Mech Touch 7061

Chapter 7061: Divided By Three

Ves perked up when the Web Mistress addressed the mutated voribug threat.

The major human powers had not published a lot of information about them. Most of what the public learned came from studying the public combat footage against the new threat that emerged on the Rubarthan front.

Many people already speculated that the voribugs were being directed by a central authority.

The masses were just unclear whether this direction came from a gestalt hive mind existence that formed when enough low-intelligence voribugs gathered together, or whether the direction originated from a single hyper-intelligent queen organism.

It sounded as if the latter was the case. That had many implications. A single supreme voribug queen likely possessed absolute command over all of her swarms, making it so that each and every single element acted in complete coordination with each other.

This was the kind of absolute control that the Polymath could only dream of. The voribug queen was able to implement a cohesive strategy and ensure that her entire swarm moved and fought according to her will.

Even if the individual voribugs lacked the autonomy to make too many important decisions by themselves, the superior control made up for it in most cases.

Ves inwardly shuddered when he thought about what a formidable opponent red humanity had gained.

Yet for all of the advantages that the mutated voribugs gained by centralizing their command and control, there was also a very big vulnerability.

"So have you guys sent out the Evolution Witch or another god pilot to track down the voribug queen and snuff out her life already?"

"It is not that simple, Ves. We have mapped out the overall territorial expansion of the mutated voribugs, but we cannot pin down her exact location. She can be in one among tens of thousands of star systems. In fact, there is a possibility that she left the known holdings of the voribug race many months ago and secretly chose to hide her presence in an alien or even a human star system."

"Shouldn't there be ways for us to track her down?" Ves looked puzzled. "Whatever means she uses to control her swarms, there has to be an insanely high amount of signal traffic between the voribug queen and all of her minions. You should be able to map out this communication network easily and trace the location of the nexus."

"Again, it is not that simple. The alien network is dense and filled with large amounts of garbage data. Every signal bounces off other voribug, which bounces to the surrounding voribugs and so on. The voribugs are somehow also aware of signal interception and resort to more means to scramble and encrypt their data transmissions. This indicates that the voribug queen has a good understanding of red humanity's capabilities and has already implemented countermeasures to prevent my senses from tracking her down."

Ves grew alarmed when he heard that! "Are you saying that the voribug queen is intelligent and aware of our capabilities to such an extent that she has successfully employed countermeasures against your 'network authority'?"

The Web Mistress nodded with a serious expression. "The intelligence she has displayed through her actions is frightening for an alien being. I estimate that not even the ancient phase whales that have lived for over a million standard years can match her in this aspect. We are confronted by a hostile alien True God that understands our language, society and technology well enough to target our weaknesses while evading our strengths. It is naive to assume we can strangle this threat in its cradle by tracking down this queen and dispatching our god pilots at her. She may not be a Star Designer, but she is gifted in her own ways."

All of this was alarming information!

Ves already had an inkling that the mutated voribugs would be hellish to fight against, if all of those swarms were directed by an intelligent and rational queen, then their threat level was much higher than anticipated!

"Are you able to tell whether the voribugs are bioengineered species rather than naturally formed?"

"Oh, the answer to that question is simple, Ves. We know without a shadow of a doubt that the voribugs cannot possibly be a naturally evolved race. There are too many traits and too many signs of genetic tampering and optimization to conclude otherwise. What we do know is that the creations have almost certainly outlasted their creator. The voribugs would absolutely not behave as aggressively and reveal themselves at this time if they were still enslaved by their makers."

Ves nodded in agreement. He thought so as well. It would be too outrageous if their original creators were still around.

He also appreciated that he received confirmation that the voribugs were engineered. That would influence his strategy towards this race to an extent. Knowing that they were designed and bred for war and conquest was different from dealing with a naturally mutated species that possessed a lot of other traits.

"I am looking to travel to the Rubarthan Pact and take a look at how our mechs are faring against the voribug threat." Ves said. "I am hoping to see whether I can help by designing a mech that is specifically designed to fight against them. Do you have any advice or insights that you are willing to share that can help me fulfill my goal?"

He was being completely earnest here. He hoped that the Web Mistress would sense that and be more generous in sharing her information.

She remained silent for a few seconds. "As I have already mentioned, the mutated voribugs are controlled by a singular powerful and intelligent queen, one who understands humans like us no less. Do not let your guard down and do not underestimate this threat. The voribugs are enemies that grow more formidable and more difficult to block as they grow in numbers. I am not too concerned whether the voribugs will make progress in human-occupied space. The reinforcements from the Cybernetic Empire should help the Rubarthan Pact hold the lines. It is the native aliens that reside in the territories around the expanding voribug threat that concern me. They are ill-prepared to fight a defensive war and will lose many more territories in the coming months."

Her words alluded to a more terrible consequence. Ves only had to think for a brief amount of time before he figured out what she meant. "Are you saying... the inability for the Red Cabal and the native aliens to hold back the expanding mutated voribug threat will only cause them to grow uncontrollably strong, perhaps to the point of completely overpowering both us and the native aliens at the same time?"

The Star Designer grimly nodded. "For better or worse, the Red Ocean is currently divided by three contesting civilizations. This normally leads to a precarious but surprisingly stable equilibrium. If one of them grows too powerful, the other two will temporarily reduce their hostilities against each other in order to suppress the greatest threat. This should automatically bring the civilizations into balance again, until another one threatens to become too strong."

"That sounds nice, but reality isn't as clear-cut as you make it sound." Ves almost scoffed. "People aren't rational, and the same applies to our alien adversaries. The Red Cabal and the native aliens hate us so much for killing all of their native gods that they are determined to wipe us out even if bugs have begun to infest their homes on a large scale. The voribugs meanwhile conquer so many star systems that their exponential growth will advance at record speed. By the time both humans and native aliens are finally able to acknowledge the greater threat, I fear the voribugs may have already surpassed a critical point where they are producing enough offspring to potentially conquer the entire Red Ocean!"

There were plenty of signs that the native alien races had utterly become consumed by their war against red humanity. They could not bring themselves to stop and face the latest and most acute threat.

Even if red humans were more sensible and understood that they needed to hold back the voribug swarms first, their forces may not be able to relocate to the furthest border region of the Rubarthan Pact because of the continued threat of alien invasion elsewhere!

In fact, according to the latest news reports, the Terran Alliance was enduring a renewed enemy push across its frontlines. The native aliens seem more interested in wiping out red humanity first than dealing with the voribug infestation while its scale still remained relatively small.

Ves began to grimace as he suddenly understood what the Web Mistress was alluding to with her earlier words.

"Are you saying that... if we want to contain the voribug threat and prevent it from growing out of control, we may have to assist the native aliens in repelling the bug infestations in their own space?"

The entire notion sounded like a farce!

Yet such an absurd circumstance may actually unfold in front of their eyes. Ves disliked the idea of fixing the incompetence of the major alien races whose territories were being gnawed upon, yet the alternatives were worse.

As much as Ves hated the native aliens and wanted to wipe them all out, letting the voribug swarms devour the original rulers of the Red Ocean would lead to a worse outcome!

As the Web Mistress had said earlier, a galaxy divided by three civilizations maintained its status quo longer because any that grew too strong instantly got ganged up by the other two.

Right now, that correcting mechanism might not fire up in time to make a difference due to the absurd growth rate of the mutated voribugs!

This meant that red humanity may have to do the unthinkable and assist the native aliens in defending their own space!

Ves did not have a clue on how he could pull this off. It was beyond unacceptable to actually dispatch human forces over the border and fight side-by-side with the outnumbered native alien defenders.

The latter would probably turn their guns on the arriving human mechs and warships!

He wanted to palm his face when he thought about all of these headaches. "What a mess."

The Web Mistress maintained a stoic expression. "Nobody thinks this is a desirable circumstance. Nonetheless, that should not prevent us from doing what is necessary to

defend our race and civilization against the most dangerous biohazard in the new frontier. What separates high-tier galactic citizens such as you and I from those who rank below us is our ability and willingness to leverage our capabilities to the good of our society. I am pleased with the initiative that you have already shown, but I advise you to be open-minded."

"What do you mean by that, Your Excellency?"

"A time may come when you believe it is in our interests to defend the native aliens against invading voribugs. If doing what is necessary earns you condemnation, then you should proceed without fear. We shall vouch for you and protect you. Others may be short-sighted, but Star Designers such as myself are certainly not. We know what is best."

Ves did not entirely agree with that last part, but he understood the gist of her argument.

He still did not feel comfortable with this 'mission'. The very notion of having to fight on behalf of the native aliens sounded far too much like a betrayal for everything that he and his Larkinsons fought for in the past.

"I will see." He said in a noncommittal tone. "I much prefer to keep everything simple and focus my efforts on helping our troops fight the voribug swarms directly. All of this 'my enemy of my enemy is my friend' stuff is too convoluted for me. Besides, maybe we are looking down on the native aliens too much. They have huge warmaking potential and they still have lots of phase lords and phase whales that have yet to commit to the Red War. They ought to be able to defend their own space."

Chapter 7062: Polylife Concept

Time was slowly ticking down.

Ves was acutely aware of how much time had passed and how many more minutes he had left.

As much as he was interested in continuing to talk about the new and rapidly escalating voribug threat, Ves did not forget about his original goals.

"Can we please get back to the original topic?" Ves asked as he gestured to the projection of the draft design of a Polymetal mech. "As we have established before,

my personal Polymetal mech will consist of two fundamental smart metal products, the NanoGatherers and the NanoSmiths. This should be enough to serve as a productive foundation for my Polymetal mech. I think that I can produce remarkable results if I turn this smart metal mech alive."

The Web Mistress looked intrigued. "You already possess a solid plan for your future Carmine mech. What aid do you seek from me, young man?"

"I have several questions where your input is welcome, Your Excellency. First, I roughly understand what will happen if I turn a smart metal mech alive. Only the collective is alive. The individual nanomachines are sadly not clever enough to be alive by themselves. They're too small and rudimentary to develop this quality. They are also just components rather than fully self-contained units."

The Devil Tiger was his first true smart metal mech. It possessed several interesting qualities that Ves never fully appreciated at the time. It was only now that he had become a Senior Mech Designer with ambitions to develop a Polymetal mech that his first smart metal mech as well as tiger mech possessed a lot of reference value.

What Veronica learned from studying the present incarnation of the Devil Tiger both delighted and disappointed Ves.

His father possessed excellent control over his now-ace mech as a single unit, but he was unable to exert precise control over the individual nanomachines. It was only the programming as well as the living personality of the Devil Tiger that could perform such a feat.

Perhaps the only way for his father to gain total granular control over the individual nanomachines was to become a god pilot, because by that point he would merge with his living mech.

That should probably work out for Ryncol Larkinson. He did not possess the mental capacity to control an astronomical amount of nanomachines directly. He never expressed a need to control nanomachines to such a surgical extent either. He was more than happy with his present level of control over his battle partner.

Unfortunately, that did not align with Ves' own demands.

He had become a much more capable mech designer than when he initially developed the Devil Tiger on a whim.

Ves also had access to much better technology as well as materials.

With such luxurious conditions, he owed it to himself to design a smart metal Carmine mech that completely raised the ceiling of what was possible and set a new standard in the mech industry!

Ves outlined his ambitious demands to the Star Designer.

