# Mech 4061

Chapter 4061 Untested System

Ves did not actually have to invest much time in order to set up his ambitious Mental Simulation Training System.

Vulcan had already begun to use his formidable expertise and capabilities to build it up from scratch. By borrowing Ves' expertise as well as the knowledge that he had absorbed from his growing number of 'associates', the spiritual incarnation achieved incredible progress in a short amount of time.

In fact, Vulcan's ability to construct the MSTS was so impressive that Ves even contemplated the possibility of outsourcing future work assignments to his incarnation!

The difference in productivity between the two was too great. Ves was still bound by mortal limitations while Vulcan was much less constrained in this sense.

Of course, Vulcan was not capable of replacing Ves entirely.

The design spirit did not have direct access to a design seed, so he was unable to fully replicate the performance of a mech designer, especially the higher-ranking ones with unique design philosophies.

Ves' hopes of imitating the strengths of rational mech designers by emulating other design philosophies were dashed.

What Ves did manage to find out was that Vulcan could still function like an assisting design team on his own! While the spiritual entity was not good at some assignments, he was pretty good in many other aspects!

"This is interesting." Ves rubbed his smooth-shaven chin as he thought about the implications of this accidental discovery. "Why didn't I think about this possibility before? I can single-handedly increase my productivity by as much as half or more by off-loading the more tedious design tasks to Vulcan!"

The increasing amount of design projects that he committed to working on became a lot more manageable all of a sudden once Vulcan came into the picture!

It was as if Ves suddenly remembered that he had a spare design team as well as a supercomputer laying around in his backyard!

The thought that he had access to all of this extra capacity but forgot about using any of it until recently made him feel as if he was stupid!

"You dummy!" Ves admonished himself and slapped his forehead for good measure!

Fortunately, it wasn't too late to begin with utilizing Vulcan if only to avoid wasting the available capacity.

Right now, Vulcan was still investing most of his attention on completing the MSTS, so Ves was not yet able to assign any mech design-related assignments to his incarnation. He would surely do so once the Tutor Project was finally complete in every aspect.

Whenever Ves paid attention to his other self's progress, he noted that Vulcan already developed a high amount of competence in spiritual engineering. This was what the design spirit excelled at because he was a spiritual entity himself.

Ves saw new possibilities in Vulcan because of this reason.

If his incarnation was good enough to develop something as innovative, complicated and ambitious as the MSTS, then Vulcan would surely be clever enough to work on other advanced spiritual engineering projects!

"Maybe I should have let you design the Death Lotus instead of me!" Ves muttered.

Vulcan had one big flaw, though. His domain was based on the spiritual attributes of dwarfs, mechs and craftsmanship. He also incorporated a tiny amount of high-grade metal attribute, but hadn't evolved to the point where he could freely make use of this element.

Nonetheless, for all of Vulcan's strengths, he lacked the life attribute that enabled Ves to make all of his products alive.

This meant that Vulcan could not take over all of Ves' work entirely. Both of them needed to work together to maximize the potential of their own creations.

"Oh well. This is already good enough."

Time continued to pass as Vulcan fleshed out the MSTS. Over time, he also brought in the Quint as well as Helena to the spiritual engineering project in order to properly incorporate their respective contributions to the simulation program.

The Quint's reaction to this initiative was rather interesting.

When Ves first brought up the topic to his colorful masterwork mech, the evolved machine's eyes flashed with excitement.

"THIS WILL BE FUN, HAHA!" The speakers that the Quint gained access to had boomed. Ves had already provided his most valuable and most developed living mechs extra privileges in order to keep them happy. "AS LONG AS YOU GIVE ME CONTROL OVER THE ACTIONS AND BEHAVIOR OF THE 'NPC' MECHS, I WILL MAKE SURE

THAT THOSE CUTE MECH CADETS WILL LEARN HOW TO HANDLE THEMSELVES IN BATTLE."

Ves directed a suspicious glance towards his mech. "I can give you the freedom to construct your own battle scenarios based on the fights that you have participated in as well as whatever you managed to obtain from other sources, but they will not be the only simulations that the users of my Tutor Project can utilize. Some of them are younger and need to work on their basics, so it is not appropriate to throw them off into the deep end right away. The NPCs in these simpler battle scenarios need to be dumbed down as well in order to give the younger mech cadets a decent chance at defeating them with their inferior piloting skills."

"...FINE. I WILL DO MY PART IN ACCELERATING THEIR IMPROVEMENT AND TEACH THEM THE LESSONS THEY NEED TO IMPROVE THEIR SKILLS."

Ves feared that the main reason the Quint wanted to put in all of this effort was so that it wouldn't take as much time for the mech cadets to qualify for the more advanced battle scenarios that his crooked mech had in mind!

Oh well. No matter the Quint's motivations, as long as the users of the Tutor Project improved faster and became more competent in battle, it didn't really matter. Ves just hoped that the living mech would have a sense of measure and avoid torturing the immature mech pilots too much.

After hashing everything out between the participating design spirits and coordinating their respective contributions to this great spiritual engineering endeavor, the MSTS finally reached a state where its basic functions were all complete.

It became a lot more difficult to develop the spiritual software program any further than that. Vulcan might be a lot more competent in spiritual engineering than Ves initially thought, but even he was reaching his limits in working so long on something without testing its actual performance all this time.

"We need more data! We can't go on without seeing how it actually functions in its current state!"

This put Ves in a difficult position. As promising and revolutionary as it sounded, the MSTS was a highly experimental spiritual construct that was anything but safe.

Who knew what happened if the test pilot of a prototype version of the Tutor Project started to engage this function?

Would the test pilot merely experience nothing as the MSTS failed to come online?

Would the test pilot's head explode as a glitch in the MSTS caused it to exceed its safety limits?

Would the test pilot perform normally at first but slowly develop brain damage as well as mental disorders due to gradual exposure to the extreme stimuli produced by the MSTS?

Ves had no answers to these questions! Although he developed the MSTS with the best of intentions, he knew first-hand that even the most beneficial inventions could produce adverse results when put into use.

He did not have enough confidence in the soundness of MSTS to test it out with his Larkinson mech pilots or mech cadets.

There was no way he would put someone as precious as Lanie Larkinson in an untested Tutor Project mech!

"Where the hell am I supposed to find the test pilots for my new design?" Ves grumbled and scratched his head.

Could he make use of his pakklaton prisoners?

"No. None of them are mech pilots. I don't even know if there are any neural interfaces that can establish a stable and working connection between their alien minds and a mech designed for humans."

Should he instruct his Black Cats to sneakily kidnap and smuggle over a handful of criminal mech pilots?

That sounded like trouble. If the operatives ever got caught, Ves would get into a lot of trouble!

"Wait, why am I treating this as a shameful act that needs to be covered up at all costs?"

Ves began to entertain a course of action that he would have never considered in the past.

While it sounded crazy to him, it made complete sense with the knowledge that he possessed.

He did not hesitate any longer. He activated his comm and called his buddy Jovy Armalon.

The connection did not go through. This wasn't too unusual as Jovy hadn't been easy to reach ever since Ves gifted him with the Eye of Providence.

"Let's try this one then."

Ves initiated a call to a different mecher.

It took twenty-four seconds for the man to accept the call. The face of a distinguished-looking man with graying hair appeared in the projection.

"Mr. Larkinson. I do not make a habit of accepting the calls of a Journeyman, but I have determined that there is a high probability that you are about to present a case to me that is sufficient to hold my interest."

Well, that was an interesting way to open a conversation. Ves understood that he was treading on thin ice.

A person as important and accomplished as Master Termaneo Dervidian definitely wouldn't be amused if a bratty little Journeyman took up the man's precious time for a project beneath his notice!

"I need your help or the help of your faction." Ves quickly stated. "First, are you impressed with my ongoing mech design projects?"

"No. As promising as you may be, I am not bored enough to pay attention to the work of my juniors."

"Then let me explain the premise and the progress that I have made on my Tutor Project to you. I'll send you a few documents on my design project as well."

As Ves explained the Tutor Project's goal and unique, groundbreaking features, the MTA Master quickly processed the documents he received over the comm.

It only took a few minutes for Master Dervidian to catch up and understand what he needed to know.

Suffice to say, the existence of a psionic construct that was capable of breaking through the technological bottlenecks that limited the progress of developers for many years was completely astonishing!

Such an invention was fully worthy of his attention!

Someone as clever as Master Dervidian was already able to understand the greatest uses of the MSTS!

If Ves wasn't lying about the possibilities of this revolutionary new system, then it could be used for a lot more purposes than training mech cadets!

The Transhumanist leader's eyes glinted as he gazed at Ves with greater appreciation. He didn't even care whether the Journeyman had embellished his story or created a more flawed product than he thought.

As long as the Mental Simulation Training System had any possibility of working as intended, then it would become a revolutionary new technology that could unlock a lot of useful possibilities to the mech industry!

"I understand. I will personally make the arrangements. What do you need?"

"I need test pilots." Ves answered. "I need at least a hundred teenage mech cadets as well as older mech pilots. It is best if their ages, specialties, training and background are as varied as possible. My focus lies on second-class mech pilots, but I won't say no to receiving a batch of third-class and first-class mech pilots as well."

"You will obtain what you need to thoroughly determine the safety of your MSTS. Do not be afraid to use up the test subjects that we will deliver to you. Before we will allow you to put such a new and experimental system to use, our Association must thoroughly understand its safety parameters. I shall dispatch a team of research assistants to facilitate the experiments and collect the required research data."

"Er… you don't need to do that, sir…"

"No need to thank us, Mr. Larkinson. We are happy to help."

Chapter 4062 Alacritous Stork

When the MTA made a commitment, it quickly delivered on it. Only a day after Ves made an agreement with Master Dervidian, an MTA frigate called the Alacritous Stork portal-jumped into the Davute System and matched orbits with the Larkinson fleet.

Soon enough, thirteen junior researchers teleported in one of the conference rooms of the Blinding Banshee.

Due to the controversial nature of the experiments that Ves had in mind, he thought it was best not to conduct them on the surface of a busy planet.

The Blinding Banshee was the right venue to test the MSTS. As long as the Tutor Project did not have to move, the espionage vessel offered enough room to test its revolutionary new simulation program.

Aside from that, the Blinding Banshee also contained a lot of high-security cells that could discreetly and securely contain a lot of sensitive prisoners.

Ves had especially boarded a shuttle that brought him all the way back into orbit so that he could meet with the researchers and supervise at least a portion of the experiments.

The mechers that teleported inside the conference room looked younger and less senior than he expected.

Master Dervidian was most definitely capable of mobilizing senior researchers if he wished. It was curious that he decided to send a bunch of brats who were predominantly in their twenties and thirties.

Despite their high backgrounds, the MTA researchers that showed up did not assume an air of superiority that was characteristic of their kinds.

Ves did not need to ask any questions to know that they had been briefed beforehand. That was pretty nice and thoughtful of Master Dervidian. It saved him the trouble of showing who was in charge.

The junior researcher at the lead hovered forward and made a strange salute with his hand.

"Good afternoon, Mr. Larkinson. It is an honor to meet an accomplished mech designer such as yourself. I am Yarach Stimmons, a research assistant serving on the Paracelsus Optimus. Master Dervidian has recently commanded my colleagues and I to assist you in your research. We have brought specialized lab equipment to collect additional data and thoroughly determine the effects of your new invention on different individuals."

Ves shook hands with the young man. He could immediately tell that the guy was more than just a researcher. He was a Journeyman who possessed a lot of curiosity towards the Tutor Project.

If the training mech design was valuable enough for someone as impressive as Master Dervidian to intervene in its development, then it had to possess extraordinary properties! There was no other reason for such a formidable figure to make so many moves just to assist a mech designer who wasn't even a part of the Association!

