

## The Mech 5201

### Chapter 5201 Demimech Concept

"I honestly don't know whether it can even work." Ves honestly replied.

If he wasn't in the presence of an extremely distinguished company, Ves would have scratched his head by this time.

He always considered himself to be a creative thinker who could come up with the wildest ideas, but it turned out that he was just an amateur compared to these older and much more competent professionals!

They cast their gazes far beyond what was obvious from the surface. The way they analyzed the Carmine System from so many more angles could easily boggle the minds of less imaginative people!

Even Ves had to spend a lot of time catching up to the latest tangents sprung by the panel members.

"According to your limited awareness of your own invention, do you judge it plausible enough for this scaled-down 'demimech' to work?" Master Xena Wintress continued to press. "There is no need for you to provide answers with a high degree of confidence. We are more than aware of your lack of empirical data. We only wish you to provide input based on your own perspective and understanding."

Ves furrowed his brows as he tried to imagine this 'mech' in action.

"Even though it is scaled down to the point where it is as large as a suit of heavy combat armor, it should operate close to a mech more or less. The variables I am not certain about is how it is like to move a limb. Both the limbs of the 'pilot' and the servos of the mechanical construct around them will have to move in unison. This is different from a more traditional mech as the body of the pilot merely has to remain seated. If you truly want my judgment, then I don't think these differences will matter too much. I think the potential results will actually be quite astounding. The closer a mech resembles the human body, the easier it is for a pilot to control the machine. The difficulty of 'piloting' your reduced mechs should not require nearly as much training."

Wintress nodded in agreement.

"These are insightful replies. Let me present you with another scenario."

She began to weave her fingers in order to design a set of three different mechs.

They were a light mech, a medium mech and a heavy mech.

While all of them looked fairly generic as far as Ves could tell, the three spontaneous mech designs happened to possess the same diverging trait.

They did not possess traditional cockpits!

Instead, the cockpit looked like a tube that was attached to control systems, much of which Ves couldn't recognize.

What also stood out was that the mechs all came with their own facsimiles of the Carmine System.

A number of biomechanical components were absent, though.

It soon became clear why Master Wintress replaced a traditional cockpit with this reduced contraption.

The female Master waved her hand, causing the projected image of the so-called demimech to enter a port and fit into the tube of the light mech!

Once the demimech entered the space that was tailor-made to accommodate it, numerous different mechanical parts sprung forth to lock the smaller construct in place.

That was not all.

The Carmine Systems of both the demimech and the light mech began to make contact and connect with each other!

The integration between the two looked so good that it became impossible to determine that they were originally separate if Ves came across this combination from the beginning!

"Is this scenario plausible, Professor Larkinson?"

"Uhh... I am not sure, actually." Ves hesitantly replied. "It depends on how strictly the Blood Pact is being interpreted. Personally, I think there is enough leeway here to avoid setting off the restriction of being limited to one mech. The key here is that while the demimech and the light mech have merged on a physical level, they remain separate on a metaphysical level. This means that while it is theoretically possible for the pilot to control the light mech using the demimech as a connecting medium, the experience won't quite be the same."

That caused all three panel members to look thoughtful. The answer was not as good as they hoped, but it was better than nothing.

Master Wintress then proceeded to manipulate the projection yet again.

This time, the demimech disengaged from the light mech, thereby turning them into separate machines again.

The demimech proceeded to enter the tube of the medium mech, causing the two to merge together on a physical level.

"Is it possible to circumvent the restriction of only being able to pilot a single mech by using it as the control interface for larger and more combat capable mechs?"

"I think... it is plausible enough to work." Ves slowly answered. "If it works on one mech, there is no reason to think that it doesn't work on the other mech. The only essential constant is that the demimech must remain the same in conception. If the pilot somehow lost his demimech, it is impossible for him to pilot any further mechs."

"Understood."

Wintress then began to design a completely different machine altogether!

Ves started to feel a bit of déjà vu as the Master rapidly drafted a juggernaut.

Although the design lacked a lot of details in order to save on time, the overall message was clear.

When the demimech slotted into a tiny tube embedded in the chest area of the enormous humanoid construct, Master Wintress looked pointedly at Ves.

"Is this plausible as well?"

"I... don't know." Ves repeated the same answer yet again. "I don't even know how the Carmine System works for juggernauts in a normal capacity. This implementation of yours completely falls into my blindspot. My very loose guess is that it will probably work, but only barely as it shares the same problem with pilots trying to grapple with conventional juggernauts. The sheer size and amount of active systems produce so much data that there simply isn't enough bandwidth and mental processing power to exert a good degree of control over the enormous juggernaut frame."

The problem rested with the juggernaut, not necessarily with the Carmine System.

Ves briefly recalled Polak Neziri's obsession with large multi-pilot mechs. Would his interpretation of juggernauts be able to solve this particular problem?

It was an idea worth exploring if he had the time.

Master Wintress presented one more scenario before she was done. She waved away the projections of all of the mechs and sketched out another design.

The scale of the machine was even larger than a juggernaut. As the loose lines became increasingly clearer, it turned out that Wintress did not set out to create a mech this time.

She had drafted an enormous capital ship!

The ship was roughly five kilometers long and featured enough main gun batteries to lay waste to cities in short order.

Yet what made the battleship different was that Wintress actually added an enormously scaled up version of the Carmine System within her hull structure.

A thick and branching structure of organic blood veins spread out and maintained contact with each and every single compartment of the battleship!

A familiar tube rested in the depths of the armed warship's citadel. When Wintress inserted the familiar demimech inside this cavity, the pilot became connected to a mechanical construct that was unimaginable in size!

"Please share your opinion with us, Professor Larkinson. Is this plausible?"

Ves found the projected scenario to be so absurd that he thought it was silly to ask his opinion on this matter. He lacked so much data and information that there was no way he could give an authoritative answer on whether this ridiculous concept could even work!

"Theoretically, attempting to enable a single human individual to pilot an entire warship will stumble upon the same problems as with trying to do the same with a juggernaut. There are too many systems that the mech pilot has to take into consideration. Even if the pilot has studied all of the required courses needed to understand the functioning of an entire battleship, this single person has to track and control so many systems that his mind simply won't be able to take it. I expect this experiment to end in a violent and explosive fashion."

