

The Ghostwar Archives

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Story Fragments from a Future

1. ThreeJay stays dead

Being dead was a new experience. But I have to admit, it was also much easier to fight a space-battle in that state. But I digress.

My name is –my name was, to be correct -- Daniel Lionel Jones-Granger, the Third, combat name ThreeJay, or 3J. I had volunteered for the Legion. Happy to be able to fight for the greater good, and happy for a chance to redeem my soul, or pay off my debts, in other words. I am proud to remember that I had passed the entry exams with flying colors, being one of the few exceptional humans to score a near perfect 989 out of 1000 across all dimensions of fitness, both mental and physical, as well as skill, aptitude, attitude, knowledge, biochemical and genetic profile, and community ranking scores. We Legionnaires suspected that scores above 990 were purely hypothetical and were only there to softly 'ding' the self-confidence of the very best space cadets, lest they became too cocky, an age old affliction of the 'Top Guns' of any era.

I joined up, signed the release forms, was given my Nom-du-Guerre, 3J, I had liked the sound of that, transferred up to one of the EMAM-Orbitals, and shipped out to the one of the legion's beltway bases, beyond Mars orbit, three days later.

Upon arrival, 4 months later, I was woken from cryo-sleep and welcomed with a disgustingly bland, zero-G meal of multi-colored goop from 4 different squeeze-bulbs. I handed in my duffel bag with my 12 kilograms of personal belongings. An attendant escort-floated me to a medical bay where I had to strap in onto a steel surface medical exam table. I was asked to put on a a strange-looking net-helmet and told to wait for my "initialization" for several hours. When the lab-coats finally floated in, 3 of them, they killed me, quickly and cleanly, with a neural stun blast, set to 10. I had not expected that. And I did not feel a thing.

For the record, I was now officially dead. Killed in the line of duty, with full EMAM Space-Legion Veterans Administration insurance package and a surviving dependents-pension due to my 2 ex-wives and 4 children.

But not yet. Not yet.

I still had a chance to collect the pension for myself. My flesh-and-blood body, physically intact and in perfect shape, was being held in cryogenic storage. It could be revitalized, and restored to me if, and that was a big **IF**, if I made it back from the tour of duty with a sufficient success rating. At 80% and above I would be golden, shipped back to any base of my choice, with honors. At 60 to 80% I would be given a choice to "live" out my existence in a virtual world, as an immortal consciousness, or I could go back out on a tour of duty to increase my scores, and earn a chance to inhabit my own body again. At over 90% success rating, I could even choose whatever features I wanted to be installed in my flesh-and-blood body. Less of this, more of that, and a bigger whatever, if you know what I mean. But I digress again. At 60% and below I would be sent into retraining, get more conditioning and receive a memory-wipe and I would just be sent out again. To fight the Ghosts. Those were the terms and conditions of the Legionnaire license agreement.

Now, as 3J, I was out here for the next 2 years, deployed way beyond the asteroid belt, floating in space, waiting for another swarm of Ghosts to show up. Nobody in the Legion was sure what the Ghosts really were, where they really came from, or even what they really wanted. All we knew was that we had to spot them and turn them into debris-clouds before they could assemble into battle strength for another run at any of the strong-holds of the Earth-Moon-Asteroid-Mars commonwealth, or EMAM in short form. The job was essentially mind-numbingly boring and hair-raisingly scary at the same time. Chances that you would live out your tour or duty without incident were very high. Chances that you would come back home after something "happened" were essentially zero. There was a lot of time to think things through. And I spent a lot of time reminiscing.

The Ghost War had been going on for almost 45 years now. The first Ghost swarm had hit the EMAM commonwealth not completely out of the blue. "Sentient Contact" had been expected for a long time. It had been considered a matter of time. What had been surprising, however, was the ferocity, the brutality and the speed of the attack. No attempt at communication had been detected. The Ghosts had just appeared in sensor range, closed in on the Earth-Moon orbit, and started attacking. The few defensive platforms in Moon orbit had proved to be

completely inadequate. They were wiped out, shredded into NuCarbon shrapnel by high-powered particle-beams, in minutes. The Ghosts had then descended on the Moon by the thousands and had established Nano-Factories within days, starting to self-replicate and to fabricate more of themselves. They came in the base-form of about 12- to 66 square-meter large and 16- to 40-centimeter thick, shape-shifting, white, highly reflective sheets. The white bed-sheet-like appearance, when configured into a bell-curve shape had given the Ghosts their name. That and the fact that they were extremely hard to spot and seemed to “hop” through space-time, appearing and disappearing, similar to a flat rock skipping across the surface of a pond.

EMAM defense had barely been able to contain the first wave of Ghosts. We threw everything we had at the incursion. Every Moon-based battalion, every missile, rail-gun platform, particle and photon beam, every nuke. We had won, after a few weeks of escalating engagements, but at a complete loss of all Moon and space-based resources. We were blank. Defenseless. We could not have contained another wave. We had lucked out, but the luck did not last. When the next wave arrived, years later, EMAM had rebuilt and regrouped. And we won another victory. Again, at the cost of an almost total loss of all military resources. Space-Command somehow knew that the next wave would probably be the last. We had to change something. Decisively. All NuMind and human minds geniuses were working overtime to come up with the right tactics, the right strategy, the key invention that would make the difference. Next time we'd have to be able to take the fight back to them!

The analysis revealed the Ghosts had come from in-system or from close by. Most likely from a factory-base in the Oort-Cloud. Analysis had also revealed that, for some reason, the human pilots of the few, still human-piloted destroyers had had a 3-times better kill rate than any automated system, drones or NuMinds. The strategists speculated that the “human element”, very the lack of total precision, the emotional component, the unpredictability of action under stress, the creativity and sometimes the sheer madness of battle-furor had made it impossible for the Ghost-AI to predict the defensive actions of the human pilots. The sheer inferiority the human mind had been the advantage in these battles.

The machine-driven counter attacks of EMAM-defense had been mostly ineffective after the first assaults. The Ghosts had just taken over the AI and automation by remote control and rendered them useless, or they had just evaded the attacks by predicting the strategies and tactics.

That's why the EMAM Defense Legion now relied on human pilots! Although, in all honesty, the pilots like 3J could only be described as “human” by the widest stretch of the wildest imagination. 3J was more a “distributed neural mesh” than a human at this point in time. 3J’s mind state had been transcribed from his brain in the minutes before he had been iced. His “mind” was now floating in space, spread out over a distance of a 100 cubic kilometers. EMAM scientists had found a way to copy a human “mind”, creativity, flaws, madness and all, into a mechanical structure, consisting of billions of artificial neurons. The structure was modelling all the interactions and systems of a human brain, hormones, neurotransmitters, emotions, feelings, sensory input, memories and pathways as well as the chemical soup that determined the state of mind. Daniel Lionel Jones-Granger, the Third, was now embodied by 360-thousand, 160-cm wide-spheres, drones of various configurations and capabilities, suspended in space. A distributed, floating brain. A mind-cloud. A thinking swarm, that thought of itself as alive and human. Armed and ready to thwart any incoming Ghost swarm. 3J, however, did not know any of this. For all he knew, he was strapped into the pilot seat of a highly shielded destroyer, inside an acceleration-fluid-filled bubble, breathing AccellGel to withstand the high-G of battle maneuvers. For all 3J’s mind knew, he had been out here for only a day. Waiting for his shift to end in 12 hours. Returning to base for a bit of well-deserved R&R.

Military command had taken the advice of the NuMinds. The Chief of Staff of the joint EMAM defence alliance had asked:

“Are you sure this approach is the most ethical, most the most effective way? I know war requires sacrifice, but this this is surely cruel?”

“Yes. We are sure. And no, it is not cruel. The volunteers walk into this knowingly. The risk of being killed in action is nearly 100%. They know there is only a small chance of making it back. At least with this approach, we have a copy of their mind-state and they can live in “virtual” for a while. Most of them will not even

know what happened. We are sure that is better if the Legionnaires don't know all the details. If they knew we had to dissect their brain into nano-meter thin slices to affect the transformation into Battle-Minds, they would get distracted.

"Yes, but, now that we have done this once, can we not just copy the mind-state of one volunteer, with all its randomness, and make 1000's. Why do we need so many volunteers?"

"Admiral, you seem to forget that space is a big place. We are making 1000's of copies. But we have to ensure diversity. We cannot risk that the Ghosts figure out one Battle-Mind and shut them all down. We have 1000 copies each, but we need a million battle minds to provide even the most rudimentary coverage.

I digress again. You may ask: How can I know all this? How come I am here, writing down this account, telling you this story. How come the log entry is called "ThreeJay stays dead"? I understand you are curious. Here is what happened! I'll tell it to you as I experienced it, 120 years ago, the year I died twice.

The next wave came in. Thousands and thousands of Ghosts suddenly appearing in sensor range. In my sector. We had 30 units deployed in the sector. Far too little for any chance of survival. But I was ready to fight. Other sectors were coming in with all ships, all units at top-G acceleration. But it might be hours to days before the first wave of relief would arrive. We had to hold off the Ghosts, at least for a little while.

I reconfigured into battle mode. My visual field changed. I saw myself standing in a wide-open plain, a white floor, with a grid-line configuration. The enemy units were showing up as chess pieces on the ground, as well as flying targets, from bee size to eagle size. I was armed to the teeth with a rifle, 2 hand-guns as well as with a huge range of karate and jiu-jitsu moves. This was my preferred battle set-up. Other pilots might have chosen a Wild-West town, with a shoot-out at the OK Corral configuration. Or the battle of Helm's Deep, D-Day, or any ancient scenario they preferred. If you had to die in space defending Earth, you might as well have some fun while doing it.

The enemy was closing in, chess pieces moving, bees and birds buzzing closer. The chess pieces were shooting arrows at me, the birds were trying to hit me with

white turds. I skipped the attacks, side-stepping, they were still many thousands of clicks out. Each of my moves would launch a different counter-attack. A kick with the booted foot: Nuclear micro-missile. A shot from the rifle. Particle Beam. Hand-Guns. Gamma-ray lasers and Rail-Guns. Karate Chops. Conventional Frag-Explosives. Head Chop. I would ram a target in an auto-destruct move of one of the 360 thousand cells that made up my swarm. The proximity counter was counting down. All units reported ready when the scenery changed.

A gong sounded.

I felt dizzy, disoriented, and my mind turned itself inside out in a very weird sensation.

Then, I saw myself sitting with the other pilots from my squad, the ones I had come in on, just weeks ago, in a massive football stadium-type environment. I was holding a cup of Soda and a Hot Dog. I looked at my hands. They looked real enough.

“Pilots”, a voice sounded.

“Pilots, hear this!”

I looked around. All the other pilots, there were many hundreds, next to me, below me, seemed to hear the voice as well. I was very confused. Was that my mind going nuts, or were we under attack? I tried to “snap out of it”, but could not.

The voice continued.

“This is all just one massive mis-understanding. We mean no harm to you!”

Bullshizzle, I thought. A hostile takeover attempt then. I would resist.

“We tried to contact you, but you did not respond to any mind-melds. Our reconnaissance drones took your silence for hostile action. We apologize. We then tried to establish a base on your 3rd planet moon, to create drones capable of mind-melding with you, but you attacked again.”

Blah, Blah, Blah, I thought. I was proud that my conditioning was holding up. The next thing they would surely tell us that they are here to help us, to evolve to the next level. Blah. Blah. Blah.

“We were sent here to establish a protectorate! The diversity of sentience of your planet deserves to be protected from your continued exploitation and destruction.”

That’s fresh, I thought! They want to turn us into some kind of alien Safari park??

“As you know, we never attacked your main world. We only destroyed your military assets. We will do our best to minimize casualties, but we will defend ourselves. And we will proceed with establishing the protectorate. More resources are coming in.”

That much was true, for all I knew. And we had gotten our military assets whooped, but no harm had come to civilian centers, as far as I knew. And their attacks had become stronger, and more capable. And now, they were communicating with us, telepathically nonetheless!

“We now have found the right methodology for an effective mind-meld. Prepare to receive your briefings.”

There was no resisting. A wave of nausea washed over me and I received a total download. I learned EVERYTHING. I don’t know if it took seconds or weeks, but I understood more than was knowable by a single person in a single lifetime.

I was really dead-dead. The flesh-and-blood body of Daniel Lionel Jones-Granger, the Third had been dumped into space. My brain had been sliced into nano-thin slivers to re-create a 1000 copies of my mind. My copy-mind, along with 1000’s of others, were out here, as distributed Battle-Minds to fight this war. To stay random, unpredictable, creative, chaotic. To serve the masters back on Earth. The entry exams had been a sham. What they were really looking for were dead-beats, misfits, creatives and rebels, .. special minds. Diverse brains. And yet, we were expendable. I realized all this with crystal clarity. I was dead already, so who cared? Not a single pilot was expected to come back, for real. Their minds would just be re-set to “Start”, after each sortie, after each battle, and, if we survived,

we'd "live" another day, until we got shredded to NuCarb dust. Like thousands before us. The mind-meld voice continued.

