## for EABA



## The Colonies

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The following is an excerpt from Brigadier
Samuel Robertson's introductory lecture to his
class at the Martian Defense Force Academy.

THE HEIGHT OF DISCOVERY - It all started with the Hubble Space Telescope. After countless years of continual upgrading, it was finally retired in 2010CE. The Sagan Space Observatory, which supported a scientific crew of five, replaced it. NASA and United States Spaceforce scientists shared time on the observatory and eventually began renting its use out to other nations and organizations. This orbiting telescope became man's ultimate early warning system. But, we'll get to that later.

Another important instrument in humanity's development was the International Space Station or ISS. It was crucial to Earth's future and directly contributed to the development of new spacecraft designs, alloys, and even solar cruises (commercial space tourism), providng a much-needed boost to the commercial space industries of the United States, United Kingdom, and the European Union.

With the advent of construction yards on the Moon in 2018CE, giant factories were erected to create the materials necessary for interplanetary ships. The next generation of spacecraft were just around the corner and caused the decline of the International Space Station. Since it was too fragile to for docking any of the large deep space and interplanetary craft designs, U.S. personnel were reassigned to the Moon. Full ownership of the station was eventually relinquished to the European Union in 2020CE. A larger transit station was built in Earth orbit using lunar materials, but most research continued to be done on smaller, older facilities.

The year 2021CE gave birth to fusion power. A ten-year resolution was instituted by the United Nations and all major governments agreed to replace old nuclear fission reactors with these new, cleaner, and more efficient fusion reactors. In an unprecedented outbreak of peace and common sense, every member of the United Nations signed a ban on nuclear weapons and fissionable materials three years before the deadline of 2031CE. This may very well have been the downfall of man.

The last big scientific invention born on Earth was the technology of photonics. Using light instead of electricity, this new medium replaced siliconbased computers, allowing smaller and faster systems to be built. It laid a foundation for nearly unlimited computer creativity.

The United States, in cooperation with Russian Federations, achieved the boldest space mission yet in 2030CE - the colonization of Mars. The United Kingdom and the European Union also became partners and contributed billions of dollars in supplies. Originally intended as a scientific outpost, it soon became an adventurer's paradise; much like Africa or the Amazon in previous centuries. Tourism on Mars for the rich was offered by three civilian corporations. The United Nations which a decade before had agreed on the destruction of nuclear weapons found itself unable to agree on the political status of Mars. Corporations, billionaires and even a few religious groups could afford fusionpowered ships capable of carrying enough supplies to start a Lunar or Martian colony. And they did, often avoiding national restrictions by launching from obscure facilities in impoverished countries in exchange for helping these countries gain their own space presence. The years from 2032CE to 2036CE were extremely chaotic, but in a peaceful way. Fusion power made the trips possible, but not profitable, and there was more than enough real estate for the relatively small number of colonists (several thousand by 2036CE).

Disaster! - Now, back to the Sagan Observatory. The year 2036CE marked a four hundred percent increase in its usage due to Earth's top astronomers and astrophysicists fighting for time on it. Each one strived to become the first to qualify a new celestial body which appeared in the skies. It turned out to be a new comet that was also on a collision course with Earth.

Data was checked and rechecked.

Unfortunately, the findings were accurate. This new threat caused governments to cooperate and compete like never before. Several ideas surfaced most were fantastic yet unlikely.

Nuclear weapons seemed to be the only hope. The United States and Russia worked diligently to design a device and delivery system that would be able to obliterate or deflect the massive body of stone and ice. In the end, however, physics proved to be on the side of the comet. It was just too big and too fast. Impact was predicted for the central Atlantic in early 2038CE.

Chaos ensued. Governments and virtually everyone who could afford or extort it, built or commandeered a spaceworthy craft and fled Earth. There are no good records of how many ships were launched, how many were lost or what their destinations were. Any with the endurance headed for Mars. The Moon was considered a last resort, as it was expected to be heavily bombarded by debris ejected from the impact of the comet with Earth.

