

The background is a dark blue, monochromatic illustration of space. It features a meteor shower with numerous bright streaks falling from the top right towards the bottom left. In the upper right, a satellite or space station is visible. A large, stylized, leaf-like graphic is positioned in the center-left, partially overlapping the text. The overall aesthetic is futuristic and dramatic.

TORONTO MODEL UNITED NATIONS II

**WANDERING
EARTH**

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Directors Letter

Dear delegates,

My name is Kevin Zhou, and I have the unique honor of serving as your director of the United Earth Government Committee. I am delighted to welcome you alongside your Assistant Director, Brian Jiang, and your Chair, Joyce Li.

Throughout my involvement with Model United Nations, I can recount my experiences with one word- unforgettable. The distinct characteristics of each conference, whether as a delegate or staff, are what allow me to look forward eagerly to the next one I attend. I have full confidence that Toronto Model United Nations (TMUN) will be unforgettable for us all, and that each delegate will ensure they leave a mark in history as we navigate the path to survival.

The spirit of Model United Nations is the art of diplomacy. I encourage all delegates to collaborate, formulate solutions, and above all, to speak. As you converse with individuals of unique dispositions, cultures, and perceptions, I urge all delegates to constantly remain active in discussions as you embrace your skills in critical thinking and negotiation.

As a committee, we tackle the highest stake of all- the survival of humanity. As delegates work to prioritize the continuity of the human race, you will be faced with unprecedented backlash from dissenting opposition. In a time when international tensions run high and change does not seem to be embraced with open admiration, delegates must stay true to their objective and be prepared to sacrifice. In the name of the greater good, discussions in this committee will one day be memorialized as the makings of humanity's saviors- unless an unexpected accident occurs. Be willing to engage with the challenges ahead, and good luck, you will need it.

On behalf of your dias team, I am thrilled to welcome you to the United Earth Government Committee, and equally eager to meet you all.

Best wishes,

Kevin Zhou

Director of United Earth Government Committee — TMUN 2024

Committee Description

As the sun is set to expand and engulf the Earth - causing the Earth's inevitable destruction. In order to adequately respond to the threat posed by the enlarging sun, a new committee was formed in 2041: The United Earth Government. This committee was formed on the basis of global cooperation for a greater goal. Moreover, the committee has previously decided to begin the "Moving Mountain Project", a massive project of creating Fusion-Powered rocket engines to move the Earth to a new star system. Along with the Moving Mountain Project, the Lunar Exile Project was formed in order to push the moon away from the Earth utilizing three fusion engines to minimize its gravitational attraction on Earth.

On the surface level, the United Earth Government's plan seems foolproof... However, as the Moving Mountain Project continues, conspiracies begin to confront the nations of the world. Choosing the Moving Mountain Project, the United Earth Government shuts down the Digital Life Project (DLP), one that attempts to provide citizens with digital immortality through developing mind uploading technologies. These actions by the United Earth Government have caused skepticism and concern from citizens, causing violent uproar from protestors. Ten thousand nuclear fusion engines are to be built as part of the plan in order to move Earth away from the Sun's expansion and toward a far-off star system that may harbor life. But in this committee, time becomes our enemy... Delegates take on the role of protectors for human survival. transcend roles to influence our course. They face difficulties that include complexity, practical obstacles, and difficult moral choices.

Delegates are faced with a problem that spans light years, generations, and the entire world. This task is not an easy one, sacrifices have to be made, lives need to be lost, but for the survival of humanity it is worth it... or is it?

Topic Overview

In the year 2044, a historic gathering took place known as the United Nations assembly. It marks a turning point in our journey, as humanity. At this juncture we face a crisis where our Sun, the source of life for thousands of years, is hurtling towards a cataclysmic supernova. To confront this catastrophe the United Nations has transformed into the United Earth Government (UEG) Committee entrusted with a mission called the Moving Mountain Project. The plan entails constructing ten thousand nuclear fusion engines that can propel Earth away from the Sun's expansion, and towards a distant star system that can support life. However time becomes our adversary in this committee... Delegates become guardians of humanity's survival. Transcend roles to shape our destiny. They encounter challenges encompassing complexities, logistical hurdles and profound ethical dilemmas.

Resource allocation, collaboration and ethical quandaries become tests for our values and determination. The urgency demands resolute action. The fate of humanity rests upon the shoulders of those who gather together for this endeavor. Together they embark on a journey filled with obstacles and moral dilemmas—a real race, against time itself. Be part of the United Earth Government Committee where every decision and action is defined by a sense of urgency driven by this mission. This is not just a simulation; it's a race, against the clock, where the fate of humanity hangs in the balance. Our determination as a collective is crucial to ensuring our survival in the reaches of the universe. Every second matters, and there's no time for hesitation.