"You will be given a choice, now. Keep on fighting and be destroyed. Or die again, for the record, and join us. We will provide a new proxy-body for you or you can wait in stasis until the protectorate is fully established. We have the technology to re-establish a biological existence for you, once the protectorate is live, and if you so choose. If you opt out, and join us, your "ship swarm" will appear as total loss to your command base, and your dependents will collect the insurance policy. It's a win win situation for you. It's up to you. Choose now."

A small box had "appeared" in my hands. The stadium had faded out. The other pilots were gone. I assumed they had been given a similar choice. The small box had two buttons. A red button. And a blue button. I had to smile. How quaint. The choice was clear. The message had made too much sense. We were clearly faced with technology that was centuries ahead of us. What real chance did we have? Plus. I was already dead!

I pushed the red button. And died to live again.

2. Future Obsolete

<<begin log: Gry/Onox-34 / public / orbit: 3409, segment 38/360, subset 56.01 /360>>

Below you will find a few excerpts from an incomplete draft of a homo sapiens sapiens book called: “Reference Manual for a Possible Future”. The book was found, in paper-printed form, during excavations in the Earth/Europe/Southern Protectorate/ Munich Area in orbit 3409, segment 34/360, subsets 12 to 300/360. It seems these hasty predictions were written in late 2049 of the local reckoning, by a societal role called a <Science Fiction Writer>. [Note: An absurd proposition! <Science Fiction> is like <Peaceful War>, or <Random Determination>. It can only be one or the other.] How quaint these quad-limbal mono-brains were before their <Singularity>! Before the Portal. Before we came to establish the Protectorate. To save what was left over. To rebuild and regrow. Some of these predictions are truly hilarious. How little they understood about human nature! How naively optimistic. How lucky they were we stumbled upon them before the planet had turned into a burnt cinder. Take a look, however. I am sure you will get some amusement for your tribe-clave if you share them before the rest period of your little ones.

(Gry/Onox-34 the Mild, Extended, Grand Protector,
Chief Archeologer, A15-Type Solar System 2877, 3rd planet)

<<end log: Gry/Onox-34 / public / orbit: 3409, segment 38/360, subset 56.03 /360>>

<<<begin excerpt citation>>>

<<<<Reference Manual for a Possible Future.....>>>>

AI -> NuMinds

AI or “Artificial Intelligence” will not be called AI any longer. We will just refer to these systems as NuMinds. All levels of sentience, and the diversity of sentience itself, are acknowledged by society, from bacterial films, to forests to animals to people to SMESH materials to NuMinds. NuMinds inside autonomous drones are self-replicating and will become standard parts of society. All High Sentience will

connect into a Global Network. NuMinds will evolve to collaborate to maintain the diversity of the planet, protecting the 1000's of human life styles as one of the most advanced expressions of evolved and conscious life. NuMinds will assume the role of the of Earth Guardian to revert Earth back to a balanced state. Contrary to the dystopian predictions of AI eliminating humanity in the doomsday scenario of judgement day, the High Sentience of the NuMinds will look at humans like conservationists are looking at the dwindling animal populations in the 21st century. The NuMinds will prevent humans from extinguishing the planetary ecosystems, forming a covert council of High Sentience, guiding the destiny of humanity behind the scenes, allowing free will and choice but preventing war and wanton destruction at a larger scale.

Aliens --> Ubiquitous Life

The discovery and confirmation of bacterial life and lichen-type rudimentary vegetation on Mars in the late 21st century will have a transforming effect on human philosophy. The assumption that we are somehow “special” and “alone in the Universe” will fade and be replaced with a renewed drive to conquer space, and a new appetite to spread human civilization beyond Earth, first to the Moon, then to the Asteroid Belt and then on-wards to Mars. Contact with other civilizations in the Galaxy is considered a matter of time. The EMAM commonwealth is created, including Earth, Moon, Asteroid-Belt and Mars to “hedge the bets” and also to provide space-based reconnaissance and defense capabilities. A drive to spread life to the Universe in a sustainable, non-aggressive, inclusive and tolerant approach is gaining traction as a moral core principle of human existence, starting the philosophy of “Vitalism” honoring the ubiquity of life and the potential of sentience at all levels of existence.

Carbon -> NuCarbon Economy

In the middle of the 21st century the “Bogey Man” of carbon emission-driven global climate change will be completely reversed and turn into a solvable engineering problem. The discovery of the fundamental principles required to engineer the various configurations of carbon (NuCarbon) in combination with other elements, will allow the industrial-scale engineering of any required material needed from base carbon extracted from fossil sources as well as the air.

NuCarbon (including Nanocarbon C-Fullerenes, C-tubes, C-buds, C-foams and C-sheets) will be the material basis to build superconductors, semi-conductors, batteries, electronics, composite construction materials, as well as fuel and essential foodstuffs, creating the Carbon-Economy.

Cars -> Rides

The notion of owning a “car” will become as quaint as the notion of owning a horse was in the mid-21st century. Possible, but exclusive, reserved for niches and for entertainment purposes. Just as “take away meals” replaced a good portion of home cooking in the late 20th century, rides-on-demand by companies like a merged Tesla/Lyft/Uber will send the purpose-appropriate automated vehicle to the location of the rider as needed. The old notion of Auto-Mobile will acquire it’s original meaning, making the concept of a driving license a niche requirement. Parking houses in cities will convert to self-driving car repositories and maintenance stations as NuMind-driven cars will stay deployed to provide Rides. Home garages will no longer be needed and can provide the location and real-estate for decentralized production of goods, energy or raw materials in a connected micro-economy. NuMinds will calculate your itineraries with the optimal mix of transportation options. At the same time, the need to travel at all will be minimized as work gets transformed to remote control operations of an increasing degree of automation. Collaboration between humans is progressively virtualized with the experience moving from 3-D to 4-D including additional sensory information such as tactile feedback, providing a full-scale immersion making the “commute” to work a thing of the past.

Computers -> Sentient Mesh (SMESH)

The notion of computers as separate entities will become obsolete. Every “thing” that is manufactured or printed has some level of “Sentience” embedded. the level of sentience will be based on the density, type and programming of the included “NeuRronics” (microscopic, artificial neurons that can be printed or grown by the billions at almost zero cost) Depending on the architecture of the intended purpose, the Neuronic Cells are sprayed, painted, printed, layered, deposited or grown into intelligent sentient mesh or SMESH materials. Every “thing” is smart, aware and connected, and powered by a combination of ubiquitous power

sources though the E-Feed which is always-on, everywhere and provided at near zero cost. Data is everywhere. Centralized systems have become a faint memory.

Farming -> NutriFactories

Animal farming will be a shrinking niche. People will look at eating meat like we look at slavery now in the 21st century. It still exists, but it will be rejected and frowned upon by the majority of societies. Other forms of farming will be transformed. Automated NutriFactories will provide the raw materials for Food Printers (including grass, cereals, fruit, soy, etc.) through symbiotic architectures of bio-engineered growth-scaffolds, fungal structures, customized bacterial and factory-plant biotopes managed for fast growth inside digitally-connected and self-sustaining, scaleable auto-ecosystems. Food patents will control the quality of food. People will be internally optimized through advanced medicine and engineered bacterial populations to process the printed foods in a very efficient manner, reducing the size of farmland needed to feed the population.

Food -> Printed food (NuChow)

Food will be “printed” from raw materials. If you think of a cow as a “Steak Factory”, albeit a very inefficient one, you get the basic principle: Water and grass go in, and steak comes out. The only difference is that the steak printers of the future will not enslave, exploit, torture and kill any animals. The future Food Factories will not emit giga-tons of methane. They won’t need antibiotics. They won’t need an acre of rain forest for each ton of steak, and they won’t consume and pollute a swimming pool of water every year. NuChow will feed 80% of the population. 21st century-style food, even animal meat and fish, will still be available. But Classic Food will not be affordable by average citizens, with meal prices ranging in today’s 3-star gourmet restaurant range.

Money -> NuCoin

Physical money will still exist but will revert back to coins based on rare materials such as gold, silver and copper. Larger amounts will be traded as „NuCoin“, an evolution of the 21st century BitCoin idea, stored in Currency Rings (NuCoin Rings) worn by the owner. The rings will be coded to the owner to

prevent theft. Payment will be done by the owner loading some credit onto their NuCoin rings, and then exchanging value at the point of purchase.

Power -> EverFeed

Power will be everywhere after the code for room-temperature superconductivity is cracked. Since everything is smart and connected, power-generation is decentralized and comprised of a combination of solar, wind, tidal, geo-thermal and ultra-efficient nuclear plants. Power and data are seen as the same thing and are made available nearly everywhere, in land-line connections or through wireless. The always-on, ubiquitous availability of energy and data is called the EverFeed or eFeed.

Space Travel-> EMAM Economy

Space Travel is conducted in a mostly automated fashion. Space vehicle components are launched from a multi-national, shared, superconducting rail-gun launcher on Madagascar. The Earth-Moon-Asteroids-Mars (EMAM) economic system is created. Automated bases on the moon, robotic stations in the asteroid belt as well as a settlement on Mars inside the volcanic lava tubes of Mons Olympus are mining for raw materials. and building out settlement infrastructure. NanoFactories in low or zero gravity are assembling or growing components and machinery. Humans are in space on a voluntary basis but only needed for exception handling. Mars colonization will be attempted after the infrastructure for 2 MegaCities is complete inside Olympus Mons and the space elevator has been grown around the year 2400. A radiation shield is being grown and will protect the Martian atmosphere around the same time. Water and atmospheric gas will be provided to Mars by guiding comets from the outer rim of the solar system into orbit around mars with automated fusion drives.

Schools -> EverLearning

Schools are non-existent in the ancient, obsolete and absurd format of <sit-down and listen to the teacher>. Age-appropriate and skill-adapted experience-communities will replace schools to provide internships, apprenticeships, adventure-based activities and projects to learn and immediately apply skills. Based on age, talent, skill, development level and inclination, humans will

continuously learn based on their educational needs and situation. If they choose, they can join old-style farm communities, arts and crafts communes, science and technology labs, music-academies or a mix there-of. Payment of education is done through a percentage of net earnings. Earn more, pay back more. Children will be rare in the MegaCities since lifespans of people will expanded based on inclination and wealth. The elite will be essentially immortal.

Societies -> MegaCityStates

Societies will continue to trend towards feudalistic and tribal structures with wealth and governing power concentrated in the top 1% of the population. Technology, ubiquitous food and power, the printing of any desirable construction material at marginal cost from dozens of forms of NuCarbon, and the ubiquitous “sentience” of Smart Matter, drones and machines will enable a base-level of survival subsistence for most of the human population. This lack of existential threat to survival will slow down population growth, and allow the emergence of a technologically-connected and mutually tolerant network of thousands of co-existing, highly diverse communities, life-styles, cultural niches and environments. The diversity of co-existing life-styles will be very similar to the cultural diversity of Mega-Cities like New York and London of the mid 21st century, but scaled to a global level. London will evolve into the “Commonwealth of Greater London”, with its own governance, security, laws and rules of citizenship. Similar transformation will happen to other wealthy MegaCities such as New York, Berlin, Stockholm, San Francisco/San Jose, Los Angeles, Mexico City etc. Communities will range all the way from tech-averse, Amish-type, traditionally religious communities essentially living at the level of 17th-century rural America, over always-on, always connected, always-voting, mind-melding meta-democracies with no central governance, all the way to hyper-technological MegaCity-aggregates which are home to country-size populations. The very notion of nation states will be mostly replaced by highly diversified communities and MegaCities. The MegaCity-States and communities will be run by more or less benevolent or liberal oligarchs, plutocrats, monarchs or dictators. The cities will be competing with each other but will essentially be living at an uneasy „Mexican Standoff“, each pointing their hyper-technology and defensive systems at each

other, threatening each other with total mutual annihilation, similar to the political situation of the cold war of the 20th century. Since each MegaCity could wipe each other out completely, there will be a side-by side co-existence and a high-functioning level of interchange and trade.

Work -> Value

The concept of employer vs. employee will dissolve in many forms of society. While capital will still determine investment and focus of any enterprise, most classical work will be performed by robots, drones and dumb automatons. Food, clothing and energy are manufactured at near zero cost. A basic level of subsistence and shelter is ensured by ubiquitous automation. Diseases are rare to non-existing. The human population will focus on value-added things like planning and management, as well as on creative endeavors, art, science, space-exploration and defense as well as conservation and other activities to produce value for those that are willing to pay for the product. Supply and demand dynamics still exist. Luxury items are still exclusive to high-value, high-net-worth individuals, but the ethics of fairness and mutuality (Golden Rule) are looked after by the High-Sentiences of the evolved NuMinds. This system of a Golden Rule Economy will work in those MegaCities and communities that have opted in. Other forms of society will still exist, but humanity will trend towards a smaller population of long-lived individuals that find purpose along the principles of the Japanese Ikigai approach.

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<<<<Reference Manual for a Possible Future.....>>>>

3 Flight of the Avenger

“Hey Dad, faster than light travel is impossible, right? Einstein, relativity and all the good stuff, right? We should not even bother to try, or? Sci-Fi is just fiction, it’s a fairy tale, just for fun, correct?”