"My wishlist for my personal Polymetal mech can be boiled down to three key features." He said. "The first one is what I call Polylife. I not only want to find a way to make each and every individual nanomachine alive, but also grant them the ability to pool their intelligence in a very intimate and unbreakable kinship network. I want each of them to merge their spiritualities together in a superintelligence of sorts that is greater than the sum of its parts. The more nanomachines in the pool, the smarter and more alive my Polymetal mech has become. What do you think about this idea, Your Excellency?"

This was the first time he shared this radical concept to anyone. He had never bothered to share this crazy idea to Gloriana or his RA liaisons because their perspectives were too limited to appreciate the greatness of this idea.

Ves hoped that a Star Designer would be different. The one sitting before him should not only be smart enough to understand the intricacies of his idea, but hopefully be able to offer concrete tips and advice on how to realize it. He urgently needed guidance on how to translate his imagination into a concrete mech design.

The Web Mistress genuinely looked interested at this point.

"You have presented a difficult puzzle to me, Ves. Do you even have a plan to turn every individual nanomachine alive?"

"I do. I would not come here if I haven't figured out at least that much, though I still need to flesh out the mechanics of my action plan. What I am struggling with is how to tie all of these nanomachines into a small and most importantly unbreakable kinship network of sorts. As stated earlier, I want all of the NanoGatherers and NanoSmiths — or at least their original batch — to not only be alive on an individual basis, but form a superintelligent amalgamation that will constitute the main living mech."

The Web Mistress understood the key point.

"You believe that forming them into a strong network with my assistance will enable you to realize this Polylife concept, is that correct?"

Ves nodded. "Yes. I may be able to figure it out myself through lots of trial and error, but that requires me to commit a huge amount of time and effort. I can't spare that much these days. I would like you to help me draft the outline of a more complex 'kinship network' that can satisfy my demands."

The Web Mistress looked at the projection of the draft design of the Polymetal mech with a different mindset.

Knowing more about what Ves had in mind interested her a lot. This was definitely one of the boldest ideas that she had heard from a young Senior Mech Designer.

Most mech designers who heard about his Polylife concept would dismiss it as pure fantasy that was impossible to translate into reality, but she was different.

Star Designers rarely if ever dealt with impossibilities.

They were so much more capable than other mech designers that they were limited by time and resources far more than competence and ability.

In other words, almost anything was possible to a Star Designer. They just had to find it worthwhile and cost-effective enough to pursue an ambitious project.

Not every Star Designer would think so, but the Polylife concept happened to be a viable design application to the Web Mistress!

"You have approached the correct Star Designer." She complimented him. "I am able to devise the steps you need to take in order to have a good chance of realizing this Polylife concept for your smart metal mech. It will appear as if you are creating a heavily altered version of a kinship network. It is much more limited in scope and lacks a true nexus of sorts. It will also be more difficult to expand. Adding more smart metal to your Polymetal mech will not immediately upgrade the superintelligence. It may take days or weeks for the new additions to be fully assimilated."

That last part surprised him. "Why does it take much longer for the new nanomachines to assimilate into this 'Polylife Network' or whatever?"

"That is because the nature of the network has changed too much. The absence of a nexus will remove a critical weak point to your Polylife mech. Theoretically, each nanomachine can be eliminated and replaced by new ones without negatively affecting the whole."

"I am familiar with the Ship of Theseus concept." Ves mentioned. "I always take advantage of that when upgrading my existing living mechs."

"That is clever, but it is also reflection of the looseness of the living traits of your mechs." The Web Mistress gently chided him. "The 'Polylife Network' that I have envisioned will strengthen and harden it against external tampering and attacks, but it will also make it much more difficult to adapt to rapid changes."

Ves' eyes lit up. "Can these measures be used to strengthen other kinship networks such as my own Larkinson Network?"

"Nya?"

Even the Golden Cat who had previously been napping in the last half hour perked up after hearing this possibility.

However, the Web Mistress shook her head.

"Do not get your hopes up, Ves. It is theoretically possible to reverse engineer my specific solution for your Polylife Network and apply the same principles to the Larkinson Network, but the conditions are completely different. A small-scale local area network is incomparable to one that rivals the galactic net in scope."

Ves grew disappointed, but he did not dispute her words. It was ridiculous for him to think that it would be that easy to translate the benefits to the Polylife Network to normal kinship networks.

"So what do I need to know about this Polylife Network?"

"There are several points that you need to be aware of. I am unable to create this Polylife Network myself. Only you can do so as you are the living mech specialist. I am therefore unable to verify whether it is viable enough for you to produce a successful outcome. In the event that you are able to create your Polymetal mech as you have envisioned, your new living mech may not behave as you expected."

Ves frowned when he heard that second part. "What do you mean by that, Your Excellency?"

"Have you ever spent much thought on the form this 'superintelligence' will take? I am unable to determine how intelligent you can make each and every individual nanomachine. Regardless of that, even if every single NanoGatherer and NanoSmith is only as alive and intelligent as an ordinary bee, their quantity is so vast that melding them together in a Polylife Network will result in the birth of an amalgamated life that far exceeds anything that you have produced with your living mechs up to this point."

He froze as he thought about what she said. He admittedly put a bit of thought behind how smart or how stupid this superintelligence may be, but he possessed so little data and knowledge about it that he could not make any solid predictions.

The Web Mistress evidently suspected that the most likely outcome would be an unprecedentedly powerful and intelligent living mech!

"All of my latest living mechs, especially the ones that I have designed and crafted in person, are what I call third order living mechs." Ves explained. "They are as intelligent and sapient as baseline humans. They are even better at certain aspects, especially when they grow older and more experienced. If what you are saying is right, my Polymetal mech may be able to reach the fourth threshold of a living mech. It is one that I have yet to define or even imagine, but if your theory is correct... my Polymetal mech may actually break the barrier of a third order living mech, if only on a conditional basis."

He never imagined that his Polymetal mech may be the first living mech to become a fourth order living mech!

Even if it did not truly reach the fourth order due to the nature of its existence, what mattered was that Ves could study his machine extensively and gather lots of data on the traits that made it different from his previous works.

It was like gaining a preview on what he was capable of if he mastered his specialization further.

His analysis and conclusion would subsequently help him develop a genuine fourth order living mech in the future!

Perhaps his Polymetal mech may only be classified as a pseudo-fourth order living mech.

This was because it could theoretically regress back into a third order living mech if it lost a lot of smart metal.

Yet Ves did not see any reason to quibble over this circumstance as the only other alternative was a regular third order living mech.

"Are you not afraid of what you may inadvertently bring to life, Ves? What if your creation escapes your control?"

"I am not afraid." Ves said with a smirk. "That is because I intend to form a Polymetal Pact with it right away. As long as we are bound by blood or rather smart metal, the two of us are completely tied together. That should be enough to ensure its loyalty and obedience."

Chapter 7063: Ves the Trapped Fly

What the Web Mistress presented to Ves was ambitious beyond his own imagination.

To think that the Polylife concept could potentially result in the birth of a pseudofourth order living mech. Ves' expectations for his Polymetal mech design project continually rose as he continued to exchange his thoughts with the Web Mistress.

She might not be a living mech expert, but she was still the definite authority on networks in the Red Ocean, so she was in a unique position to provide a lot of relevant consultation on this specific mech proposal.

The notion that Ves may be able to create a living mech that broke past the threshold of the third order excited him beyond all measure!

Ves became even more committed to his ambitious Polymetal mech concept!

Its attraction grew so strong that even the Web Mistress expressed a personal interest in the outcome of his experimental idea.

"Your ingenuity and boldness as a Senior Mech Designer is a refreshing surprise." She complimented him. "Regardless of whether you have what it takes to realize the full scope of your mech proposal, the journey towards developing it should already form a valuable component of your growth trajectory. You are still young enough that you can afford to make many mistakes."

Ves disagreed with her assessment. He may be young, but human history was unfolding at a very rapid pace. The Red War, the Voribug Outbreak and the arrival of a hostile God King from Messier 87 in a few decades all loomed heavily over his shoulders.

He lamented the limited status and capabilities of a Senior Mech Designer. He urgently needed to progress his design philosophy and realize it in order to gain the power he needed to produce more meaningful changes to society.

The Arboreal Project was making good progress now that the Terran Alliance had thrown its full support behind the collaborative effort. Ves expected to see the first Woodsap mechs roll out of their growth pools in a handful of months at most.

Being able to develop a solid outline and theoretical framework for his Polymetal mech should allow him to complete its development within one or two years by his estimation. There was no reason to expect any major delays so long as he was able to

use the Web Mistress' guidance to solve the most difficult technical problems in advance.

That still left him with three more elemental Carmine mechs to complete.

The one based on the water element had become stalled as the Hunting Association had yet to decide on whether to go through with the Mergewater mech concept that he proposed.

The one based on the fire element had yet to enter the planning stage, but Ves was confident he could make good progress on it due to the data and experience he accrued when he bestowed life to the Dominion of Man.

Only the one based on the earth element remained a mystery to him for the time being. He had yet to develop a solid idea on the configuration or central concept for a mech after all this time.

He had been lacking in inspiration on this front.

Ves was not worried yet, but it would grow into an increasingly more severe problem if he still hadn't managed to come up with a killer idea for an earth-based Carmine mech.

"Your time is running out." The Star Designer reminded Ves. "Regardless of whether your Polymetal mech is capable of becoming a so-called fourth order living mech, you must first ensure that its Polylife Network is capable of producing this result. Let me explain my theory and proposed solutions to you first."

She began to get technical, using a projection to draw out an elaborate and detailed theoretical model that involved many different variables.

Although the basic premise of the Polylife Network was not too complicated, Ves needed to incorporate a lot of additional factors in order to control and regulate the fusion between an uncountable amount of nanomachine-scaled life forms.

The Star Designer claimed that every step was necessary to reduce the failure rate and avoid any undesirable complications, and Ves believed in her judgment.

The good news was that much of her layout consisted of pure E-technology. Ves just had to put on his spiritual engineering hat and work out the specific implementation to her suggestions.

The more challenging parts came from trying to modify the designs of the individual nanomachines to better facilitate the creation of a superintelligence.

"Smart metal is a specialized field that possesses a high threshold to enter. A nonspecialist such as yourself will not know how to modify the carefully engineered designs of the NanoGatherer and NanoSmith. You will have to seek out a mech designer who specializes in nanotechnology and designing smart metal mechs to fully realize this blueprint. You can take your chances without completing this step, but I do not advise you to skip this essential step. It is abundantly clear to me that the Polymath never envisioned that these two nanomachine products would ever be used to form a living mech and a Polymetal mech no less."

As much as Ves wanted to deny it, he knew she made an important point.

The components had to fit the design. The base versions of the NanoGatherer and NanoSmith were solely designed and optimized with lifeless mechs in mind. Even before he met with the Web Mistress, Ves already thought about implementing numerous tiny changes to them so that they would better support the functioning of a living mech.

As Ves wondered where he should seek out a smart metal specialist, the Star Designer voiced her own proposal.

"You do not need to seek out a reliable and competent collaborator. I can refer you to a mech designer that can fully assist you in analyzing and modifying the designs of the CE nanomachines. As an upstanding member of my Mech Supremacist Faction, I can vouch for his competence and trustworthiness. While I will not order him to offer his services to you, I do not believe my intervention is necessary for you to persuade the individual in question to fully cooperate with you, even up to the point of agreeing to strict conditions such as signing a non-disclosure agreement."

Ves looked up at the Web Mistress with a hint of vigilance.