Master Wintress and Master Goldstein both nodded after hearing this answer.

The Mace of Retaliation exhibited a different reaction. He decided to interject at this time.

"In the last two cases, you identified the pilot as the weakest link in the chain. What if you replace this hypothetical pilot with a stronger individual? Let us assume that the replacement has a much greater capacity to process large streams of data such as myself. Would I be able to effectively pilot a juggernaut or a battleship by myself through the Carmine System?"

Ves looked almost completely lost by this time.

He had to admit that the scenarios presented by the Mace of Retaliation were much more optimistic.

"It is... slightly more plausible." Ves eventually replied. "I think that you will find it a bit more difficult to produce true resonance across all of the juggernaut or battleship. From what I have been able to understand, expert pilots and possibly higher-ranking pilots are unable to effectively empower and reinforce mechs with true resonance once they exceed a certain size. They have to be small and compact enough to prevent this from happening. I don't know whether it makes any difference if the pilot uses a neural interface or a Carmine System."

"What if the pilot uses both?" The only ace pilot on the panel asked. "You stated in your initial presentation that the neural interface and the Carmine System are not mutually exclusive. They can operate both independently and concurrently on the same mech. Do you believe it is possible to amplify the true resonance range of a typical expert pilot or ace pilot by employing both the neural interface and the Carmine System at once?"

The possibilities alluded by the Mace of Relation's latest question had massive implications!

Not just Ves, but also the other two Master Mech Designers in the chamber couldn't remain calm anymore once they envisioned the possibilities.

Expert pilots were no longer confined to piloting standard-sized mechs anymore. They could effectively pilot juggernauts or other large constructs while retaining the benefit of empowering all of their mechanical structures with true resonance!

Of course, the pilots had to be strong enough to spread his power so far and wide. It may be that piloting ultra-sized constructs at full strength was only limited to ace pilots and higher.

Even so, that could already change the landscape of high-end mechs as Ves knew it! Once expert mechs and ace mechs were no longer strictly limited by scale, it might be possible to design a juggernaut the size of a cruiser.

Such a juggernaut would not only possess all of the traditional strengths of a cruiser of this size, but also gained a lot of empowerment from true resonance, which would completely transform the combat effectiveness of this enormous machine!

It could effectively amplify the combat power of an expert pilot or an ace pilot by at least an order of magnitude!

The power amplification may even be two orders of magnitude greater if the juggernaut was as large as a sizable battleship!

Ves could not imagine this scenario. Ace pilots such as Patriarch Reginald Cross and Saintess Ulrika Vracken were already extremely powerful when paired with normal-sized ace mechs.

What if the mass and volume of their ace mechs multiplied by a factor of 100?

The faint presumption was that these junior ace pilots suddenly gained so much combat power at once that they could approximate the overwhelming raw strength of a god pilot!

While the ace pilots would still exhibit a lot of deficiencies compared to genuine god pilots when they piloted these large but clumsy frames, what mattered was that their defenses and firepower had the potential to enter into god mech territory!

## Chapter 5202 Lack Of Proof

Red humanity had become embroiled in a war between species.

Total extinction was on the horizon as humanity was hopelessly outnumbered by the native alien races.

The existence of top combat assets such as god mechs were one of the few reasons that gave red humanity a fighting chance against their adversaries.

However, with only 8 god pilots available in the Red Ocean, it was impossible for these living legends to cover a lot of territories.

The strategic outlook would completely change if there was a possibility for ace pilots to become as threatening as god pilots!

Ves did not know how many ace pilots were active in the Red Ocean, but there had to be hundreds of them at the very least.

If all it took to produce these 'pseudo-god mechs' was to design and construct large amounts of custom juggernauts and integrate them with super-sized versions of the Carmine System, then that might be enough to save their entire race from extinction!

In fact, it could even allow the numerically inferior humans to launch a massive counterattack on the aliens by using the pseudo-god mechs as spearheads!

Every human invasion force would be able to roll over practically any sort of alien opposition that stood in their way!

Perhaps the only alien assets that could fight the juggernauts piloted by ace mechs to a standstill were the mysterious ancient phase whales.

However, Ves bet that there probably weren't many of them in the Red Ocean.

This meant that even if a pseudo-god mech was individually weaker than an ancient phase whale, the former was never supposed to confront the latter by themselves.

Ves predicted that if a dozen pseudo-god mechs confronted an ancient phase whale on the battlefield, the advantage of numbers might prove decisive enough to make the powerful alien leader's life miserable!

This possibility and more caused everyone inside the chamber to regard the Carmine System as a much more impactful technological innovation than before.

Ves, Jovy and the three members of the secret panels all shared the sentiment at this time.

The Carmine System had the potential to enable a lot of powerful new innovations!

It was similar to the neural interface in that regard. The invention of a device that enabled the brain of a human to interface with a machine led to the development of mechs that dominated an entire era!

While nobody dared to say that the Carmine System had the potential to produce the same level of impact, as long as any of the aforementioned scenarios were plausible, the entire landscape of mechs as everyone knew it would irrevocably change!

Ves eventually broke the momentary silence.

"I would like to caution you that I do not have any proof that it is possible to realize all of these wild and outlandish ideas. All I can say is that I cannot rule them out for the time being. I will have to test the Carmine System further by employing it in different applications. The more data I gather, the more accurate my conclusions."

"We understand. We will speak about this later." Master Vayro Goldstein spoke. "We would like to explore additional speculative possibilities with you. We are not engaging in baseless fantasies here. We are being thorough by exploring every conceivable angle. Let me show you another possibility."

They did just that. The panel began to present numerous different applications of the Carmine System and asked for Ves to share his opinion on whether the ideas had any chance of working.

For example, Master Goldstein conjured up the image of an entire regiment of larger demimechs.

The machines weren't as small as the one used as a control interface.

They were instead scaled up to the point where they were at the halfway point between a suit of heavy combat armor and a light mech.