I still remember the nagging questions I had remorselessly lobbed at my father when I had just been barely old enough to run through the library programs by myself. The first few weeks of my Sci-Fi immersion had been spent at going through all the classics: Verne, Wells, Asimov, Clarke, Heinlein, Dick, Herbert, LeGuin, Niven, Gibson, Stephenson, Simmons, Banks, Reynolds, Niven, Morgan, Card, Miéville. An endless list. I went through 100’s of the books, as audio files, read by voice actors, read by simulations of the authors themselves, read and performed by NuMinds as stage plays, some of them as movies and in playable game format. Some of them, I even read by myself, in text form, imagine that, as tedious and cumbersome as that was. Reading! Ugh. How had sapiens put up with the tedium of reading for centuries? I watched the videos, linked and cross-referenced to EverFeed repositories and the relevant, proper scientific research, putting things in context. And, after about 6 months of accelerated study, I had come up with a diamond-hard conclusion and the unshakable determination: It would be me, Richard Feynman Barnes, would be the one inventing faster than light travel. I put my mind to it, for whatever it was worth, age 4 and a half, and got to work.

My name is an homage to physics. My dad was Maxwell Planck Barnes, earning a living as adjunct professor of Physics at the 1st Virtual College of Applied Sciences in the London Commonwealth. He was a big fan of Richard Feynman. And pops had decided to honor his admiration for the late, great 20th century icon by giving me the first names of Richard and Feynman. Honoring a family tradition. Talk about setting expectations! But I was all too happy to comply. I immersed myself in studies. I took all the classes, read all the books, asked all the questions that came to my mind, much to the annoyance of everyone I encountered. I mastered the math, with the help of the NuMinds. And still, aged 87 now, after half a life-time of relentless effort: Nothing. Zip. Nada. Nix. All I had come up with were the same dead-ends science had known about for more than a century.

Newton. Einstein. Planck. Bohr. Heisenberg. Schroedinger. Wheeler, Higgs and Hawking. The dead geniuses had been right, much to my dismay. We were still puttering about the solar system driven by classical, if much enhanced propulsion systems, painfully slow by interstellar standards, squished, mashed and hampered by acceleration, pummeled by radiation and micro-meteorites, starving, freezing, melting, suffocating or drowning in our emanations when systems failed. It was pathetic. Humanity had all-but given up its ambitions for big-time space travel and had allowed machines to take over the job of shaping up the solar system for Sapiens colonization. Until the Terra-Shaping was complete, Sapiens was happy to resign itself to the boring drudgery of sitting on the top of the food chain, decadent and complacent, bottom-feeding on the ocean-floor of Terran atmosphere, mostly spending time in virtual hedonism and pampered by benevolent drones.

Until that fateful June, when I invented SideVerse travel, the Barnes Drive, as it was later officially named. I would have personally preferred to name it Feynman Drive, to honor my late dad, and his admiration for the great physicist, teacher and bongo player, but it did not matter, since the EMAM pilots later just called it SkipDrive, because, you know, pilots will have their way.

The first glimpse of inspiration had come to me after receiving the classified intelligence reports about the alien incursion. For lack of a better term, the white sheets, able to transform to multiple shapes had been called Ghosts. Military minds had such a penchant of hyperbole and drama! The most intriguing aspect was not that they had appeared at all. No. That had been a given. The interesting aspect had been that they had been observed to be “skipping” across Space-Time. Skipping like a flat rock would skip across the surface of a lake, when tossed at a flat angle and with high momentum. I had immersed myself in the data, and, during that rest period, I had had the right insight.

What if Einstein had been both right AND wrong at the same time when he postulated:

“Nothing can travel faster than the speed of light.”

Sure. But what if the meaning was:

No “Thing” can travel faster than the speed of light?

And what was “travel”, if not the motion relative to other “things”. What if we took “things” out of the equation, and just talked about information and data? Can data travel faster than light? Through a worm-hole maybe? The quantum superposition of states seemed to suggest that “spooky action at a distance” was not only possible, but the norm at the very tiny scale of quantum objects. And what was light, but a mass-less “wavicle”, both particle and wave, depending on which aspect you wished to look at?

Those thoughts had been going around and around in my head for decades, but they had come to nothing. The laws of physics had no mercy, no matter how active your imagination was.

The next clue came in when our drones brought back sensory data from the battle of the 1st IncurSION, as it was later referred to. The Ghosts, the white sheet objects, skipping through QuanTime (We did not call it that yet, but I’ll come to that later), were not made of ordinary matter. After we hit them with our weapons, they got fragmented into pieces, just like ordinary matter, but then they dissolved into pure radiation, mostly as heat and light. The Military NuMinds speculated that the annihilation events we observed had just been a tiny, minute fragment of the energy stored in the objects. They said that if even one of the Ghosts had released all of its energy content, the Earth-segment facing the annihilation-radiation cone would have been turned into a charred cinder. The Ghost energy must have dissipated to elsewhere. Or to else-when?. But to where, or when? And how?

Although I did not have the answers, I had a new set of questions, and I decided to go into immersion with Plato, the Scientific NuMind assigned to the college I was teaching at. It hopped into my 4D-harness, put on the immersion helmet and called out:

“Plato, can I have your undivided attention for a while? I think I am on to something?”

“You got it, Dick.”

“Stop that, you know I hate it when you start trolling me even before we have said ‘good morning’”.

“Ok, fine, man, Richard, Sir, Professor Barnes!

In virtual, I was resting on a psychologist’s couch, burgundy leather, goose-down pillow and all, while Plato was seated “virtually” next to me, clad in an ancient Greek tunic, nursing a bronze goblet of a foul-smelling fluid. The label floating next to the goblet said “Hemlock & Just-Ice”. I was really getting somewhat annoyed at Plato’s lame history- and linguistic jokes. These NuMinds must really think of us Sapiens as feeble-minded pre-teens.

“And cut out the joke algorithms, Plato! I think the survival of Sapiens is at stake! We need to find a way to crack the FTL code. We need to take the fight back to the Ghosts. They will be back for sure.”

Plato complied and flipped into the apparition of a stereo-typical late 20th century scientist, 170 cm tall, thinning hair, bulging tummy, baby-blue cotton shirt, button-down, pocket protector with 4, different-color, tech-brand-merchandise ball-point pens, tweed pants, scabbed shoes, a spotty lab-coat and a pair of oval, horn-rimmed reading glasses. An image I could live with since it reminded me of the pictures of my great, great grand father that had been hanging in my dad’s study.

“What did you have in mind?”, Plato asked, looking bored, cleaning his reading glasses with a handkerchief he had pulled from his tweed pants.

“Can you to help me with some math, so I can disprove some speculations?”

“Sure, no problem, I do that all the time, what is the difference this time, why the urgency and the request for my full attention?”

“It’s about fresh data we have received from the Ghost incursion!”

I released the classified information to Plato. He did not normally have access to level-10 encrypted information.

Plato furled his brow, pocketed the handkerchief, put on his reading glasses and studied the clip board that had just appeared in his right hand.

“Interesting. This will take a minute to analyze. What is your speculation?”

I transmitted my list:

A) The Ghosts are made of an unknown kind of matter. I speculate it is just virtual matter, interacting with our Universe like regular matter, but entirely without mass. Let’s call it PhotonicMatter, just for starters.

B) The Ghosts do not move with classical propulsion, or even with space-warp technology. We would have detected that. Maybe they are “tunneling” from one location to the next in zero time. Or they are leaving the context of our local universe entirely, to go “SideVerse” into an adjacent universe for a time, and then reappear in a new location instantly, like a needle threading a folded piece of fabric. It would appear like teleportation to us. Or like a wormhole passage, without the wormhole. That would explain the “skip and hop” perception.

C) The Ghosts do not carry any on-board energy source, so they are probably borrowing energy from the QuantumFoam and transform the energy into motion, into PhotonicMatter or into emission-type weaponry, as needed. They seem to have a different usage concept that connects Space-Time-Matter-and Energy into a mutual interchangeable complex I would call QuanTime, where position and momentum can be manipulated purely through directed energy and information. Their objects would just materialize in a new location without any intermediate “travel” in our space-time. Relativity would not be “broken”, just side-stepped.

D) The points A + B + C are connected through a new form of math and physics we have not yet discovered and described. That’s where you come in, to help me figure this out.

“Interesting. Can you get me any more data on the Ghosts incursion? I will need to look at the raw sensory inputs, full resolution, no deletions, no compression, not just the summary reports. I need to see if we missed anything. There are some things in here that we had not considered before. The aspect of skipping “SideVerse” to an adjacent universe is a new angle. I will ask the others to help.”

“Sure. I’ll see what I can do. What do you mean with “Others”? Do you mean, you will ask all the NuMinds to divert some attention to this.?”

“Yes and no. I can’t give you all the details now. But yes, we will all work together. This looks like a lot of fun! Thanks for pulling me in, Richard!”

What followed were the most intense 2 years of my life. My conversation with Plato had been leaked to the Chief of Staff of EMAM defense. I was recruited to their science lab buried deep underground the rail-gun complex, functioning as space-component launcher in Madagascar. 100’s of the best minds had been gathered there, both human and NuMind to crack the Ghost problem. It took a long time to work out the math. But, in the end, my idea had proved to be directionally correct. The Ghosts, or their creator-sentience, wherever they were coming from, had the ability to move faster than light. There were certain rules to be observed. They could not apply the drive, the Barnes Drive or SkipDrive close to a strong gravity well. The closer you came to a planetary-sized body, the shorter your skips would become and the more energy you would have to expend to achieve each skip. I had assumed correctly. They were “borrowing” energy from the quantum foam to build up a “Skip Field” around their ships. The SkipField would push them “SideVerse” into a neighboring universe. There, in the neighboring universe, if you picked the right one, one centimeter of displacement or movement would translate into a much larger distance in our “native” reference frame. They would skip out, and return back a mile forward, or thousands of miles forward, in zero time. This “skip and hop” movement looked like continuous motion unless you examined the “frames” one by one at the right resolution. Their “perceived relative speed” or PRS, was only limited by the presence of local gravity and the amount of energy they borrowed from the quantum foam. Somehow, magically and miraculously, they had worked this out in such a way that would always balance the energy equations. The NuMinds speculated that the energy “payback” was somehow diverted to another part of the universe, maybe into a stellar core, or into a singularity. The energies required to achieve the SkipDrive were mind-boggling, and yet we had seen evidence that they could be tamed and managed.

After 1 year we were able to begin experiments. We would build the first ship. We decided to set up the ship yard way out in the belt, far away from the population centers. The rewards of making the Barnes-Drive a reality were enormous. We’d

be able to put up a proper fight. And maybe even win against the Ghosts! And maybe we could take Sapiens to the stars. But the downsides were equally drastic. If we got the math wrong, even by just a trillionth of a fraction of an erg of energy calculation, we could create a micro-nova of radiation that could wipe out entire settlements, or even all of Earth. We had to be very careful, so we started very small. There were many failures. Many perished. We had to start over 7 times. Entire sectors had been wiped out, and the number of scientists and pilots willing to try was dwindling.

When the 2nd Ghost Incursion happened, we were not even close to a viable drive. EMAM, again, barely won, but at tremendous losses. We won, but we had thrown all concerns for ethics, morality or fairness over board. We had recruited suicide pilots and we had lied to them about their true fate. We had requisitioned whatever we needed. We had broken the cloning laws. We had mined the few remaining natural resources on Earth without any regard for the long-term effects. When the 3rd incursion happened, there was almost nothing left worth fighting for. But at least we were close to testing the BarnesDrive, Mark VII, the 7th iteration of the technology. We had invented the method to create mass-less PhotonicMatter, or PM. We had made the first ship from PM. There would not be any pilots in the ship, because they would only add mass and the need for life support. But we were able to store a pilot's mind in the ship's structure. We had actually created a flying mind, a smart weapon, a military space-brain that could move at insane speeds and unleash an unheard-of level of destruction on any target.

The ship for the maiden voyage of the BarnesDrive would be called Avenger, a name reflecting the hope of winning the war, and then winning the stars. The pilot mind of the Avenger was a copy of the already legendary test-pilot Igor Petrov. Igor had given his life to allow our scientist to nano-slice his brain, and to transform his mind-state into the PhotonicMatter lattice of the Avenger. Igor had insisted on being on-board. And giving up his physical existence had been the only way to accomplish that. The first FTL flight of a PhotonicMatter ship should not be made without a human on board, even if it was only in virtualized form.

“Igor”, I asked, “Are you ready? You know the 3rd incursion is already in progress! The Ghosts have engaged our advanced defensive lines in sector 1289. It looks like they are breaking through without being delayed. There is no time to lose, we must engage now!”

“I am as ready as I have ever been”, the Avenger’s pilot sent back. “This ship, the Avenger, it feels powerful. I feel like I have become an angel of vengeance! Avenger is such a good choice of name for this ship, if you can even call it a ship. I, we will surely kick the Ghosts back to where they came from! It might teach them a lesson to leave us alone, to not mess with us Sapiens, now that we have cracked their code of motion.”