We know at least twenty-eight "colony" ships successfully reached Mars in the 2037CE to 2039CE period, landing at widely separated spots on the planet. The chaos of the moment and later events prevented contact with all but the closest of the landings for periods of months to up to two years. Some of the ships carried nothing but infants and a handful of adult caretakers, parents staying behind so that a larger number of smaller bodies could find a new life under the reddish sky of Mars. We know of at least thirteen failed landings, sometimes through operator error, sometimes from lack of a surviving pilot. Some ships missed Mars entirely, having run out of fuel, miscalculating their trajectories or other problems. Some of these are still drifting between Mars and Jupiter, others passed without sufficient information being gathered to make a long-term orbital plot.

In addition, in 2037CE a secret U.S. operation, deep in the Arizona desert, began refitting an experimental deep space ship design to carry refugees to far away planets. Intended for unmanned exploration, the craft used a new drive system: the fusion-photon drive. It was, theoretically, capable of achieving near-light speeds by using high-energy photons to generate thrust. In addition to colony seeding modules, special hibernation chambers were added to protect the colonists from radiation and to reduce the supplies needed for the multi-year journeys. The United States knew that it would possibly take centuries for Mars to build itself up to where another exodus of this type could be feasible, and if by cosmic bad luck Mars ended up in the crosshairs before then, humanity would become extinct. So, a long shot was gambled on, and the first interstellar colonization was underway.

Using census data and various records like military dossiers, the government secretly recruited citizens to colonize new worlds. Most of these colonists left Earth without even being informed of their ultimate destination. Although, the existence of these seeding ships was never made public, recent data recovered from Earth confirms that at least twenty were launched.

Setup or Salvation? - Earth's countdown to devastation was interrupted when a radio signal came in from space in early 2038CE. Everyone's attention was focused on this signal. After days of analysis, the encoding method was finally cracked and the first sounds of an alien voice echoed throughout the halls of the White House and U.S. Space Command.

They called themselves the Virimar and offered to destroy the comet. The world leaders agreed without hesitation; a decision which spared our brethren their lives, but cost them their freedom.

The blasts that pulverized the comet were visible even in daylight. One bright approaching star became a diffuse patch of light in the night sky. People were celebrating in the streets when word came that the comet was gone. They rejoiced for two days. On the third day, however, another catastrophe struck. The world went momentarily dark and silent.

A shockwave from the blast struck the Earth, destroying all orbital satellites and many central computer systems. The computers were relatively easy to fix, but all satellite communication was lost, including the link with Mars.

Dangerous amounts of radiation in Earth's magnetic belts were also reported, far more than before the comet was destroyed. After analysis, scientists concluded that an extremely intense electromagnetic debris field was present through most of Earth's orbit. Since Earth had no idea of the technology used to destroy the comet, there was no real way to guess exactly what had happened. What it did mean was no manned spacecraft could launch, most unmanned ones were destroyed before leaving orbit, no contact with Mars could be re-established, and all communications involving high-orbit satellites were lost.

This debris field eventually led to the Virimar request (by short-range laser communication) to land their massive space craft on Earth. Everyone felt compassionately toward their saviours and the aliens were allowed to land in a isolated part of central Australia.

They have been there ever since.
The Virimar never journeyed outside their craft and only met with high ranking government officials. Talk of aliens soon went away; out of sight, out of mind. They offered no wonderful new technology, asked for no favors except privacy. So, for over forty years, the Virimar lived an apparently isolated existence in the Australian Outback.

The Sleepers Awaken - In 2081CE the debris field began to dissipate and a renewed interest in space travel blossomed. But, before it could come to fruition, another threat materialized.

Under the guise of "colonial peacekeeping", the French had amassed a considerable army, much of it secretly equipped with Virimar-supplied technologies. They used this army in a surprise invasion of key cities in Europe. Between surprise and technological superiority, Europe fell quickly.

The United States, United Kingdom, Canada, Mexico, and China banded together in a new World War. Virimar technology made the French a powerful force. Over one million Allied troops were dispatched to Europe. It would appear that this move was calculated by the Virimar.

With the majority of troops abroad, the Virimar activated sleeper agents which they had planted throughout the world. Many were politicians or corporate individuals influential in providing key technical or information services. This provided an easy method for subverting or overthrowing governments.