The demimechs at this scale possessed numerous interesting traits. They were far more powerful than regular infantry, but not quite as strong as a conventional mech.

However, the difficulty of controlling them was much more reduced as they consisted of a lot less parts and lost a lot of complexity.

Master Goldstein's demimechs were also a lot more economical as they consisted of relatively cheaper materials and avoided any overly complicated design elements.

"I project that it will take norms without appropriate genetic aptitude to become proficient enough in their use in two or three years." The Master Mech Designer estimated. "It may take several additional years if the demimechs possess fully articulating limbs. Nonetheless, the time it takes to raise a large number of qualified and combat capable demimech armies should be much less than trying to form traditional mech armies. Do you believe that these units will be effective enough in combat to resist the alien forces such as the ones that you have encountered in your expeditions?"

That was a difficult question. Ves never thought about applying the Carmine System in this fashion.

He didn't even know what to think about the whole demimech concept. Whether the Survivalists wanted to employ them as an upgraded version of a piloting suit or a discount mech, he could not accurately foresee the possibilities as they ranged far beyond his own experiences!

The panel members would probably gain much more useful responses if they asked the judgment of the Xenotechnician or the Polymath. Why did they bother to ask for the opinion of a humble Senior Mech Designer? Ves could not possibly supply the correct answers!

"I don't think these demimech armies have the hard power needed to fight against the strongest alien assets." Ves eventually responded to Goldstein. "Their scale is just too small for them to put a serious dent in the transphasic energy shields of alien battleships. Their vast quantities might make them a lot more useful when dealing with sub-capital ships or planetary combat, but I am not too sure to be honest. If you ask me whether it is possible to develop these demimechs with the help of a Carmine System, then I am much more confident that it can be made."

He did not need to remind the three powerful Survivalists that these demimechs could only get off the ground if the Carmine System worked as expected.

Just as with everything else, Ves lacked the hard proof and the empirical data needed to offer more solid judgments!

After offering his lame responses to a few other ridiculous scenarios, the three Survivalists were finally done with expositioning their crazy fantasies.

"Let us return to more relevant matters." Master Vayro Goldstein eventually spoke. "Professor Larkinson, you have previously stated that you have chosen the Carmine System to become your main area of research in your quest to realize your design philosophy."

"That is correct." Ves replied. "Even if I did not envision all of those scenarios that you have mentioned during this secret session, the two basic uses of the Carmine System are already more than enough for me to dedicate my years as a Senior Mech Designer to fleshing it out. I do not think I have the time or expertise to spare on exploring all of those other possibilities. I will probably leave that work to other mech designers once I have advanced to the rank of Master."

That frustrated the panel members. They were all accustomed to interacting with older and more accomplished mech designers.

The fact that Ves was just a Senior and not a Master limited a lot of options!

Of course, it was still good that Ves presented his Carmine System to them at this early stage.

They would rather learn about it and issue their verdicts on it before it had any opportunity to completely disrupt the mech community when Carmine mechs started to become known to the public.

Master Goldstein asked another question.

"Are you able to integrate your Carmine System in a collaborative mech design?"

"Yes, but only if I have real control over how to set up the Carmine System. If anyone else tries to do it, the organic components won't do anything aside from exchanging blood."

"Will first-class mechs and third-class mechs experience any significant reductions in performance if they are solely controlled by the Carmine System?"

Ves frowned in response. "I am not too sure about that. I think that first-class mechs will probably see a slight to moderate reduction when paired with unqualified mech pilots due to the difficulty of managing their advanced systems. Third-class mechs should actually be able to perform a lot better

as they were much simpler and easier to master. Their lack of complexity also helps with easing the difficulty. The cost of the Carmine System doesn't have to be that high anyway. I can make it a lot cheaper by utilizing cheaper technologies and materials to produce them. They will become more fragile, but since the Blood Pact is not a physical connection, its effectiveness will remain constant."

In other words, Ves speculated that the Carmine System actually provided a lot more value for third-raters as opposed to first-raters!

This was highly optimistic news for the third-rate colonial states that resided in the lower zones.

They occupied the greatest amount of territory in red humanity's space and actually held the largest population as well.

Anything that could enhance their combat power so that they could make a greater difference in the war was welcome news to the Survivalist Faction!

It also happened to give a powerful boost to Polymath's sub-faction!

Ves answered a few more questions. Master Wintress and the Mace of Retaliation both asked questions that were relevant to the plans supported by their own patrons.

As the lengthy and tiring secret session dragged on, the three panel members finally came to a consensus.

Master Goldstein smiled down at Ves. "Thank you for introducing your Carmine System to us and sharing your opinions on its many potential applications. However, you have given us many quandaries as well. Your lack of proof to back up many of your assertions is hindering us from making any definitive decisions."

"Your schedule for the rest of this day is free, correct?" Master Wintress suddenly asked.

"Uh, yes. I am obliged to lead a closed session on another subject the next day, so I won't be available at that specific time slot."

Ves originally intended to attend several interesting sessions after this was over.

He had a feeling that he might be forced to scrap this plan.

"Good. Then you should have enough time to design and build several experimental mechs that feature the Carmine System. We will provide you with access to one of the Khamater Reign's complete mech workshops. Our ship's state-of-the-art materializers and high-tech bioproduction facilities should help you realize your designs as quickly as possible. We will also allocate a small selection of trusted mech pilots and norms to you. Their assignment will be to cooperate with your experiments and interface with your test products."

He knew it. The Survivalists were not satisfied with taking him at his word. They wanted to obtain hard proof and see the Carmine System at work in front of their eyes!

Ves did not necessarily object to this arrangement. The only reason why he felt upset about this order was because he could no longer attend any of the interesting and informative sessions on this day anymore!

However, he understood that it was necessary for him to produce hard proof to reinforce his pitch.



The more the panel members appreciated the Carmine System, the more they were inclined to support Ves and his work!

Ves bowed his head in acquiescence. "I shall do my best to satisfy your demands and produce enough samples of the Carmine System for you to analyze and verify my work. I would like to add that my design philosophy probably doesn't work well with materializers. I need my mechs to become alive. A production method that is completely impersonal and removed from human intervention makes that impossible."