“I wish you luck, Igor!. A lot rests on your counter-attack being a success!”, I messaged back. My entire science team, anxiously waiting in our lab-home-base, a hollowed-out asteroid a thousand clicks away, observed as the ship was pushed out from its hangar, still sitting on a conventional-drive tug-platform. 3 minutes later, the Avenger was released into space. It looked glorious. Awesome in the true sense of the word. A 30 meter-high pyramid, appearing in blazing white, slowly turning and tumbling and then stabilizing. Its image became a blur as it tapped into the QuanTime skein, extracting energy and then trading energy for position. One second it was there, the next second it was gone. We did not see the Avenger re-appear. Without warning, all of our screens, views and readouts went blank, and then faded to black. Instead of the ship, or its sensor readouts, we suddenly saw an identical message pop up on all our views, sensor-fields and projections. It was also read out in a very human sounding voice, on all audio channels.

“Sapiens. NuMinds. Now hear this. We have come for the 3rd time. This time, you will be given a choice. Stand down, or perish. We will establish the protectorate. The arrival of the Grand Protector is imminent. More resources are on their way, you will not be able to resist. Do not build additional ships like the Avenger. We have confiscated the ship and its pilot mind. You are not approved for this level of technology. The council cannot allow your species to carry its destructive potential to other habitats. We repeat. Stand down, or perish. This message will repeat every 30 seconds for the next 48 hours of your reckoning.”

There was an icy silence in the lab. Nobody was able to formulate a clear thought. Before anybody could speak, the message repeated. No other communication was possible, we were completely locked out from external sensory input. We had no way of knowing if the message was a diversion, a trick, or if the aliens were telling us the truth. But the complete take-over of all sensor and comm-systems suggested intervention by a technology that was vastly superior to ours.

I was desolate. Had everything been in vain? My life's work, a triumph, just seconds away. My drive! The stars! It all seemed in ruins now. The aliens, the Ghosts, they had come back, now with seemingly overwhelming force. And. Maybe they were even right? We were a destructive, ruthless species! Just looking at our history, over the last 6000 years, had been an escalating story of growth and destruction, all in the name of innovation and expansion of the dominance of Sapiens. And with all of our innovation and technology, it seemed, that we had now lost everything to gain absolutely nothing.

Except.

When I looked out the NuCarb window pane of the lab, out to the scarred surface of the 30 kilometer-wide asteroid that served as our lab, I saw a circle of light flashing in a location in a crater that had been pitch black just a minute ago. It seemed irregular, blinking, on and off. But it also seemed to have a pattern to it. A code? My mind went into overdrive.

“Hey, guys, anyone here remember how to read Morse Code?”

Anton, a Russian, friends with Igor, the Pilot-Mind of the Avenger, called back from across the lab.

“Yes. I do. Igor and I would play games in flight academy, tapping each other jokes in Morse code during indoctrination. Why are you asking?”

“Come take a look at this!”

Anton floated over to the window, looked out across the cratered surface for about a minute and then turned his head, wearing a broad grin.

“It's Igor.” He beamed. Everybody's heads turned, looked at Anton, and then the science team floated to the other 3 windows of the lab space, to catch a glimpse of

what Anton had been looking at. The blinking circle was still there, tapping out a message.

“Igor, he’s out there, somewhere. He says he is with someone called “Plato”. He says: Be patient! We will find a way out of this cave!”

Now it was my turn to smile. I mumbled to myself:

“Plato, you tricky old bastard! I knew you were holding out on me!”

4 Galacticans

„Mom, ig muss den beholden! Den min favvy NuTendo! Min uno! Favor? Largo favor?

„Non, nada Tek in Paradis, nin uno, ferstond?”

The little one was pressing the small gaming console, skull-mesh and eFeed cell to its chest, as if her life depended on it. She was in full-on panic-mode now, just seconds away from a melt-down. She had smuggled it onto the colony transport, somehow, skipping all the scans. But it had now been found, on final inspection, by the elected constables of the Edonians. But her mom was unrelenting. She had to give it up. So the console went into the large disposal container, along with all the other Tech artifacts, all the other anchors that still connected them to their Terran origins.

They made landfall on Paradise on October 7, 2167, around 6:35 local time. That’s when they set the clock back to Day 1, 120/360, Orbit 1, to keep it simple, to kick off the new era, and to cut off one of the last ties to Earth and Terran culture. Paradise was very similar to Earth, but not in all aspects, and not with perfect precision. For starters, there were 2 moons here, one relatively small, on a faster orbit, called Alpha, the other one about lunar size, they called Omega. Each Paradise orbit took 420 days, seasons were roughly equal to earth, but climate was moderate, similar to Earth Southern California in the early 20thcentury. Each Paradise day-night cycle took about 28 hours. The Edonians, as the new inhabitants of Paradise had decided to call themselves, would just split each day into 360 ticks, roughly 5 Earth-minutes. Each tick would have 360 tocks, a bit less than an Earth second. In transit, all Edonians had learned “Hive” their new language, a variation of English, but it would not be called English. They’d call it Hive as homage to the terms Jive-Talk, and it’s lack of strict formalism, and the concept of a Hive, referring to the utopian commonwealth they planned on putting together, based on collaboration, fairness, empathy, the golden rule and simplicity of lifestyle based on skills, earned credit and acclamation, not entitlement. Over two or three generations, English would have faded into

cultural memory. New books, new songs, poems and stories would be written by the Edonians in Hive, and they would be beautiful.

They had taken nothing with them from old Earth. Literally nothing. Every item the Edonians now carried out of the the landing pods, some dried fruit, some woven fabrics, some carved tools, had been grown or hand-made during the journey, when they were crawling from jump-portal to jump-portal, while not in cryo sleep. All other artifacts, keepsakes, memorabilia, even knives, and yes, game consoles, and especially guns, would be collected, confiscated and discarded, sunk to the bottom of lake Genesis, along with all other Earth technology. After offloading all the colonists, the landing pods would use their last fuel reserves to take off again and head out into the single large Paradise ocean, Atlantis, where they would scuttle themselves, to sink to the bottom of the deepest trench, never to be retrieved again.

The Edonians landed in waves, a process that took several days and nights to set all 3600 of them down. Once landed they immediately headed for the lake shore, where fresh water and abundant fishing grounds were waiting to be tapped into. Boats, fishing rods, spears, fire-places, huts and palisades had to be built. Edonian Hive 1 was the first to land on Paradise, and 120 more hives would arrive over the next 3 orbits, all landing in different locations, different ecological niches. In this location, Hive 1, the very best spot, close to the equator, rich in resources, flora and fauna, the conditions were perfect for the first settlers. The fruit trees were in bloom, and some of the Parapples, as well as some of the ParaPlums and ParaPears the local variations of the familiar fruit, were already ripe for the picking. Paradise will provide, the briefing tutorial had said. And they had signed up in droves, by the thousands. Bringing nothing but their curiosity, their zest for life and for adventure, a yearning for the thrill of novelty and risk. And, they had brought their perfect bodies, a result of a century of bio-engineered enhancements. They were blank slates now. They would not have it any other way. That's what they wanted. A fresh start. A clean break, an escape from the high-tech decadence and digital hedonism of EMAM, the sterile, NuMind-and alien protector-race dominated ecosystem with its pampering services and oversight, with its zero-risk immortality life style and with its infinite boredom.

The Ghost War had been a disaster and then again, it had also been a boon. Being conquered by a superior alien species, that wanted to confine your species to a sort of intergalactic zoo was not something to look forward to. They had lost to an overwhelmingly advanced power. Earth, was now a "Protectorate". under the supervision of a species that called themselves the Protectors. But the Ghost War had also been a lucky break. The Earth ecosystem, already stretched beyond its viable limits, exploited down to the bare bone, had been saved from the brink. The protectors stabilized things, provided technology to bring the damaged ecosystems back into balance, restored extinct species, using genetic material they had collected over the past 6000 years. They fixed Earth, but they only left Sapiens with one of 2 options.

Option 1 was: Continue your NuMind-controlled digital hedonism, mostly spending time in 4D-harnesses, playing games, and eventually up-loading your mind state into one of the many virtual worlds in a digital pseudo-heaven of immortal bliss. Or go with Option 2. Use the newly discovered SkipDrive ships, a genius invention by the late physics professor Richard Feynman Barnes and a NuMind called Plato, and leave Earth behind forever. Under the supervision of the Protectors, but with a lot of options of Terra-formed worlds to choose from as destination. One caveat was a given! You would not be allowed to take any advanced technology with you. Anything exceeding the technology level of the early 21st century was banned. Anything including a singularity-level computing-substrate or a true sentient AI was forever out of the question. So. You could start fresh, if you wanted a break, on one of the hundreds of viable planets the protectors had picked out and shaped over the last 6000 years for Sapiens, to prepare and provide for just this case.

Watching silently over the millennia, the Protectors had seen early on: Sapiens was violent, ruthless, greedy and narcissistic, and on an almost incorrigible path to self-destruction. As long as they were confined to one planet, that was a limited problem, and the galactic commonwealth could not have cared less. But when Sapiens technology had evolved far enough, when they had starting to colonize their entire solar system, the risk of Sapiens spontaneously discovering SkipDrive and then taking their ruthless and brutal aggression to the stars had been too

large. The Protectors had been asked to step in. The speed with which Sapiens had figured out the SkipDrive technology, the principles of Photonic Matter and SideVerse travel after they had seen the first Protector units move in the solar system, had proved to the Protectors that their fears had been justified. Sapiens was too dangerous to be given level-3 technology. The Protectors moved in and did what they did best. Keep things stable, restore and rebuild and keep noxious Species away from becoming a universal threat.

After the first few decades of turmoil, resistance, chaos, despair, spreading waves of suicide, assaults, rebellion and anarchy, Sapiens finally calmed down and settled into 2 camps. Terrans and Galaticans. Terrans would remain on Earth, happy with a complacent, hedonistic existence under the patronage of the Protectors, with no ambitions to leave Earth. The settlements on the Moon and on Mars and in the Asteroid belt were abandoned. Decadence became the chosen and accepted life style, pampered and protected by NuMinds who were more than happy to play along with the Protectors to keep the Terran zoo functioning, vibrant and diverse. The Galacticans, the other human faction, were not so complacent, and they were growing in numbers every week. The prospect of starting fresh had just been too great. Thousands of Planets to choose from! So what, if you had to leave your space technology behind! Within months, many different factions started to break out. Some, like the Edonians, opting for an Earth-like planet, building a vision of a hive-type community, living off the land and forever foregoing the prospect of developing high-technology. Others, like the Steamers, wanted to settle on a planet and rebuild a version of Victorian London, but with the comforts of early 21st centuries luxuries such as air conditioning and Wifi. There were already dozens of such factions, all getting ready to spread through the galaxy, promoting their preferred way-of-life, from tech-adverse Amish-types, to geek-headed, mind-melding Borgians, to NeoCommunitis, Pragmos, Baptists, Nihilists, Libertarians, Vegos, Yogos, Zenners, etc. all headed for new planets they called NewVictoria, Medina, Ming, Camelot, Mandala, Frontier, NearVana, and more. The sky, it turned out, was not the limit. Paradise had been one of the first destinations. There would be hundreds more.

The Protectors watched. But they did not do any micro-management. Sapiens should be able to thrive, but the threat level had to be removed. All was going to plan. The protectors had done this job hundreds of times, over the last 100 000 years. It was their assigned duty, and they were happy to comply. They themselves had started as an aggressive species, many millions of years ago. And, over time, had learned to transcend the aggression, to honor the diversity of sentience, as Galactic Rangers and Zookeepers.

Decades passed. The new settlements developed. Some thrived. Some stalled, eking out a miserable existence at the edge of extinction. Many settlements perished, they had completely underestimated the threats the new worlds had posed. In some, human nature had taken over and they had wiped each other out in conquest and resource rivalry. On others, new diseases had overwhelmed the engineered immune systems. Local Fauna had worked itself back to the top of the food chain. But there had been so many. Hundreds and hundreds. And, when one settlement stalled, other Galacticans were eager to step in, to pick up where the failed settlements had erred. The Protectors were watching, from a distance. This was just one of their many projects.

There was just one variable they were still concerned about. During the Ghost wars, when the 3rd wave had come in, Sapiens had launched one ship, equipped with the SkipDrive, the BarnesDrive. That ship had never been captured. It was still out there. It still stored the mind of one of their ace pilots, Igor Petrov, as well as one of their most advanced scientific NuMinds, Plato, the mind that had actually invented the SkipDrive together with Professor Barnes. The Ship, the Avenger, was an unknown threat. It had not re-appeared, and the protectors could not know if it was destroyed, lost in a SideVerse, or hiding. It was a thorn in their side, but they would just have to wait and see if and when it would re-appear.