"I don't really understand what each of you can do. Can you explain your expertise and how you can facilitate my research?"

"Why certainly." Yarah Stimmons nodded without any fuss. "I am a Journeyman who specializes in neural interface systems. Master Dervidian chose me for this assignment because I have thoroughly studied the risks and dangers of interfacing with mechs. I possess a considerable understanding of human biology with a particular focus on the brain and how they react to different forms of interactions with neural interfaces. I am mainly tasked with detecting and registering any possible degradation to the health of the mech pilot."

The other junior researchers reported their professions, their specialties and their presumed roles in the upcoming study.

None of them were mech designers aside from Mr. Stimmons. Many of them were medical specialists who were highly knowledgeable about human physiology or

psychology. Each of them were supposed to monitor and study the health and state of the test subjects as they trialed the MSTS under various circumstances.

Soon enough, the topic of the discussion shifted towards the test subjects that the MTA frigate had brought.

"We have brought a total of 420 experimental test subjects." Stimmons revealed to Ves. "With 40 first-class mech pilots, 300 second-class mech pilots and 80 third-class mech pilots of varying degrees of skills, origins and specialties, we should be able to collect a sufficient amount of starting data to gain a preliminary understanding on the safety and the soundness of your Mental Simulation Training System."

That was more than enough test subjects to obtain the data that Ves needed! He was quite impressed by how many mech pilots the Transhumanists were able to bring on short notice.

However, he recalled that they did not belong to him. Ves could only borrow them from the MTA.

"How much control am I allowed to have over the test subjects?"

"We will have to discuss that in detail later on, Mr. Larkinson. The experimental subjects are valuable assets that we have only put at your disposal in order to understand the safety of your MSTS and how far we can push the boundaries before anything breaks. One of the assignments that we have received from our superiors is to test your new system out under extreme circumstances. In order to fully understand the conditions where it is safe to use by the general public, we must explore the circumstances where it produces detrimental effects towards its users."

This was easy to understand. It was not enough to declare the MSTS safe after using it under normal conditions.

There were lots of stupid customers in human space. No matter how many safety instructions Ves issued with his product, there were bound to be dummies who utilized the Tutor Project and the MSTS in conditions that were outside the scenarios that he envisioned!

Rather than remaining ignorant of the consequences of using his spiritual system in unknown circumstances, it was better to explore them in advance and thoroughly understand the consequences of misuse.

After Ves chatted a bit more Mr. Stimmons, he did not object to these plans. He saw how useful it was to explore all of these extremes and anticipate any potential disasters in advance.

They soon began to get to work. It turned out that the Blinding Banshee didn't need to host the test subjects or serve as the venue of the experiments. The Alacritous Stork was already set up to collect all of the data the MTA needed on the effects of Ves' invention on different mech pilots.

Both sides were impatient to start. After Ves filled in the research team on what they needed to know, they soon made the appropriate preparations.

Ves, the MTA researchers teleported to the Alacritous Stork and began right away. The MTA also brought over a prototype Tutor Project mech and thoroughly scanned its frame to understand its technical properties.

There were no surprises on this front. While its ability to morph its limbs and proportions to adapt to the physiques of different mech cadets was rather interesting, it was nothing new to a mech designer like Yarach Stimmons.

The truly valuable property of the Tutor Project was its ability to connect to the MSTS, which was supported by Vulcan, not the mech itself.

This also made it easy and convenient for Ves to hook up other living mechs to the MSTS in the future.

"We shall start with testing your MSTS with an ordinary adult second-class mech pilot." Stimmons said. "We are aware that your Tutor Project is designed to be piloted by mech cadets, but we have not brought many of them due to their relative scarcity."

"I see. Well, there shouldn't be too much of a difference. If something goes wrong with the initial test subject, then we should fix that first."

Stimmons summoned a random second-class mech pilot and forced the man into the cockpit of the Tutor Project.

The mechers had already modified the cockpit of the prototype machine to make sure its pilot remained 'in control'.

Ves deliberately did not request or summon any information about the test subjects. He did not need to learn their backstories and how they ended up in the hands of the Transhumanist Faction. He only needed to know their basic piloting properties.

The man that the mechers had chosen to become the first person to connect with the Mental Simulation Training System did not look like a criminal or pilot at first.

He possessed the demeanor of a professional soldier and did not seem to harbor much resistance against his captivity.

The first test subject complied with each instruction and dutifully activated and interfaced with the prototype as instructed.

"Everything is within tolerance so far." Stimmons stated. "Let us test a number of basic parameters before connecting the test subject to the MSTS."

After making sure that the prototype itself was functioning as expected, they soon moved on to the critical moment.

There were numerous control options for the MSTS.

There was a setting that allowed the mech pilot to activate it on his own initiative.

There was another setting that required the permission of both the living mech and pilot to engage the MSTS.

Then there was a setting that would not allow the Tutor Project to connect to the MSTS without permission from a mech instructor or other supervisor.

Right now, the prototype had adopted the latter setting, so Ves personally had to press the button before the prototype performed the critical act.

He leaned forward as soon as he did so and examined the mech that was standing silently in the hangar bay of the Alacritous Stork.

Yarach Stimmons and the other MTA researchers did not really notice anything special. Though the sensor readings displayed a few changes in activity, the only obvious change to the Tutor Project was the fact that its third eye began to emit bright blue light.

Ves had added this setting to the mech as a symbolic representation that the mech pilot had cast his mind to an entirely different reality, one that was entirely illusionary and crafted according to his own design.

A few awkward minutes passed in the control room where he and all of the MTA researchers were studying the telemetry transmitted by the mech and the sophisticated sensor systems.

While Ves had no doubt that the incoming data was all valuable, Stimmons did not look entirely pleased with the current state of events.

"Mr. Larkinson." He spoke up. "Did you include any interface that allows us to observe the mech pilot's interactions with your MSTS? While we can observe our test subject's mental and physical changes, it is difficult for us to understand the context of these fluctuations without knowing what is taking place in the active simulation program."

Ves blinked. "Oh. Sorry. I overlooked this issue. Let me arrange a solution."

He thought for a second before he pulled out the Hammer of Brilliance from his toolbelt. He communicated with Vulcan for a moment before placing it on a console.

The hammer glowed with power before it projected a spiritual illusion. Vulcan directly used the relic as a channel to transmit the 'live footage' of the ongoing simulated environment it had created for the inaugural user of the MSTS!

Everyone grew interested as they looked at the first glimpses of this mysterious new simulation program.

At first glance, it did not look different from ordinary simulations. The Tutor Project had deployed into an empty arena and was fighting against an identical Tutor Project mech.

The only unusual part about the current simulation battle was that the opposing machine was controlled by a remarkably skilled and clever 'AI pilot'!

The test pilot was no slouch, though.

As mech pilot with military training and experience, the man quickly familiarized himself with the properties of the Tutor Project and skillfully utilized its default loadout of a sword and shield to resist the aggressive adversary!

Soon enough, both sides traded more and more blows as they maneuvered around the battlefield.

As a premium training mech, Ves designed the Tutor Project with both defense and mobility in mind. It was fairly well-protected while also possessing enough mobility to agilely move around the battlefield.

The only truly disappointing aspect about the Tutor Project was that its offensive power was considerably below average.

This was not considered a disadvantage for training mechs as their lethality was supposed to be limited in the first place. It wouldn't do for mech cadets to be in control of a combat machine that was capable of blowing up an entire campus building if it lost control!

## Chapter 4063 Limitations of Simulator Technology

The first proper connection and activation of the Mental Simulation Training System proceeded without any obvious points of concerns.

Even though this was the first spiritual simulation system that Ves and Vulcan had ever crafted through their own efforts, its operation and degree of accuracy were not that different from conventional simulation programs.

This was no surprise. Despite the need to develop a framework for spiritual software and spiritual programming language from scratch, Vulcan was adept in both conventional programming and spiritual engineering.

As a spiritual entity that was unbound by the organic limitations of a weak and frail human body, Vulcan's productivity was frighteningly high!

Though there were a lot of spiritual entities who were stronger than him in an absolute sense, Ves doubted that his other spiritual products such as Helena or the Superior Mother could catch up to his incarnation in this regard.

This was because Ves designed Vulcan to be a creator and a maker of products!

True to his mythological source of inspiration, Vulcan traded a lot of direct combat power in order to become the ultimate spiritual artisan. The amount of design assistance that he could provide was incalculable!

Ves wanted to slap his forehead again. How come it took so long for him to realize such a simple fact?

His incarnation functioned similarly to a clone of himself that was crossed with a supercomputer!

Ves even had the feeling that as long as he had access to Vulcan, he could design mechs from beginning to end without ever accessing his implant or a single electronic system!

This was an amazing advantage!

Even now, Vulcan was continuing to develop the MSTS further. While he had already made sure that the spiritual simulation program was able to run realistic battle scenarios involving mechs, he still needed to add a lot of variables in order to make the simulation more complete.

Vulcan still needed to include additional factors such as different battlefields, additional mech models, starships, exobeasts and alien tech to the database. Though Ves had access to a sufficient amount of data on those elements, it still took time for his other self to convert them into spiritual 'files' and properly incorporate them into the MSTS.

Fortunately, the lack of variety did not hamper the efforts to test the viability and safety of the current iteration of the MSTS. Even though it could only simulate battles between relatively simple mechs for now, this was what mech cadets practiced with all of the time.

"The first test has concluded." Ves announced as the prototype Tutor Project pulled out of the MSTS.

The test pilot that had just sparred against another Tutor Project in the spiritual simulation had used his rich battle experience to trick the opponent into overreaching.

Though the Tutor Project model was considerably faster and more agile than the original Chiron model, if both of them made a serious error of judgment, then that would probably spell their doom!

Ves smirked for a moment. The Quint may have learned much about piloting mechs, but his battle partners were predominantly younger mech pilots that relied on an abundance of talent and skill to achieve superiority on the battlefield.

The test pilot that completed the first test was not as talented but possessed decades of combat experience. A wily soldier that had survived many battlefields was not so easy to outmatch!

"I am glad to see that your MSTS is functioning properly, but this is only the beginning. Let us repeat this process with other test subjects." Yarach Stimmons suggest. "I must understand the baseline of this new simulation system before we can test your innovation under more challenging circumstances."

Ves and the MTA research team conducted test after test. The parameters of the mech and its mech pilot while both of them remained connected to the MSTS looked normal enough. It was all quite boring but that wasn't necessarily bad.

The reason for that was that despite the strange nature of the MSTS, it did not behave much differently than a conventional similar program, at least on the surface.

It was not unusual for pilots to use a mech to connect to a simulation program. The popular and ubiquitous simulator pods were developed as a cheaper and more convenient alternative to them for the purpose of facilitating training.

Ves even got bored after a while. While he was glad that the MSTS did not exhibit any serious bugs or generate any dangerous circumstances, the test pilots that experienced this new training solution for the first time did not undergo any drastic experiences either.

Most of that was because the training scenarios that the MSTS put them through were too basic. Ves expected the test subjects to endure a lot more stimulation once they trialed the more intensive battle scenarios.

Once the first round of experiments came to an end, Ves and his mecher helpers analyzed the data and made a number of preliminary conclusions.

"First of all, all signs look good so far." Stimmons spoke to Ves and his team. "Although the nature of the new simulation program is anything but conventional, it operates close enough to the simulators that we are familiar with that the test subjects largely behave

as if they are undergoing a conventional virtual training session. There are only a few minor deviations that provide interesting data points."

The man waved his hand. A projection appeared to his side that showed a semi-transparent image of a human head. The image showed off a model of a brain where numerous points were lit up with red.