That was not welcome news to the three Survivalists. They all wanted to obtain as many samples as possible. It would be a bit troublesome if Ves had to spend hours on fabricating every individual mech.

The Mace of Retaliation released an impatient sigh. "Do the best you can, Professor Larkinson."

Master Goldstein echoed this sentiment. "It is imperative for you to produce enough experimental mechs within a timespan of 20 hours. That will give us enough time to collect preliminary test data on your Carmine System and discuss the findings with a select group of other trusted experts. Can you meet our demands within this short amount of time?"

Ves felt glad that he had a decent amount of mech tournament experience. This was not the first time he had to develop mechs in a matter of hours.

"I can do it as long as the bioproduction machines or whatever can grow all of the organic components of the Carmine System in a short amount of time." He replied with a bit more confidence than before.

"That should not be a problem, Professor Larkinson." Goldstein smiled in satisfaction. "Please inform us if you lack the proper production equipment to meet your deadline. We shall design and produce the instruments that you require on the spot."

There were so many Master Mech Designers and other developers aboard the Khamater Reign that none of them were lacking in technical expertise!

## Chapter 5203 Greater Expectations

"When I arrived at this conference, I expected to learn a lot of useful insights from the fellow experts invited by your faction. I did not expect to be stuffed back into a mech workshop and be told to go to work again."

Ves felt quite annoyed at being forced to deviate from his plan. He wanted to keep learning more about alien technology, the nature of phasewater and all of the amazing discoveries that people had made about E energy radiation.

Though he already attended enough sessions to come away with a lot of helpful guidance going forward, there were still many sessions related to restricted subjects that could offer even more information!

It pained Ves so much that the secret panel abruptly ordered him to fabricate a bunch of Carmine mechs for them. Couldn't the mechers show a bit of patience and at least wait until the conference had come to an end before they saddled him up with homework.

The three sub-leaders did not even bother to give Ves time to think or accept his new assignment.

A teleportation system directly plucked him out of the secure chamber and brought him to a mech workshop!

At least Jovy came along as well. Having a familiar and friendly face around helped a lot with acclimatizing to his new circumstances.

"This is an opportunity, Ves. The higher ups wouldn't have bothered to give you time to produce your works if they found your speculative claims to lack substance. During the questioning, they pressed you on the versatility and limits of the Carmine System because they are interested in how extensively your work can change the mech community and the rest of our civilization for the better."

Ves calmed down a bit more as Jovy provided his insights on what just happened.

"I guess... it is better for people to take my words into serious consideration rather than dismiss my claims out of hand." Ves admitted. "I think I still need time to adjust my cognition. I came in expecting those big figures to look down on my work. After all, the claims I have made are a bit wild considering I have made little progress after I have completed my first two Carmine mechs. A sample size of just two is hardly sufficient to back up my predictions about how it can make anyone pilot a mech regardless of genetic aptitude."

Jovy smiled at his friend. "Perhaps you are right to expect to receive a skeptical reaction from an ordinary audience. We are different, though. You just came away from an inquiry led by three tier 2 galactic citizens that lasted for two whole hours. Do you know how few people ever get to present their work to such a distinguished panel? You have moved up in our society, Ves. If your work on companion spirits had already put you on the map, then your work on your Carmine System will cement your place among the leaders of our civilization!"

Ves felt both gratified and worried about that. He already anticipated that he would get to raise his profile and earn more recognition during this conference, but this was too much.

What frustrated him the most was that his actions would come under much greater scrutiny now. He had caught the attention of the likes of Master Xena Wintress and the Mace of Retaliation.

There was no way they would let their eye off him now that they discovered the amazing potential of his work!

Even if Ves was still too far away from realizing his design philosophy, that did not prevent these great figures from piling up a lot of expectations on his shoulders.

Once he became a higher tier galactic citizen, there was no way he could go back to the life he led once before!

He felt as if his situation was spinning out of control. There was no way he could calmly return to his fleet and merrily continue his Trailblazer Expedition as if little had changed.

As long as the Survivalists went ahead and increased his galactic citizenship tier, then Ves would not only attract a huge amount of attention from a lot of humans, but also the aliens!

Given that the aliens were already monitoring major movements taking place within red humanity's society, they would definitely be keen on taking out any human leaders or elites.

This meant that if Ves actually became a tier 4 galactic citizen or higher by the end of the week, the aliens would definitely not miss the opportunity to launch a decapitation strike on his expeditionary fleet!

Although the mechers promised to provide Ves with an escort force that consisted of numerous powerful RA mechs and warships, it was still short of a proper warfleet.

A full-blown assault from an alien warfleet could easily roll over a smaller protection force by relying on heavy firepower and the advantage of numbers!

The likelihood that the aliens would divert one of their strategic warfleets for this task was not high.

However, if the aliens thought they had a window of opportunity to whack a freshly promoted tier 3 galactic citizen who happened to be located close to the frontlines, then any ambitious alien commander would take the shot!

As much as Ves hated the thought, he might have to put serious thought into putting his expedition days behind him. He would just be setting himself up for assassinations and ambush attacks if he kept strolling through the deep frontier while red humanity was in the middle for a war that determined the future of the Red Ocean!

Once he was done with adjusting his mentality, Ves began to take a serious look at the workshop.

What struck him first was that it was a modern and incredibly high-end facility. Ves did not know what kind of mechers made use of this place, but it was definitely reserved for a Master Mech Designer.

The place had been cleaned up and few objects looked out of place. Ves did not recognize the models of any of the instruments and production machines, but he could already tell that each of them were much more expensive and capable than the entry-level first-class production equipment in his own personal workshop.

To be honest, Ves did not recognize the purpose or the functions of over half of the machines in this compartment.

"I can help you with that." Jovy offered. "I might not have worked with many of these advanced devices in a serious capacity, but I have studied their basic operation during my classes. Each of these devices excel in one job extremely well. They can save you a lot of time and reduce the probability of defects if you want to fabricate particularly demanding components."