Of course the Red Association wanted in on his ambitious mech design project. The Polymetal mech concept had very strong implications for their profession. It was impossible for the mechers to ignore its potential and let Ves keep it for himself.

"I suppose you guys are offering me the expertise of a smart metal specialist for more reasons than giving me a hand, right?"

The Star Designer responded with a coy expression. "Come now, Ves. You would not have come here and presented a revolutionary Carmine mech design that can change the mech designer profession forever if you did not already consider the decision to collaborate with the Red Association. This experimental project of yours is precisely the initiative we are willing to welcome with open arms. It is unthinkable to leave us out of the development of this promising endeavor."

She was right, but that did not mean that Ves would welcome RA intervention with the same degree of enthusiasm.

The initial version Polymetal mech should ideally be a product made by himself and used by himself.

He wanted to retain the freedom to publish or withhold his work in order to fish for greater concessions, but the Star Designer was onto his game.*f*ree@ebnovel.com

She clearly wanted the RA to get involved from the start of the design project so that it could become an important 'shareholder' while the cost of entry was still relatively low.

The mechers would most certainly wanted to gain valuable concessions in exchange for their extensive support.

"We can use your collaboration with the Terran Alliance on the Arboreal Project as a template for our own contract. We do not ask much from you, Ves. In exchange for providing the relevant mech designers and R&D support that you require in order to develop a powerful and future-proof Polymetal mech, we would like to obtain exclusive distribution rights and other related rights to our collaborative efforts. You may use the resulting Polymetal mech model and its variants as you wish in the Larkinson Clan, but outside of that we must obtain control over who is permitted to receive and pilot such machines."

That was pretty much the same deal he made with the Terrans about the Arboreal Project.

It was not a coincidence. He would not accept a stricter proposal, and the mechers would lose out if they gave up ground on the exclusivity issue.

"Do I truly need the help of you mechers?" He asked even though he already knew the answer.

"You must. The Cybernetic Empire has admittedly done an excellent job in developing the NanoGatherer and NanoSmith models, but they are both products of an environment that is devoid of E energy and had no access to superdimensional matter. Are you truly willing to settle for an inferior product that lacks the benefits of hyper technology and superdimensional technology? Let me inform you that it is impossible for you and your clan to develop superdimensional versions of the aforementioned nanomachine models, especially if you seek to make use of the most volatile highgrade superdimensional matter. You require external support, and it may as well come from our Association."

Ves felt as if he was a fly who got caught in her web.

She made a number of valid points. He could not refute her arguments. Ves wanted the best for himself, and that meant upgrading the outdated CE nanomachine designs with the two technologies that the Polymath had not been able to access until recently.

The only issue that he could push back on was whether Ves could only collaborate with the Red Association on this project.

That was not true.

The Terrans, Rubarthans and even the fleeters could help him solve his technical problems, but did they have the right experts and resources, and were they willing to put them all at his disposal?

That remained unclear.

He could even seek to collaborate with the Cybernetic Empire on this project.

However, its attainments on superdimensional technology would definity be at least half a year behind the other major powers.

The thought of dealing with inferior tech and implementations repulsed him to the point of dropping this alternative.

If Ves wanted to obtain the best and fastest results, then collaborating with the mechers was truly the most optimal course of action, and both of them knew this was the case.

How could a fly possibly dislodge himself from a sticky web when he voluntarily flew into it in the first place?

A part of himself already predicted this sequence of events.

He may not like it, but the outcome was not completely unacceptable.

Gaining the buy-in of the mechers drastically increased the success rate of his experimental project.

He would not have to worry about trying to develop high-grade superdimensional nanomachines because the mechers would do all of the heavy lifting.

The Web Mistress gave Ves an additional assurance.

"If you agree to collaborate with us right away, then I will guarantee your project in my name. This means that you will not encounter any hindrance from others inside or outside of our Association. Trust me, Ves, the subversive implications of your Polymetal mech concept will attract a considerable amount of opposition. With my guarantee, no one but other Star Designers are qualified to object to your work, but they are unlikely to confront us over this endeavor. It will also be easier for us to mobilize more restricted personnel and assets."

That pushed aside any lingering hesitation that Ves had left.

"Fine." He replied in a resigned tone. "I can agree to collaborate with the Rec Association on the development of the first Polymetal mech. As long as you stick to those terms and let me be in charge of the design project, I have no further objections. I would still like to let our lawyers hash out a formal contract."

"That can be arranged. My contract lawyers will make contact with yours. Let us finalize this matter quickly. The sooner we sign the contract, the sooner we can get to work."

Chapter 7064: Free Trial

After Ves concluded his deal with the Web Mistress, a guard led him away from the center of the compound and brought him back to the shuttle.

The vehicle then brought him back to the luxury accommodations located in a highly protected location on one of the planets of Yernstall.

He remained seated while petting a disconcerted Goldie on his lap. He repeatedly went over his deal with the Web Mistress and tried to think of the implications.

One of the consequences of the agreement with the Red Association was that Ves had renewed and reasserted his commitment to partner with the mechers.

This was an important gesture and vote of confidence during a sensitive period where the Red Association suffered repeated setbacks.

The Red Split and the emergence of a shiny new rival in the form of the Cybernetic Empire had sparked a massive confidence crisis over whether the mechers were still developing in the right direction.

Change was already inevitable, but there were multiple different sides that each proposed a different future for their superorganization.

On one extreme, there were mechers that wanted to return to the previous status quo as much as possible. They not only advocated for sticking to the old rules that defined the Age of Mechs, but also sought to undermine the Terrans and the Rubarthans as much as possible in order to subjugate them again!

On the other extreme, there were extreme reformists and ideologies that argued that the mechers and the fleeters had completed their historic assignments of letting humans recover from the end of the Age of Conquest. Now that the states had become stable and populous enough, they no longer needed to abide by so many patronizing rules anymore. It was best if the Red Two withdrew from direct governance and turned into pure supervisory organizations.

Both sides cared a lot about their viewpoints, so their arguments frequently became heated.

Although the mechers stationed in Yernstall were professional enough to keep their arguing behind closed doors, Ves could still feel the underlying tension and repressed emotions across the entire planet and central star node.

It made him feel as if Yernstall had turned into a powder keg.

Ironically, it was the continued presence of Terran and Rubarthan visitors that restrained the mechers from engaging in open warfare.

They did not want to embarass themselves by airing out their internal disputes in front of their rivals.

The Web Mistress was probably the most sensitive towards all of the discord raging through the ranks.

Perhaps she sought to secure exclusivity rights for the first Polymetal mech as a means to give the mechers a distraction.

If his ambitious project worked out as expected, then the release of genuine Polymetal mechs would make a lot of mech designers ecstatic!

For the first time, they finally gained access to a Carmine mech that was especially tailored to their needs and capabilities.

Unlike the Yellow Jacket models that were specifically geared towards the lower end of the mech market, the Polymetal mechs were bound to turn into expensive luxury products no matter the edition.

Smart metal was already much more expensive than regular metal alloys, and the various features that Ves hoped to include could drive up the costs even further.

Despite that, most mech designers should be able to afford a Polymetal mech as long as they were successful enough.

They only needed to set aside a portion of their savings or go deeper into debt in order to obtain a Polymetal mech quickly.

The difficulty of learning how to pilot a Carmine mech and how to take full advantage of the smart metal aspects should consume a lot of time and energy!

Perhaps playing around with Polymetal mechs may cause the productivity of mech designers to drop, but it would be worth it as first-hand experience in piloting 'real' mechs would translate into much more fitting mech design work.

In any case, if the Web Mistress was willing to guarantee the Polymetal mech in her own name, then she definitely concluded that its benefits outweighed the costs.

This was not a casual move. Once it became known that a Star Designer personally invested in a mech design project started by an associate, it would inevitably attract a huge amount of attention!

Fortunately, Ves was already accustomed to the spotlight. He was not afraid of all of the attention. The support of the Web Mistress meant that he did not have to restrain himself in order to appease narrow-minded idiots who questioned every potential innovation.

Either the project would succeed or end up producing a failed product. Either way, Ves remained in control, and that was just the way he liked it. His partnership with the mechers should not drown out his voice in his own project. At least he hoped that would be the case.

"What do you think, Goldie?"

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"Nya?"

"Do you think that cooperating with the Web Mistress is the right decision? She has taught me a number of tricks to make your Larkinson Network more robust and harder to exploit."

"Nya nya nya."

"I guess you're right."

Although the Web Mistress had given him concrete tips and instructions on how to strengthen the Larkinson Network in the short term, they did not go far enough to turn it into a fortress.

If Ves wanted to attain this result, then he needed to look for new variables or unusual phenomena that he could leverage for this purpose.

That was not a condition he could satisfy in the short term, and that disappointed him. It may take years or decades for him to upgrade the Larkinson Network to a more satisfactory standard.

Even then, it may ultimately not be enough.

Ves was mainly worried about True God-level enemies for the time being. From the ancient phase whales of the Red Cabal to the mysterious hive queen of the mutated voribugs, each of them had the potential to tamper or ruin the Larkinson Network.

However, in about 5 decades, a God King would arrive in their small dwarf galaxy.

This was a crisis of epic proportions. Such an enemy would be able to dominate trillions of humans with his immense spiritual presence alone.

The gap between ordinary humans and an alien cultivator of the fourth major cultivation rank was so huge that the former could not think of doing else but offer their absolute surrender.

This must not happen.

The only way that Ves could think of that could make his Larkinsons and potentially all humans maintain their wits in front of this supremely powerful enemy was to transform kinship networks into another variation of support link technology.

Just as shield link technology allowed individual mechs to withstand punishing amounts of damage by borrowing the shield energies of other machines, kinship networks had the potential to function in a similar manner.

However, there was so much complex engineering behind support link technology that it was not easy to translate all of those design principles in a completely different medium.

"At least we can make a start."

Ves was able to recognize that the specific instructions conveyed by the Web Mistress shared many parallels with shield link technology that his clan had recently acquired.

Although Ves was not a specialist in energy shield technology, he made sure to study the theory behind shield link technology and energy link technology in preparation for designing first-class multipurpose mechs for the Larkinson Clan.

He had always been envious about support link technology that he never thought about reverse engineering its principles and applying them to kinship networks until the Web Mistress directly showed him how it could be done!

The knowledge she bestowed to him earlier was so specific and helpful that he definitely believed she had already applied similar solutions to the Red Association's own kinship network.

There was still much to go before a kinship network could truly function in the same manner as shield link technology.

Ves recognized that the Web Mistress only gave him a freebie with regards to this major endeavor. She gave him enough to plug the biggest gaps and complete the first step in the transformation.

As for the subsequent steps?

Ves and the Larkinsons either needed to figure out everything by themselves, or approach the Web Mistress and negotiate for 'step 2', 'step 3' and subsequent instructions to finalize the transformation of the Larkinson Network into a more helpful and resilient form.

The female Star Designer could milk the Larkinson Clan for all of its spare superdimensional matter by stretching out this exchange!

That obviously did not sit well with Ves. He preferred to solve the problem in-house. That would not only spare the clan a lot of strategic resources, but also prevent the mechers from embedding secret backdoors into the Larkinson Network.

When Ves returned to his temporary accommodations, he began to contact the T Institute and quickly brought its director up to speed on the latest developments.

Director Pesca Aduc, formerly of the Aduc Family, looked pensive as Ves issued his latest demands and specifications.