"This is the state of the brain of a typical trained mech pilot when interfacing with a generic combat mech. The areas in red indicate the parts of the central nervous system that are often strained over the course of piloting a mech under normal circumstances. The load and intensity of this strain can vary greatly depending on the mech model and the circumstances it is operating under. In general, third-class mechs are considerably less strenuous while first-class mechs induce an enormous burden that is especially difficult to endure for unaugmented potentates with lower-than-average genetic aptitudes."

There was an intricate and complicated relationship between the strain that a mech pilot endured and the mech he was interfacing with. Ves only knew the basics but did not pretend to understand all of the variables and relationships between them. This was solely the domain of neural interface specialists.

What Ves did know was that strain was a reflection on how well a mech pilot was able to cope with the flow of data that passed through the man-machine connection.

The reason why first-class mechs produced incomparably greater strain was because they not only produced a lot more data as output, but also required a lot of data as input from the mech pilot!

One of the reasons why the higher grades of genetic aptitude was so valued by the mech community was because those at the top could control their machines at a much finer level!

In cases where the mechs, skills and combat experience of two opposing mech pilots were equal, the one with superior genetic aptitude often gained an edge over the opposition! This was because the pilot was able to process more data and exert greater control over a mech!

From what Ves had learned, it was only when a mech pilot surpassed the extraordinary threshold that these limitations no longer applied. Every expert pilot's capacity to process data was expanded by at least an order of magnitude.

This was also the only way they could pilot much more complicated expert mechs that could fry the brain of any ordinary mech pilot!

Stimmons waved his hand again, causing a few of the red areas to fade or disappear entirely.

"This is the state of a brain when interfacing with a typical commercial-grade simulator pod. Do you see the difference? Compared to actual mechs, simulator pods produce less strain because of two main reasons. First, a simulation program's fidelity towards reality is always flawed, so virtual battles can never produce the full range of stimulation of actual battles. Second, the developers of these training systems have to abide by strict safety limitations that artificially restrict the degree of immersion. If these safety limits are not present, then the pilots in question risk getting harmed without ever stepping onto a real battlefield."

Ves raised his hand. "I have a question, Mr. Stimmons. Why is the degree of immersion capped for these devices? Isn't it better to raise it a little so that mech pilots get more involved in the virtual battles and gain greater stimulation as a result?"

"No." The MTA Journeyman shook his head. "You are not the first mech designer to ask this question, but there are good reasons to limit the immersion of simulator pods. Aside from preventing mech pilots from enduring excessive strain and suffering from unneeded injury feedback, we do not want mech pilots to become too acclimated to the false reality of a virtual battle environment."

"Uhhh…"

"As you know, Mr. Larkinson, typical simulation programs are only capable of modeling reality to a range from 80 percent to 99 percent. No matter how close they try to mimic reality, they can never achieve the most ideal state. What do you think will happen when a mech pilot who has spent thousands of hours in training with a simulator pod that only reached 80 percent realism steps onto an actual battlefield for the first time?"

"That pilot will fumble and perform well below expectations because the habits he has trained in the virtual simulations no longer work as well in reality. The disparity in physics and other interactions are so great that it is like the difference between fighting in space and fighting in the air of a terrestrial planet!"

Stimmons nodded. "Exactly. Do you see why our Association has mandated that every simulator pod and simulation system must restrict the degree of immersion to a shallower limit? While we are aware that mech pilots do not get as much out of their virtual training sessions, the greater degree of separation also prevents them from taking their practice environment too seriously. This lowers the chances of learning bad habits. Of course, it is also necessary for the individuals to pilot physical mechs in reality in order to build up and maintain their good habits."

This was why live practice sessions were essential to mech pilots! If simulations could provide them with all of the improvement they needed, then there was much less reason for them to sortie with their mechs!

After Stimmons explained a few other essential differences between interfacing with a real mech and interfacing with a simulator pod, he waved his hand a third time, causing a different image of a brain to appear on the projection.

"This… is the overall state of the brains of our test subjects when they interfaced with the prototype while engaging the MSTS. Do you see how this image differs between the last two that I have shown?"

Ves had quite a good memory and it was effortless for him to use his implant to make direct comparisons between all three images.

His eyes lit up as he noticed the differences and realized what it could possibly mean!

"The state of a mech pilot's brain when connected to the MSTS is close to the state of piloting an actual mech!"

The MTA Journeyman smiled. "That is correct! This is in spite of the fact that the neural interface of the Tutor Project is a safer model that is specifically designed to be a safe choice for growing mech cadets. While I must gather more data to be certain, my preliminary conclusion of why our test subjects exhibit this degree of strain is because the MSTS mirrors reality at least as well as the top simulators available to humanity!"

In other words, the test subjects all fought as if they were truly fighting for their lives!

This was a fantastic result! The simulated environments produced by the MSTS reminded the test subjects of how they fought in reality.

With 'special effects' such as glows to stir their emotions during a simulated battle, it was easy for them to get invested in the false battles.

After all, with Helena's minute's influence, the test subjects all felt that dying in the illusionary battlefield would actually get them killed for real!

Chapter 4064 Positive and Negative Feedback

Now that Ves obtained solid data on the performance of his new and revolutionary MSTS, he became incredibly satisfied with the preliminary results!

According to various data points, the Mental Simulation Training System was not only relatively safe to use, but also approximated realistic battles to a degree that Yarach Stimmons had rarely seen in other simulation programs!

"Although the tests so far only produced data relating to simulated duels between two training mechs, the performance of the MSTS has exceeded my expectations." Yarach Stimmons told Ves. "Master Dervidian did not dispatch us to you in vain. Even if the subsequent performance of your new simulation system does not pass muster, the

starting point is so impressive that it is already of great value to the mech industry. Congratulations, Mr. Larkinson. I do not know how you did it, but you have successfully created an entirely new base of simulation technology that sidesteps many of the technical limitations that have long plagued this sector."

Ves continued to stare at the projected diagrams and data tables. Each of them communicated a different aspect of performance. While he did not have the expertise to understand the significance of much of the data, the researchers dispatched by the MTA clearly told him that the figures should have only been produced by simulation programs that were much more advanced than what second-raters had access to in most situations!

"We wouldn't be too surprised if this data was produced by a Terran or Rubarthan simulation system, but the fact that it originated from a simulator developed by just a single Journeyman without any significant experience in this field is… astonishing."

If Ves hadn't proven himself already to the Transhumanist Faction, Stimmons would have definitely leveraged the authority of the Association to press for more answers!

Fortunately, Ves and the Transhumanists already developed a friendly relationship with each other. There was no need for the mechers to push any further. The fact that Ves contacted Master Dervidian for assistance was already a tacit form of cooperation.

After just a single testing session, the MTA researchers all recognized the insane potential and value of the MSTS. They all felt privileged for being the first mechers to get in touch with it and conduct tests on it. If everything went well, their early contributions would become widely recognized, granting them lots of recognition and rewards within the Association!

The attitudes of the mechers aboard the Alacritous Stork visibly improved.

If they previously showed respect towards Ves because of his status and because of the instructions from above, this time they all recognized his brilliance from the bottom of their hearts!

However, they still needed to do their jobs, and the data they had gathered so far was not sufficient to determine whether the MSTS was safe and beneficial.

"Now that we have established a baseline, it is time to explore the limits of your new simulation system." Stimmons grinned in a rather ominous manner.

In the next few days, the MTA Journeyman showed what neural interface specialists truly did when they were tasked with exploring the safety parameters of a new system!

The man used a sophisticated materializer to modify the neural interface device of the prototype Tutor Project without disassembling it. Normally, it was illegal to mess around

with neural interfaces, but Stimmons was one of the few people that could make changes that deliberately increased the danger factor of these critical devices!

Once they put in another test subject, they prompted the prototype mech to connect to the MSTS and run another ordinary simulated duel.

Ves immediately noticed the difference this time. The telemetry showing the mech pilot's brain activity and other life signs spiked a lot higher than normal!

"What does this mean?" He asked.

"The readings suggest that the current test subject is receiving much more feedback from the simulation than in the previous cases." Stimmons answered as his eyes remained glued to the fluctuating graphs and numbers. "The change I made to the neural interface artificially lifted its safety limit to a degree that goes beyond recommended parameters. This has allowed the test subject to forge a much deeper connection to the training mech and by extension the active simulation program. It is remarkable how quickly the test subject became immersed into the false reality he has ended up in. The simulation may be so real to him that he has unconsciously forgotten that he and his mech are just standing still in the cargo hold of a frigate."

Ves glanced at the spiritual feed projected by his Hammer of Brilliance. It displayed a thrilling duel between two different Tutor Projects.

Just like in the previous cases, the test subject was a mature pilot with military training. A mech pilot of his level of skill and experience should have been able to crush any ordinary opponent in a duel even if he was piloting an unfamiliar mech.

However, the opponents produced by the MSTS weren't vegetables!

Although their performance against the test subjects of the MTA weren't that great at the start, the driving intelligence learned quickly and rarely made the same mistake twice.

It became harder and harder for the test subjects to defeat their opponents!

When the MTA researchers brought up the rapid pace of improvement, Ves merely shrugged and gave an excuse.

"The AI driving these mechs is designed to be highly adaptive and good at learning. The better its opponents, the more it improves."

There were still limitations, of course, but the current level of performance was already more than satisfactory.

The important point here was that the AI mech the current test pilot was fighting against was so challenging that he had to do his utmost to grasp any chance of defeating his opponent!

This difficulty level happened to be exactly right in this instance. The automated opponent was not strong enough to defeat the mech piloted by the test subject outright, but it wasn't a pushover either.

The opponent was only a bit better than the test subject, which forced the latter to fight at full strength and squeeze whatever potential he retained!

Ves didn't need to look at the data to know that the test subject was performing at a considerably higher level than was customary in training sessions!

He could see the spiritual activity from the prototype Tutor Project mech if he glanced through the window. He could also connect with Vulcan and glimpse what was going on with the MSTS at the moment.

While he wasn't an expert in simulation battles, Ves could tell that the test subject was truly fighting as if everything was real and that his life was on the line!

This was a death battle where only a single mech pilot could leave the arena with his life intact!

"Remarkable!" Stimmons enthusiastically spoke. "I anticipated that this might happen. The high degree of realism of the MSTS combined with raising the limits of the neural interface can truly induce a state that is difficult to achieve for other simulation systems."

"Does this mean that the feedback and stimulation that the test subject receives is equivalent to that of fighting in a real battle?"

That was a much more complicated question to answer. Stimmons frowned a bit. "I cannot say. The current indicators show that this may be the case, but do not forget that the current simulation has only produced this result because I have removed some of the safety precautions from the neural interface of your prototype."

In other words, the rewards of training with the MSTS were only greater after increasing the risk factor!

The test subject was literally gambling his life and his future as a mech pilot at the moment!

"Let us see the perils of the current state of your prototype and your MSTS. Can you interfere with the current simulated duel so that the test subject will fall into a disadvantage and lose?"

"Certainly. Give me a moment."

It was easy enough for Ves to manipulate any ongoing battles. He silently passed on an instruction that essentially told the Quint to stop holding back and beat up the mech piloted by the test subject as soon as possible!

The change happened in an instant.

In one moment, the two Tutor Project mechs were exchanging blows without either of them falling into a disadvantage.

In the next moment, the 'AI mech' rushed forward and battered aside the incoming sword at an ingenious angle and timing!

This allowed the aggressive mech to shoulder bash the machine piloted by the test subject, thereby producing a considerable impact!

Fortunately, the Tutor Project not only possessed a considerable tolerance for damage, but was also designed to be considerably more stable than ordinary humanoid mechs.