Ves shook his head. "That won't be necessary this time. I only have less than 20 hours to complete this assignment. I can't waste my time on mechs that are too advanced and finicky to design and fabricate. Speed is of the essence. If those panel members expect me to fabricate a bunch of first-class multipurpose mechs for them in this timespan, then I am afraid that they are overestimating my abilities."

His friend chuckled at that. "Oh, they are not that unreasonable. I have a list that contains a more detailed set of specifications and requirements. You are permitted to design and build second-class mechs. You can also choose to develop third-class mechs if you think that is necessary to complete your work in time. This is anything but ideal, though. The more you distance yourself from first-class mechs, the more it hinders the investigation of our higher ups. You should stick to designing second-class mechs if possible."

"Give me the list."

Ves' eyes widened shortly afterwards when he went through all of the conditions.

"I have to deliver at least 4 vastly different Carmine mechs!"

"Is that a problem for a tournament winner such as yourself?"

Ves slapped his palm towards the projected document! "Look at this! It's not a big deal to quickly whip up 4 Carmine mechs that are otherwise normal in other aspects, but that is not what I am supposed to do. Aside from developing at least 1 somewhat conventional medium mech, I also have to come up with a demimech, a medium mech specifically designed to be piloted by a norm and a HUGE JUGGERNAUT!"

Jovy's smile grew strained. "I have to admit that this is not a normal assignment, but Master Wintress and Master Goldstein wouldn't have imposed this demand on you if they thought you were hopeless. Don't forget that they have detailed access to your record and other intelligence by our Association. As Master Mech Designers themselves, they have likely built up an excellent understanding of your current competencies. Instead of complaining about it before you have started to embark on this project, you may as well start your work and see how far you can go. Once the deadline has come, you can tell the panel members that you have tried your best."

He was right. Ves was wasting too much time on unproductive behavior. The clock had already started to tick since he showed up in this mech workshop.

He needed to commence his work right away!

"Oh, before I begin, are you allowed to help me develop my Carmine mechs?"

Jovy nodded. "I have been told that I can assist you in any capacity. The only conditions are that I must not taint your work with my own design philosophy and that I cannot do anything that weakens your own work."

That caused Ves to let out a huge sigh of relief. "If that is the case, then I might actually be able to fulfill this assignment in a reasonable timeframe. I understand what your bosses want from me. Let's start with drafting the first three designs."

"You don't want to draft the juggernaut mech as well while we formulate the concepts for all of the machines?"

Ves shook his head. "This is an entirely different beast. I want to accrue more experience with developing the other three Carmine mechs first before I tackle this big beast. Is the Khamatar Reign even capable of fabricating an entire juggernaut mech from scratch within the span of a couple of hours? The humongous network of organic tissue that makes up the Carmine System will probably take weeks or months to grow! This workshop probably isn't even equipped to fabricate a construct of that scale."

"Hmmm. You are correct. Give me a second. I need to contact Master Goldstein."

It took half a minute before Jovy received his answer.

"What did Goldstein say?"

"He told us that you don't need to concern yourself about the juggernaut for the time being. It is enough to deliver a complete design of one to us. Other mech designers will be tasked to fabricate the juggernaut at a different facility. What matters is that you complete at least several Carmine mechs of your own design while the conference is still ongoing."

Ves scratched his head. "Alright. I can do that, I guess. Let us start with designing the simplest and most conventional medium mech first. Do the Masters mind if I copy design solutions and design elements from my previous mech designs?"

"They do not mind." Jovy readily replied. "You can make any decision you want if you think it will speed up your work. We are not judging your craftsmanship, your creative vision or your design skills. We only require mechs with working Carmine Systems for us to test."

That was good news! Ves could easily cut down his workload by at least 30 percent if he could reuse elements of his older designs!

Ves actually started to grow excited now. The Survivalists exerted a lot of pressure on him. Designing mechs was what he did best. There was no reason for him to fail this assignment!

"Alright, let's do it like this. Let us start with designing a fairly broad and simple knight mech..."

#### Chapter 5204 Carmine Mechs

Now that he went down to business, Ves quickly fell into his groove. Ideas emerged in his mind about what sort of mechs he could deliver that best showcased the strengths and uses of his Carmine System.

Having a highly competent first-class Senior Mech Designer as his sole assistant was an incredible luxury that made his life much easier.

Jovy Armalon might not have that much experience with designing second-class mechs, but he possessed an excellent understanding on how to operate all of the exclusive high-end workshop equipment of this workshop.

Not only that, his extensive familiarity with Ves' design philosophy, mech designs and overall work approach also saved a lot of time. Jovy did not need to hear any lengthy and exhausting explanations on what living mechs were like or how Ves preferred to fabricate his works.

The input he provided to Ves was always helpful or insightful.

"I do not recommend you design a landbound mech to fulfill this demand." Jovy gently advised. "If I understand our bosses well enough, they will want to test your works under different circumstances. Flight capability is essential. Your first Carmine mech has to be able to fly in space."

"Okay. It will take a bit of extra time to design such a mech, but oh well. What about the demimech and the conventional mech that is meant to be paired with a norm? The former doesn't have enough space for bells and whistles. The latter will become a lot more dangerous and complicated to pilot to an individual who has never piloted an actual mech in his life."

Jovy quickly referenced the list of demands. "It shouldn't be a problem to leave a flight system out of the demimech. It has to be small enough to operate within the halls and corridors of a starship if possible. Flight is not essential in this case. As for the latter... the candidate assigned to pilot this particular work of yours is not ignorant of mech operation. According to his record, he is an avid

fanatic of mechs. He has not only taken numerous theoretical classes related to mechs, but he has also spent tens of thousands of hours of his free time on playing virtual mech piloting games."

Ves raised his eyebrow at that. "How realistic are those games?"

"Not too high. There is a limit to how much a norm can safely pilot a mech with the use of a limited interface. Many of the more complicated operations are automated in those games. This should not be a major problem. We are not asking for this norm to become a champion as soon as he enters the cockpit and forms a bond with your Carmine mech. We only want to see if he can actually perform decently enough that he will provide a net benefit to our armed forces after he has undertaken more training."