## The Colonies

It was not quite so simple as this. The plan was not flawless nor without setbacks, but forty years of preparation, a disturbingly good assessment of human behavior and some highly advanced technology gave the Virimar the upper hand. Nations were soon controlled by the Virimar, perhaps not openly at first, but controlled none the less. Under martial law and using phrases like "in the interests of national security" and "promoting world peace", the Virimar used their "influence" and national databases to identify and neutralize any resistance before it could organize. Attempts were made by numerous parties to assemble nuclear weapons and other tools of mass destruction, but since all radioactive material and biological was strictly regulated, they were unsuccessful. Fusionpowered ships attempting to kamikaze against the mothership were quickly and easily shot down well outside of any range where a fusion detonation might have caused them harm. Had Earth's stockpiles of nucelar weapons still been in the thousands instead of dozens, they may have remained free.

Today, Earth is divided into Virimar-controlled provinces or teritories. Although each region is governed by humans, these people have either been brainwashed by the Virimar or have been enticed by wealth and power over their fellow man. Most also have brain implants limiting their actions.


Life on Earth - Except for the collaborators, living on Earth is tough. Conditions have been reduced to that of the mid-twentieth century. New tech appears only in the administrative areas, leaving the masses without artificial intelligence, biotech medical assistance, or organized municipal utilities.

Major cities still maintain the largest populations. The same crime-laden neighborhoods exist with even more starving and suffering people. Virimar fiat currency is all but useless to the masses, and people trade jewelry and goods in order to survive. Barter is now a way of life for all but the French.

The countries which were once referred to as third word have regressed to primitive societies. From the warrior tribes of the South African province to the tribal groupings of the Alaskans, men have become slaves to necessity.

The Republic of France is the only "free" nation on Earth. It was given all of eastern Europe for its treachery. History has been rewritten, making France the injured party, with only the assistance of the Virimar helping them repel the jealous masses and eventually bringing peace to the decadent and violent nations outside its borders. And without an organized resistance, by now a lot of people even believe this fabrication. A security wall surrounds France, preventing entrance or egress. All French citizens live in luxury compared to the rest of the world, and know the conditions elsewhere only through the filtered lenses of government censors.


## Administrative areas

Slang: comfort zone
Collaborators monitor their territories from the comforts of the administrative areas. These are often the city centers; the only remnants of a once advanced Earth.

Skyscrapers cast shadows over the dilapidated neighborhoods of the common man. Administrators live in luxury and benefit from the suffering masses. Their lifestyles echo "I have betrayed my brethren" to the masses.

## Inner city

Slang: the ghetto or the 'hood
The neighborhoods closest to the administrative area are heavily watched by collaborator troops. They are monitored for "terrorist" groups (very loosely defined) and possible threats to the comfort zone.

The inner city neighborhoods are densely packed with homes; crimes of desperation run amok. The only police available are those who volunteer to protect the peace. Many are killed for their interference.

Gangs are common among the inner city neighborhoods. They rule their territories and are not usually challenged by police. Homemade narcotics are often traded for food or other commodities.

## Outer City

Slang: the 'subs or farms
The once middle and upper class residents of the suburban neighborhoods are now little better off than the poor. The suburbs have become the ruins of once fruitful communities on the outskirts of the cities.

Although nicer homes exist here, they are typically neglected. Those which are kept up, are usually done so by entire families which occupy the home. It is not uncommon for more than ten family members to occupy one dwelling.

It is also common for the 'subs to contain a lot of farmland, operated by communal groups.

## Labor Camps

Slang: death camps
Political crimes are the only real interest of the collaborator police units, though anyone who gets on their bad side seems to have committed a political crime. Labor camps were established to house the millions guilty of these political crimes. Even in a world where nowhere is safe, anything is preferred to living in a camp. These are little better than the worst World War 2 concentration camps.

MARS - After Mars lost contact with Earth in 2038CE, we stepped up building and terraforming projects to promote self-sufficiency. Early Martian architecture took on an alien quality, but people soon adapted; it slowly evolved to what we see today, large efficient arcologies surrounded by pressurized greenhouses, connected to outlying launch pads and other arcologies by maglev monorails. Depending on its design and age, each arcology houses anywhere from ten to twenty thousand people. While these are clearly the most efficient way to thrive in our still-hostile environment, there remain a few holdout colonies from the earliest days, living in clusters of half-buried domes far from any monorail line. There is room enough for all, and if they don't want visitors, they are free to keep to themselves.