The machine that got struck in the chest faltered backwards but did not tip over entirely.

However, the mech still exposed enough openings that prevented it from blocking the subsequent sword attacks with ideal footing.

The incoming blows continually pushed back the mech while it was already out of balance. This caused the test subject to experience a lot of distress. His stress levels and other activity levels spiked as he scrambled for his mech to regain its guard!

Sadly for him, the AI mech was not only ruthless, but also exhibited a lot more skill and mastery over the Tutor Project mech than before.

Like a battering ram colliding against the gates of a castle, the AI mech's offensive continually left no room for its target to breathe.

Finally, the mech that had fallen into a disadvantage suffered enough hits to its chest for the next sword stab to sink straight through an exposed weak point and drive directly through the cockpit!

"AHHHHHH!"

At the same time, the test subject that still resided in the prototype Tutor Project screamed in agony as many readings abruptly turned red!

The training mech automatically pulled out of the MSTS and disengaged the man-machine connection, but it was already too late by this point.

"What happened?!" Ves gasped.

"That is what happens when a mech pilot has sunk too deep into the man-machine connection while receiving injury feedback." Stimmons calmly stated as a teleporter directly removed the injured test pilot from the cockpit. "This is a phenomenon that is responsible for the early retirement of many mech pilots. It is a result that should never happen in simulation training but sometimes will due to the use of illegally-modified simulator pods."

Ves looked dismayed. The previous results looked so promising at first. The high degree of realism produced a lot of feedback that mirrored the experience of fighting real battles.

However, where there was positive feedback, there was also negative feedback.

The excessive pain and other negative stimuli that mech pilots received after a mech sustained severe damage was known to cripple and disable a lot of good soldiers!

Even his grandfather Benjamin Larkinson was forced to abandon the identity of an expert pilot due to suffering a loss many decades ago!

Stimmons turned and gave Ves an encouraging smile. "Do not take this outcome too hard, Mr. Larkinson. I deliberately explored an extreme condition this time. As long as I reinstate the safety restrictions of the neural interface, this result is unlikely to happen again. Of course, the feedback from simulation training will also reduce as a result. It will merely be good rather than excellent."

Ves eventually restored his mood. He knew he was being too greedy at the moment. It was a bad idea to resort to shortcuts to chase after greater rewards when the initial results of the MSTS already satisfied his goal!

The MTA researchers conducted a few more tests with the dangerous neural interface. Not only did they want to see what happened to the test subjects if they lost the training scenarios, they also observed what happened when they won the duels!

It was at this time that the MTA research team brought up a female, middle-aged mech pilot that was different from the ones that showed before.

Ves could immediately tell that this test subject not only possessed spiritual potential, but had also developed it to a degree that reminded him of those that were close to becoming expert candidates!

He had a feeling that it was not a coincidence that the MTA researchers brought out this specific test subject at this time.

Chapter 4065 Pushing and Nudging

"Please try your best to set up the next battle scenario to stimulate the current test subject as best as possible. Your goal is to induce her into breaking through to expert candidate."

"Pardon? Are you seriously asking me to produce an expert candidate on demand? Are you serious?!"

Ves was shocked by the MTA research team's request!

The Association already struggled to accomplish this feat even with all of their advanced knowledge and technologies.

How could the mechers issue this request as if Ves was easily able to produce breakthroughs with the snap of his fingers? Under ordinary circumstances, no one would take this request seriously!

This was not an ordinary circumstance, though. Ves not only had a history of developing innovations that could increase a mech pilot's chances of breaking through, but the test subject that the MTA brought forth this time was not an average grunt either!

"According to our analysis of the data we have gathered and the observations we have made up to this point, it is not an unrealistic possibility for your MSTS to induce a breakthrough." Yarach Stimmons spoke in a factual tone. "Ordinarily, simulation programs are unable to produce this result except under extremely rare conditions, but the realism as well as the higher-than-average baseline feedback levels of your simulation program are unusually high. We have often theorized that a hyper-realistic simulation can become an effective substitute to exposing mech pilots to life-threatening battles, and this is one of the possibilities that I have been tasked with exploring."

Ves figured as much. "I see. The test subject…?"

"Ah, yes. She is special. You do not need to know her full backstory, but she used to be an elite second-class mech pilot who took part in advanced training programs. According to our indications, she should be much closer to breaking through than usual, though we cannot quantify by how much. In short, with her, we should be able to see whether your MSTS can truly yield the result that we aim to see. Even if the neural interface is still in a dangerous and unbound state, a single successful instance is enough for us to ascertain that your MSTS is worthy of greater consideration."

Since the MTA wanted to see this happen, Ves was willing to play along. In truth, he wanted to see whether his Tutor Project and MSTS was capable of inducing breakthroughs without ever exposing the mech pilot to actual battle!

"I will try my best." He promised. "Can you tell me if there have been instances in the past where mech pilots inexplicably broke through during simulation training?"

Stimmons nodded. "Such instances have indeed happened in the past, but they are exceedingly rare. The overwhelming majority of cases happened to highly talented mech pilots with A-grade genetic aptitudes. They are special existences among potentates that are able to break through under considerably less serious circumstances. Outside of that, it is practically impossible for mech pilots with B-grade and lower genetic aptitudes to get lucky while piloting the most advanced and realistic simulators that modern technology can deliver."

The mech pilots simply didn't perceive the simulated battle as real. As long as they were aware that it was fake and that dying in a virtual training scenario did not result in the end of their lives, it was hard for them to truly care about victory and defeat.

This was why the MTA research team already regarded the MSTS as a different simulation program. The data as well as other clues all indicated that the aforementioned limitations did not necessarily apply anymore, especially with unsafe neural interfaces!

"It is also important to note that those exceptions only took place when talented mech pilots broke through to the rank of expert candidate." Stimmons added. "After that, it is impossible for them to rely on simulators to advance any further because simulations cannot fully express and reproduce the capabilities of expert candidates and high-ranking expert pilots. This is the great flaw and constraint of human simulation technology."

This was also one of the biggest reasons why expert pilots and higher struggled to improve so much. No amount of simulation training could foster their growth any further because even the most sophisticated simulation programs broke down whenever they attempted to reproduce the performance of expert mechs and true resonance.

True resonance and whatever else an expert pilot was capable of bent and broke the rules of reality!

Illogical outcomes such as 1 + 1 = 15 happened all the time as soon as expert pilots resonated with their expert mechs!

It was already hard enough for simulation programs that relied on solid and correct math to mirror reality as best possible.

It was even harder for anyone to program a simulation that could properly calculate all of the crooked math and produce results that were at least somewhat reflective of what might happen in reality!

Therefore, Ves was not surprised to hear that expert candidates did not gain much if anything out of simulation training. As weak as they appeared to be, they still mastered a small amount of extraordinary power, and this was already more than ordinary simulations could handle!

"Let's see whether the MSTS is bound by the same rules."

Since both Ves and the MTA researchers wanted to see a positive result as soon as possible, the experiment quickly commenced after a few minutes of preparation.

This time, the simulated Tutor Project mech piloted by the female test subject did not end up in a boring arena as usual.

Instead, Ves had thrown the simulation mech into a more realistic battlefield!

Shells exploded in every direction as the ground of a crumbling city environment continuously rumbled.

Hundreds of mechs of varying designs collided against each other or exchanged fire from a distance.

Chaos happened in every direction as war completely engulfed the urban battlefield!

As an elite mech pilot, the test subject immediately knew that it was a bad idea for her mech to be standing around in the open, so she immediately commanded her simulation mech to head to the nearest form of cover.

"It's too late!"

Ves did not have the patience to witness the test subject scurrying around the battlefield like a cowardly cat, so he had already commanded a squad of hostile mechs to attack the simulation mech!

"Fight!"

Fortunately for the test subject, there was a squad of friendly mechs nearby that could block the attackers, but only for a time.

The problem was that the friendly mechs had already gone through a previous skirmish and were no longer in their prime!

Their battle damage along with the depletion of ammunition and energy meant that they were at an immediate disadvantage that soon grew serious when the weakest among them already collapsed.

The simulation mech piloted by the test subject soon became a target when a Bright Warrior that only suffered moderate damage flew straight towards the training mech and swung its sword with abandon!

Ves winced in pain. Although the Tutor Project was a heartland-level mech while the Bright Warrior was only a rim-level mech, their purposes were completely different.

No matter how much the aged Bright Warrior design performance had fallen behind over the years, it was still a versatile combat machine that was designed for battle from beginning to end!

In contrast, the more modern and advanced Tutor Project was mostly designed to be a mech with training wheels. It contained an excessive degree of safety features that made it a lot safer for mech cadets to handle the mech but also reduced its effective performance by a large margin.

All of this meant that the female test subject immediately struggled to cope with the Bright Warrior's aggressive sword attack.

Though her proficiency with the Tutor Project mech rapidly increased under the pressure, the Bright Warrior succeeded in striking the training mech's armor numerous times.

If not for the superior alloys that were meant to provide the training mech with a greater damage buffer in case of accidents, those attacks would have inflicted serious damage at this time!

"Not enough." Ves shook his head. "It's not enough. She needs to face more pressure."

Another friendly mech broke apart when a hostile Stingripper shot it to pieces.

Although the Stingripper was just a light harasser mech, it was impossible for a medium mech such as the Tutor Project to catch up to it. Since the current simulation mech only entered battle with a knight mech loadout, there was no way for the test subject to retaliate against her second opponent!

The Bright Warrior and the Stingripper behaved as if they were controlled by trained military mech pilots. They cooperated wonderfully with each other.

While the melee mech continued to occupy all of the Tutor Project's attention at the front, the ranged mech circled around and fired its luminar crystal submachine gun at the exposed rear of the training mech!

Of course, the rear armor of the Tutor Project was quite thick and robust, so a light weapon was not capable of ripping it apart in an instant.

The test subject also tried to turn her machine around as much as possible to spread the damage and allow the Tutor Project's physical shield to withstand as much fire as possible.

Nonetheless, the Stingripper was still able to keep up and poke increasingly more holes in the Tutor Project's frame.

Already, the training mech suffered internal damage that slowly caused its performance to worsen.

This subsequently caused it to expose more openings to its more immediate opponent, allowing the aggressive Bright Warrior to land more hits on its scarred chest plate!

Ves glanced at the sensor readings and noticed that the test subject was under a high degree of stress.

"Is it enough?"

He had a feeling that the test subject needed another push. While Ves contemplated adding a third opponent, the Tutor Project would probably collapse too soon as a consequence.

"Hmmm, maybe I don't need to give that big of a push. Maybe there is a more gentle way for me to nudge her in the right direction."

He concentrated his mind and communicated with a design spirit.

Soon enough, the test subject that was already under considerable pressure due to the fact that her simulation mech was falling apart suddenly experienced a moment of great crisis!

For an instant, it was as if a Sword of Damocles had appeared above her body and descended in order to chop her head off her neck!

While there were many people that would break and cower in this situation, the test subject was different!

"NO! I WILL NOT DIE IN THIS UNWORTHY FIELD!"

Her most primal desire to survive burst out with the greatest intensity than she had ever experienced!

She completely forgot that she was piloting a training mech in a simulated battlefield.

She completely forgot that her opponents were fake mechs that weren't even piloted by real humans.

She completely forgot that she had no stake in the war between the two sides!

All she knew was that if she did not fight at a level that was more than she had ever attained, she would lose this battle and her life without any doubt!

As soon as her latent potential exploded forth with great power, the circumstances in reality underwent a drastic change!

The prototype Tutor Project suddenly burst forth with forced resonance! The cargo hold of the MTA frigate sounded an alarm as the unmoving training mech radiated so much power that the deck started to deform for reasons that no one could explain!