Godspeed Delegates...

Current Situation

Prelude:

In 1977, a Chinese astronomer Fu Jianming discovered that the sun is rapidly aging and will continue to expand. It was estimated that the sun will engulf the Earth in 100 years, and in 300 years, the solar system will no longer exist. Following this chilling discovery, from 1991-1994, the Biosphere 1 project was a success, with astronauts being able to survive the isolation of space. This success sparked the technical foundation for the ARK Project, the creation of a space station carrying embryos and seeds to ensure the survival of humanity on a different planet. In the same year, Fu Jianming discovered that a solar helium flash will occur in over 400 years, signaling the end of the sun, and subsequently, the solar system.

Following further research and discoveries, in 2018, the Wandering Earth model was proposed; this would later evolve into the Moving Mountain Project, and the Lunar Exile Program. In 2026, a massive solar storm swept across the Earth, causing massive damage to the energy infrastructure of the Earth. The Earth's population dropped 3% (241 million dead) after this incident. This incident causes the nations of the world to pay attention to this crisis. Following this crisis, governments banded together to begin construction on "The ARK", a plan proposed by the United States to create a super-large space station, in which the human population is to be carried out of the solar system in search of a new homeland. Following the beginning of Project ARK, the Biological Backup Project (2030) was launched - leading to the subsequent Digital Life Project (2037).

Moreover, due to the dire situation of the solar crisis a century later, the United Nations was reorganized into the United Earth Government (UEG) colloquially known as "The Coalition" to better tackle the looming crisis. This government is made up of the major nations of the current world, and are the decision-making body of the newly created government. The old "Permanent Five" members of the United Nations Security Council are granted powers to "veto" decisions made by other nations. Following the formation of the UEG, dozens of crisis plans were proposed; however, plans submitted by the United States, Russia, China, and India were the main candidates.

Moving Mountain Project:

This plan originally intended to build over 10,000 planetary engines that include an "underground city" under each on the Earth's surface in order to propel the earth to the constellation Centauri α , 4.2 light-years away. As of now, the UEG has decided to pursue the Moving Mountain Project as the plan to ensure the survival of the human race. The plan was initially proposed by China to deal with the solar crisis, and involves five main stages. The first of which is titled the Braking Era, when the Earth engines would generate thrust in the opposite direction of the Earth's rotation, with the goal of halting its rotation. It is important to note that the halting of the Earth's rotation will create unintended consequences... The second stage, the Deserting Era, involves the engines accelerating the Earth until it reaches escape velocity, expelling it from the Solar System. Moreover, as the Earth escapes the grasp of the sun and accelerates to its "cruising speed". The Earth engines would then carry the Earth towards Proxima Centauri. Following this stage, comes the deceleration stage where the Earth engines reverse direction, causing the speed of the Earth to slow and ultimately reach constellation Centauri...

Lunar Exile Program / Month-To-Month Plans:

As of 2044, robots have been deployed to the moon to continue with the lunar exile program - a program involving building three fusion engines to push the moon away from the Earth. In doing so,

the UEG has begun the shut down of the Digital Life Project (DLP) which proposed the continuing of human civilisation through digital immortality by developing mind uploading technologies. This ban occurs despite scepticism of the Moving Mountain Project and increasing violent protests from the public. The first of this phase project is to build two Lunar Exile Engines, one of which is near a research base in the Moon's Campanus Crater, and the other located near the Space Elevator built in Libreville, Gabon. The Lunar Exile Program was built off of the Russian plan proposed to escape the expanding sun, known as the Month-to-month plans. This plan originally planned to use the moon into a natural escape capsule, and the Russian Federation, which carried out a manned landing on the moon to implement this program. This plan was combined with the Moving Mountain Project to successfully de-orbit the moon from the Earth, building the Fusion Engines to prevent the gravitational influence of the Earth and the Moon.

Project Ark

The United States proposed Project Ark as an initial response to the solar crisis, which details the building of a spaceship to relocate the human population. Upon being stockpiled with all necessities for the continuation of human survival, the ship would be fully self-sufficient. After hitting an impasse due to the limitations of technological advancement, the plan was leaked in 2028 and faced critical backlash for its unlikely feasibility. There were few resources capable of escaping planetary pull on a mass scale, and the prospects of the project were divided between stakeholders. Public criticism eventually led to its abandonment. Eventually, the Ark Project was absorbed into the Moving Mountains Project to serve as an orbit elevator in helping the transportation of resources between Earth and the Moon. The Moon, tied to Earth by its gravitational pull, serves as an important resource and target for research.