"Our cultivation scientists shall do their best to implement the instructions given by the honored Star Designer. From what you have described, the instructions are straightforward enough that we do not need to apply too much critical thinking. It is what comes next that is problematic. You are asking us to engage in a crossdisciplinary research project that will not only demand a large research team, but also research leaders who are highly competent and brilliant. There are not that many of the latter in our institute. Hiring them is also challenging as they are already committed to existing employers."

"So you can't do it?" Ves asked directly.

The director of one of the most important research institutions of the Larkinson Clan did not dare to misdirect the former patriarch.

"I did not say that, but it will be a long-term commitment, sir." She said. "The new matriarch will have to approve a new initiative where we will establish a new research division that is solely dedicated to maintaining, repairing and upgrading the Larkinson Network. We will only be able to assign regular cultivation scientists and research-minded practitioners to it. Without a highly competent leader that can provide clear direction to the scientists, progress will be slow and incremental."

"How do you intend to solve the talent problem, then?"

"It is unlikely we will be able to hire the right experts from the Red Association or other groups." Director Pesca said. "Our only viable choice is to identify promising talents while they are still in school or graduated recently and put them through focused training. Many will fail to live up to our most optimistic expectations, but the handful that do will be fast-tracked so that they can pioneer a new vision for the research division. Their roles should be similar to what you have done for your Design Department."

"I see. That is a reasonable setup, but it will take many years for this scheme to yield solid improvements and results. That is way too long in my opinion. I am not telling you to give up on this, but I think you should still try and see if you can hire a talented and highly capable outsider to kickstart the process of transforming the Larkinson Network."

Both of them understood how vital it was for the Larkinson Network to exist and to become stronger than its current state.

"I will draft a proposal and present it to the Saint Commander." Director Pesca Aduc promised while also reminding Ves that he did not have the final word on this matter. "From my previous talks with her, the new matriarch cares greatly for her Larkinsons. I am confident I can gain her approval and also secure a higher budget if I frame this proposal as a means to make our clansmen safe against the more esoteric enemies we might encounter in the future."

Ves also did not believe that Casella would block such an important initiative, but it was best to do this properly.

"Do what you must, director."

Chapter 7065: Reliance on Collaborations

When Gloriana returned to their temporary accommodations after her meeting with the Resonance Smith and taking the kids out to play, she still retained a lot of energy.

"Papa! Look, look! I bought a new shark plushie. He can fly and he can swim in our baths. Doesn't he look cute?"

Ves smiled and lifted his only son in his arms.

"So what do you think of Yernstall IV?"

"It is not as busy as Yernstall V, but there is a lot more high-tech stuff." Marvaine babbled. "There is so much stuff about mechs for sale on this planet. Not just whole mechs, but also parts and wnew technologies. They even have Mekanos box sets for sale, but mama refused to buy any for me. They were so cool!"

"We already have more than enough to keep you satisfied, young man." Gloriana lectured him as he sorted out the new jewelry and smart clothing she bought during a visit to a shopping mall. "It is a waste to keep buying new Mekanos when you have not sufficiently explored the possibilities of your existing ones. Remember that each new set opens up new combinations and possibilities with your old sets. It is the habit of a good mech designer to look back at your old works and see if you can upgrade them with the new tech that has become available."

She made a very valid point, but Marvaine did not look so pleased.

Ves was actually surprised that Yernstall, the stronghold and de facto capital of the Red Two, still sold Mekano products.

After all, they were invented by the Polymath, who not only disgraced herself a few years ago, but had completely turned away from the Red Association while appropriating the richest and most developed star system in the Red Ocean.

Then again, Mekano was genuinely a good product. The toys were beloved by many children in both galaxies and created an entire ecosystem of third-party kit developers.

It would be unreasonable to replace it with another toy system as it was extremely difficult to cast Mekano from its throne. Its quality and design specifications are close to perfect while the network effect was firmly on its side.

In the face of this entrenchment, the mechers would only seem desperate if they forcibly tried to replace Mekano with their own rival products. It would also offend the Cybernetic Empire during a time where she was sitting on a mountain of advanced, next-generation technology.

The mechers did not want to offend the Polymath during this tense period.

So long as that remained the case, Mekano would probably remain a fixture in the lives of many children and teenagers.

After dinner, Ves and Gloriana let the children play and run around in the living room while they moved to the side and shared what they had gained from their respective meetings.

Ves went first.

"I underestimated the Web Mistress." He began. "You would expect a mech designer who specializes in networks and stuff to be relatively weak compared to the rest of her peers. It doesn't help that she has always maintained a lower profile compared to the likes of the Polymath. It turns out that Zemana Ilcef is much more formidable in reality."

His wife responded with a smug grin. "I could have told you that, but you wouldn't have believed me. You are far too prone to making judgments in advance based on the incomplete information that you have gathered. The reality described on the galactic net and hearsay from your friends is not an accurate match to our actual reality. A Star Designer is still a Star Designer. Just because the Web Mistress does not shout all of her accomplishments is not an indication that she lacks ambition. She is likely working on a big project that is not yet ready for public consumption."

That may be the case. Ves did not know what the Web Mistress was working on next.

It could be trying to upgrade the Red Association's kinship network into a much more powerful version.

It could be a massive improvement to her existing support link technology applications.

It could also be a new form of support link technology that further reduced the separation between individual mechs.

"From what I gathered from the Web Mistress, she is a true mech supremacist at heart." Ves said. "The supremacy of mechs is under threat. They fare better and better against the native aliens because we are constantly developing new and more costeffective means to counter transphasic energy shields. The mutated voribugs don't care about that at all because they don't have a heavy defensive focus to begin with. Instead, their combat strategy amounts to flooding our troops with an excess of disposable insect warriors. Even shield link technology will reach a limit after a bunch of mechs have endured so many attacks for multiple hours."

The native aliens engaged in attrition warfare on the strategic level, but liked to decide important battles with concentrated offensive pushes.

This forced red humanity to change in order to cope with both at the same time.

The mutated voribugs fought differently because their doctrines did not center around phase lords or other champion units. Their absence made it difficult for them to fight against expert pilots and ace pilots, but it was not impossible to overwhelm them after sacrificing millions if not billions of individual voribugs.

His wife understood the problem as well. "Mechs are most suited for relatively shortduration deployments. Those designed to last longer tend to allocate more capacity to energy cells and other supplies. That subsequently makes them weaker, which is exactly what you do not want in mechs assigned to fight against the mutated voribugs. A more ideal mech is one that can output strong damage over a longer period of time. Such mechs... certainly exist, but they were never designed to fight against enemies as outrageous as the voribugs." Ves recognized an opportunity to make a difference. He could design a living mech that was specifically configured to fare better when deployed against the voribugs.

However, the demands were harsh and the competition had already begun to develop their own offerings.

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If Ves wanted to make a greater difference in this new war, then he needed to visit the frontlines in person and observe with his own eyes how the mutated voribugs fought.

Only after gathering all of this data and forming his conclusions would he be ready to start a new mech design project that could truly push back the relentless tide of voribug swarms.

"Let's leave the voribug issue for another time and get back to what I have gained from the Web Mistress." He said before proceeding to summarize what he learned to strengthen the Larkinson Network.

"Can you give me a copy of the improvements?" She asked. "My companion spirit Alexandria relies heavily on creating design networks to increase harmony among our design teams. I want to see whether I can apply the improvements that the Web MIstress has prepared for your kinship network on a different kind of network."

Ves looked a bit skeptical. "You can certainly try, but it is difficult for me to think you can readily apply them to your situation."

"I am aware of the difficulties, Ves. I do not hope to be able to replicate the specialized solutions to my design network. I am already content if I can decipher the general principles and gain enough inspiration to devise my own custom solutions. I am quite grateful for you for being willing to use up your favors for us to meet with two different Star Designers. Their insight exists on a completely higher level. If you had not talked with the Web Mistress, I would not have been able to come up with this idea myself."

A Star Designer did not always have to solve problems by presenting the most advanced and coolest tech possible. Even a True God was willing to resort to mundane solutions that completely lacked elegance but solved the problem in the fastest and most expedient measures possible.

A stupid mech designer always tried to put the most complexible parts of an entire system in a project. He did so first without putting enough thought in the alternative.

A clever mech designer sought ways to cut back on advanced tech and expensive materials, but squeezed what remained to their absolute limits to the fullest.

That was partially what the Web Mistress presented to Ves. Her data transfer contained dozens of blueprints and instructions on how to develop small and specific programming code that would not look out of place in the development of a new mech.

After Ves completed his explanation on kinship networks, he moved on to explaining the latest deal he made with the mechers.

Gloriana responded with a slight smile. "You made the right choice as far as I am concerned. You have always entertained big dreams whenever you thought about designing your Polymetal mech, but it is clear that your ambitions have left your competencies far behind. Your expertise on smart metal is too shallow to realize such a project by yourself. No ordinary mech designer specializes in this expensive and highly complex field. They can only be found among the major players, and they usually maintain a tight grip on their nanotechnology wizards. Choosing to cooperate with the Red Association is the best and most expedient decision that you could make under the circumstances."

He sighed. "I do admit that delegating all of those complicated technical problems to the RA's mech designers and R&D teams has shed a large weight off my shoulders. On the other hand, it feels too much like cheating. I am not putting in the hard work needed to develop one of the most important technological applications that defines a Polymetal mech. While I am still firmly in control of the E-technology side of this design project, I feel like I am only designing a part of a mech instead of the whole."

"That is what collaboration is all about, Ves. If you wanted to retain full ownership of your Polymetal mech design project, then you should have never mentioned it to the Web Mistress in the first place. I think you should get used to this sensation, because you will be repeating it many times in the future." That message did not sit well with Ves.

"I miss the old days..."

His wife snorted. "Forget about the past. Our standards have risen beyond the point where we can design everything at a level that we are satisfied with. Sure, I can design a good archemech, but I am not a specialist when it comes to flight systems, armor systems and mech armaments. It is not a weakness to admit your lack of competence in these fields. Acknowledging the truth requires bravery. As a mech designer, you should be objective and recognize when you need help to adequately design the other core aspects of your mech."

Her overall message rang true.

Collaborations with much more competent specialists and experts became increasingly more essential to realize the high-quality mechs that Ves and Gloriana envisioned.

The Larkinson Clan was partially able to meet this demand, but its foundation was far too shallow.

The Miracle Couple had grown too quickly relative to the Larkinson Clan.

The Larkinson Biotech Institute, the T Institute and all of the other R&D institutions had expanded quickly over the past decade, but they were still many leagues behind compared to the renowned establishments of all of the big players.

This left Ves and the other Larkinson mech designers with little choice but to get used to cooperating with the likes of the Terrans and the mechers.

Gloriana most definitely believed this to be the case.

"You should get used to working with third-party collaborators to complete the development of your remaining three elemental Carmine mech design projects." She stated. "Because if you hold them to the same standard as the Arboreal Project and your new Polymetal mech design project, you will never be able to complete them inhouse. Your potential breakthrough to Master Mech Designer will therefore be a community-supported effort. Your success is no longer a solo effort."

"…"

Chapter 7066: An Unbounder's Desire

After the pair was done with talking about Ves' meeting with the Web Mistress, they moved on to Gloriana's shorter meeting with the Resonance Smith.

"So how was he?" Ves asked.

His wife adopted a complicated expression. "The Resonance Smith was... eccentric to say the least. I am used to that from you, but His Excellency is much less restrained in this regard. He has no desire to hide his true nature from anyone."