Stimmons quickly activated a few safety settings that caused a powerful energy shield to contain much of the forced resonance fluctuations produced by the training mech and its incredible mech pilot.

Despite aiming to achieve this result from the beginning, Ves, Stimmons and everyone else still looked shocked when it actually happened.

A few of them doubted whether the MSTS could produce such a result in the first place. Others couldn't believe that it could happen so soon.

Regardless, the test subject successfully defied convention and became the latest person to join the list of exceptions that broke through while fighting on a simulated battlefield!

"Stimmons…" Ves trailed off. "What is the genetic aptitude of the lady in the cockpit of my prototype mech?"

"B minus." The MTA Journeyman stiffly answered. "She is a relatively talented mech pilot by all indications, but she is incomparable to those with superior genetic aptitudes. This is what makes this breakthrough so remarkable."

Even if the MSTS could not help those with inferior genetic aptitudes break through in simulation battles, the current results were already enough to change the landscape of the mech community!

Chapter 4066 New Ore Mine

As soon as the momentum from the breakthrough disappeared, the MTA research team immediately teleported the exhausted expert candidate away.

It was of vital interest to determine how the lucky woman's advancement had changed her and whether she was any different from expert candidates who broke through during battle.

Ves did not expect there to be any significant differences. He could already observe through various means that the new expert candidate was the real deal. Her strength, her outburst, her transformation of will and other indicators were all similar to the other expert candidates he had known in the past.

He became distracted by other considerations.

Two important consequences resulted from the breakthrough.

First, the test subject's breakthrough to expert candidate released a huge amount of spiritual feedback!

Different from the previous breakthroughs that Ves had witnessed, multiple different parties became the beneficiaries of the energies unleashed by the female mech pilot.

The prototype Tutor Project obtained the largest share. The mech became one of the few living mechs that was being piloted by an individual who had broken through while interfacing with it. This caused the prototype to become a unique mech that became stronger and more developed than any ordinary copy of the same design!

"It also makes it rather troublesome to perform any subsequent experiments with it." Ves observed. "If I want to gather representative data on its routine performance, then I will have to change it out with a fresh and unadulterated copy of the Tutor Project."

Still, the current prototype was already a lot more valuable than before. With all of the growth and strengthening it had gone through, it could follow in the footsteps of the Quint and become a powerful living mech that excelled at training mech pilots!

The breakthrough benefited other parties as well. Since the test pilot and the Tutor Project were both connected to the MSTS, the design spirits that were responsible for maintaining its operations also received their shares!

Vulcan obtained the greatest share while the Quint and Helena were only entitled to lesser shares.

Even so, all three of them were satisfied with this 'bonus'!

The feedback from an extraordinary individual was qualitatively different from the feedback of an ordinary individual.

In order for his design spirits to evolve, it was not enough for them to accumulate a huge quantity of low-grade spiritual energy. They also needed to gather higher grades of spiritual energy that could help them reach a higher life phase.

"Interesting."

Ves was happy to see all three of them grow stronger, but he recognized that much of their gains came at the expense of the prototype Tutor Project mech.

"It can't be helped. The amount of energy released by a breakthrough event is ultimately finite."

Aside from this, Ves also took note of another consequence of the unusual breakthrough event.

The simulated battle inside MSTS that tipped the test subject over the edge briefly fluctuated and grew unstable upon the moment of her breakthrough event.

The reason why this happened was because the simulated environment was not entirely capable of getting to terms with forced resonance.

This was an outburst that briefly granted the simulation mech the power of an expert mech!

Even if it only lasted for a short amount of time, the degree in which the expert candidate and her mech distorted reality was considerable!

All Ves knew was that despite Vulcan and the Quint working together to maintain the realism of the MSTS, they failed to account for all of the weird phenomena that forced resonance could produce!

The two design spirits had to rely on their existing knowledge to construct a theorized model of forced resonance.

In other words, the simulation mech that overflowed with power due to the test subject's breakthrough entered into a fantasy scenario when it started to beat up the opposing mechs!

None of it was a reflection of reality!

If the test subject fought in the same scenario but for real, her performance and the parameters of her prototype Tutor Project mechs would probably be different from what the MSTS had tried to approximate!

Ves frowned at this sight. He already expected the MSTS to be unable to model and calculate willpower and resonance phenomena properly. After all, Vulcan had only worked on it for less than a year, and he spent much of that time building the foundation and framework of the spiritual simulation program.

It was already good enough that the MSTS was able to portray normal mech battles with a remarkably high degree of accuracy. It would be too much to expect more out of such an immature new system!

"That doesn't mean it has to remain limited in the future." He whispered to himself.

Though the MSTS failed to cope with this extreme properly this time, this didn't mean it had to stay this way!

He already made enough observations to confirm that the MSTS was not only capable of simulating forced resonance, but also the performance of expert mechs and maybe more!

This was because the MSTS was a spiritual program and was not subject to the limitations of digital software programs. It was already capable of depicting certain metaphysical concepts such as living mechs and glows. As long as Ves or Vulcan expanded its rudimentary framework to encompass more complex phenomena, it could model all kinds of irrational power manifestations!

Ves slowly grinned. If his suspicions were correct, his Mental Simulation Training System had the potential of providing a proper simulation environment for expert pilots and expert mechs!

"The costs are high, though."

He tempered his expectations after thinking about how much he needed to invest to get to this point. In order to expand his spiritual simulation program's scope and encompass all of these ambitious phenomena that digital simulation programs weren't capable of modeling, Vulcan would probably have to spend at least a decade on this task!

Vulcan would have to start from the beginning and research how to quantify and model different forms of resonance. It wasn't enough to feed Vulcan with data on breakthrough events and how expert mechs such as the Amaranto and the Everchanger performed during their practice sessions.

The true challenge lay in trying to translate these data points into reasonably accurate formulas and rules that could predict how an expert mech would behave under many different circumstances.

The difficulty was akin to predicting the weather patterns on a typical planet like Davute VII up to a week or a month in advance!

Was it possible to accomplish such a feat? Yes.

Was it easy to do so? Definitely not!

"In short, this is not a goal that I can fulfill in the short-term."

He felt quite frustrated about that. He knew it was possible and he knew that he had the capability to turn the MSTS into an effective simulation program for his expert pilots.

Ves knew without a doubt that if he could mature his spiritual simulation program up to this point, the growth and progress of all of his expert pilots would accelerate!

For the time being, people such as Venerable Tus and Venerable Joshua had little choice but to participate in tame practice sessions. The gains they made during their friendly spars were limited because they always needed to hold back their power for fear of dealing serious damage and because they never truly faced any threat of death.

It would be different in an advanced simulation environment! As long as the MSTS could model their true resonance and the reality-breaking capabilities of their expert mechs properly, every Larkinson expert pilot could unscrupulously exercise their powers and test themselves against challenging opponents that could undoubtedly push them to their limits!

Even if it turned out that his expert pilots could not make as many gains as fighting in actual battles, this was still a far better outcome than the previous status quo!

"Argh!"

He constantly had to remind himself not to get ahead of himself. While he wasn't sure whether the MTA secretly developed a solution to this problem, he was pretty sure that there was no publicly available commercial product on the market that could compete against his MSTS!

"After all, compared to existing simulation programs who all share the same tech base that has been explored for millenia, mine is based on a completely different tech base that has barely been exploited to its full potential!"

It was like comparing two different ore mines..

The ones used by every existing competitor were not only active for thousands of years, but had almost depleted all of its reserves.

In contrast, the one that Ves had just started to dig was still rich with untapped ore!

The only problem was that he was by himself and had to use a pickaxe to manually dig out chunks of ore! It would take a huge amount of time for him to gather any yield through his own efforts!

That led him to consider whether he could employ more people to assist with the development of the MSTS.

No one said that only Ves or Vulcan could work on it. The problem was that it was difficult to find helpers who possessed the qualifications to facilitate the development of a spiritual software program.

"The Aducs can't do it." Ves shook his head.

Ever since he struck a deal with the Aduc Family, its family members had begun to take up positions within the T Institute.

The Aduc researchers employed their limited spiritual abilities to perform relatively simple studies.

Much of their tasks amounted to routine experimental grunt work. Although Ves had noticed that the Aducs started to develop their spiritualities after Gaia came into their lives, their pace of growth was not impressive.

Ves did not expect any of the Aducs to turn into qualified spiritual sorcerers or spiritual engineers anytime soon.

"In the end, I'm still suffering from the same problem as always. I don't have enough manpower."

He felt quite depressed about that. He had developed a lot of great ideas over the years. His to-do list had practically expanded into a library by now and showed no signs of shrinking.

The development of the MSTS was a major project that could take a lifetime to complete. Though Vulcan was a highly productive creator, he alone was not enough to realize the potential of this revolutionary new simulation system!

"It would be a different story if I had a thousand qualified programmers at my disposal."

He sighed and decided to just muddle onwards like it was useful and hope his circumstances improved in the future.

In any case, there was no need for the MSTS to accommodate high-ranking mechs and mech pilots at the moment. It just needed to be complete enough to pair well with training mechs.

The demands of mech cadets weren't as high as real mech pilots. The current state of the MSTS was already enough to run routine training scenarios.

When Ves finally ended his contemplations, he turned to Yarach Stimmons who looked completely excited.

"I need to pass on this result to Master Dervidian as fast as possible." The MTA Journeyman said. "Due to the sensitive nature of this development, we must maintain its secrecy as best as possible. I will have to enter a secure communication chamber to pass on word back to the Paracelsus Optimus."

"Uhh… okay?"

"There is no need for concern. Master Dervidian will undoubtedly award you with a substantial sum of MTA merits should your new innovation prove useful to us. Our Association is always always grateful for any contribution that you can make to the mech community."

Now that was a lot more reassuring to hear! Ves relaxed a bit. The mechers might be scumbags in many aspects, but they were never ungrateful.

"I will await his reaction." Ves calmly responded.

The significance of the MSTS was no less than the transcendence glow that previously excited the Transhumanist Faction.

Ves had no doubt that he had become even more important to the Transhumanists now that he came up with a second groundbreaking innovation in a short amount of time!

Chapter 4067 Phased Contributions

The MTA research team became so excited by what happened that they suspended the rest of the experiments planned for the day.

Ves and the others spent their time on analyzing the data of the previous experiments. The case where the latest test subject broke through provided a wealth of data that could help them understand the capabilities of the MSTS and possibly increase the chances of generating other breakthroughs.

The prototype Tutor Project had become a lot more interesting than before. Newly empowered after receiving a heap of spiritual feedback, the living mech had come a lot closer to becoming a third order living mech.

"It's a pity that it is just a prototype."

As valuable as the mech may be, it would always remain flawed and incomplete in his eyes. While third order living mechs were valuable, Ves felt it was against his principles to make serious use of a product that was only built for testing purposes.

Fortunately, the MTA was eager to take his prototype mech off his hands. Ves spoke for a while with a few of the MTA researchers aboard the Alacritous Stork about using the current prototype to induce other breakthroughs.

The discussion came to a halt as soon as Stimmons teleported back into the control room.

"Mr. Larkinson, I have news for you. Let us move to a private chamber so that I can convey our Master's new instructions."

They moved to a private office where they both sat down next to a desk. The MTA Journeyman was still brimming with excitement, which meant that the news he was about to share shouldn't be too bad.

"First, let me make it clear that Master Dervidian is highly pleased with your progress. While your decision to branch out into mech training simulation systems sounds rather random, the results you have achieved so far are impressive, especially since you have built your MSTS from scratch by yourself. We see great potential in your innovation and wish to see how far you can take it. We would like to obtain a batch of your new training mechs so that we can study its properties and see how viable it is to reproduce what has happened under many different circumstances."