In other words, the Survivalists wanted to determine whether they could turn norms into qualified cannon fodder. There was no need for any of these dummies to be overly proficient at their new jobs.

Now that he thought about it, Ves thought that this might be a good way to put the Polymath's batch humans to good use!

No matter whether those test tube products developed genetic aptitude or not, each of them could be stuffed inside a Carmine mech and sent to the battlefield after a short period of acclimatization!

"I think I have a good understanding of what your superior expect from me now." Ves confidently spoke. "Let's complete these drafts and determine their overall configurations."

Ves did not even have to reassign his cyborg leg and Veronica from their current assignments to complete these relatively simple design tasks.

He occasionally borrowed parts of their brainpower at times in order to speed up his considerations, but that was the extent of his 'cheating'.

Ves had no illusions about the fact that he was under constant observation at the moment.

With both the Polymath and the Xenotechnician stationed aboard the Khamatar Reign, it would be beyond foolish for Ves to pull off any naughty tricks in their vicinity!

Fortunately for him, the demands imposed by the panel did not make his life unnecessarily difficult.

It only took a short amount of time for him to design a second-class space knight that shared many parallels with his previous works.

He took the Bastion as the main inspiration of his draft and heavily reworked its design elements to fit a standard mech.

He borrowed a lot of design elements from other works when appropriate.

After all, why should he spend his precious time reinventing the wheel when he already had an existing copy in storage?

He took bits and pieces from designs such as the Bright Warrior, the Doom Guard, the War Squire and even the Eye Project.

His professional sensibilities screamed in pain as Ves kept plagiarizing his old works. He always prided himself on designing mechs from the ground up with solutions that were precisely tailored for the jobs at hand.

Recycling old solutions was a lazy and suboptimal way of designing a mech. Parts, components and systems that were originally meant to increase the performance of other mech designs would never work as well when applied in a substantially different context!

Ves forcibly suppressed these impulses. He was not tasked with creating living works of art. He just had to create a bunch of functional tools, nothing more nothing less.

"Alright. What do you think of my Carmine Trooper, Jovy?"

"I think its mechanical structure is sound enough given the short amount of time you invested in it, but it lacks... skill expression. Don't forget that this is the mech that is meant to be paired with one of our existing mech pilots. We want to see how the Carmine System by itself and the combination between it and the neural interface will affect the control of the pilot. It is much easier to gather solid data on any performance improvements if you pair your machine with a ranged weapon."

He made a good point, so Ves rapidly adjusted the draft and ended up with a hero mech instead.

As far as hero mechs went, the draft design did not come close to the Everchanger or Ouroboros.

The second draft of the Carmine Trooper possessed a broad and blocky shape. Any mech designer could see that while the mech boasted good defenses and possessed a greater fault tolerance than average, its speed and maneuverability left much to be desired.

"Is it truly necessary for you to open up so much capacity to accommodate the Carmine System for this design?" Jovy questioned with a hint of skepticism. "You should be able to get away with a much slimmer version of your earlier implementations."

"I know, but I don't want to take any chances with this design." Ves responded. "I do not want the Carmine System to fail or glitch when this work is subjected to a battery of tests. I am unable to determine how strong or resilient the organic components of this design will be, so I prefer to err on the side of caution. Let's treat the most basic Carmine Trooper as our control group. We can try to vary the proportions of the Carmine System in the other designs."

This way, if the three other designs somehow malfunctioned or failed to produce adequate results, Ves would still be assured that the boring but solid Carmine Trooper would do its job with certainty!

Once Ves was done with planning the configuration of the Carmine Trooper, he moved on to a much more dumbed down machine.

"I don't think it is a good idea to copy the Carmine Trooper for the mech that is designed to be piloted by a norm." Ves responded. "Even if the chosen candidate has fought thousands of battles in virtual reality, the real piloting experience is vastly more complicated and demanding than what those simplified games can deliver."

"Are you thinking about falling back to a knight mech for this design?"

"No. That's too big of a leap I think. It may be better to design a frontline mech instead."

It was Jovy's turn to shake his head this time. "You are overshooting in the other direction if you do that. You should stick to a complete humanoid mech design. Trust me. A knight mech should be more than enough. You don't even need to include a flight system at this time."

"Alright. I guess I will do that instead."

It took even less time for him to design the simplified Carmine Conscript. The codename might not sound dignified, but Ves didn't really care.

He tried to increase the buffer and fault tolerance of the Carmine Conscript as much as possible while maintaining reasonable proportions. This caused the mech to look a lot fatter and cumbersome than the Carmine Trooper.

The reason why he compromised its mobility was because all of the added defenses and redundancies protected the mech and its pilot to the maximum possible extent when it was being inexpertly handled.

The mech would not incur significant damage if it tripped on its feet and fell flat on its chest, for example.

Adding a lot of mass and bulk to the mech also prevented the pilot from moving any of its limbs too quickly and losing control because of that. It was a lot less important for this mech to have a lot of skill expression because the 'pilot' wasn't supposed to be controlling a mech in the first place!

The Carmine Conscript did come with fully articulating arms and hands, so it could always pick up a ranged weapon and test the candidate's marksmanship when controlling a giant machine through the Blood Pact.

With that out of the way, Ves and Jovy moved on to the third request.

"A demimech, huh?" Ves spoke. "The list doesn't contain too many detailed specifications and requirements. I can pick any size I want, right?"

"That is correct. This is because none of us know the extent to how much you can miniaturize a mech and still preserve the operation of both the machine as its shrunken Carmine System."

That was understandable.

"Do I have to design this demimech for a professional mech pilot or a norm?" Ves asked.

"A mech pilot." Jovy replied. "The higher ups preferably want a copy of both, but it is more important to quickly determine the viability and the combat effectiveness of a demimech when it is being used with great skill. It will take too much time for a norm to operate the demimech with an acceptable degree of performance."

"Understood. Let me think about this..."

Ves did not draft any lines until he roughly determined the scale of his demimech.

He ultimately settled for a size that was a bit smaller than an ultra-light mech.