"Why should he? He is a Star Designer. Very few people can restrain him these days, and none of them have a compelling reason to do so. He can do damn near anything so long as he doesn't threaten the core interests of his peers."

"Well, I can tell you that he was probably in a good mood. Human civilization in the Red Ocean was moving towards a future envisioned by the Unbound Humanity Faction. Jose Ukewe believed that this will 'unlock' our race's potential and help us regain the astounding growth rate that we last experienced during the first half of the Age of Conquest. Only through overwhelming pressure will we be able to cut out the rot that has festered our society and let a new generation of proven leaders take charge."

"I can already tell he is a big fan of the Societal Revival Theory." Ves mildly said. "I do not necessarily disagree with this sentiment, but isn't the Resonance Smith being a bit too... celebratory about all of these changes?"

"He is, and he is being shameless about it. You should have heard him bragging about this to me. He thinks that the breakdown of RA authority is essential to creating room for upstarts like you and I to grow and take their place."

"Is that the only subject he talked about?"

"Of course not." Gloriana said. "We merely chatted about various topics while he devoted most of his attention to devising a solution for my problem. After working for over half an hour, he granted me documents containing initial solutions to the

problems that arise when trying to merge archetech with superdimensional technology. As far as the Resonance Smith has tested, his solution works, but the outcome is still far from perfect. Fortunately, he has been generous enough to bestow me with a roadmap that outlines what research we must complete in order to produce incremental performance gains."

She shared the virtual documents to Ves.

He skimmed through them quickly but quickly got lost in all of the dense jargon, mathematical formulas and complicated theories.

Perhaps he might be able to understand half of what is contained in the documents, but that would require him to sit down and read the pages carefully while referencing all kinds of textbooks.

That was way too tedious and time-consuming for him, so he ceased his examination and decided to leave this matter to Gloriana as originally planned.

"So does that mean we can proceed with completing the Riot Mark III as a full superdimensional archemech?" Ves asked the most important question.

"The short answer is yes. The long answer is more nuanced than that." His wife replied.

"You will need to elaborate that further."

Gloriana drew a projected graph in the air.

"The initial solutions provided by the Resonance Smith are far from perfect. They do the job by meeting the minimum standards. In my eyes, they are akin to half-failed solutions. Incorporating them in the Riot Mark III Project without implementing any further changes and adjustments will lead to an expert spearman mech that is not as light and strong as he could have been. The archetech-compatible alloy formulas that he managed to research and placed in my possession incorporate a lower proportion of high-grade superdimensional matter and a higher proportion of stabilizing materials."

She placed a dot at the lower end of the performance graph.

"The only advantages of these superdimensional alloy formulas is that they are cheap in terms of superdimensional matter requirements. We only need to use up less than half of the volume of raw matter in order to produce a stable alloy. Best of all is that the formula contains a number of complementary exotics that slightly increases the potency of the existing superdimensional matter. The Resonance Smith told me that he has 'taken inspiration' from his study of alien-grade superdimensional alloys to come up with this small improvement, but that he still has much to go before he can find more effective combinations."

Ves looked intrigued. "I see. So the performance of this alloy is not good if we compare it to the theoretical peak that can be attained with a much better variation of superdimensional alloy, but it should be enough to satisfy our short-term needs, is that correct?"

Gloriana nodded. "From a purely physical perspective, the solutions provided by the Resonance Smith will make the Riot Mark III less resilient than the First Sword Mark III if their mass is equal."

"Their mass and volume are not the same, though." He pointed out the obvious. "The Riot Mark II is significantly thicker and should also be denser as well. The Riot's armor system is truly designed to resist serious blows, while the First Sword's thinner armor system is more of a reliable backup option if the ace swordsman mech has failed to evade attacks."

"That is true, but I hope you can understand my point, Ves. If we abandoned the use of archetech, we can make use of simpler but more powerful superdimensional alloys to significantly increase the damage resistance of the Riot Mark III's armor system. This version will bounce away projectiles and resist energy beams noticeably easier. However, its internals are much softer, so any attack that is powerful enough to punch through armor-grade superdimensional plating can obliterate whatever internals are sheltering behind."

That was not an ideal situation for a mech that was designed to confront enemies head-on without fear of suffering injuries.

"Let me get this straight." He said. "You are claiming that the superdimensional archetech version of the Riot Mark III will possess the advantages of both superdimensional technology and archetech, but it won't really excel in the former because too many compromises had to be made to develop an alloy that is stable

enough to be used throughout the entire mech frame in the form of archemetal. However, you think that this is still a superior alternative to using the same approach that Ketis has used for the First Sword Mark III, right?"

"Correct. The initial implementation of the Riot Mark III may be further from perfection than I prefer, but it is possible to upgrade the composition of his archemech frame over time. As long as our scientists and I continue to conduct follow-up research in the directions pointed out by the Resonance Smith's roadmap, we can develop better and more optimized superdimensional archemetal alloys that effectively bestow greater resilience and damage resistance compared to older versions. This will be a long-term effort."

That was okay. At least there was a way to improve the relatively mediocre initial solutions. The Resonance Smith had truly done the minimum work required to reciprocate the 'minor favor'.

He did not do more work because he had more important priorities to work upon, but also ensured that a young Senior Mech Designer like Gloriana remained active and invested in her archetech specialization.

If the Resonance Smith solved all of the technical problems, there would be little opportunity for Gloriana to conduct research on archetech and understand its nature better.

So this was a good outcome all-considered.

"Did the Resonance Smith convey anything more during your meeting with him?" He said. "Did he mention anything that is of great political significance? Did he talk about the Larkinson Clan specifically?"

His wife had to pause and recall the conversation. "His Excellency seemingly spoke without constraint or filters. He made more than a few outrageous remarks that would have definitely stirred controversy if not for his high status and identity. He has not mentioned anything about our clan, unfortunately. I have the sense that he does not take us seriously. Our clan is too young and the two of us are merely Senior Mech Designers. We may have a healthy amount of ace pilots in our service, but they are far from the peak ace pilots that have a chance of turning into god pilots in the short term."

In other words, if his wife's assessment was correct, then there was not much point in engaging with the Resonance Smith at this point. He sounded as if he looked down on Ves and Gloriana due to their relative youth and inexperience.

Perhaps it was just Gloriana that was the problem. Her attainments were much less impressive than his own. She did not really deserve to speak with a Star Designer. It must have annoyed the Resonance Smith to be spending an hour of his time on a mech designer with insufficient qualifications.

That made sense given his ideology. He was an anti-establishment figure who railed against the corruptive nature of old organizations and institutions. He was a strong believer in meritocracy and thought that taking down the old structure would clear enough room to accommodate the rise of leaders among the newer generation.

The important part here was that only the best deserved to lead red humanity in the future.

Whether Gloriana belonged in this group or not remained to be seen, but so far she still had a long way to go before she made a big enough contribution to the mech community.

"Anything else I should know? Did he say anything about me?" He asked.

"He approves of your work." She said with a hint of jealousy in his tone. "He specifically commended your Carmine mechs as the most disruptive invention that the mech industry has received in the last century. The availability of the Yellow Jacket line has already disrupted a large amount of existing structures and rewrote many rules. He hopes that you can continue your work in shaking up the status quo and unsettle the lives of those who have grown too complacent in their positions of power and wealth."

Ves' lips twitched into a smile. "I think he will not be disappointed at what I have in store for the future. His Excellency is certainly not afraid of confronting new challenges. Is there anything else about the meeting that I should know?"

"Not about the meeting itself, but I have received a number of invitations during the rest of the afternoon." She told him. "When I took the children out to shop and sight-see, numerous attendants approached and hand-delivered their invitation letters to me in person. There are not too many of them, and I think that each of them represent
various important groups and consortiums. I think it is worth it to attend at least half of the gatherings and events. Not only will we be able to mingle with Yernstall's high society, but we can also seek out new partners and business opportunities."

Ves frowned. "I don't know. We have better things to do than socialize every day. I am not opposed to attending one or two gatherings, but that is my limit. Let us look over the invitations and accept the ones that bring together the largest amount of guests. That should give the groups who are interested in doing business with us and our clan enough opportunities to get in and come up to us with business proposals on hand."

"Hm, I like it. Let them come to us rather than the other way around. We should make sure to coordinate this with our new matriarch, though. We should check whether we have discretion to trade away superdimensional matter. We are in the possession of highly coveted materials whose value far exceeds phasewater. While we should reserve most of it for internal use, it does not hurt to trade modest amounts of superdimensional matter for a new starship or proprietary technologies."

Chapter 7067: Near-Full Body Augmentation

One of the assignments that Ves accepted was to pick up Saint Isobel Kotin.

The Larkinson ace pilot had lost her entire body during a misguided but ultimately successful attempt to break her limits.

Her entire body got burned, but her upgraded willpower exerted just enough control over the flames to keep them relatively light around her head.

Combined with the modest fortification provided by her willpower, her brain had received minimal damage.

Human technology allowed for people to replace nearly their entire body with artificial substitutes.

No matter whether they replaced their bodies with bioengineered or more mechanical components, so long as anyone could afford the expensive price tags, they could completely upgrade their bodies to superior variations.

During the Age of Conquest, the concept of a human came under repeated attack.

As greedy and ambitious people sought greater power and wealth for themselves, they tried to invest in their improvement in any way possible.

They funded the development of new and more extreme augmentations.

These ranged from splicing alien genes into the human genetic makeup to creating a supercomputer that was designed to accommodate a human consciousness.

Few of these experiments succeeded. Most of them outright failed, while a minority only produced partial or conditional successes.

Many clients did not care. They only paid attention to the results. They accepted the side effects without considering their full implications as they were too busy with climbing up the ranks and outcompeting their rivals and enemies.

Due to this insane demand, the augmentation sector continued to boom. Scientists and developers became flooded with cash and could procure all of the facilities and resources they wanted in order to invent even more extreme but high-performing products.

Back then, their supervision had been grossly inadequate. Many star empires and star nations all maintained different policies. The mad scientists who developed the most extreme but promising augmentations could always leave the places where the rule of law was strong and move to a state where they could kidnap children and experiment on them with near-impunity without getting into trouble with the authorities!

Due to these fractured and inconsistent enforcement patterns, the liberated scientists freely indulged in their fantasies and created many products that produced far more problems than they solved.

The Age of Conquest was a golden age for the augmentation sector. Many of the implants and genetic treatments used by humans to this day could trace their origins during this near-mythical time period.

Unfortunately for many transhumanists and cybernetic enthusiasts, the Age of Mechs kicked off with a complete reversal on all of the rampant augmentation development.

The MTA and the CFA had managed to rise up during an age that was previously dominated by monsters that wore human skins.

No matter whether they were qi cultivators or excessively augmented superhumans, both of them had completely lost all of their empathy, their common sense and their ability to identify with normal humans.

The Big Two sought to eradicate this trend that caused far too many people to lose their humanity in exchange for more power than they deserved to wield in their lifetimes.

Their efforts bore limited success. Their attempts to regulate the augmentation sector forced many scientists and developers to follow ethical rules that they previously treated as worthless.

Their output became heavily restricted as they needed to be much more rigorous in their testing while making sure they stayed away from one of the many taboos imposed by the new regime.

The mechers and the fleeters also initiated a profound cultural change in human society.

Although they were unable to remove the urge to upgrade oneself in order to attain greater intelligence and abilities, they were at least able to reassert the value of being human and make a lot of extreme and inhuman augmentations undesirable.