Ves already expected that the Transhumanists would show this kind of reaction. It was hard for a faction that has always sought to further human evolution to remain unmoved in the face of an invention that could produce breakthroughs under more controlled circumstances!

"What do I need to do and what do you expect from me?" Ves asked as he wanted to know whether his latest accomplishments added any additional burdens to his plate.

"We do not wish to move too quickly with regards to your MSTS." Stimmons reassured him. "This is a new form of simulation program and we know far too little about it compared to conventional simulation programs. We are also aware that it is relatively early in development and that it may take many years for it to be complete enough to promote its use across human space. For now, we approve of your intention to hide its full potential and capabilities and cautiously extend its use for its initial purpose in providing mech cadets with a different and potentially more effective form of training."

That was good news to Ves. The MTA already understood his situation and did not force him to change his original plans.

The initial reason he came up with the MSTS was because he wanted to give his new line of training mechs additional value that could not be matched by the competition. He more than met this goal this time! 

As such, Ves was not that eager to flesh out his MSTS as it would take a long time before he could achieve any drastic progress.

He wanted to proceed with his original goal of completing his Tutor Project and publish his promising new training mech model!

Once the completed Tutor Project went on sale, many different mech cadets would begin to make use of the MSTS.

All of these connections and all of the spiritual simulation sessions would provide Ves and Vulcan with a wealth of data. They could monitor the use of the MSTS, observe whether there were any problems that they did not notice beforehand.

For example, there may be extremely rare glitches that could only happen at a frequency of 1 per billion training sessions. It was practically impossible to catch these bugs before Ves chose to release his training mech model!

While Ves was still committed to testing his spiritual training program with the test subjects provided by the MTA, it took way too much time and effort to completely verify the safety and proper functioning of the MSTS.

If Ves wanted to complete this ambitious project in a timely manner and move on to newer and more interesting pursuits, he had to release his Tutor Project once he gained a reasonable amount of confidence.

He just hoped that the early adopters of his completed Tutor Project model did not mind serving as his beta testers!

Ves already understood that this was what the Transhumanists wanted to see as well. They could perform as many tests as they wanted with their own test subjects, but it was much easier to obtain a vast quantity of real usage data by distributing his training mech to the public.

"Are there any limits to how I can proceed with the utilization and subsequent development of my MSTS?" He asked. "My new training program is an independent invention. Once I release the Tutor Project and see that its users are doing fine, I plan to add the ability to engage the MSTS to my other training mech designs."

In fact, Ves also planned to add this valuable new feature to all of his Larkinson-exclusive mech designs going forward, but he did not see the need to mention that at this junction.

Stimmons transmitted a document to Ves. "We do have a list of rules and restrictions that we expect you to abide by. As we have seen in previous test cases, your Tutor Project and your MSTS can produce damaging and even fatal outcomes to mech pilots when improperly handled. The circumstances that happened today should not be repeated elsewhere unless we give our explicit authorization. Do you understand?"

"I do."

Much of the reason why the Tutor Project and the MSTS produced extreme positive and negative results during this session was because of the unbound neural interface.

If they attempted to perform the same tests with a safe and legal neural interface inside the cockpit of the Tutor Project, then nothing drastic would happen in all likelihood.

There was no way that Ves would be able to gain a foothold in the market for training mechs if his products frequently caused accidents!

Stimmons explained a few additional rules. None of them bothered Ves that much since they were mainly established to prevent him from screwing around with his mechs in order to produce additional breakthroughs under highly dangerous circumstances.

The MTA was not looking for another solution that promised to help mech pilots advance in rank at great risk of their lives!

The true holy grail was accomplishing this feat with zero danger to the mech pilots in question!

Since it would probably take a lot more research and development to reach this point, the Transhumanists were willing to be patient and let Ves improve his MSTS at his own pace.

In any case, Ves was just as eager as the MTA to turn his revolutionary new spiritual training program into a tool that could make any mech pilot break through on demand!

After providing Ves with an entire lecture on prohibitions and safety instructions, Stimmons finally revealed how much this contribution was worth.

"Given the promising but highly rudimentary state of your MSTS, Master Dervidian has seen fit to award you with 35,000,000 MTA merits." Stimmons officially announced.

That… was quite a big reward for a product that Vulcan had made over the course of a single design round!

However, when Ves thought of the amazing potential of his invention, it did not sound nearly as much as it was actually worth!

After all, who else could claim to invent a simulation system that could not only induce breakthroughs at much higher ease, but also give expert pilots and expert mechs an opportunity to shine in a safe environment?

"This is only the first phase of your reward." Stimmons said as if the MTA already anticipated his reaction. "Master Dervidian will continue to monitor the progress that you have made with the MSTS. Whenever you have achieved major progress, he will review your work and grant you additional MTA merits when he sees fit."

"I understand."

This was a clear signal that the Transhumanists wanted Ves to continue his work on the MSTS. Both sides knew that it would probably be difficult to achieve a lot of progress in a short amount of time, so the offer was quite open-ended in that regard.

Now that they got all of the official stuff out of the way, Ves and the MTA research team resumed their experiments and continued to explore the limits and the dangers of the MSTS.

Ves had to fabricate a new prototype of the Tutor Project since the previous one had changed too much after receiving a lot of spiritual feedback.

Once they resumed testing on a fresh mech, the subsequent results weren't as astonishing.

A lot of test subjects broke down and suffered varying degrees of brain damage as they endured great pressure in the spiritual simulation battles.

Not many of them possessed spiritual potential and even fewer of them were anywhere close to advancing to expert candidate!

Any attempt to force a breakthrough on them was as foolish as trying to empty an ocean with a single bucket. It just wasn't possible!

One of the more notable negative outcomes was whenever Helena went overboard and scared the test subjects a bit too much!

The mech pilots all came out traumatized after getting the biggest fright of their lives. It would probably take considerable effort for them to recover and realize that they were never at risk of dying in the first place!

"Damn, sister."

After the fiftieth mech pilot screamed as the injury feedback from the Tutor Project fried the nerves in his brain to the point where he could never interface with a mech again, Stimmons finally ended this sadistic run.

"Let us see whether it is possible to induce breakthroughs when the Tutor Project and the MSTS are restored to their safe parameters."

The MTA Journeyman tinkered with the neural interface of the Tutor Project and reinstated all of its standard safety settings. The man also instructed Ves not to make the simulated battle scenarios too outrageous.

Just as expected, the subsequent testing sessions did not yield any exciting results. No matter how close the test subjects were to breaking through, none of them ever received enough of a push to tip them over.

The safe version of the Tutor Project put hard limits on the degree of immersion, so the mech pilots were unable to go too deep with their man-machine connections.

In addition, the battle scenarios were a bit tamer as well. While a lot of enemies still tried their best to destroy the simulation mech, Ves had commanded Helena to tone down her influence to avoid scaring people senseless.

While none of the test subjects suffered any significant mental or physical damage during the subsequent experimental sessions, the benefits were only marginal this time.

Ves was not unhappy with these results. Both the Tutor Project and the MSTS had reached an adequate level of safety and effectiveness. It was too difficult to improve the latter without compromising the former, so it was best not to mess around any further.

In the end, Ves received the verdict that he was aiming for when they finally wrapped up their experiments.

"Master Dervidian is satisfied with the safety of your new inventions." Stimmons said. "You can proceed with selling your products to the public and allow them to experience the benefits of your new training mech and training system."

"Great! I have been waiting to hear this answer."

Ves could finally proceed with opening up another promising income stream for his clan!

Chapter 4068 The Cartoon Conspiracy

After spending several weeks on testing the Tutor Project and the MSTS, the MTA research team was finally ready to wrap up their data collection duties!

Yarach Stimmons and his fellow MTA researchers had completed their assignment in the Davute System. There was no reason for them to stick around any longer and the Alacritous Stork had already received instructions to bring them back to the Paracelsus Optimus.

Many of them looked rather regretful at the end. They had become increasingly more cognizant of the innovative and groundbreaking nature of the Mental Simulation Training System.

It was built from a completely different tech base that offered a lot of new possibilities!

A few MTA researchers were even clever enough to realize that if this tech base was powerful enough to produce the MSTS, it could also be used to develop other wonderful applications!

Alas, none of them possessed the qualifications or permission to poke any further. Ves had not made any deals with regards to sharing the source code or the tech base behind his MSTS.

Even if he did, he doubted whether anyone from the MTA would be able to replicate Vulcan's spiritual work!

Ves was happy enough to see the MTA busybodies return to where they belonged. As much as they had been useful in verifying the safety of his new products, they were less than forthcoming in sharing all of their data and analysis results.

Only Stimmons spoke a bit more freely. Part of that was because he was a mech designer. Another part was because he would likely be assigned to study aspects of the MSTS in the future.

Now that they wrapped everything up, Ves and Stimmons finally had an opportunity to speak to each other on a personal basis.

Ves had long grown curious at the differences in status and responsibilities between Jovy Armalon and Yarach Stimmons.

Both of them were Journeymen who grew up and worked for the Mech Trade Association for their entire lives.

However, there were clear differences between the two. The fundamental reason why they received different treatments was because of the disparities in their design philosophies.

"Mr. Armalon is pursuing a much more profound design philosophy in comparison to many other mech designers within our Association." Stimmons frankly explained to Ves. "His ambitious choice along with the progress he has achieved so far has put him onto an elite track where he is entitled to greater care and resources. As long as he continues to make progress in a branch of mech design that none of us have explored in the past, he will continue to receive rich rewards."

"What about you, Mr. Stimmons?"

The MTA Journeyman smiled. "I have enough self-knowledge to pursue more modest and achievable goals. I am not as daring as you or Jovy nor possess the overwhelming need to make a radical difference in the mech industry. It is already enough for me to contribute where I can and facilitate the work of other mech designers such as yourself. This is what our Association is tasked with doing in the first place."

Ves did not entirely understand why mech designers entered this profession without developing an ambition to make any major changes, but everyone was different. He respected the decision made by Stimmons. Perhaps it was not bad for a mech designer who did not possess an overwhelming amount of confidence in his abilities to aim for a more modest goal.

"What can you tell me about your specialization?" Ves asked. "All I know so far is that you specialize in neural interface technology. What is it that you intend to improve with your work? I met a neural interface specialist once who wanted to make it more viable for potentates with lower grades of genetic aptitude to become effective in battle."

Yarach Stimmons wryly smiled. "That is an ambitious goal. Many mech designers have poured over this problem, and while they have achieved a limited degree of success. This is done by developing a unique neural interface and incorporating special components and programming that are specifically optimized to work with a mech pilot's individual strengths and weaknesses. However, the cost of designing and producing customized neural interfaces that can slightly improve the performance of a low aptitude pilot is exorbitant."

It was good that mech pilots with lower-than-average genetic aptitudes still had hope. They just had to be at least as rich as a first-rater in order to commission a custom neural interface!

"I see. You sound like you don't really believe in this solution."

"Neural interfaces are amazing products of technology. They can easily and conveniently accomplish a feat that did not sound possible to humanity at first. They are devices that can establish a stable and coherent connection between an organic human mind and a completely digital machine. However, only a small proportion of humanity is naturally able to withstand the high degree of data throughput that takes place during each active connection. Mech pilots with lower grades of genetic aptitudes are clear failures who are not able to keep up with the demands of intensive mechs."

In the past, mech pilots with D-grade and F-grade genetic aptitudes weren't as worthless. Mechs were a lot simpler and weaker back then. They moved slower, they didn't possess a lot of systems and mech designers weren't as crazy at the time.

However, as mechs and the technology around them became more advanced, the subsequent generations of mech pilots had to handle more data and control more and more aspects of their newer and fancier machines.