Digital Life Program:

As a means to preserve the immortality of humanity, the United Earth Government (UEG) considered the Digital Life Program (DLP). By uploading the consciousness of an individual to a virtual space maintained by artificial intelligence, humans could exist digitally. The upload includes the individual's memories, spirit, thoughts, and everything else that exists within their brain. Functions would ideally remain the same as each individual would continue to exist, albeit not in the physical realm. The UEG later shut down the DLP as a result of concerns regarding the limitations of technology and pushback due to ethics. It was unclear whether individuals preserved by the DLP would be self-sufficient and not require external interference to continue living. Furthermore, the accessibility of the technology and its subjects led to questions on the use of artificial intelligence and its potential override of the human will. The developed technology was adapted for use in the planetary engines of the Moving Mountain Project as well as computer assistants for humanity. Although it continues to remain in use, the usage of manual controls overriding artificial calculations continues to be discussed at length.

Space Elevator Crisis:

Many citizens of the world hold heavy skepticism against the Moving Mountain Project, and public opinion is in favor of the Digital Life Project. In 2044, the United Earth Government building - formerly the United Nations Building - was attacked by supporters of the Digital Life Project, damaging the avenue and parts of the building. Furthermore, UEG drones at the Gabon base were the target of a cyber attack, and were used as the weapons and were used to target the unfinished space elevator. A number of terrorists supporting the Digital Life Project infiltrated the base, fighting fiercely against the pilots and soldiers of the base. Terrorists were successful in detonating explosives in the uncompleted space station. Fortunately, after a brief period of chaos, the base's technological

personnel were able to activate 550c - a quantum computer - to regain control of the drones. Unfortunately, the detonated explosives had caused detrimental damage to the space station, causing the Ark Space Station to crash back into the base. An estimated 3,000 people were killed in the incident, and Ark Space Station and the Space Elevator were completely decimated.

Timeline

Year 2058 - Moving Mountain Project Implemented, Liu Peiqiang leaves behind his son Liu Qi for his station on the International Space Station

Year 2075 - Liu Peiqiang's return is delayed due to a spike in tidal force caused by close proximity to Jupiter, leaving half of the Earth Engines disabled and Earth on course to collide with Jupiter

Liu Qi illegally goes to the surface of Earth with his foster sister Han Duo Duo but are arrested, meeting another prisoner Tim and reuniting with their grandfather Han Zi'ang in jail

The four are released but are recruited by Captain Wang Lei to transport a Lighter Core to restart the Earth Engine in Hangzhou in order to save Earth

Han Zi'ang freezes to death after encountering difficulty travelling up to Shanghai Tower during the mission

Liu Qi, Han Duo Duo, and Tim encounter a crashed cargo plane with an intact vehicle. The engineer Li Yiyi on board convinces them to transport another Lighter Core to an Earth Engine in Sulawesi.

On the International Space Station, Liu Peiqiang discovers that the computer in control of the station named MOSS has calculated to abandon Earth and establish another planet. Liu Peiqiang arrives at the control room but fails to override the system.

On Earth, Liu Qi's group discovers that the Sulawesi engine has already restarted. However, the combined engines are no longer able to stop Earth from colliding with Jupiter due to the massive gravitational pull.

Liu Qi proposes to use an explosion caused by a mixture of the hydrogen in Jupiter's atmosphere and the oxygen from Earth to break Earth free from the gravitational pull. Li Yiyi configures the Sulawesi engine to fire a plasma beam to make this reaction happen.

Han Duoduo successfully persuades the United Earth Government to send a public broadcast for help from other rescue parties. However, the combined beam still falls short of being able to reach Jupiter.

Liu Peiqiang manages to override MOSS and flies the space station towards the plasma beam. He sacrifices himself to create the explosion that will save Earth and push it into orbit towards the Alpha Centauri star system.