During the Age of Mechs, the combination of heavy-handed regulation and more subtle cultural influencing led to a sharp retreat of the augmentation sector.

Third-raters rarely managed to get in touch with them. Cheaper augmentations simply did not exist as the risks became unacceptably high when trying to produce augmentations on the cheap.

Second-raters were able to access them easier, but the selection of implants and gene mod templates were largely constrained by laws. Their capabilities were limited and did not generate too much concern.

First-raters and especially the wealthier ones had not been able to get rid of their dependence on augmentations. While the Big Two had managed to get rid of the worst practices and abuses, they were not able to fully restrain the human need to become better.

It was telling that even the mechers and the fleeters themselves relied heavily on augmentations in order to maintain their superiority over other humans.

Since that was the case, the Big Two could never fully eliminate the gigantic augmentation sector.

Even the Chosen Human who exerted an enormous influence on humanity's relationship with augmentations could not overcome the immense opposition against a near-total ban.

Fortunately, most first-raters still valued their humanity to varying degrees. They were unwilling to become inhuman just so that they could raise their performance to the next level.

Full-body replacements and other extreme transformations rarely took place.

They had become entirely phased out by designer babies. Parents hired biotech specialists who methodically planned out the augmentation journey of their next child.

By planning ahead, these experts could not only optimize the selection of augmentations to produce the greatest possible synergies, but also avoid hasty and illthought additions that could completely disrupt the mental balance of the designer baby.

The designer baby solution therefore presented the most ideal way for people to undergo augmentation.

While this did not provide an adequate solution to people who were born as baseline humans or those who had experienced a rapid rise or drop in wealth and status, it satisfied most first-raters. Full-body replacements like the ones implemented on Isobel Kotin were therefore the exception rather than the rule.

As Ves boarded an armored shuttle that took him to an exclusive military hospital and biomedical research institute, he received a brief tour from one of the directors of the large and luxurious facility.

The hospital and related grounds hosted tens of thousands of patients, each of whom were locked in various stages of their recovery journey.

"The Red War is a conflict marked by high death rates." The director explained to Ves as they toured the serene grounds. "You should understand more than I once a mech or warship's defenses are shattered by the transphasic weapons wielded by the native aliens, total annihilation is quick to follow. Those who manage to escape by ejecting the cockpits or escape pods are usually unharmed."

"Usually does not mean always." Ves spoke. "The native aliens have never abided by any formal or informal agreements that prohibit the deliberate targeting of escape vessels. They target our escape pods while we do the same to theirs. We rarely take prisoners because it is too much of a hassle to keep captives that we have no use of. Our hatred against each other is so great that we refuse to entertain any prisoner swaps."

The director grimly nodded. "That is true. This is why there are not many hospitals and recovery facilities that are dedicated to treating injured soldiers. There are many more hospitals that are dedicated to treating wounded but surviving civilians that received a first-hand taste of alien brutality. However, you shall not be seeing any of them here. Wounds suffered by civilians are different from those suffered by soldiers, and mech pilots present an especially difficult challenge to treatment centers."

Ves gazed around the grounds and noted dozens of patients that were healthy enough to spend their time outdoors.

Many of them bore visible signs of wounds and marks of treatment that had yet to be cosmetically hidden.

One soldier had lost a part of his skull and bore a refined but unambiguously artificial metal enclosure in its place.

Another wounded trooper had lost both of his legs, but was currently regrowing them as could be seen from the transparent tanks wrapped around and below the knees. The devices stimulated the regrowth of leg tissue, enabling the soldier to regain legs that would perfectly align to his original physique.

This was a benefit that alternative treatments such as grafting cloned legs or fully cybernetic limbs could not match.

There was even a group of humans that had accepted full cybernetic body replacement treatment.

These people clearly stood out among all of the patients. They all radiated a sense of undeniable strength due to the power of their cybernetic limbs and other parts.

No human hearts beat inside their chests anymore.

The only blood that still flowed through their brains was the small amount that was still needed to keep their original organic brains healthy and functional.

For the rest of the body, small-scale power reactors supplied energy to all of the electronic components that ensured that their artificial bodies remained strong and in working condition.

"Does the current situation of Isobel Kotin resemble these patients?" Ves asked.

"Every patient's circumstance and treatment is unique. We do not believe in standardized treatments." The director responded. "Near-full body replacements for mech pilots has always presented a serious challenge to our staff. The brains of the patients must be retained as much as possible as there is no means of piloting a classical mech with cloned or electronic replacements."

"Is that still the case these days?" Ves asked. "Carmine mechs are available nowadays. I see no reason why those who have undergone more extreme brain treatments cannot bond with a Carmine mech. As long as they still consider themselves human, they should be able to get back into action." "Our researchers have not conducted the relevant experiments themselves, but we have access to the results of other institutions that have performed the relevant studies. We havec found that it is theoretically possible for patients who have received these brain conversions to still be able to pilot Carmine mechs. In practice, many patients reject this option even if their original brains are in worse condition. Far too many of them value their ability to pilot mechs by relying on their genetic aptitudes."

Ves did not blame these skeptical pilots for clinging to such a notion. Everything was still new. Glitches and failures could happen at any time. It was not wise to gamble your entire career on experimental treatments.

"Saint Isobel Kotin still retains her original brain, right?"

"Oh, yes. You do not need to feel concerned about her. As an ace pilot, she possesses several advantages and disadvantages that make it easier to complete certain steps but also hinders the completion of other steps of her treatment plan. Her original brain is strongly affected by her willpower to the point where it actively resists most artificial modifications and additions. It has been an uphill battle for our researchers to install a cranial implant piece by piece. By stretching out this installation process over several months, we are able to trick the patient's unconscious behavior into believing that little has changed. By taking the incremental approach, we have completed a vital process while giving her fragile brain plenty of time to heal and adapt to the trickle of upgrades."

He liked the sound of that. While it was a time-consuming process to install the implant components piece by piece, the results should definitely be worth all of the effort.

"So does Isobel currently have a powerful cranial implant at her disposal?"

"Yes." The director smiled with pride. "We have partnered with one of our implant development companies to customize a cranial implant for an ace pilot. This is a formidable challenge, as the brain and physique of every ace pilot mutates in different directions due to the unique properties of their willpower and domain fields."

"So every ace pilot requires a custom job."

"Just so, Professor Larkinson. It has been extra challenging to devise a cranial implant for Saint Isobel Kotin as her E energy attribute alignment is strongly biased towards the fire element. The researchers and developers had to experiment with many samples of fire-attributed hyper materials before they found the ones that worked well with the rest of the implant. The inclusion of these hypers also strengthen the patient's ability to sense and channel fire-attributed E energy."

Chapter 7068: Survival Build - FIXED

"Is all of this brain stuff safe?" Ves asked. "I mean, I am already aware that implant developers have successfully incorporated hyper materials in their latest generations of cranial implants, but the brains of mech pilots and especially high-ranking ones are different. How much has the tech used in Saint Isobel's cranial implant been tested?"

This was a sensitive topic, especially during the Age of Dawn where many rules had changed.

"Not nearly as much as we would prefer." The hospital director frankly admitted. "The pace of development in the augmentation sector has multiplied by at least an order of magnitude than before. Since the Great Severing, the Evolution Witch has taken over the Transhumanist Faction from the Chosen Human. The new leader has a much more proactive vision of human augmentation. Many laws have been rescinded and almost all of the remaining regulations have been softened to promote faster and more powerful development. That ultimately comes with an enormous reduction in the amount of mandatory testing that is required before releasing any product or service."

Ves did not look good after hearing that. "So there is a significant risk that any of the novel augmentations used to reconstruct Saint Isobel's body can glitch out at any time?"

"The probability is not high, Professor Larkinson. We have conducted extensive simulations as well as isolated live experiments and we have worked out many potential flaws and vulnerabilities. What we have not been able to do is test the interactions between all of the different implants and cybernetic components working together while being actively under the influence of the patient's willpower. We have tried our best to account for these conditions and implement contingencies, but there is only so much tech we can fit in an artificial body of human proportions."

"I see. Does that mean we have to assign dedicated cybernetic experts to her team so that her condition can be monitored on a daily basis?"

"Correct. It is best to see her new body as a highly engineered machine that is 90 percent mechanical with a limited number of organic tissue interspersed throughout

her body for various reasons. Her new body shares more similarities with a high-end mech than a humanoid organism. Her cybernetic body not only demands regular maintenance, but also updates and bug fixes over the course of its life cycle. The worst part is that it is already out of date."

Ves had an inkling of what the director was talking about.

"The Cybernetic Empire?"

The mention of the elephant in the room caused the director's mood to plunge.

"You guessed correctly. Before the return of Bridgehead One, Yernstall was known as the center of human augmentation. Encouraged by the new policies implemented by the Evolution Witch, the Transhumanist Faction and other relevant groups concentrated many of our R&D institutions on Yernstall IV and Yernstall V. Not only have they made many attainments, the cross-pollination that takes place between them has also led to many joint innovations and enhanced knowledge sharing. We have made more advancements in the last 2 years than in three whole mech generations."

Ves crossed his arms. "And then the Cybers arrived, each of whom spent 53 years on starting up new lives and conducting a huge amount of research inside their safe and comfy greater spacetime bubble. That is equivalent to two whole mech generations worth technological innovation and refinement."

"The gap between us is too big. Even if Bridgehead One is only 1 star system, it is not a normal one. With the Polymath herself leading a star system-wide adoption of cybernetics in lieu of systematic cultivation, she has successfully created a society and culture that has not only embraced augmentation through body replacement, but created an enormous sector that is filled with mature companies and institutions that are all several generations ahead of us. Since her empire bears the word 'cybernetic' in its name, you can easily imagine how much the Cybers take pride in their augmentations. We do not think it is possible for us to catch up to their progress."

This was an enormous blow to the Transhumanist Faction as well as many other groups that possessed a strong interest in human augmentation. All of their research and development amounted to nothing more than inferior and outdated results when they compared their works to that of the Cybers. The Cybernetic Empire also protected its advanced technologies tightly, making it so that only a fraction of cybernetic innovations would trickle down to the rest of humanoccupied space. This ensured that the Cybers always maintained an absolute leadership position in this market.

Ves actually felt regret that he had arranged for Isobel to be treated by the mechers based in Yernstall.

If he kept Isobel as a brain in a jar at this time, then he would have the freedom to approach the Cybernetic Empire and arrange a new and hyper-modern cybernetic body for Isobel!

Alas, it was too late to change his mind now. The Red Association installed too much of its own exclusive tech inside Isobel's new artificial form. It would be difficult for other organizations to repair, tweak, modify or upgrade its systems for this reason.

Ves did not think of turning to the Cybernetic Empire to overhaul Isobel's cybernetic body and upgrade it to their standards.

The Cybers would ask a high price for this service, and their augmentations are not without their flaws and shortcomings.

One advantage the cybernetics of the Red Association possessed was a much more integral understanding and application of hyper materials.

That became clear when the director began to explain the configuration of Isobel's extensive cybernetics suite.

"How much have you guys been able to meet the requirements set by our clan?"

"As per your specifications, we have tried our best to make her new cybernetic body capable of protecting her against heavy damage. Even if her cockpit is breached by a powerful enemy attack, her body may not necessarily break due to how well it is protected. We have made a special effort to make her artificial physique as fireproof as possible."

The director projected a humanoid figure and highlighted the exterior as well as a few internal components.