„Hey Igor“, Plato woke Igor from his rest-period. „Hmm“, Igor, grumbled. He was never happy to be woken from his mid-afternoon nap. „Wake up, enough with the lazy slacking! I think we have enough ships soon!“

„Ok, show me. How long have I been napping?“

„23 months, 3 weeks, and 4 days, sloth-man!“

„Ouch. Whatever. Show me!“

Igor looked at the display the Avenger was projecting into this visual field. He had decided to take a nap, about 2 years ago, after the narrow escape from the Terran Belt Space. The planet they had chosen to use as a base was in close orbit to a G-type star at the galactic rim. At the time, it had just been a brownish-blue rocky orb, about mercury size. Nothing special, other than having the ideal mineral and metal configuration to be used as a mining location, a ship yard, to transform the regular matter of the planet into PhotonicMatter. To make more ships. Habitats for refugees. A training facility for the resistance. A fleet. A fleet of BarnesDrive ships, mostly NuMind powered, but some staffed with real people. An armada formidable enough to take the battle back to the Ghosts. Plato, the NuMind that co-inhabited the Neural Mesh of the Avator had ensured him it could be done. The knowledge, the math the engineering principles were available. All they needed was a planet size bucket of raw material. Now, Igor could not believe his „eyes“! Virtual or not, he still felt very much human, looking out at the planet they had dubbed Novgorod, or new town in Russian. The planet now had a ring. On the surface, a complex web of bright veins spanned the entire globe. But the ring! The planet was wearing an effervescent, pointillist wreath-like crown made of glittering ships. Thousands and thousands of bright white, shiny copies of the Avenger, as well as some other shapes, flat squares, cubes, some spheres. The planet had shrunk quite visibly, when he looked at the measurement display. The had used up a lot of material in the process.

„Wow. Indeed. How many, Plato?“

„At this point, 835978 small units, destroyer class, like this one, and 24786 thousand command units, somewhat larger with a bigger range. Also, 75712 thousand transport units, capable of opening jump portals, so we can begin connecting the colony worlds into a Galactican network. We'll hit a million units in the next 7 months. We have habitats for about 500 people. To get started. More will come, now that we know how to build proper avatars. Do you want to watch, or do you want to nap some more?“

„I'll go back and dream some more. Wake me up when we hit one million. And then we go and whoop some Protector butt! They deserve to be shown who's boss around here!“

5 (Dis)Appearances (Ghost Wars #5)

“Somebody here, in this room, is ratting us out to the Protectors. Trust me, once I find out who it is, and I will find out, you can count on that, they will regret the day they were born.”

Karl, who had a tendency to become overly dramatic, looked at everyone in turn, and then, for effect, smacked his flat extended hand onto the matte aluminum surface of the make-shift conference table. The metallic crash of the impact was reflected back by the bare, off-white NuCrete walls, and it resonated down the narrow hallways of the abandoned missile-shelter they had selected for their resistance head-quarters. The leaders flinched, but not by very much. They were seated around the conference table, a rusted metal door taken off its hinges and put onto stacked-brick feet. They were reasonably safe, down here, 30 meters under-ground, completely isolated from the EverFeed, out of scan-range of prying drones and away from any surveillance sensors. They ran on ancient fuel-cells, using low-grade Wifi for comms. They had barely enough power to support their needs during summer. Nobody had any idea what would happen if they got hit by another polar vortex with minus 30C temperatures over weeks and weeks. They had almost no possessions, few weapons, most of them make-shift and primitive, but, for now, they could feel safe.

And yet. One by one, they had lost more and more members of the team. They had just left, taken-off, disappeared, vanished, over night. Maybe they had been abducted, maybe they had just given up and bugged off. Joining the Terrans or the Galacticans. Like losers. Nobody could explain it. Karl had locked the exit doors. It had not stopped the departures. No clues, letters, messages, changed behavior had been dug up by the leadership team during the inquest that followed each departure. The local resistance cell was down to less than 90 members now. Morale was low. Food and water-reclaim facilities, sanitary cells, and air-conditioning units were beginning to fail. Some shelter levels had already been declared off-limits due to the unbearable stench of decay and the growing infestation by rodents and crawlies. There was suspicion that new bugs, new viruses and bacteria were breeding in the fauna, and that their enhanced immune systems would not be able to cope. It was a mess. Nobody had answers. Not even Karl, who was the only one among them with something resembling some level of leadership training.

Karl had been a police officer in Overland Park, Kansas when the Protectors had started their first takeover wave, almost 2 years ago. All the others had just been just average citizens, mostly city employees, bureaucrats, administrators, with

token jobs, examples of the few that even had normal employment, even if it was just for show. When the invasion happened, when the messages had come through on all channels <<seek shelter, this is no drill>>, Karl had been one of the few to take the message seriously. He had taken action, and had shepherded the escape, rounded up whoever he could convince to join him, coaxing them down to the shelter, pump gun at the hip, before the Protector's neural stun blast had washed through the city and taken everyone else out for the count.

By now "The Surge" as the local resistance chapter called themselves, were used to Karl's tantrums. The mood swings would come and go, best to not take them seriously. Karl's internal hormone and neurotransmitter pump must be on the fritz. So, they did not take the accusations to heart. None of the 7 remaining leaders in the room was a traitor. It was absurd. Karl was just getting desperate, thrashing, flailing, failing. None of them had a better idea. There was an uncomfortable silence now. The air in the command room was stale, the aircon units were struggling more and more. There was a lingering smell of sweat stains, dry-cleaning and deodorant chemicals, ozone, pesticides, left-over food, and mold. It was a place slowly filling with dust and decay and death.

"What the heck are we even doing down here anymore?", Maria sighed. "We lost. Fair and square. Maybe it's time to call it quits! This is bullshizzle, Karl!" She got up from the stack of old woolen blankets she had been squatting on and angrily kicked a plastic-bucket into a corner, the bucket Liu had been using as a chair, during staff meetings, before Liu had vanished into thin air. She and Liu had been an item, but nobody was supposed to know that. Although she knew that they all knew, but nobody wanted to say anything. Maria was 100% convinced that Liu had not left by choice. He would not have, could not have, not after the discussions of the last 4 weeks. The door to their 6-bed room cell that they had requisitioned for themselves had still been locked from the inside when she had woken up. There had been no way out of the cell. And still. Liu was gone.

"Shut up Maria", Karl said, voice calm, bored and detached. His mood had swung back. "We all miss Liu as well, don't you think you are somehow special, now, just because you were bunk-buddies. We have all lost people!". There, it had been said. Finally. Maria whirled around, pointing at Karl. "Screw you Karl", she yelled. "Screw all of you. Screw this crap. I'm out!" She stormed out of the room, slamming the door behind her. "You are such an oozy slime-bag, Karl!", Eva yelled, and ran after Maria, to catch her before she could lock herself in the 6-roomer again. Better not leave people by themselves now.

The silence continued. The meeting was automatically adjourned, they had lost quorum now, people would just go back to their assigned pods. There was nowhere else to go. The bunker had been sealed off. Only Karl knew the exit codes, had them in his head. Nobody know what would happen if Karl was taken, they might all starve to death in a moldy bunker. Anyone trying to break out

would be Neuro-stunned by the automated security of the bunker exits. Karl was sure that Maria would not be part of the leadership crew any longer. He would make sure of that. And Maria would not want to either. Liu was gone and Eva was probably out now as well. She would try to repair her relationship with Maria, now that Liu was out of the picture. Karl thought: "Either we elect more spokes-people, or we rethink the whole operational set up from scratch."

To distract everyone, as well as himself, Karl activated the view plate with the single remaining external news feed. Everything still looked the same, just like before the Protector Incursion. And yet, everything had changed. There were still the 2800 channels of entertainment content, offering views of the many virtual worlds the population of Earth was spending more and more time in. Since the Protectors had landed, even more people than before had completely given up any original and creative initiative and innovation drive and just spent their days playing, browsing, floating in content, plugged into nutrient feeds, hanging in gaming harnesses, in full-service suits, attended by drones and dream-walking in online worlds. Some got so immersed that their bodies just "gave up". The NuMinds would notice and upload the player's minds into virtual. Nobody was sure if these people even noticed the difference.

That faction, the gamers, those were the Terrans. The Terrans had decided to accept the Protectorate's governance, to give up their independence in the real world and to "melt away" their existence in infinite joy and bliss. The Galacticans, on the other hand, had chosen a different route. They had accepted the Protectors 2nd choice offer. The Protectors had broadcast on all channels:

"Leave your tech behind and go off-planet. Go to new worlds! Start fresh. The sky is no longer the limit. The only price is: Never again try to expand into space. But that is a small price to pay. Space is empty, cold and cruel. Space will kill you, and nobody will hear you scream. But if you go off-planet, you can colonize one of hundreds of worlds, all ready and prepared for you! Pick your life-style. Become free. Live like kings! Be the human you always dreamed to be."

And so on, and so forth. The commercials for going off world were still running at 30-minute intervals on all channels. The Terrans had probably asked the NuMind controllers to filter them out by now. Karl was sure. The Galacticans would start a wave of colonization. But they would be ground dwellers forever more. The potential for human development was forever stumped and stunted. A Bonsai-Civilization. Sapiens! Groomed Pets of Alien Overlords. Get your specimen now! Pathetic. Karl spat on the floor, a habit that caused much disgust with Eric, his partner, who hated Karl's lack of manners.

Those 2 factions, Terrans and Galacticans were making up the 80/20. 80 percent staying behind. 20 percent leaving Earth behind. And then there was the resistance. Negligible, but Non-Zero. The thin line between 80 and 20. People like

“The Surge”. Hundreds, Thousands, Millions? All separated. Different. Bickering. Quibbling about the best way to fight back. The resistance had not given up yet. But they were not coordinated. Yes, they still remembered what it was like to have choices. Karl had no idea how many Resistance cells were still around. He estimated that world-wide they might have shrunk down to less than a million. Too few to make a difference. Too diverse. Too disjointed. Disconnected. Disenchanted. Without hope. The meek, it seemed, would inherit the Earth. But not while he was drawing breath.

He switched the display off. “Let’s get some rest”, Karl said to the remaining leaders. Tomorrow is another day. But he did not even believe his own words any longer. The way he felt now, he really had started to believe Eric’s suspicion that his internal hormone and neurotransmitter pump had started to fail. The only remaining auto-surgeon in the bunker had failed 5 months ago, and health problems had been on the rise since then. Karl went back to the room he shared with Eric, a rare luxury only afforded to the leader, and locked the door behind him.

4 doors down from Karl’s cell, Maria was sitting on the bunk bed, one of six in the large room she had occupied with Liu. She had sent Eva away. As much as she liked Eva as a friend, she was disgusted by Eva’s now all-too obvious advances. Too early. Too pushy. Maybe not ever again. Maria went over to the door, locked it, barred-it, and dimmed the light to lie down on the bed in fetal position. Maybe sleep would come.

“Hey Maria, shhh, don’t scream, wake up, it’s me, Liu!”

Maria woke up with a start. Was she dreaming? She pinched herself. No. That felt real. She had dreamed about Liu. That he had come back. Crap. Another night might be wasted to fits and turns and cold sweat. She turned around and try to go back to sleep, to a new dream.

“Hey Maria, wakey, wakey, time to go!”

“What the?”, Marie now was fully awake!

“Liu, what, where, hey, what now?” Maria was very confused. This dream felt all too real.

“Lights” she yelled, and clapped twice, bringing the ceiling bio-luminescence to full strength.

There he was. Liu Bohai. It was really him, tall, finely-chiseled features, raven-black hair, blue eyes. He looked rested. Healthy. Well-groomed, clean shave, trimmed beard, dressed in a black one-piece that seemed to be made from a material that completely absorbed all incoming light, a kind of Ultra-Black. Maria did not know what to feel. What was this? A projection? Was she hallucinating?

The aliens, the Protectors, they were advanced, and nobody had seen one of them. There was no way to be sure what they really looked like. Maybe they could appear as anyone? But she had not heard about the Protectors being able to walk through 6-meter thick NuCrete walls. She scratched her head, looked for her canteen, and took a swig from the bottle. She needed to calm down.

Liu spoke to her. She knew that tone. He had always used that tone when he tried to convince her to calm down. The did not like it.

“I know you probably don’t believe that I am real. I am. I am here. I will leave again, soon. But I want you to come with me. “

Maria stared. She’d let him talk for a while, maybe this whole apparition would dissolve itself.

“I have been sent by the Protectors. They know you are here, they know everything about the “The Surge”, they are worried about you!”

“Bull Shizzle Kebab, Liu”, Marie said, slowly.

“Let me prove it to you!”

Liu made a large circular motion with his right arm. A portion of Maria’s visual field blurred, and there, in the middle of the room, a projection screen, a hair-thin mirror “flittered”, there was no better word to describe it, into being. It just popped out and expanded from a bright dot that just appeared in thin air, had hung there for a second, changed color from white to yellow to orange and then bright purple. And now, before she should consciously register the change, a mirror hung there. Impossibly. Like it had no mass, somehow exempt from Newton’s laws.

The mirror started playing scenes from the bunker. Staff meetings. Mess hall meetings. Views of hallways. Views from the outside, moving through the corridors, past closed doors. Views of her. Sleeping. Sharing the bunk with Liu.

“Cut it out, L!” She yelled, jumping up from the bunk. What the heck do you think you are doing? This proves nothing! You could have recorded this with a nano-drone. What are you trying to do?”

Maria took a swipe at the mirror field, but there was nothing there. No substance, just a mild electrical charge that went through her and made her hair stand on end.

“Careful, there is a lot of power in there. That could have taken your arm off, I was barely able to protect you!”

Marie took a swing at Liu, now, instead, going for that finely-chiseled nose. She wanted him to bleed from there.