He did not try to push his limits and shrink the demimech down all the way until it was barely larger than a suit of heavy combat armor.

This was because such a tiny 'mech' resembled infantry more than a mech at that point.



What Ves had to create was an intermediate form between infantry and armor that sat in between but retained much of the advantages of both.

## Chapter 5205 Data Cruncher

Ves gained a lot of confidence in the viability of his demimech.

The draft for the Carmine Raider looked like a fairly compact but capable demimech that should easily be able to crush most second-class infantry forces.

Its height was only a bit shorter than the height of the torso of a typical medium mech.

Shrinking the machine to such an extent demanded a massive amount of adjustments that Ves never grappled with before.

For example, the substantial reduction in size meant that the mech lost a lot of mass, mechanical strength and leverage. Its limbs were shorter, its mech engine became a lot weaker and it needed to squeeze all of its parts in a much tinier frame.

While it sounded easy enough to simply substitute larger parts with miniaturized ones, Ves had to make far more adjustments as the dynamics of a demimech were completely different from that of a full-sized mech.

Ves did not feel too concerned about these problems. He might not have any actual experience with designing this kind of machine, but he possessed enough knowledge and experience to cope with the challenges imposed by this atypical design.

He did not really stick to a fixed mech archetype this time. The role of a demimech of this scale was much different from a traditional mech. He did not feel like turning his Carmine Raider into a straightforward knight mech or rifleman mech.

"I think you can get away with designing it as a hybrid mech." Jovy said. "It would also help a lot if it has at least some flight capabilities. You don't have to make it as fast as an actual light mech, but it should possess enough maneuverability for the pilot to pull off complex maneuvers. This will help a lot with testing the properties of the Carmine System at this scale."

Ves rubbed his hairless chin in contemplation.

The demimech shared many aspects of mechs, but had also shrunk down to the point where he could apply the design principles of ultra-heavy combat armor.

It just so happened that Ves was not entirely unfamiliar with working on suits of combat armor.

He had spent a significant amount of time on designing and upgrading his Unending Regalia over the years.

Even though his personal suit of protective armor did not come with any significant integrated weapons, it still allowed him to figure out how to handle considerably smaller and more limited armor systems, mechanical servos, energy supply systems and more.

Ves ultimately came to a decision.

"We can do that, provided that you help me out with selecting and integrating all of the miniaturized weapon systems. That is a bit of a blindspot to me. I am much more accustomed to handling larger and more generous weapon systems."

"I can take this responsibility." Jovy immediately responded. "You should focus on the big picture for this design. I can solve all of the time-consuming technical problems that are not worth your attention."

"Great! If that is the case, then we can go a little wild for this design."

Ves had tried to err on the side of caution for the first two mech designs, but he wanted to be a little more adventurous with the demimech design.

Ironically, he had more room to play this time. The Carmine Trooper and the Carmine Knight both had to be fairly basic and foolproof in order to reduce their complications as much as possible.

The Carmine Raider was an unprecedented work as far as Ves was concerned. There were no standard templates of demimechs that he should follow.

The stupendous availability of miniaturized parts meant that Ves could slot in as many of them into his design as he wanted. As long as Ves and Jovy did not select anything too weird or abnormal, they should be able to treat them as modular components that they could readily slot into the frame of the demimech.

By the time the pair completed the draft design of the Carmine Raider, they ended up with a scrappy and fairly maneuverable urban combat machine that was armed to the teeth.

The demimech's frame integrated a combination of miniaturized plasma and laser weapon modules. It also featured a pair of shoulder-mounted missile launchers that could easily be replaced by other weapon systems.

Its handheld weapon loadout consisted of a plasma sword and a machine gun, but the machine could easily employ a different set of weapons.

Ves truly felt that this demimech was highly suited for urban combat. It possessed a lower profile, it was a lot more surgical in its offensive options and its capacity for producing collateral damage dropped by a considerable margin.

He grew particularly happy with the array of small boosters spread across its compact frame.

These boosters significantly increased the demimech's short-ranged maneuverability and turned it into an even trickier combat machine!

Of course, a single demimech was no match to an actual mech in raw power. The difference in scale was too substantial.

The demimech's reduced capacity also came with other downsides. Its range and staying power were not good. Its defenses were predictably poor. Its melee combat capabilities were far inferior to its ranged combat capabilities.

Ves was unable to fit a cockpit that could safely eject its pilot. He was sure he could cobble together an improvised solution that could serve as a decent substitute, but there was too little time to work out such an ejection system.

"It is not strictly necessary so long as we test this mech under heavy supervision." Jovy reassured Ves. "We will have our teleporters locked to the test pilot at all times. He will be whisked away before the demimech is able to cause any actual harm."

"I guess that works."

The demimech was his favorite mech design thus far. The completely different circumstances caused Ves and Jovy to come up with original design elements that they had yet to work on before.

They could afford to do this because the individual parts weren't as large as that of a regular mech. It took a lot less time to get everything right as a consequence.

"Do you want to tackle the design of the juggernaut while we are at this stage?"

Ves shook his head. "Let's flesh out these three designs and fabricate them first. Who knows what insights and lessons we will gain over the next hours. The delay will also give us more time to think about how we should tackle this troublesome juggernaut design."

"Very well. We will do it your way, Ves."

Ves and Jovy proceeded to design the Carmine Trooper first.

Their design speed was impressive. Ves was already highly productive due to his mysterious spiritual sublimation. His performance comfortably exceeded that of any other second-class Senior Mech Designer.

That said, Jovy turned out to be more than capable of carrying his own weight!

The RA Senior possessed a few shortcomings in more practical areas that spoke of lack of experience in designing and fabricating mechs for actual use. His intuition and instinctive understanding of mechs were not as developed either. This was understandable as Jovy mostly practiced his craft within the confines of the Design World. He also did not have any masterwork certificates to his name.

Jovy's grasp of scientific theories and the Red Association's vast array of technologies were much more impressive in comparison. He possessed an excellent first-class cranial implant that provided him with an astounding boost in analytical ability.

These differences became evident once they started to design the Carmine Trooper side by side.