Over the decades since the Virimar first landed, Mars has became a superpower on par with the former United States and has created a new selfsufficient and highly capitalistic state. Mars also became the voice of freedom in the solar system. Democratic elections are held every six years for positions such as prime minister, senator (three from each arcology), and governor (presiding over each arcology). Although anyone can run for office, most candidates come from the corporate or political class. Elected positions are not just warm bodies casting a vote. The technical infrastructure, energy economy and continuing Virimar threat mean that any successful political candidate has a solid education and knowledge of what is needed for the best interest of Mars, not just for their constituents, but for Mars as a whole.

The colony is fueled by commerce and industry, creating a need for large corporations. Unlike Earth corporations, those on Mars have a strong sense of community and always look out for the welfare of employees and their families. Healthcare, quality accommodations, and even food are all part of the employer's contract.

Those who elect not to work for a corporation are still cared for. They are given apartments at the bottom levels of arcologies; a symbol of their social contribution. Many activists move into these welfare homes and recruit their under-privileged neighbors to participate in protests. Some even refuse to participate in the economy at all, relying on their own survival skills to keep them alive in makeshift shelters on the planet's surface.

## The Colonies

Martian space travel - Practical space travel was out of reach for years after 2038CE. Virtually every colony ship also became an integral part of a habitat, its life support systems and fusion-generated electricity necessary simply to survive. In time, ships were assembled or freed from other duties to begin space exploration again. Scientists carried out orbital tests which were relatively hazard free. Short, trips to the tiny Martian moons were also successful.

In 2060CE, a few space craft were fitted with modified versions of the old U.S. fusion-photon drive prototype which was moved to Mars as a classified Spaceforce project in 2035. Special chambers were also developed to protect the crew from the craft's deadly radiation, and these were used for longtransit voyages to the outer solar system and unsuccessful attempts to contact Earth. However, most craft continued to use a standard fusion drive.

In 2069CE the first ship returned from the 2037CE Cassiopia colonization attempt. An twist of physics renewed contact with far-flung humanity decades earlier than expected, but the consequences of this did not become fully apparent for some years.

A number of refugees managed to escape Earth in obsolete and risky space craft in the years following 2081CE. Early on, most did not make it through the debris field around Earth. The ones who did make it alerted the Martian authorities to the situation on Earth. A small group of scientists even managed to smuggle an incomplete report concerning the colony ships. Even after the Virimar took over, they seemed to have little interest in stopping such refugees. The ultimate motivations and goals of the Virimar are still unknown, save that they obviously don't do things the way we would. While their mothership apparently had the power to obliterate a massive comet and shoot down all aerial assaults aimed at it forty years later, it has not moved from its landing site in Australia since 2038CE.

Once the economic situation allowed it, craft were launched from Mars to find and recover the missing colony ships. To date, four colonies have been found or have found us: Cassiopia, Serpenti, Reticuli, and Orionis.

The first wave of colonists have now returned home. Mankind's new home - Mars. The Martian government is recruiting men and women to join the Off-World Milifia. That's why you are here.

THE OTHER COLONIES - The fusion-photon drive proved to be the best compromise for any sort of long range spaceship. At low speeds, fusion exhaust provided reasonably high thrust at low efficiency, but for extended travel, the fusion reactions could be reconfigured to provide an intense low-thrust photon output that could be maintained for years. While the photon exhaust could be channelled at many wavelengths, an unfortunate side effect was extraordinary levels of radiation that could not be deflected. This meant that crews had to be kept far from the drive, and in heavily shielded areas. For the number of people required for a colony ship, this amount of shielding was impractical, hence the development of hibernation chambers. These could fit the colonists into a much smaller volume, which could be protected. The ships also had a small set of shielded regular quarters and control stations. A skeleton crew would always be awake and monitoring vital systems, waking up a new crew every few months and rotating into hibernation themselves. This kept consumption of supplies to a minimum, and allowed more mass for colonization supplies.

The journeys were originally expected to take dozens of years, even with minor relativistic effects taken into account, and with no faster than light communications, Earth would have no way of telling how a given ship was doing except by the progress of their photon trail and faint, long-delayed radio signals. This of course became impossible after the cometary debris crippled Earth's extra-planetary communications capability.