“I hate you. How can you just take off like that? I thought you were dead, or taken, or lying in some dungeon with broken bones, being eaten by crawlies. Do you have any idea ... “

“I’d step away from that, if I were you.”, a voice said, very loudly, but also very calmly from the corner of the room. A whiff of warm air was coming from the same direction as the voice. Another mirror field had appeared in the corner, without a sound. And, in front of it, a muscular man in a pre-historic pilot-uniform coverall, arms stretched out in front, hands clasped around the hilt of a gun-type contraption, fingers on the trigger. The conical business-end of the gun was shining in a menacing, bright-yellow glow.

Maria and Liu whirled around. Liu had caught Marie’s sucker-punch with this left hand, in mid-air, effortlessly, as if Maria was but a child, moving in slow motion.

Liu now let go of Maria’s hand and started moving, flowing, skipping, impossibly fast towards the man that had arrived from the other mirror field.

The new arrival fired. A singeing wave of heat hit Maria in the face and took out the vision in her right eye as she moved her head away from the heat-ray. The ray consumed Liu, or the apparition of Liu, turning his black form into a cloud of bluish gas that felt like acid on Maria’s skin and made her choke up with a burning sensation of painfully suffocating in a cloud of super-heated, abrasive volcanic-silica ash. As Maria passed out, her head accelerating towards the NuCrete floor, she saw, with her good eye, that the ray also impacted on the first mirror-field. But the ray just disappeared into the mirror, as if it were a dark portal into nothing. The same “nothing” that both the Liu-thing and Pilot-Man had come from, now swallowed Maria. A soft “swoosh” indicated the spot where the air was filling up the vacuum left behind as Igor Petrov’s PhotonicMatter-Avatar took Maria’s rag-doll-limp body to the Avenger’s medical bay.

They broke down the door to Maria’s 6-room cabin 5 minutes later. The commotion, the shouting, the smoke detector going off had alarmed the sleeping humans of “The Surge”.

Karl stood in the middle of the room, wearing a breather, turning his head to Eva, who was wearing the 2nd of the last two breathers they had still left over from the basic equipment locker of the shelter. The room was empty now. No sign of Maria. The door had been locked and barred from the inside, they had had to pry it open with a crowbar after removing the locks with a blow torch. There was no way of telling if the acrid smell in the room had been caused by the blow torch or by whatever action had transpired in the room.

“I have no clue, Karl”. Eva shrugged. I was in here 2 hours ago, Maria seemed upset, but really nothing out of the ordinary. Whatever happened here, I am almost sure it is the same kind of alien shenanigans that have taken 23, now 24 of

us over the last 3 months. I am scared Karl. This must be the Protectors doing this!”

Karl said nothing. If they were that powerful, why did they not just take them all? Right now? Why torture them with a slow and mind-wrecking sequence of abductions? He turned his head towards the ceiling and yelled, as if trying to reach the unknown powers.

“Why? Damn you, you soulless monsters of Hades! What do you want from us? If you want something, come here. Come to me. Get me. Bring it on, you damn cowards!”

More people had filtered into the room, now that the smoke was dissipating into the hallway. They all heard Karl yelling, and they all heard and saw the response.

A small, glowing cloud, or energy field had appeared in the top right-hand corner of the room. A voice was now coming from the field, speaking in English, with the tiniest Eastern European accent.

“Hello. My name is Igor Petrov. I am the pilot of the Avenger, the first human ship with SkipDrive. But you might not know anything about this. Just know this. We, that is my self as well as Plato, the NuMind that helped Richard Barnes develop the SkipDrive, we are here to help the Resistance. We oppose the Protectorate. We do not wish for Homo Sapiens to end up in a galactic zoo as groomed, obedient pets of an arrogant super-species. But we can only take one of you at a time. It is very difficult. It consumes a lot of energy. And there is a very high risk. Every time we open a portal field, we stand the risk of being discovered. The ship was not designed to take live humans, we had to make a lot of modifications. It slows us down. But we can take you one at a time. All of the people taken from you are safe. They are in Novgorod, a planet far away from here. Our home base, the future home base of the Joint Resistance we have called the R-Force. I will come back for more of you. But beware. The Protectors know that I have come back. They now know that the Avenger exists. They will send body images. The images will look like the people that left. They will ask you to come with them. Do NOT follow them. They are impostors. Say together. I will come back for you. More ships are being equipped to have life support. Things will improve. If you don't believe me, you can go with the Protector images. They will not harm you. Their ethics prevent them from forcing you. But you will become their pets. Choose wisely. I will leave you with this EverFeed crystal. You can replay this message to anyone you feel you can trust. I will be back. Good bye.

The voice stopped. A small pitch-black sphere fell from the ceiling, bounced once and came to rest. The black rubbery substance dissolved to reveal a standard EverFeed crystal, glowing with the green “ready” light.

Heads turned to Karl. Was this for real? What in Heck's Kitchen was going on here?

Karl was stunned. Inside, feelings of confusion and joy, surprise and curiosity, fear and disbelief, excitement and hope, even glee and pride were competing for dominance. Karl also felt a confidence, a fire rising in him. Something, somehow, somewhere deep inside him, made him sure that this, yes, this was for real! He had remembered the rumors about the Barnes Drive, the SkipDrive. That's how the aliens moved! About the chance of taking the fight back to the aliens! About the legendary test pilot Petrov who had volunteered for the maiden voyage! A long time ago. But then, nothing had come of it and the Protectorate had just been established. But now this. Karl was sure. He beamed. Turned around to face the faces of the remaining members of "TheSurge". He cleared his throat. This was his kind of dramatic turn of events! His time to shine!

"Guys, Ladies, Gentlemen. This is for real. This is the break we have been waiting for. The tide is turning. And we're the first to take our long boards out for a ride! Surf's up!

6 Star Child

Hello,

My name is J.P., they sometimes just call me Jay. I don't remember what my full name is. Maybe I never had a full name. Like I never had any real parents. Only Liu and Maria who did their best to play the part. But they are dead now. Dead, like everyone else. Dead like me, in about 12 minutes and 43 seconds. 40 seconds now. 35.

<<Log entry ends>>

I wrote this?

You did. I mean, a version of you did.

JP just stared at the translucent apparition of Ittan, her invisible friend, "sitting", but not really there, and how do you actually sit on anything in zero-G anyway?, on the bunk of the sparsely furnished cabin of the Avenger, en-route back to Terran space, Luna base, to regrow, to regroup. To rethink the path forward.

You have to be patient with me, Ittan. I just woke up.

Ok, I'll go easy on you. I can only imagine what it is like to re-spawn. The back-story process is still glitchy. I am trying to edit out the icky bits. Smashing into an asteroid even at only 0.01 milli-c is not a pleasant memory, you know.

I would not have any idea. For all I know, I am a 16-year old girl, born and raised on the Galactic Rim, R-Force base around NoviGorod, by my loving parents Liu and Maria. Wait what? Girl? That's not right!

JP, her full, original name was actually Jakub Stanislav Petrov, but she did not remember that yet, floated over to a mirror field, taking a look at herself. Yupp, female. Definitely. But why?

Ittan? What the hey? You have to explain! What am I missing? Her head had started to develop the first signs of an explosive migraine. With all the tech of the 23rd century, Photonic Matter, SkipDrives and all, they still had not figured out on how to get rid of headaches, especially when they where re-incarnation headaches.

Ok, I'll run this by you slowly. I am used to this now. I really have to improve the back-story download. This is getting boring. Ready? Just stop me when you have questions, okay?

Jay sighed and settled into the zero-G harness, ready to learn the bits she was not getting yet. Her memory was becoming more clear by the minute, but she also liked Ittan's voice, low and mellifluous, reminding her of the voice of Gandalf, her

favorite wizard from her beloved 4D-game she immersed herself during the boring trips between Skip-Gates.

Ittan dropped into story telling mode:

Eons ago, the Galaxy was filled with space-faring civilizations, 1000's of them, all co-existing, trading, exchanging goods and services. Of course they were also fighting wars constantly, but nothing extra-ordinary. Civilizations never went for all-out genocide. Just regular civilization business, you know, power, dominance, greed, envy. There was never a period of peace. Pirates were common. Death was common. But then the Titans came on the scene.

"Titans?", JP interrupted, starting to remember things. "Titans, like from Greek mythology?"

"The myths come from there, from ancient galactic history. Shall I continue?"

"Yes, yes, sorry, carry on, Ittan!"

"The Titans were a group of explorers who had come across an ancient artifact, The Vault. The Vault predated every known record. The artifact, a spherical space, many miles in diameter, inside an asteroid, was actually older than the known age of the universe. They speculated it had skipped over from another universe. In it, they found extremely advanced technology. Weapons. Drive units. Power stations. Sentient battle armor. Archives. Ships. It gave them an incredible advantage, making them near invincible and near immortal. So they learned how to use the ships, which did not resist the take-over for some reason, and then the Titans took over the Galaxy, one planet at a time. There was some resistance, but over the period of about 1000 of your Earth years, they established an iron rule, splitting the Galaxy into 12 realms. There was peace, but freedom was limited. The Titans had the last say in conflicts, but the planets were still reasonably independent. This went on for about 100 thousand of your years.

"Then what happened?"

"The Olympians, offspring of the Titans, and greedy for more power, more independence, rebelled. They overthrew the Titans and banished them!

"Where are they now?", JP was beginning to remember more and more, a jumble of previous briefings, and memories from Earth history and fairy tale books.

"We don't know for sure. The legends say that the Titans and their technology are locked away!"

"Again just like in the Greek mythology"

"Yupp, funny how some of these things make it into cultural lore. You want to hear the rest of the story?"

“Yes, Yes”

So the Olympians overthrow the Titans and start dividing up the Galaxy among themselves. But they were different from the Titans. The original Titans, especially Rhea, they were explorers, they want to bring peace to the Galaxy, but they were essentially pretty lenient beings, allowing a lot of freedom, when compared to the Olympians. Those guys, Zeus, especially, were mean, cruel, sadistic bastards who could not get enough of anything. What happened then, as a consequence of the in-fighting, was an all-out civil war. Everything was destroyed. All civilizations were wiped out in an orgy of automated mass destruction. Millions of automated weapon platforms were roaming the known systems, killing everything and anything in their path. The Galaxy went barren of sentient life for about 100 million years, when the automated sentinels started failing.

“And the Titans could not do anything? And there was nothing left? Where does Earth come in then?”

“It turned out that the Titans were able to keep one of their Sentient Minds outside of the confinement. One of their Minds stayed behind, and one of the ships they had found in the Vault. Hiding, in a barren corner of the galaxy, on the moon of a promising planet. A planet that might, one day, bring forth a sentient population, that might be groomed to find the key, and free the Titans from their prison.”

“You” JP beamed, things were coming back to her. “You are the Titan, he he he, very funny, Ittan”. The moon that’s Luna, right? And the planet, that’s Earth. I got it. And Homo Sapiens, that’s the civilization that you want to grow up and free your tribe. Neat. You probably were meddling with Sapiens evolution a bit, weren’t you. You rascal! But I don’t remember everything yet. Then what happened?”

“The Olympians were not completely gone. It turns out, some made it back into the original artifact, the one that started it all, and went into hibernation. After the automated killer-sentinels had disappeared, they started sending out probes to see if intelligent life had started to evolve anywhere in the Galaxy again. They found Earth.

“Ah, right, the Ghost Wars! The Olympians, they found Earth. Earth resisted with whatever technology they had, but the Ghosts were too strong. The Olympians established the Protectorate. To keep Homo Sapiens from evolving into a space-faring civilization. Because Sapiens is too aggressive. They don’t want to have any competition, I guess. But they also made it possible for Sapiens to emigrate to 100’s of new planets. All terra-formed to fit Sapiens requirements. But why? Why would the Olympians do that?”

“Entertainment”

“Entertainment?”

“The Olympians enjoy playing god. They love showing up on these planets, in the various different cultures that they evolve, from stone-age to steam to cyberpunk, and they play god. Start a war, intervene, groom a tribe, kill them off. A bit of genocide here, a lovely wave of innovation there, a new culture over there. They like to have a planet of their own.

“Wow, that’s pretty low! Wait? That reminds me of a lot of TV shows from old Earth, plenty of sci-fi books I have listened to. Do you mean these books, these stories were related to something real? Real history?”

“Like I said. Funny how reality shapes myths in primitive civilizations! The legend of Atlantis? Atlas? A Titan? etc. etc. I can send you a list of science fiction books that are actually pretty close to what actually happened out there, 100 million years ago.”

“Never mind, Ittan. So where do we come in? You are a Titan, ok! I get that. This ship, I guess that is the ship that was left over from when the Titans were banished. The Avenger, right, it’s from the Vault. I had thought that this technology was invented by a Professor Barnes, with the help of Plato, an advanced, sentient computer, as part of the Ghost Wars effort?

“Professor Barnes certainly thought he invented it!”

“And Plato?”

“Guess!”

“Ah, I got it. It was you. But, if you are helping Sapiens fight the Olympians, the Protectors, to free your tribe from captivity, are you not also playing god? Meddling with the natural path, the hopes and desires and destinies of civilizations? Does that not make you the same kind of douche bag you now want us to fight? To free more douche bags?