This led to the gradual marginalization of potentates who weren't lucky enough to obtain genetic aptitudes that were at least higher than C-grade.

Perhaps third-raters below this threshold could still get by in limited circumstances, but first-raters wouldn't even be able to enroll into any mech academy with their awful talent.

The cost of training any first-class mech pilot was extremely high! It was not worth it to invest so much effort only to produce an inferior soldier that wouldn't even be able to control an ordinary first-class multipurpose mech!

Ves inwardly sighed. He truly pitied the potentates who had fallen into this bucket.

He also recognized the difference between a third-class mech designer and a first-class mech designer.

The former was more sympathetic towards mech pilots with lower than average talent while the latter did not care at all for the plight of the most unfortunate group of potentates!

"You haven't exactly told me where your focus lies in your personal work." Ves reminded the MTA Journeyman. "What do you aim to achieve with your design philosophy?"

"My work is not that easy to explain to an uninitiated mech designer such as yourself. A simple description of my research direction is that I am looking to improve the degree of fidelity in substitution whenever a mech pilot interfaces with a non-humanoid mech."

"Uhh…"

"To put it in simpler terms, my work aims to make mech pilots feel less alienated and 'stuck in the wrong body' whenever they pilot a beast mech, an aquatic mech and other mech types that are less common."

"Oh! I get it now! That actually sounds interesting. Is the issue that you are working on a big problem?"

"It depends." Stimmons said. "Do you know the reason why beast mechs designed by most of our colleagues look similar to the animals that we are familiar with in nature or in various forms of media?"

"I always thought that people like us are too lazy to invent a new mech shape. Why go through all of that trouble and effort when natural evolution has already given us ready-made templates that are already proven concepts?"

The MTA Journeyman smirked. "This is only a shallow reason. The deeper reason why beast mechs look similar to classical Earth animals is because every single mech pilot has grown up with images and depictions of them. For example, a mech pilot that grew up with a cat as a pet or seen a tiger in a zoo will perform considerably better when piloting a tiger mech."

"What?! Are you serious? I've never heard about this relationship before!"

"I am being utterly serious, Mr. Larkinson. This is a real and clear relationship that has been empirically proven by many studies. This is actually one of the reasons why we subtly encourage the adoption of pets and make sure that modern media show plenty of depictions of Earth animals. Think about all of the popular cartoon dramas that children grow up with. Those shows that center about the daily lives of anthropomorphized ponies? They prep future mech pilots into piloting centaur mechs. That classic cartoon

where a cat continually tries and fails to catch a mouse? The potentates who have watched this show will feel grateful for doing so when they choose to pilot tiger mechs in the future."

Ves was utterly gobsmacked. He never knew that there was such an important relation between a mech pilot's familiarity with animals and their subsequent compatibility with non-humanoid mechs that adopted the shape of those very beasts.

For the MTA to go as far as to manipulate the programming of children's cartoons showed that this relationship was quite real!

"Doesn't that mean the mech pilots of my clan are highly predisposed to piloting tiger mechs?"

Stimmons firmly nodded. "With all of the cats associated with your Larkinsons, this is practically a guarantee. Of course, it is not necessary to keep so many pets. Your clan is a bit excessive in that regard. In truth, it is already enough to expose mech pilots to images or stylized depictions of animals. The essential requirement is to familiarize a mech pilot to the shape and behavior of an animal. As long as he can visualize a cat, a bird or an octopus, he will smoothly and naturally be able to pilot a beast mech of the associated shape without needing to go through too much book learning and specialized training."

This explained so much about beast mechs. Perhaps mech designers who specialized in designing them already learned about this relationship in their classes, but Ves mostly spent his time on designing humanoid mechs.

"So this is the reason why there aren't many mechs out there that adopt weird and abnormal alien shapes, right?"

"Correct. Beast mechs with shapes that do not correspond to any familiar animals may possess objective advantages over their more conventional counterparts, but they are much less popular on the market and do not sell as much. Few mech pilots are willing to invest the considerable amount of time and effort that is necessary to understand a new beast shape and learn their distinct advantages. This in turn makes it so that beast mech designers are even less inclined to deviate from the prevailing industry standard."

The consequence was that the overwhelming majority of beast mechs in use all looked familiar to many people!

It was not without reason why tiger mechs and avian mechs were the most popular beast shapes!

"I can imagine that it isn't really necessary for mech designers to deviate from the classical beast mech shapes." Ves remarked. "Most of them already do their jobs well enough that they do not need to be replaced."

"That is correct. You can design a tiger mech with six limbs instead of four, but the costs outweigh the benefits in most cases. We mech designers do not stick to the familiar shapes solely because they are familiar to us. They can truly form the basis of powerful, cost-effective mech designs."

"I see. So where does your design philosophy play into this, Mr. Stimmons?"

"My work is aimed at reducing the familiarity problem. I am actually a bit of a contrarian on this issue and see greater promise in beast mechs that are inspired by more obscure exobeasts and astral beasts. They may look horrifying to some, but many of them are also products of natural evolution. If mech pilots do not have to overcome a major threshold in order to get started on mastering these non-standard non-humanoid mechs, then it becomes slightly easier to increase the diversity of beast mech models in the mech market."

"...And you call that a modest goal?"

## Chapter 4069 For-Profit Education

Ves finally completed the Tutor Project!

After a relatively simple design journey that just so happened to have generated a lot of interest from the MTA, Ves finally wrapped up everything that was necessary to introduce a new paradigm of mech training onto the mech market.

No one aside from Ves and maybe a select group of Transhumanists had any idea of what the LMC was about to unleash to the public!

Though the MSTS undoubtedly stole the show, a mech cadet wouldn't be able to gain as much value out of it without a training mech that played to the spiritual simulation program's strength.

The Tutor Project and the MSTS were literally made for each other. Both of them were already independently capable of providing a lot of helpful training and instruction to any mech cadet lucky enough to get in touch with them, but when used together they produced a form of synergy that would be certain to win over a lot of mech cadets!

He looked up at the first batch of training mechs fabricated by the LMC at the Hammerworks, the new manufacturing complex located in the heart of the Cat Nest on Davute VII.

The mechs possessed a substantial amount of armor but could also move quite deftly on land, in the air and in space. It was designed in a way that mech academies could conveniently slot in different models of semi-modular flight systems depending on the need. They could also leave them out entirely and deploy the new training mechs as landbound machines.

The visual design of the new training mech deviated from the more functional appearances of other training mechs. Ves had spent a decent amount of time on stamping his new design with his own artistic style.

While he was aware that imposing his own art on his works might cause it to look repugnant to a decent slice of the market, he didn't care about that. His machines stood out more as a result and possessed their own distinct identities.

His new training mechs already looked like they were more than ready to enter into scraps and earn new dents on the training fields. When paired with a glow that felt as if these mechs were eager to learn, they conveyed an impression that they were the ultimate training mechs!

"My Tutor Project, no, my War Squire is ready to be used."

He settled on naming his new training mech the War Squire to convey the right meaning and to shape people's attitudes towards the machine.

By calling his work the War Squire, he essentially boasted that his new training mech model was not only capable of training any mech cadet into a competent mech pilot, but that it could also prepare them for the toughest wars and the most brutal battlefields!

His expression worsened. "Now I need to make it sell."

This was not as easy as it sounded. Private individuals and groups almost never bought individual training mechs from the market.

The reason was because it was too expensive, time-consuming and troublesome to train mech pilots from scratch in-house. Every security company, mercenary outfit, mech military and other mech organizations found it much more convenient to hire new troops that had already graduated from the mech academies.

By the time the graduates who were all in their twenties entered the workforce, they had all gained the qualifications to pilot combat mechs. There was no way they wanted to go back to piloting neutered mechs with training wheels at this stage!

"As a result, the training mech market is almost entirely based on servicing big clients."

It was similar to the market for law enforcement mechs. Without a well-known brand or an established reputation in a specialized sector, it was extremely difficult to break into a market where trust and stability were highly valued!

Ves already went through a minor ordeal when he tried to market his new Pacifier model. The circumstances regarding his first true law enforcement mech were considerably more generous because he already partnered up with a reputable mech designer with a good foundation in the law enforcement sector.

Also, Ves was able to take advantage of the broad applications of the Pacifier model's glow by marketing it towards an entirely new audience.

A growing number of security companies and mercenary organizations had already discovered the many uses of Lufa's glow and eagerly ordered one batch after another of the increasingly hotter Pacifier mechs!

Ves smiled when he thought about how his Pacifier model finally became a bestseller. His smile faded a bit when he recognized the circumstances surrounding his new training mech model were much less favorable.

There was no way for him to push his completed work onto another segment of the market like before. The applications of the War Squire were solely limited to training mech cadets.

At most, recent graduates who required a little more preparation before stepping onto the battlefield might find it useful to pilot them, but most organizations preferred to put them into real mechs instead.

"I need to create demand for my new product." Ves recognized.

To do that, he had to prove that his new War Squire possessed substantially more value over training mechs at comparable price ranges.

Ves didn't make it easy for himself. He set out to design a premium training mech, and he succeeded in doing so. With a list price of 0.75 MTA credits per copy, the War Squire was cheaper than many combat mechs but considerably more expensive than the run-of-the-mill training mech models on the market.

All of this meant that the War Squire had to compete against excellent products made by mech companies that had built up a huge track record and trusted reputation over many years!

Each of their training mechs were designed by Master Mech Designers. With entire catalogs of products that were characterized by superior performance, superior optimization and incredibly low malfunction rates, it was hard for any new entrant in the market to dislodge the market leaders!

Normally, it was a pipe dream for a smaller and less established mech company like the LMC to vie for the attention of the elite mech academies that consisted of the main group of customers of premium training mechs.

Fortunately, Ves and his fellow clansmen already anticipated that it wouldn't be easy to gain a foothold in the market. The LMC's Marketing Department already spent months working on a multi-pronged strategy to turn the War Squire into a hot new product.

"Tell me what you've got, Benny." Ves demanded as he entered his office in his so-called Royal Mansion.

He stepped towards the thick and hard windows and peered out at the greenery that lay beyond.

He and his little family had made themselves home in the Royal Mansion for a year at this point. Located within the Blue Cat Estates of the Cat Nest, it was surrounded by a luscious forest that the Aducs had arranged with great care and thoughtfulness.

The sense of nature evoked by the surroundings put Ves at peace and made it easier for him to separate himself from the hustle and bustle that dominated the rest of Davute VII.

Even though the Royal Mansion looked a bit vulnerable and exposed from afar, appearances were deceiving.

The entire Cat Nest was constantly guarded and protected by a combination of shield generators, underground fortresses and mechs hailing from the Battle Criers, the Living Sentinels and the Eye of Ylvaine.

While these mech legions might not excel at offensive actions, their mech doctrines and mech rosters were much better predisposed towards defensive missions!

Combined with the fact that the Larkinson Clan also set up a random guard rotation of two expert mechs, Ves was certain that there was no compound in Industrial District 2 that enjoyed more luxurious protection!

Of course, that was mainly because the other lots in the district were mostly ordinary fabrication plants, logistical centers and other industrial facilities.

None of the groups that invested in the district had been eccentric enough to build residential housing next to their manufacturing complexes and surround everything with fortress-grade defenses!

Those who lived their entire lives on safe and peaceful planets could not possibly understand why Ves and the Larkinsons took matters into their own hands and invested so much in their own protection.

Ves could only shake their heads at the complacent behavior of other pioneering organizations. Didn't they realize that they were operating in a frontier environment that was much less safe than civilized space back in the old galaxy?

A year of living in Davute had made it clear that there were way too many colonists in the Red Ocean who treated their new ventures as low-risk opportunities to open up new lands and markets!