"The patient carries a compact shield generator in her abdomen that can generate a strong transphasic fire hyper energy shield. Since it is not an azure energy shield that is based on the water element, its ability to resist most damage types has decreased, but it has proven to be more effective at withstanding energy and heat damage."

That was understandable.

"What else?"

"Most of the metals used in the structure and exterior plating are made up of transphasic fire hyper alloys. They provide excellent protection against most forms of flames and heat. Their physical damage resistance is also decent, but do not expect miracles on this front."

"I noticed that no superdimensional matter is involved."

The director stared directly at Ves in the eyes.

"That is true. We know too little about whether human beings can safely remain in very close proximity to different quantities of superdimensional matter, whether raw or processed into stabler alloys. We have barely completed such studies related to transphasic materials, and we have identified numerous instances where the health of carriers of transphasic implants are at risk. We prefer to conduct several years of intensive studies to figure out once and for all whether a new and volatile material is safe enough to be used in augmentations. From what I have heard from the relevant research institutions, their scientists have only just begun these studies."

That meant that until these biotech experts had completed their studies, there was no immediate option to upgrade this toy machine.

However, so long as they completed their research, Isobel and many other people gained the option to replace their existing transphasic cybernetics with superdimensional equivalents.

They would probably have to supply their own superdimensional matter in order to complete this upgrade, but that was not a particularly big problem for the Larkinson Clan.

Compared to a future superdimensional upgrade, Ves cared much more about another important factor.

"Have you been able to build an imitation of human blood vessels that penetrates every part of her new body?" He asked.

The director responded with a wry smile. "This unusual request of yours has generated considerable consternation and frustration among the cybernetic experts assigned to this project. They had to make many uncomfortable compromises to the design in order to include false blood vessels that are primarily made out of alloys that include heat-resistant materials as well as fire hyper materials. While they do not reach into every individual component, they still have a strong presence in the entire torso, all four limbs and the neck as well as the lower head. You can channel pure flames through these channels and not inflict any damage to the false veins and the rest of the heat-resistant body."

Ves grinned when he heard this. He already had a vague intention of turning the Promethea Mark II into the first proper Bloodfire mech. He could think of no better candidate to choose from than this unique instance.

Although the existence of the Dominion of Man already proved the viability of the Bloodfire Pact, the fact that it depended on the circulation of hot and dangerous fireattributed E energy made it very dangerous for ordinary people to pilot an Fire Carmine mech of this specification.

Just as the Terrans assigned to pilot the Woodsap mech needed to undergo body modifications in order to be able to cycle the sap of the Emperor Tree through his veins, the pilots of future Bloodfire mechs needed to withstand the heat brought by fire energy on a repeated basis!

As far as test pilots were concerned, Isobel Kotin was not representative of the general population because of her extensive high-quality cybernetics and her unnaturally strong willpower.

However, if Ves just wanted to produce a success case with the least amount of risk, Isobel was by far the best candidate due to her insane resistance against flames and heat.

He did not have to worry about accidentally cooking Saint Isobel Kotin to death!

Once he completed the Promethea Mark II and observed the performance of the Bloodfire System in action, he could easily design a downgraded version that was suitable to be piloted by any individual who was willing to install the augmentations required to safely circulate fire energy through their veins.

This was certainly a heavy demand. Ves did not expect massive numbers of people to agree to such an inhumane demand.

Yet Ves also expected much from those that did. Fire energy was powerful and potent, and Bloodfire mech could easily unleash enormous amounts of firepower.

All of this would have to wait for the future, though.

The first step was to make sure that Saint Isobel Kotin recovered from her heavy injuries and regained her will to step back into the cockpit and fight to become stronger.

"What about the remaining features of her artificial body?"

"We have incorporated an extensive range of weapons, defensive options as well as mobility enhancements." The director said. "At the request of the recovering pilot herself, we have upgraded her arsenal at the cost of other reductions in performance. She currently possesses integrated laser weapons, integrated plasma weapons, a pair of compact flamethrowers, a plasma blade as well as a solid alloy blade."

Ves frowned. "That sounds like a bit much. I know those weapon systems take up a lot of capacity in a cybernetic human body."

"We know, but this is a personal request from our client. I have already addressed her defensive options, so I will not repeat them. Her mobility options are relatively weak. Aside from an integrated single-use teleporter, she possesses strengthened legs,

limited reactionless flight capability and she can anchor her feet onto solid metal surfaces."

Those options indeed sounded weak, but it was already the best that Isobel could hope for without sacrificing any of the other features of her artificial form.

"What about utility?"

"We have upgraded all of her senses to the point where they can serve as substitutes of actual sensors. Aside from that, we have added powerful but compact processors to the lower head and spine that can enable her to perform calculations by herself or coordinate her computing with that of her ace pilot. We have also installed a robust communication system that enables her to overcome lighter forms of jamming and interference in order to transmit encrypted signals. She can even extend an antenna from her upper back that can boost her signal transmission and reception."

That would look rather odd, but there were worse cybernetics on the market. Having an antenna stick out from your body was only a minor inconvenience in comparison.

Chapter 7069: Burning with Spirit

After the hospital director gave Ves an extensive overview of Isobel's new cybernetic body, he finally led him to a more private and better-protected compound.

This was the VIP recovery area where the people who were actually important received from their battlefield injuries.

Many of them actually consisted of expert candidates and expert pilots. Each of them possessed the potential to ascend to a god pilot one day. Even if their chances of overcoming all of the trials in a long and difficult journey were slim, who knew whether they might succeed one day.

The remaining patients consisted of mech pilots and norms who were heirs of powerful families or belonged to powerful organizations that paid a good price to deliver the best possible care.

It was for that reason why the RA spared few expenses when setting up this section of the medical recovery complex.

Doctors and other biotech professionals constantly remained on duty in order to monitor the conditions of the patients and respond to any emergencies that might arise.

Small-scale titan shields defended every section and wing of the luxurious compound, and mechs and infantry soldiers were constantly close at hand, though never too close in order to avoid putting the recovering patients on edge.

Ves was pleased with the amount of funding and effort the mechers had put into this facility.

It reflected their belief in the primacy of humans over technology and showed how much they cared about helping people pick themselves up after they suffered a setback and gain an opportunity to grow from their learning experience.

To that end, the hospital and its partner institutions had gone above and beyond to recover the most seriously injured soldiers who still possessed value.

The doctors and other professionals provided meticulous care to remake, rebuild and in a few cases reinvent the broken warriors that passed through their halls.

Aside from the Cybernetic Empire, the Larkinsons couldn't have picked a better place to hand over responsibility of restoring Saint Isobel Kotin.

While the Larkinson Clan was able to heal broken soldiers as well, its capabilities were only sufficient for relatively mundane injuries. A case as extreme as that of Isobel required specialist care that only a few powers had available in the new frontier.

This gap in capabilities was yet another reminder to Ves that the Larkinson Clan still had a long way to go before it became a true great power.

"In here." The director spoke as he led Ves into a well-furnished gym hall. "Ever since Saint Isobel relearned how to move her old body, she has developed an obsession of turning her cybernetic body into a weapon. Without a mech for her to pilot, she has tried to use her artificial form as a substitute. While her training is excessive, her body is designed to cope with physical extremes. Her strong will allows her to train continuously for 12 straight hours or more, with only a few hours of rest and meditation in between." That sounded rather excessive to Ves. "Isn't she supposed to spend more time on rest?"

"That would be the case for normal patients, professor, but expert pilots and ace pilots are different. Saint Isobel has deep feelings of inadequacy. She equates peace to impotency. She has a strong desire to become strong, and that means she must keep herself active somehow. She has taken to training her weapon handling skills and her mastery over her cybernetic body as her preferred means to prepare for combat in the future."

Ves soon understood how much Isobel threw herself into training when he came across an obstacle course.

Isobel used the formidable power of her legs to sprint across the distance at a pace that was several times greater than a professional athlete.

She then came across a straight wall, but managed to translate her forward momentum as well as her new reactionless flight capability to run and vault over it in one straight move.

At the other side, she came face to face with a trio of practice bots. Each of them shot out harmless training laser beams, but none managed to strike their target because Isobel had already kicked herself off the ground with the help of her blisteringly fast reaction speed.

Even as she evaded the laser beams, a pair of small laser guns unfolded from her shoulders and struck two of the bots in an instant, marking them as disabled.

As for the remaining bot, Isobel raised one of her arms and sprayed a blast of orange flames that knocked out the remaining bot.

After getting rid of her opposition, Isobel continued to traverse the obstacle course, demonstrating many different capabilities.

Her torso-mounted plasma guns practically obliterated the solid wall that barred her way.

Her alloy blade cut through a transphasic energy shield.

She was able to navigate a lightless and soundless room with relative ease.

Her transphasic fire energy shield was able to block a respectable amount of incoming laser beams and positron beams.

For all intents and purposes, Saint Isobel performed better than a first-class infantry commando.

Although her weapons and armor were restricted by the size of her body, her excellent combat acumen along with the instincts of a saint enabled her to complete an obstacle course that would have tripped most highly trained infantry soldiers!

There was no way Ves or the Larkinson Clan would ever think of commanding Saint Isobel to exit the cockpit and board an enemy starship or whatever.

However, if Isobel ever came under attack when she was far away from her ace mech, then she would always be ready to defend herself.

Once she ended her latest run, the obstacle course began to scramble and reform into a completely new and randomized circuit. It turned out that everything consisted of smart metal. That made it easy to specify every parameter and customize every part of the course.

As Ves and the hospital director approached the ace pilot, Isobel stared back at them with intense artificial eyes.

Those orbs were able to perceive far more than just the visible spectrum.

Once Ves came close enough, the two stared at each other.

Saint Isobel Kotin had returned from the brink of death with a fundamentally different body.

Though the mechers had done their best to restore the facade of her former human body, they were not able to get rid of the uncanny sensation that clearly marked her form as anything but organic.

Beneath the fake human skin rested transphasic fire hyper alloy components. Together with her willpower, Isobel attracted a constant influx of fire energy, causing her body and the air around her to feel hotter than usual.

Standing in front of Isobel was like standing in front of a vehicle with a hot engine. Her body contained a formidable amount of heat and energy.

What also impressed Ves about Isobel was the strength that exuded from her physical body.

She had never possessed a particularly strong body. She was not trained as an infantry soldier so had no need to build up or augment her body for this purpose.

Yet her total body reconstruction gave her a pair of arms and legs that far exceeded the strength of her former human limbs.

Isobel actually had to relearn how to interact with the environment around her due to this explosive strength increase. She might vault herself to the ceiling or crush anything in her hands if she did not regulate her newfound physical strength properly.

She received so many new features and upgrades that it should have taken 4 to 7 years for her to fully acclimate with all of her gifts!

Yet an ace pilot was far from a normal human. She had climbed her way up the ranks and proved beyond anyone's doubts that she was one of the best mech pilots of the Larkinson Clan.

No matter the means she used to force her latest breakthrough, the fact that she succeeded and managed to muster up the motivation to recover to this point spoke of great inner strength.

Ves dropped most of his concerns about Isobel's condition.

"Hello Isobel."

"Hello... Ves." The ace pilot spoke in a voice that closely mimicked her old one... though it was not quite the same. "Have you come here to take me away?"

"You look... a lot better than I expected. I see the mechers have indeed taken good care of you. To be able to move like this so quickly after starting your treatment shows that they have made an excellent effort. Is your treatment complete or do you need to extend your stay?"