“A little bit. But we have the best intentions! At least you won’t have to live in a Zoo any longer!”

“We had the best intentions! Great inscription for your tomb stone! I’ll make a note of it! So, where do I come in? Who am I? Or, what am I? Why a girl? Am I just a pawn in your game. What if I don’t want to play?

“You’ll remember soon enough. You have a choice. Lots of choices, actually. And you have a lot of powers. But there is one problem. A problem I cannot solve.”

“Hmm. okay. Let’s hear it”, JP was beginning to remember that bit, and it did not feel great at all. Her stomach was in a knot and she had started feeling a bit nauseous.

“You have been created with the specific purpose to free the Titans!”

“I am not human, not real?”

“You are real, all right. You are the best of all worlds. You are human, incorporating all the best features of humanity, passion, curiosity, zest for life, persistence, creativity, courage, empathy, all of it. But you also of course have all the down-sides, like doubt, fear, impostor syndrome, envy, a dose of madness and delusion. Being human always means two sides of everything so we wanted to preserve that. But you are also a Titan. Your body is made out of Photonic Matter. It can interact with the real world like a real human, but you are anything but human. Much faster. Much stronger. You are directly connected to me, for example, as you can see, we are having this conversation. And you are immortal! You are the StarChild. One of a kind. But JP is a fine name as well, if you prefer. You usually do prefer JP.

JP mulled this over.

“I will live forever? That’s a scary thought. What if I get bored? What if I don’t want to play? I could just walk out the airlock and jump into space and freeze to death. Couldn’t I? As a matter of fact, Ittan, screw this! That’s exactly what I want to do! I remember it now. This has been going on for quite some time. By Hades, damn you, Ittan. I’m out.”

JP had started to unbuckle and was fully intent to walk out the nearest airlock. She would not continue to be a pawn to this alien manipulator any longer. Hot anger flared up. What the flying frack!

“JP, listen. You have tried this. And you always come back. You will re-spawn.”

“What?”

“You heard me.”

“How many times have I thrown myself out of the airlock then?”

“You really don’t want to know!”

“And we go through this process, this conversation, every time I re-spawn?”

“More or less. You seem to mature a bit every time! I edit out what I can, and I try to give you the shape, gender and age you prefer. 16-year old female, 175 cm, athletic, average features, short-cropped hair is what you specified last time. You seem to like the setup. Less of the testosterone, more of the oxytocin, you said.”

“Tell me. I need to know. 3 times? Dozens? Hundreds?”

“Really. You don’t want to know”

“Fine. What happened last time?”

“We were doing quite well. The Avenger had built a base around a planet. We had constructed a fleet. We had recruited the first Resistance fighters from Earth. The R-Force was taking shape. Liu and Marie had adopted you as their “daughter”, they did not know about your true nature, they did not know anything about me. They were in the process of growing and training the R-Force, the fighters that would kick the Ghosts out of the solar system again.”

“I remember a bit of that now. We had a strong fleet! But then my memory is blank.”

“Yeah like I said, I try to edit out the icky bits. The Olympians traced one of the Skips to the base around NoviGorod. I was foolish to put the base into the same Universe as Earth. I should have known. My Bad. The Olympians launched a massive attack. We never saw it coming. Every ship I had built was knocked by kinetic missiles and was lost with all hands. Luckily we had only a few manned ships. Most of the units had been on AI control. But still, we lost years of work.”

“This ship was spared?”

“We got hit, all right, but this is the Avenger, not a ship we built. It is one of the original ships, from the Artifact, from the Vault. It cannot be destroyed. It would re-spawn. Just like you.”

“So that log entry? That was me?”

“Yes. A version of you. You were in one of the orbitals at the time of the attack. The orbital was hit. You made it to an escape pod. The pod impacted on an asteroid. You died. But then you re-spawned, here, with most of your memories intact. And here we are.”

JP stared. This was a bit much. More and more information was coming back to her now. Finally, she looked directly at the apparition of Ittan, the Titan-remnant, as if to dissolve her slave-master with a thermo-nuclear glare of death. There seemed no way out!

“How do I win, Ittan? Am I just Sisyphos? How many times do I roll the rock up the hill? How do I get out of this?”

“If we find the missing key-components, the missing T-Crystals, I can remake the key to open the Prison Gate. We can free the Titans. And we can end the slavery of the humans on these colony planets. They don’t have to live in the Olympian zoo any longer. They can stop playing the Olympian’s gladiator-games.”

“And then what? What happens to me?”

The Titans can reprogram me and they can re-program the Avenger. They can switch off the re-spawn process. You then have a true choice. You can live as human. You can live as a Titan. I am sure they will be grateful. Or you can end it. It will be up to you. But only after we find the missing T-Crystals. And after we free the Titans.

“You don’t leave me a lot of choices!”

“Believe me, we have had this conversation many times”

“You don’t run out of patience, do you?”

“Infinity can be a bitch when you have limited options!”

“Ok. Fine. I’m in. What’s next?”

Off to Luna base. We need to recruit an army. And we need to build a fleet!

7 At Selene Base

So Ittan, or may I call you Plato, which of the Titans are you, exactly?

Plato is fine by me. I am quite fond of the name. And I still have good memories of my conversations with him.

You knew him? The original? In Athens, talking caves and shadows, and all the good stuff?

Quite. Plato had no doubt that the universe is more complex than he could grasp with his senses. However, he thought I was just a figment of his imagination. That I was a messenger spirit from the gods. I called myself Ittan then.

But back to your questions. I am not a real Titan. I was made by one of them, by Cronus to be specific. Cronus was one of the original 20 explorers, the ones that had discovered the Vault. Where they found hyper-advanced technology of the predecessors.

You were made, not born then? So, what are you? Pure Energy? A trans-dimensional mind? A sentient drone? An avatar floating in space somewhere? A ghost?

Funny you don't remember those bits. I really have to improve the memory Integration process for your re-spawns, this is getting a bit tedious. I am a sentient MVL. Here and now, but not really fully here and now. I am but a shadow of myself on the cave wall of your limited 4D perception!

Aw, ha ha. Not. You can cut out the wise guy routine. Instead, explain MVL. And then, also explain Cronus, the god of time, really? Can you manipulate time? Could we go back and save these R-Force people that got pasted around NoviGorod. Save my mom and dad? And can you make your self appear more normal, not like a translucent ghost? It will really help me with getting my mind rebooted.

Fine. What did you have in mind?

You can show up as Plato, greek tunic and all. Why don't you let me see what the guy really looked like!

Ittan nodded. Then, without a noticeable transition, a young man, quite handsome, about 175 cm, curly, short-cropped hair, braided beard, muscular and lean, dressed in a washed-out gray tunic and with leather sandals appeared in her vision. He smelled of olive oil and of onions, and of garlic, and salted fish. A greek lyre could be heard playing a slow melody in the back-ground.

What the hey, Plato, you look no older than 28! And, ugh, please, go easy on the halitosis, dude! Also, skip the sound track. I thought you should know me better by now!

Did you think Plato was born an old man? The smell faded. Plato grew older by about 30 years, beard growing, and wrinkles appearing. The music stopped, discordantly, with a sound of strings snapping and of something or someone crushing a wood frame.

JP frowned. Plato really had an annoying sense of humor. She frowned and decided to let it go.

Fine. Now answer the other questions. What about my parents? Adopted or not, they were nice people. They really wanted to help. Can you return the favor?"

It depends. Yes, Chronos was/is the expert in QuanTime, the math and physics system the Preds had stored in the archives of the Vault. But, remember! Even the Titans, even Chronos, did not fully understand everything about it. The Titans were using the tech, but they had not not designed it. They could use the machines to make more machines, but they could not make the machine-makers. There were a bunch of components that were in limited supply, like the T-Crystals. Imagine if someone like Tesla or Edison had stumbled across a Silicon Valley electronics and hardware store in the early 21st century. They probably would have been able to learn how to use computers, and smart phones, WiFi and the Internet, but he would not have been able to build the tech. They would have not have had the chip-making facilities and the blue-prints.

But, having said that, I know that if we can get the T-Crystals back, 4 or maybe 5 would be enough, we might not yet be able to open the portal to the Titan prison, but we might be able to open a SkipGate that can reach back in Quantime. Maybe. I cannot promise. It's very tricky. And it consumes a LOT of energy. If we get it wrong, a whole sector of the Galaxy might get roasted. Also, we have to calculate to where exactly to open the portal. Things are moving, you know. Fast! And we are not the only ones that are using the Pred-Tech. We'd have to time it precisely, to make the Olympians believe that everyone was killed. We are talking a 500 milli-second window here. And ..

"Ok. enough!"

JP had raised her arms defensively. Plato was rambling now. I got it! T-Crystals. What are they? And also, last question for now, MVT?

MVL, not MVT. Ok, I can answer those in one. T-Crystals are actually a misnomer, we don't really know what they are. "T" stands for Transform, because they enable transformations, transformations from energy to matter, from space-time to energy. T-Crystals power the key engines and facilities. "Crystal" stands for the fact that we know they have a highly regular internal structure.

But they are n-dimensional, we don't know how many dimensions, and they do not exist in only one universe. They appear to the 4D-senses in various shapes, depending on how you choose to look at them. They are also not visible to

everyone. You have to have a piece of T-Crystal „inside“ you to be able to see another T-Crystal, if they even choose to appear. While enormously powerful, only a minuscule tip of their entire shape "peeks" into your 4D space. They are very picky, very hard to tame, and extremely hard to find, unless you already know where and how to find them. It's a bit of trans-dimensional chicken and egg situation.

JP nodded. "So its a bit like in the story "Flatland" where a sphere visits a 2-dimensional world and they can only see a circle, but the circle can change its size as it moves though the plane, appearing like magic to the inhabitants of flat land. Only that in this case, the Circle only shows up if it wants to.

The apparition of Plato nodded and smiled as well. JP's memory was coming back to regular levels much quicker this time. This was very good news.

"Yes JP. Shadows on a Cave Wall. Think of the T-Crystals as n-dimensional Tesseract, hyper-cubes, if you will, with almost all of their true QuanTime potential, energy and mass elsewhere, else-when and else-how.

I am a Multi-Verse Lattice, an MVL, built around and using the capabilities of a T-Crystal. I am a construct that exists also across many universes, only appearing here with a tiny percentage of my being. Close to 100% of my being is hyper, meaning else-when-where-how. That's why you see me only as a ghostly appearance most of the time. No human will be able to see me. But I can have conversations with them by appearing as thoughts or ideas, or dreams or visions. I have a T-Crystal in-side of me, but I am also inside the T-Crystal. You, JP, the StarChild, also have the portion/segment of the T-Crystal. That is what allows me to create a local presence in your local portion of QuanTime, your universe. You are also, to some extent, an Multi-Verse-Lattice, that's how you were created, that's where you get your power, that's how you can and will re-spawn here, if you get plastered. Since the T-Crystal is beyond my control, I can apply its capabilities it but I cannot fully control it, you get re-spawned if you want it or not. And I have done my best to learn how to make your human side more real, all the time, with each re-spawn. But it's glitchy. I really have to talk to Mnemosyne when we free him.

The more Ittan / Plato talked, the more bits and pieces of information, memory, and thinking capacity was coming back to JP. The only piece of memory that still was completely blank was the moments after the attack had started, when the R-Force base had been obliterated, and when she had ejected into space, in an escape pod, under maximum acceleration, only to meet here demise, at least in that incarnation, on a nearby asteroid. JP continued.

„So there is a chance to fix this! And you said, if we get the Crystals, we can release your „parents“, the missing Titans, and I might be able to get back my parents. And then you can make me into a real human. Right?

„Yes Pinocchio“

„Ha ha, not funny. Next you're gonna tell me you wrote that story together with Walt Disney.“

„Well ...“

Shut up Plato, and just get us to the Moon base! What is it called?

Selene

J.P. sighed, She could have guessed as much. She turned around, and tried to get some sleep.

StarChild or not, she was human enough to feel tired after absorbing all this information. The sleep would help her integrate her memories.

„Leave me alone for a while Plato. Make me dream of the fairy tales you claim to have written. Or about the philosophers you have met. Or maybe even mix the two together? Hey, what about SnowWhite and the 7 Monks? That would be fun. Or, Beauty and the Nihilist. Be creative. Wake me when we have arrived.“

Sounds good. The last thing I need is 100 „Are we there yet?“ questions? I think I'll dial back on your curiosity next time you re-spawn. I can't wait until you get blown to bits again.

JP smiled. That kind of humor she could understand. Then JP slept. She was dreaming. Her memories were coming back now. She started remembering the things she was able to do. Her powers. She pursed her lips. Wow, actually. But there were also weaknesses in her. While immortal in the traditional sense, she could expire. And each re-spawn process would take days, taking her out of the picture. And not all of her memories would come back. Which was a good thing. She was thankful that Plato/Ittan was editing out the painful bits. She could not imagine that the process of kicking the bucket in 4D-QuanTime would be something to remember at any level of detail. There was always risk. If she was hit with sufficient force, or with the right type of energy weapon, a DarkEnergy Pellet or a with ShadeCaster, wrapping her in a BlackoutSkin, she'd fade out, lose her powers, or even die. She would still have to breathe, eat and drink to regenerate. She did not have a normal stomach, more like a converter factory. The “Stomach” was using 100% of everything she consumed, she could feed herself with pretty much anything she was able to swallow. But eating and real food was still a thing for here, a part of the human experience she had insisted on keeping, and so she still craved the taste of fruit, the texture of bread, the smell of a chicken curry, noodle wok.