How naive.

Hopefully, his War Squire could help make their armed forces a little more prepared for the wars to come.

Gavin Neumann presented Ves with a data pad that contained the preparations as well as the progress the Marketing Department had made so far. Now that the War Squire model was finally ready for production, the LMC could proceed with pushing its new products onto the clients that it had identified in advance!

"There are many ways for us to promote the War Squire. Aside from running an ad campaign and setting up a long-term exhibition in the city center where curious visitors can try out the War Squire for free, we also intend to loan out copies of our new training mechs for free."

"Say what?"

"It makes perfect sense, boss. The overwhelming majority of mech academies in the Red Ocean are private institutions. They are businesses that need to earn a profit in order to remain alive. Right now, the market environment is not that good for them. Each of them has to build their campuses from scratch. Even if they have managed to secure grants and subsidies from local governments, it is expensive to build the necessary facilities and hire the right mech instructors. Add the need to buy hundreds of training mechs and obtain the necessary licenses and accreditation to teach up-and-coming mech pilots, virtually every group that has started a mech academy has suffered substantial losses."

It took money to start a business, and the money required to start an operation in the Red Ocean was considerably more expensive due to the awful infrastructure and lack of existing amenities!

While Ves was aware that a lot of different mech academies had popped up like mushrooms across Davute and beyond, many of them had gone through a lot of money but did not immediately attract enough mech cadets to cover their expenses!

This was because many of the immigrants arriving from the Milky Way were predominantly working age adults that had chosen to embrace new lives and challenges. Not many of them brought kids as those who already started their own families were much less willing to uproot their lives.

This meant that there were considerably less mech cadets in proportion to the total population of humans in the Red Ocean than normal!

Everyone expected this problem to be remedied within a generation as colonists in the new frontier started having kids, but how long did the education sector have to wait until the classrooms were finally full?

Each of the mech academies that had emerged in recent years were hoping that they could make it through the difficult early period. Their goal was to leverage their early establishment and turn into reputable and long-established schools.

However, in order for them to last in this survival game, they needed a constant flow of capital in order to pay all of the bills.

The larger the mech academy, the greater the costs!

According to the data pad that Gavin handed over to Ves, the Marketing Department had already identified dozens of struggling mech academies.

Each of their founding groups had underestimated the challenges and overestimated the enrollment figures!

"I see." Ves said as he comprehended his mech company's strategy. "Mech academies that are tight on money are much more sensitive to free stuff."

"Exactly. They won't say no to receiving a batch of War Squires on loan. This is the best way for our War Squires to start getting used. Once the initial mech cadets start generating positive word-of-mouth advertising, we can truly start with stoking up demand at other mech academies."

Ves nodded in understanding. "All of this sounds good, Benny, but there is only one little problem. Why are we pushing our War Squires to the cheapest, worst and bottom-ranking mech academies first?"

Chapter 4070 Starting from the Bottom

Roughly 3.5 percent of the total population of humanity possessed the right genetic aptitude to pilot mechs.

Of this privileged group of potentates, not all of them chose to attend a mech academy.

Perhaps their families abhorred the prospect of sending their children off to battle.

Perhaps the potentates did not possess genetic aptitudes that were high enough to enjoy good careers as mech pilots.

Perhaps it was difficult for them to pay for the tuition that mech academies charged.

Even so, many potentates still went on to attend mech academies instead of regular schools in order to leverage their rare advantage in life.

Since mechs were so popular and so prevalent in the public consciousness, practically every teenager with at least decent genetic aptitudes chose to pursue their childhood dreams and study to become heroic mech pilots!

As a profession that was highly dependent on skill, knowledge as well as practical experience, there were a lot of ways to train and educate them. A huge amount of training mech models and teaching systems had emerged over the centuries.

Mech academies had to make a lot of important choices. Which training mechs should they acquire? Which teaching system should they adopt?

They had to make these decisions and more based on their background, their reputation, their market appeal and most importantly their budget.

In general, the greater the budget, the greater the prestige and attractiveness of the mech academy!

For example, the Larkinsons invested a lot of money into the First Star Mech Academy located in the outskirts of Kotor City.

The Larkinson Clan was loaded with money, so it had the luxury to grant a generous budget to its first land-based mech academy.

By supplying First Star with lots of funding and a sufficient amount of good mech instructors from their own ranks, the Larkinsons were hoping that it would become a top elite institution in Davute one day!

As long as it built up a good reputation and as long as its graduates went on to become elite mech pilots in large numbers, the First Star Mech Academy had the potential to not only become renowned in Davute, but also in the rest of the surrounding region!

Of course, it wasn't easy for the Larkinsons to get to this point. The First Star's oversized campus and expensive teaching facilities had become a huge money pit that could not be filled in a short amount of time.

There weren't enough mech cadets in Davute to fill up all of its classrooms and training fields. The Larkinsons still proceeded with making this huge investment knowing that it might take 20 or even 40 years for the First Star to finally become popular enough to earn its own keep.

Even then, there was no guarantee that it could defeat the competition and attract enough mech cadets that were willing to pay a hefty amount of money each year to receive premium education from this particular institution!

In short, the education market was incredibly volatile and fraught with failure and uncertainty.

The parties that chose to start their own mech academies in the new frontier consisted of many different groups.

Some were founded by long-running educational chains that not only possessed deep pockets, but also built up a stellar reputation for raising mech pilots.

Their mech academies immediately became desirable destinations for mech cadets!

Others were founded by new entrants such as the Larkinson Clan that had the money but not the reputation or experience in this business.

Business at their mech academies were slower and were not guaranteed to pick up if they turned out to be bad at fulfilling their roles.

The remaining mech academies were founded by more modest people and groups. These were usually among the smaller and more rural institutions that overwhelmingly enrolled the less talented and less well-off mech cadets from the same city or maybe province.

There was nothing wrong with them per se. Mech cadets that received better opportunities were usually willing to move to larger cities where the larger and more prestigious mech academies were based.

Those who were unable to follow suit for whatever reason could still become decent mech pilots by attending one of the many lower-tier mech academies.

When the LMC's Marketing Department drafted its initial strategy for the War Squire model, it chose to start off with putting its focus on these less impressive mech pilot schools!

"It makes perfect sense, boss." Gavin replied. "While we are all aware that the War Squire is a premium product that is aimed at the upper end of the market, it is impossible for us to enter it right away. We need to start lower down the hierarchy where there are a lot more openings that we can exploit."

"Haven't we tried to push our products onto a more reputable institution at all, Benny?"

"We have, and none of the schools we contacted has bothered to give us a reply." Gavin sighed. "These elite mech academies are mostly founded by long-running chains that not only know exactly what they are doing, but have also established long-term partnerships with the same group of mech companies that have supplied all of their training mechs for many years. Even if these chains have entered an entirely new region, their business partners have often followed suit as well. If you were in their shoes, would you take a gamble on a completely unknown training mech offered by a stranger in this sector or would you go for training mechs that are highly similar to the ones that have already worked out well in the old galaxy?"

Mech academies depended heavily on reputation to attract more business, so it was vitally important that nothing ever went wrong with any of their training mechs. Therefore, most school administrators would definitely choose to go with the established brands rather than plunge into the dark and bet on an entirely different training mech system.

Ves frowned. "So not a single reputable institution has shown any interest even if we extended generous terms? What about the schools operated by the Wild Fighter Association? Weren't we supposed to approach them as well?"

"We tried, but even the Wild Fighters aren't willing to replace their existing suppliers."

"Damn. Have we truly received no interest from large and well-established mech academies?"

"Well…"

"What is it, Benny?"

"There's the Hexers. The ones that have moved over to the Red Ocean and started up colonies have set up many good mech academies. Once they learned about our new training mech model, they have expressed a cautious amount of optimism and enthusiasm towards our new offering."

Ves' eyes lit up. "How could I forget about them?! They're practically the biggest fans of my products! Isn't this an excellent development!? Why haven't you mentioned them before?"

"Calm down, boss." Gavin shook his head in disapproval. "While it looks like we can use the Hexers as a springboard for our War Squire model, the problem with them is that they aren't reputable. First, they are already highly biased towards us and our products, so any praise they make about the War Squire will merely be regarded as a group of fangirls celebrating the release of a new song by their favorite artist."

"Oh."

"Besides, you know what the Hexers are like. They don't get along with others and earn no respect from the foreign community. If their mech academies happen to produce better results with the help of our War Squire model, no one will pay attention because everyone thinks the Hexers are weird. It is too difficult to use them as a case where the adoption of War Squires leads to objectively better results."

In order to convince the market, the Larkinsons needed to win over mech academies that possessed actual credibility.

The fault with this option was that Hexer mech academies were not credible in the slightest!

"As for other elite mech academies, we are not the only mech company that is trying to start up a successful line of training mechs in the Red Ocean." Gavin continued. "Our offers aren't attractive to these well-funded institutions at all. The only ones that have shown actual interests are the smaller mech academies that do not have access to a large warchest."

"I need to know what sort of schools are willing to try out our War Squires."

"There is a list in one of the files on the data pad."

When Ves browsed the list, he did not look impressed. The list mentioned over two-dozen institutions that were located in various remote settlements across the Krakatoa Middle Zone.

These were relatively rural colonies located in more far-flung star systems. Many of the mech pilot schools in question were pretty much the only educational institutions available on their planets.

These mech academies were considered as necessities. They did not necessarily receive a generous amount of funding from their founders because the colonists were already bleeding money left and right in an attempt to build up the rest of their settlements!

"Don't look down on them, boss." Gavin said as Ves frowned at how shabby some of these institutions looked. "They're awful alright, but they also provide a stage that can show how drastically our War Squires can improve the quality of their education. Think about it. Their mech instructors largely suck, their training grounds and training facilities are rudimentary at best and their simulator pods are likely outdated mass production models that only stand out for being cheap."

"So?"

"If we change one variable by replacing their ramshackle training mechs with our War Squires, we predict the academic results of many mech cadets will swing so drastically that they will provide undeniable proof that our product can make a huge difference by itself!"

Ves finally understood the merits of this approach. "I see. This is a better plan than I expected. You're right. Everything about these mech academies is awful, so a training mech that can partially take over the role of mech instructors due to its proactive teaching features will be able to show off its full value!"

He could already imagine what might happen once they introduced this variable to these struggling mech academies. The mech cadets would not only embrace the new premium training mechs, but improve so much with them that they would quickly attract a lot of attention due to their superior results.

If only a single mech academy produced so much improvement, then it wouldn't necessarily generate a lot of attention.

If over 20 mech academies simultaneously produced the same pattern, then there was no question that other schools would take note!

Once it became clear that each of these rural institutions were utilizing the same training mech model, other struggling schools would definitely think about buying a few copies as well!

It wasn't necessary for these new customers to order hundreds or thousands of training mechs from the LMC at once. It was already enough for them to dip their feet into the water and buy a couple of War Squires each.

Ves was so confident in his product that he knew for certain that as long as the tentative customers experienced the benefits of the War Squire model in person, they would definitely place repeat orders!

He realized that this bottom-up approach was a good way to build up momentum in the education sector.

By gradually accumulating a growing wave of excitement and faith in his War Squire model, he was confident that those elite and established mech academies would no longer remain unmoved by the temptations of this revolutionary new training mech and its associated MSTS!

"Let's do it." Ves decided. "Wait, if we are about to hand out our mechs for free or no-interest loans, let's take advantage of it and dress it up as a charitable act rather than just a marketing ploy. We can just pretend that we care about the underdeveloped communities in the Red Ocean. It's perfect!"

Thus, the Larkinson Clan soon announced its first charitable initiative!