Isobel's artificial expression started to frown. Her expressiveness had improved compared to before. Her new face may be compensating a bit too much.

"To be honest, I am thinking about staying here longer." She eventually responded. "The soldiers here have good stories and taught me a lot about the reality of piloting mechs outside of the Larkinson Clan. The training facilities here are all top-notch, and I can request access to any combat instructor or training manual that is available in the RA. Besides, my mech is still many months away from restoration, right?"

"Right..."

Ves looked pensive. The mechers couldn't resist. They subtly attempted to win her over by providing her VIP treatment. If Isobel was not so committed to the Larkinson Clan and the Promethea, then she may have been thinking about defecting to the Red Association!

Fortunately, it was not too late.

"We can't provide you with the same level of training facilities and other amenities aboard the Tarrasque." He honestly said. "If you think you need to master your control over your new body further, then it is best if you stay here for a few more months. We don't have an ace mech for you yet. Just like Venerable Rosa Orfan, you will have to wait patiently for us to complete your new machine."

"Then why should I leave and accompany you, sir?"

"Because I need your cooperation to upgrade the Promethea Mark II into a very new and powerful elemental Carmine mech." Ves said with a smile. "The Bloodfire mech that I have envisioned is a perfect match for the Promethea Mark II Project. As long as you are willing to form an upgraded version of a Blood Pact with your upcoming ace mech, we can turn it into a truly special machine. Your control over it will be unparalleled, and the synergies you can achieve with it will reach a whole new level. Are you willing to commit your life to the Promethea Mark II, or would you rather stick to being a regular ace pilot?"

Ves was not quite sure of her intentions at this moment. Isobel went through a traumatic life-changing event and only recently regained her body and ability to communicate.

Whatever her intentions may be a few months ago, she was a completely different person today, so her opinions may have swung in a completely different direction.

Fortunately, Isobel still held a lot of trust towards Ves.

"The Promethea saved me during that time." She said in a softer tone that her artificial body conveyed pretty well. "I owe my life to her. It is only right that I pledge to dedicate myself to mastering her for the rest of my career. I am not blind to the risks, but... I will become stronger than ever with the help of the new Blood Pact that you have in mind. I cannot afford to be weak anymore. If I do not become strong enough to resist the flames, then I deserve to get burned."

Ves could clearly feel the conviction from her willpower. She truly wanted to wash away the shame and ignominy of her near-death and redeem herself on the battlefield.

She also understood the value of a good mech and wanted to do whatever she could to make it better.

Ves smiled. "That is good to hear, Isobel. With your active cooperation, I can conduct experiments on the Bloodfire System and make sure it works properly with your new physique."

Chapter 7070: Cybernetics and Mechs

Ves brought Isobel back to the same compound where he and his family resided on Yernstall IV. There was no need to bring her to the Tarrasque right away. In principle, Ves could even let her remain at the recovery facility for a few more weeks until the Bluejay Fleet was ready to depart to the Rubarthan Pact.

However, Ves grew concerned about the RA's attempt to win her over. The more Isobel remained in the custody of the mechers, the greater the possibility that she might actually choose to defect to their side.

Ves liked to think that Saint Isobel possessed too much loyalty to the Larkinson Clan to ever contemplate such a choice, but nothing was impossible. It was best to remove the possibility entirely by keeping Isobel closer to him than the mechers.

This decision burdened him with keeping Saint Isobel occupied. She needed to spend her time wisely in order to start off with the best possible footing once she was finally able to get back into action.

Ves thought for a moment before deciding to dredge a hefty amount of knowledge before transmitting it to Saint Isobel over a secure channel.

Her new cybernetic form also caused her mind to become partially digitized, so she was able to receive, decrypt and skim over the documents at a rapid pace.

"This is..."

"Do you remember the set of fire element spells that I have given you in the past?"

"I do. Kiroshi and I have learned most of them already. They get easier to learn the more spells you have already mastered. I stopped studying more because they do similar things to the previous ones. As useful as it is to know how to cast a fireball and so on, they are too weak for me to bother with using in person or while piloting a mech. I can get better results with a firearm."

"They are beginner spells. They are not meant to be too powerful. They are meant to be easy to learn and digest. You may have outgrown those beginner spells already, but the principles and concepts that you have comprehended while mastering them serve as the foundation for more advanced applications of fire energy manipulation." "You want me to continue with learning more spells?"

"Not the spells, but the working principles that make them work." Ves corrected the ace pilot. "Learning the spells is a means to an end, though they are quite useful by themselves. Have you taken a look at the documents I have sent?"

"Yes. From what I can understand while skimming over them, they all have to do with teaching me how to defend myself against flames and make myself more fireproof."

"You will need this knowledge for what is to come." He told her. "Since you have agreed to upgrade the Promethea Mark II into the very first Bloodfire mech, I want to aim high rather than low."

"What do you mean by that, sir?"

"Unlike the Yellow Jackets which have one of the lowest possible floors of my works, the Promethea Mark II shall leverage her experimental Bloodfire System to the highest theoretical configuration that I can get away with. I should normally be cautious and err on the side of caution when implementing a brand-new experimental system like this. Trying to form a Blood Pact by using raw and hot fire energy as a substitute for regular human blood is already a risky choice, but I am not satisfied with settling for lower concentrations. I have a theory that the greater the quantities and concentration of fire energy circulating through your body and the mech frame of the Promethea Mark II, the stronger the positive and negative effects of the Bloodfire System."

As a woman who specialized in playing with fire, she was not unaccustomed to this setup.

"So in other words, you want to push the limits of your new tech as far as you think you can go. You want to trade stability for power. I can definitely see why that is risky, but since we are both so new at this, we don't entirely know where we should set the limit."

Ves nodded. "That is true, but I will attempt to determine the safety threshold through numerous experiments that I will conduct on you in the following weeks. At the same time, I want you to learn the theories and practice the techniques described in the documents that I have sent you. I have acquired them by exchanging resources with the Red Collective, so I do not want you to waste this investment. It is vital for you to learn how to make yourself more resistant against fire energy and excessive heat exposure."

"Is this truly necessary?" She wondered. "I do not mind learning this theory, but I am anything but a normal person now. I hardly have any flesh left. Most of my body is now made up of heat-resistant alloys."

"I know, but more is always better. I am especially concerned about your ability to tolerate spiritual flames and heat. The fire element is one of the more dangerous E energy attributes that you can encounter. Your advanced tech won't be able to help you there. When you interface with your ace mech, you will be able to rely on your true resonance and Saint Kingdom to strengthen your artificial body and veins, but I do not think the effect will be too strong. It is a body, not a mech. Normal ace pilots are unable to reinforce their own fleshy bodies with their true resonance, and I expect your case to be the same."

"I was meaning to talk to you about that, Ves." Isobel said with a frown. "Ever since I gained this powerful new body of mine, I repeatedly tried to resonate with it, with and without the help of my companion spirit. However, aside from making my body parts slightly stronger and hotter, I failed to produce the same results as I can with a mech."

He did not look surprised. "It won't work. Your cybernetic body may remind you of a mech, and it does share a number of similarities, but they are not the same. The reason why it isn't working is because your body is fundamentally not a mech by definition. It may be a machine, but it is not significantly larger than a human body, and it does not contain any resonating materials. More importantly, it is not developed by a proper mech designer. Instead, your cybernetic body is a custom job involving hundreds of biotech experts, cybernetics specialists and other engineers. All of this means that your body lacks the essential connection that all mechs share."

Ves was not able to perceive the Red Kingdom and its many connections, but he did not need to guess that it had absolutely nothing to do with Isobel's cybernetic form.

Whether this was the source or a symptom behind Isobel's inability to resonate with her body was not quite clear. This was a chicken and egg problem where everyone probably came up with their own opinions. Regardless, Ves was clear that Isobel's attempts would never succeed even if she possessed the willpower of a god pilot.

Just as a sword practitioner could only resonate with swords, a mech pilot was only meant to resonate with mechs.

Perhaps you could get away with stretching the definition of the latter by employing machines as small as demimechs or as large as juggernauts, but there were limits to how far you could test the definition of a mech.

Saint Isobel looked disappointed.

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"Oh. I see. Is it possible for you to 'design' a new cybernetic body that contains resonating materials? Will that work, you think?"

Ves had to seriously think about the answer. He could see how it could theoretically work, but he still did not believe his work would connect to the Red Kingdom.

"The short answer is that it is unlikely to work." He told her. "However, there may be a chance to make it work if I attempt to create a demimech instead. It will be considerably larger than a suit of heavy combat armor, but it will be far smaller than a light mech. You won't be able to fit through tight indoor corridors, but you will still be able to squeeze through larger ones, though stuff like this depends on the design more often than not. If indoor operation is truly necessary, then I could design a very compact tiger or dwarf-style demimech."

"And I would be able to interface it with my cybernetic body connections rather than a neural interface?" She asked.

"Yes, but... have you just forgotten about your decision to turn the Promethea Mark II into a Bloodfire mech? Bloodfire is just a label. The proper designation for this kind of mech is an advanced fire-attributed Carmine mech. The point is that as soon as you form a Bloodfire Pact with your Promethea Mark II, you must abide by your promise. You are not allowed to pilot any other mech. You will not be able to control this theoretical cybernetic demimech that I can design for you. The fact that your current cybernetic form is not defined as a mech is therefore a boon rather than a curse. If the

opposite was the case, you would no longer have a body to control once you exit the cockpit of your ace mech."

Isobel clearly did not think about these consequences. She frowned and looked down at her artificial arms and body. She started to understand the greater limitations imposed by her new corporeal form.

"I see. We should forget about it, then."

"We might be able to take advantage of your cybernetic form to do other cool stuff in the future." Ves proposed. "For example, we can technically detach your head from the rest of the body and place it into a smaller and much more compact cockpit, though that may be a bit too much considering that your torso is essential to the functioning of the Bloodfire System. How about detaching your arms and legs instead? If you are willing to pilot your mech while removing the limbs and stashing them somewhere safe, then Romanda Devos, Gloriana and I can completely redesign the cockpit of the Promethea. Instead of making a traditional cockpit that has enough open space to fit two or three individuals if they squeeze in tight, we can reduce this free space to fit just your head and torso but nothing else."

Isobel had never thought about this. She looked perplexed as she tried to imagine what it would be like to pilot a mech while residing in such a cramped cockpit.

"Are you treating my body as if it is a plug that needs to be inserted into a socket?"

"That is a pretty good analogy. You can think of it that way. Do not underestimate the benefits of shrinking your free space. The additional capacity can be used to increase the energy reserves of the Promethea Mark II or add enhanced protection to your cockpit. There are many reasons to favor this design choice, and not many reasons that argue against it. I highly recommend you think about accepting this new layout. It won't work for most mech pilots as they do not like to chop off their arms and legs, but that is not a problem for you. From what I have learned about your cybernetic body, your configuration is semi-modular, meaning that trained personnel can detach your arms and legs without compromising the functionality of the rest of your artificial body. This is ideal for the new cockpit that I have in mind."

Ves already had plenty of ideas on how he could take advantage of these new conditions!

With a mech as compact as the upcoming Promethea Mark II, it was best to reduce the size of the cockpit and make it a lot more compact without making too many sacrifices in terms of defense, mobility and other essential features.

If the cockpit could be shrunk by a factor of 3 or 4, then that would free up enough capacity to integrate another module or significantly improve the performance of one core system!