Potential Solutions

Moving Mountain Project:

The Moving Mountain Project, proposed by China as a solution to the Solar Crisis, was arguably the most ambitious—the project involved constructing over ten-thousand mountain-range sized fusion engines on the surface of the Earth, and to propel the entire planet away from the solar system to Proxima Centauri star system, 4.2 light-years away. Massive underground cities will be constructed beneath each Earth engine, with the capacity to house half of the world's population; membership to relocate to these cities will be decided by lottery. The project would involve five main stages: The Braking Era, when the Earth engine located on the equator will generate thrust to halt the Earth's rotation. The second stage, the Deserting Era, the engines will accelerate Earth to escape velocity; the following stage would see the Earth cruise through space for two-thousand-five-hundred years. When the Earth nears the destination star system of Proxima Centauri, the engines will decelerate the Earth until it eases into orbit around the new star, after which the hope is that the population remaining of Earth will be able to emerge and recover, and rebuild civilization on the surface.

The Moving Mountain Project, despite being the solution adopted by the United Earth Government and with efforts being underway, it is in no way without hurdles. Although the theoretical concept of the project is sound, its implementation is an unfathomably monumental task. There remains countless technological uncertainties, and growing doubts amongst the delegates of the UEG. Faced with stiffening opposition and increasing friction with factions in support of alternative solutions such as the Digital Life Program, the task to ensure the survival of the Moving Mountain Project will not be an easy one.

Digital Life Program:

Despite the issue of ethics and the program's complicated history in the past, the DLP nevertheless presents itself as a valid option amongst the dwindling list of solutions available to humanity. Despite it being outlawed and official research halted, advocacy attached to it could not be suppressed, only to manifest in more radical and destructive forms.

In 2044, DLP fanatics were behind the devastating attack on the UEG base at Gabon and the destruction of the ARK space station. The attack was a near deathblow to the Moving Mountain Project, and a loss of confidence amongst nations internationally caused chaos in the UEG. Despite being behind the attack, support for DLP grew greatly in its aftermath.

Technological advances in computers and artificial intelligence has already paved the foundation to the program. As Tu Hengyu has demonstrated with the 550C quantum computer, it is already possible to upload one's consciousness and for it to be emulated digitally. The fundamental technological barrier to DLP has already been overcome. However, the principle of the program has been shrouded in ethical uncertainties, and the precedent of international and governmental pushback against the program has been harsh and unanimous. Despite the setbacks and falling out of international cooperation, it is unlikely that a fundamental shift in the world's view towards DLP will occur.

Even greater uncertainty lies in the logistics and longevity of such a program. Embracing DLP will mean an end to human existence in a physical sense. How can and how will the necessary technologies be kept running potentially for thousands or even millions of years without humans there to maintain

it? Could AI be entrusted with such a task? What will it mean if a failure occurred in the system? These are all pressing questions that must be answered.

Space Station:

The concept of a spacecraft capable of ferrying humanity across stellar distances away from the danger of our solar system was one of the first and one of the most obvious suggestions put forth at the onset of the crisis. An iteration of this has already been investigated: Project ARK was proposed by the United States as a solution to the crisis. However, faced with backlash and technological impasse, it was rejected in favour of the Moving Mountain Project.

However, as the Moving Mountain Project suffers successive setbacks, it may become necessary to re-analyse the viability of a solution of this nature. It has already been shown that humanity is capable of constructing large space structures, such as the space elevator and the ARK space station. While Project ARK only involved the United States, an international effort, coupled with advances in technology, could put such a project within the realm of feasibility.

Human Colonisation:

At the very core, the goal of the endeavour is for the preservation of the human race. This in itself can be accomplished fairly easily, considering that technologies enabling the preservation and artificial cultivation of human embryos are relatively readily available, and since there is no need to sustain a living population, spacecrafts carrying human embryos can be low maintenance and able to be operated by existing technologies. To maximise success, a large number of such probes could be sent towards multiple habitable planet candidates.

Despite it being the obvious and practical option, it has nevertheless been sidelined as a plan B, as society, and consequently the UEG, is ultimately concerned about its survival in the present. Even if the human race can theoretically be preserved, the prospect that the billions alive today will be left to die will doubtlessly incite powerful and unanimous opposition. It is unlikely that the solution of human colonisation can be pitched as the sole answer to the crisis, but it nevertheless needs to be considered in such desolate and unprecedented times.

Discussion Questions

- Should humanity prioritise survival of the physical body over the survival of the entire human race?
- Should survival prioritisation be decided by random or by the metric of “survival of the fittest”?
- Where are the funds and materials of the project coming from?
- How can countries collaborate on a united stance?
- How should countries respond to public sentiment?
- What metric should be used to select researchers and companies in charge of initiatives?

Further Resources

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https://en.wikipedia.org/wiki/Interstellar_travel

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