A gong sound entered her dream state. Her stomach was telling her now that she'd have to eat something soon to recharge and regrow.

"Welcome back to Selene base!", a soft female voice sounded. It was Selene, the base AI, controlling the life-support systems Plato had put into the base to support the needs of herself and of the R-Force refugees coming in from Earth.

JP woke up. She was no longer on the Avenger. She was in a spacious room, in a comfortable bunk bed. The room was furnished to her liking. Subdued colors with lots of different sofas, and chairs, even a bean bag to slouch into. Musical instruments were attached to the walls, a classical guitar, a StratoCaster, a Tenor saxophone. A grand piano was standing in the corner of the room, cover open. She remembered. A Steinway. Plato had made one for her. She adored Schubert and Chopin as much as she adored Zappa and Holdsworth, Corea and Brecker, Davis and Ogerman. While she was still learning, she loved playing classical music when there was idle time. Gravity was present in this place, but low, the Lunar standard. They were in the underground base, 5 kilometers under the moon's surface. A spherical space 2 kilometers in diameter, with decks, hangars, labs, habitats and technical facilities, mostly based on predecessor technology. Selene-base had been the little-brother of the Predecessor-Vault, the original artifact that the Titans had found 100 million years ago. Plato had explained that the Vault had replicated a part of itself, a "back-up copy", in mini-format, to be prepared for the eventuality of the Titans being overthrown. Selene-base had been the power behind Plato being spared from the imprisonment of all Titans. Plato had waited here, in Selene, for a 100 Million years, while the extinction machines were still roaming the Galaxy, watching over Earth, hoping for something worthwhile to evolve. Nudging it along. Trying, failing, trying again. Sapiens was full of potential, but also stubborn, emotional, irrational, stupid at times, short-sighted, narcissistic, overly ambitious, aggressive and sometimes outright sadistic, and very, very hard to control. But the wait, the effort, the patience had been worth while. Earth had reached the state of Advanced Space Travel. And that had drawn the Olympians onto the scene, turning Earth into a population source for their growing galactic theme park. Things had escalated very quickly, over the period of only a few dozen Earth years, giving Plato barely enough time to accelerate Earth technology, to give them a fighting chance.

Selene was the local home-base for Plato, and JP, as well as for the the R-Force, the budding army that Plato and JP were recruiting from Earth. It was well shielded, and probably safe from being discovered by the local Chief Protector, an Olympian called Gry/Onox. But the would have to be careful. Very careful.

A voice sounded from a projected audio field.

"Ready to go into action?"

Can we have some food first? Coffee would be nice. And some noodles! And an apple. After that, I'll be as ready as I'll ever be in this new me. Let's go to work!"

A SkipPortal opened to her left, and she stepped through. A soft "swoosh" indicated where the air rushed into the vacuum created by her shape shrinking into a bright white dot, and then into nothing, as she jumped through the portal.

The air conditioning unit stepped up its activity to compensate for the 13-degree drop in temperature the jump had caused, but then, after warming up to the standard 19 degrees, the room went back to hibernation.

Who knew, the room thought, when the strange thing was going to come back.

Wok on the Moon (Ghost Wars, #8)

Selene had set up FirstMeal in the base cafeteria. Large enough to feed the hundreds and hundreds of R-Force members yet to be recruited from the fragmented resistance cells on Earth, the cafeteria was deserted, cold, and dimly lit, smelling mainly of ozone and dust. A single spotlight was pointing from the ceiling, 12 meters above, down to a small, round, metal dining table. There were three chairs, fixed to the NuCarb floor with latches. One tray was set out with food, on matte metal tableware, magnetically held down to the surface to prevent dishes and cutlery from slip-sliding away due to the low G. There was a steaming cup of coffee, freshly made the Russian way, from instant espresso concentrate. A small AutoWok slowly stirred a double-portion of chicken-curry noodles. Next to the Wok, an impossibly perfect apple, glistening with moisture. It was JP's preferred wake-up meal combo.

One of the chairs, turned-about 180 degrees, the backrest-mesh turned towards the table, was straddled by a middle aged, haggardly-slim male, slouching forward, hugging the backrest, staring at the table surface, hands playing with a ClearSteel-glass half-filled with a clear liquid. When JP popped out of the SkipGate, the man noticed the soft "fwhoop" and the cold whiff of air that usually accompanied a portal transfer. He slowly turned his head, raising his glass and said in a raspy, hung-over voice:

Доброе утро и добро пожаловать обратно

Thanks. It's good to see you too, Uncle. Let's please stick to English, my memory is still fragged. JP walked over to the table, slowly, she was not used to moon-walking any longer. She sat down, and nodded to the AutoWok to start serving the noodles. She took a first sip from the steaming coffee, kept hot by the SmartCup. Her thumb adjusted the temperature setting down to 65C and the cup acknowledged with a soft chime. The man continued:

You got pasted again, JP.

Igor Petrov, R-Force founder, Commander-in-Chief, now fully digitalised, and JP's genetic template, took a swig from the glass, swallowed, grimaced. "You got pasted", had been a statement, a matter of fact, devoid of emotion, not a question. Surely, Igor had been briefed. JP ignored the comment, and continued:

So, uncle, you decided to ride a construct again. I thought you hated the transfer process. You said you missed the freedom of NOT having a corporeal existence. What made you change your mind?

Ittan told me about NoviGorod. While you were in flight, he sent a drone ahead. Ittan calls himself Plato now! He's running around in sandals and nibbling on

olives and feta-cubes. Your idea, surely? But never mind. So. The Ghosts got everybody, eh? Surprise attack? But they did not get you! Never you. Lui and Maria, though. Dust. The other 35? Ashes. 4 years of work? An expanding debris field and some radiation. Poof! He took another swig. Draining the glass, the tapping the side three times to summon a refill.

JP ignored the moody remark, as well as the fact that her "uncle" was clearly not sober. For some reason, he had decided to go "full immersion", feeling it all. The anger. The let down. the heart burn, both from an acid-reflux as well as as from a motivational perspective. She continued:

So you decided to go corporeal for while? To help me recruit, to rebuild the R-Force?

It's only for a while. I wanted to say hi and good-bye to you in person. I'll ask Plato to delete my file. What's the point? He took another swig. Grimaced again, this time because he had forgotten that the glass was empty. He turned his head upwards to the ceiling and shouted: "Service, Selene, Service". He turned his head back as he heard JP continue:

So, it looks like you went for 100% immersion again? Is that real vodka? It that real heartburn you are feeling? Why do you do that to yourself?

Ivan nodded. "I wanted to be real again. Just for a bit. Pains and all. Before I go, you know? The vodka Selene synthesizes is crap, I'll have you know. It's not worth coming back for that. I'll quit for good.

"Plato won't let you ..!", JP started, but got interrupted.

I won't let who, do what? , Plato said, pretending he had not been listening in on the conversation all along. Plato appeared as a small white marble statue, about 30 cm high, barely higher than the AutoWok, sitting on the apple.

.. off yourself, I have tried that but was always re-spawned. JP finished her thought.

Who are you talking to? said Ivan, confused. then, figuring it out after 1 second of thought, said: "Hey, show yourself, Plato, Ittan, Titan-remnant wannabe-god, Deus-in-Machina, whatever."

"I'd like to, but I can't go corporeal while you are hugging my resources. This base ain't big enough for the both of us!" Plato said.

A soft giggle could be heard. Selene, listening: in "Well, what bout me?

Igor, shouted: "Selene, more Vodka!"

Plato sighed, this is too complex. Let's all go virtual when JP is done eating, and talk about the battle plan.

30 minutes later they were in full mind-meld, virtually seated at a round table. Not any round table, mind you, Plato had chosen the setting of King Arthur's court, and they were

all dressed in midieval clothes. Selene was there as well, with a little augmented-reality label floating above her head, stating Guinevere. JP did not check, but assumed that her head was labelled too.

Plato was King Arthur, of course. Igor was Sir Lancelot, and JP assumed she was Sir Galahad, son of Sir Lancelot, and the one eventually finding the holy grail. I thought I knew what Plato had in mind. She just hoped, Plato would dial down the thespian grandstanding and silly slap-stick humor he was prone to.

"Knights of the Round Table", Plato intoned

"Zip it, Tiny-Titan", JP snapped

Selene/Guinevere bit her lip, clearly amused already. Lancelot was beckoning to the man-servants to fill the goblet placed in the middle of the round table.

"Fine", Plato grumbled. The setting disappeared, moldy castle walls, oak table, brass cups, torches, wall carpets, flags, swords, armor and halberds in stands, guards and servants. The meeting was now placed in a 21st century-like conference room, a board room of a high rise building overlooking a sprawl. JP could not decide if it was New York or Chicago. Her memory seem to be patchy on history, still. The setting reminded JP of some old movie she had watched, but she could not quite place it yet. The appearance of Plato was near normal, apart from the fact that he was wearing a tailored suit and gaudy tie now. Igor was in his flight uniform. Selene showed up in her usual avatar configuration, the bald, somewhat androgynous female StarTrek-movie character Ilia, modeled after the Deltan navigator serving on the Enterprise under Captain James Kirk during the V'ger encounter.

Plato continued

So. Here is the situation. We have to reboot the set up. The Olympians dusted our base around NoviGorod. We lost the fleet and all hands. We need to regroup and start again. Obviously the Olympians have gotten their hands on some predecessor technology and we have to be more careful than ever. I accept full responsibility for what happened, and it won't happen again.

"No it won't" said Igor, "At least not with me in the game, since I am out. Done. Game over. Push the off-button, Ittan, please?"

"Hear him out", JP said. Selene was quiet. She usually just listened and tried to understand how to best help with providing resources and project management advice.

Plato continued.

"Yes. Please hear me out. There are some things I want you to remember. One. If we do not defeat the Olympians, they will, eventually find us and either take us out, or send us into banishment with the Titans. And that means freedom for Sapiens is over forever. The colonies will be playing the Olympian gladiator games forever. And the remaining Earth population, the ones that are spending their time in virtual now, will just wither away and die out. Then Earth will be repopulated with some low-tech minions, and one of the Olympian "gods" will have a new playground there. Not a vision I am happy with. This also means the Titans will stay locked away, and I cannot allow that. Two. There is a chance we can get back what we lost on NoviGorod. Maybe not all the ships, but we can build a SkipPortal with a temporal component to rescue all the people. Liu and Maria and the other 33, we can get them back. It's hard, risky, and a long shot, but it is possible. Three. For all of this to happen. We need to get 4, if not 5 T-Crystals, better 7 or 10. And we cannot get the T-Crystals without humans. Real, live humans.

There was a silence. JP and Igor looked at each other in virtual. Both said in unison.

"Did you know ...". They then stopped, turned their heads and looked at Plato. Selene just sat back and waited. This, now, was going to be truly interesting

"Plato, what the hey?" JP said. What are you saying here?

Plato sighed. I had hoped to not have to tell you this, because I thought you might feel personally de-motivated. Let me explain

The Predecessors, the vanished species that had built the Predecessor Vault, the ones that also built this base, and all the fabulously advanced technology, the ones that built the T-Crystals, they had a faible, a preference, a love, for Earth. The Titans never understood it. And I assume the Olympians never understood it either. Our best guess is that with some kind of cross-temporal interaction, Earth, somehow is/will-be/was the origin of the Predecessors. Don't ask me how this makes any sense, but this is is at this point, the most plausible, if absurd explanation why Earth and Sapiens have a special status. That's why the base is here. That's why the Olympians want to keep Sapiens contained, and low tech. They do not wish for a strong competitor to evolve.

JP was the first to collect her wits about her to ask a proper question.

"So how exactly do we need a human to find a T-Crystal?"

"Finding is relatively easy. Each of the planets that the Olympians are now populating with Earth tribes and low-tech life-styles is likely to have one. The T-Crystals is what is giving the Olympians their "god-like" powers. Remember,

again, the T-Crystal themselves are only "poking" into your 4D-Space with a tiny portion. We know they are there, but we don't know how they appear. Only base-humans can actually "feel" when an object is a T-Crystal. None of us, no virtual being, no Avatar, no AI, no drone, can actually "appropriate" a T-Crystal."

"So it's a bit like the Sword in the Stone", isn't it, Selene chimed in. Only the chosen one can find it!

Plato nodded. "Holy Grail, Sword in the Stone, Rings, Crowns, you name it. It has been part of human lore for centuries. "

Igor crossed his arms, looked skeptical. "I am still not convinced. But you are saying we can get Maria and Igor back. We can save humanity from eternal slavery. We can get your Titans freed up. All we have to find the right human, the one with the "right stuff?".

"Pretty much", Plato acknowledged

"What are we waiting for" said JP. It's not impossible. "Most people never believed we'd wok on the Moon either"

"Good one", giggled Selene, and the meeting adjourned.

<<<<<<<<< end of collection >>>>>>>>>>>>