So, Earth never found out that the "known" laws of physics started to bend in deep space. They might have figured it out had they time for rigorous, extended tests of the fusion-photon drive, but time did not allow it. In the absence of virtually any gravity well, at minor relativistic speeds in an intensely radioactive environment, space bends, skips or fragments. At any given instant, a ship would appear to be in normal space, following the conventional laws of physics in all respects, but over any measured interval, it would seem to be exceeding the speed of light by a considerable margin. The colony ships reached their ultimate destinations in considerably less time than they expected, in a few years rather than a few decades.

It was still a long, dangerous round trip, but one which could conceivably be made without everyone you knew back home growing old while you were gone. It took some decades for the colonies to get on their feet enough to consider sending a ship back "home", but once the first ships from Mars reached them describing what had happened, most of the colonies set about the task at once.

Once the colonies were established, more surprises were in store. Our knowledge of evolution and biology is based entirely on our own world and our own history, Earth's lifeforms interacting with other Earth lifeforms in Earth's environment. Once humanity escaped Earth, we found that evolution can and does take place far faster than supposed possible. We and any other life we brought adapted within a handful of generations to meet the challenges of alien environments. Humans could not suddenly learn to breathe chlorine, or subsist on rocks, but tolerance and acceptance of alien proteins occurred, as did adaptations necessary to meet environmental challenges. Similarly, alien lifeforms eventually became able to tolerate us, as both hazards and food. This happened at a much slower rate, presumably because the native organisms were operating in their own environment and did not have as much pressure to adapt as we did.

Human culture evolved to match the change in environment. Living conditions unlike those found anywhere on Earth fostered the development of cultures, sub-cultures and splinter groups unique to these environments. Most are compatible with mainstream humanity, but most have quirks that Martians take a little while to get used to (and vice versa).

Cassiopia (2 year trip) - A dark and savage world, the native wildlife hunts anything that moves. Long periods of total darkness also forced man to adapt; many developed telepathic abilities to counter similar abilities in the native predatory species.

Serpenti (4 year trip) - The technologically limited world of Serpenti is not one to be visited casually. Its electrically charged radiation belts interfere with or damage all electronic or photonic components passing through them, preventing their use for orbital insertion and re-entry calculations, and limiting off-world travel for those unfortunate enough to need artificial implants. The belts shift and interfere with each other on average once per ten days, permitting shielded craft to enter and exit the planet's atmosphere with acceptable risk. Radiation from the rings that reaches the surface also seems to cause non-lethal mutations in human embryos. Much of the population shows signs of this, and Serpentis are on the whole very tolerant of physical differences.

A number of communities were formed by families which shared common interests and goals. These clans have their own specializations of labor and trade amongst themselves for goods or services their own clan is incapable of providing.


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Reticuli (4 year trip) - Ancient ruins were found on this seemingly perfect world shortly after the colonists arrived. These ruins were the remnants of an advanced but extinct civilization. The colonists discovered data records which detailed advanced biotech procedures and adapted them for humans. Some were flawed, and caused horrible side effects.

Unbeknownst to the inhabitants, nanotech devices infected everyone that came close enough to the ruins. These would eventually return with the first wave of colonists to reach Mars, and begin to infect Earth's largest off-world colony.

The surface of Reticuli is mostly sand. Presumably, most animal and plant life was affected by whatever destroyed the original occupants of the ruins. Water can be found in small, sporadic pockets. Because of this, many encampments outside of the ruins have assumed names which incorporate the word Oasis.

Orionis (3 year trip) - A delicate peace exists on this world. Christianity ruled Orionis initially, but the leaders were slowly corrupted by power. They perverted their faith by oppressing the inhabitants. Many so-called "heretics" fled to other parts of the planet to escape the oppression. Using cloning techniques to generate a large population in a single generation, they created a computer-centric society which prospered and grew to the size of New York. Other heretics formed smaller, less technocentric communes around the belief that every man, women, and child is part of the family and should be treated as such. The faithful still exist, but are now outnumbered and out-skilled by the heretics. Now in the minority, the faithful have been grudgingly forced to accept the idea that minority beliefs need to be tolerated...

