Jeong