Ves adopted a more spontaneous design approach where he skipped a lot of calculations and made a lot of gut decisions. He allowed his intuition to play an outsized role in his design process.

There were plenty of cases where Ves did not even put much thought in the theory and the numbers of specific design elements!

Instead, he approached his design work as if he was sitting in front of an incomplete canvas and only needed to make a few loose brush strokes in order to complete a painting to his satisfaction!

Jovy on the other hand possessed a much more proper and data-oriented design approach. His weaker intuition did not pose a hindrance to him as he relied on his cranial implant as well as the generous quota of the Khamatar Reign's processing power to calculate much of his solutions!

What Ves particularly found impressive about Jovy's design approach was the use of a lot of different formulas.

Instead of trying to puzzle out solutions on an ad-hoc basis, Jovy seemed to possess an appropriate formula for nearly any situation. This not only allowed him to formulate his solutions faster and with greater consistency, but it also prevented him from getting stuck!

The design of the Carmine Trooper quickly took shape under their combined efforts.

It was ultimately a basic spaceborn hero mech without any other bells and whistles aside from its Carmine System.

Fitting in the Carmine System was not that difficult as the design of the Carmine Trooper offered enough room to accommodate the extra organic parts.

Ves had to spend a bit of time learning what sort of organic products he could produce inside the mech workshop.

Many of the bioproduction machines were astoundingly complex and incredibly overkill for what he required.

Fortunately, Ves managed to find a number of simpler equipment that could rapidly grow the organic components of the Carmine System without requiring a lot of handholding.

At this stage of the development of the Carmine System, Ves was unable to design a universal version that could safely bond with any possible human.

Every human body was different and unique. This was especially the case in the upper levels of society.

Practically every single first-class individual was a separate species in biological terms!

They received so much genetic tinkering and biological modifications throughout their lifetimes that they became reproductively isolated from each other.

If their genes diverged to such an extent that they couldn't produce offspring with each other in a natural manner, then it was exceedingly dangerous for them to exchange blood with a Carmine System that was attuned to baseline human physiques!

Perhaps in time, Ves could develop an upgraded version of the Carmine System that automatically adjusted its DNA and blood composition based on the biological properties of the mech pilot during their initial contact.

This was a necessary step in order to enable mass production!

Unfortunately, Ves was not there yet, so he had little choice but to adapt the Carmine System for the Carmine Trooper to a single mech pilot selected in advance.

"Okay, we're done with this." Ves said once he put the finishing touches to the Carmine System.

Jovy had taken care of the rest of the details during this time.

It only took a short time for them to develop a close and tacit form of cooperation with each other.

Ves found it quite handy that Jovy's design approached possessed a lot of parallels with that of his wife.

Both of them had received excellent education. Their elite schools had imparted them with much more structural design techniques that allowed them to make greater use of their cranial implants and any external sources of processing power.

Of course, Jovy was a lot faster and more efficient at this than Gloriana!

This was the first time that Ves seriously collaborated on a mech design with a genuine first-class mech designer.

He never knew that possessing a first-class cranial implant that was entirely geared towards mech design could make such an enormous difference in design efficiency!

It was no wonder that Gloriana nagged about this subject all of the time. She understood a lot better how much a first-class cranial implant could accelerate her work and how much additional attention she could invest in refining her solutions.

If Jovy was a woman or agreed to undergo a sex change operation, then there was a faint possibility that Ves would have thought about divorcing Gloriana.

The temptation to 'upgrade' to a better wife and collaborator was too irresistible!

"You're getting distracted. What are you thinking about, Ves?"

"Huh? Oh, nothing. Let's wrap up this design so that we can move on to designing the Carmine Knight."

Ves inwardly shook his head to clear his head of any distracting or irrelevant thoughts.

What was he thinking? There was no way he would turn his back wife! He could not go against his own principles, and he did not want his children to grow sad!

Chapter 5206 Overkill Production

Designing the first three Carmine mechs for the Survivalist Faction turned out to be a relatively simple process.

The technical content of the designs were not particularly challenging. Ves had deliberately dumbed down a lot of aspects to the point where they performed like entry-level second-class mechs at best.

The severe lack of time did not grant Ves the luxury to employ more powerful and sophisticated solutions. It was actually quite impressive how he and Jovy were able to whip up a handful of rough but fully functional second-class mech designs in just a couple of hours.

Sure, none of them possessed the refinement or raw power that allowed them to win any awards, but the most important part about them was that Ves had great confidence in their Carmine Systems.

"Do you need to take a break? I can't help but notice that your attention is drifting off again."

"Ah, that's not necessary, Jolie! I admit that staying awake for four straight days without taking a single nap might not have been my best idea, but I don't think it will affect my work efficiency."

The RA Senior paused in his work and stared at Ves with a puzzled expression.

"My name is Jovy. Are you certain you can persist? Misspelling names or mistaking my identity is one of the more severe signs that your judgment is being impaired."

"It's nothing! Really! I'm fine!" Ves pushed back any suggestion that he was out of his mind!

"Anyway, let's move on to producing these mechs before we tackle the design of the juggernaut. I am really eager to try out these high-end superfabs. I don't recognize their models or manufacturers, but they can easily blow my AP-VEX out of the water."

Jovy still looked suspicious, but he readily moved on to business. "I wouldn't celebrate so soon if I was in your shoes. These superfabs are designed with exacting precision in mind for the most demanding and delicate projects. They offer greater manual precision and control throughout the production process, but it is also easier to botch a job if you are incapable of handling them correctly. I highly recommend you read through their manuals first before you operate them. These instruments are meant to be utilized by Masters tasked with creating masterworks. That is why you have been assigned this workshop in particular."

Ves could fully see that as many of the machines eschewed automation for greater manual control.

As he began to skim through the dense and thick virtual manuals of a couple of the Red Association-exclusive production equipment, he found it increasingly more difficult to keep track of every new variable that he had to take into account.

He underestimated how much the high-end production machines demanded out of him in terms of skill and multi-tasking ability.

It turned out that the amount of manual settings and variables that an operator needed to take into account was so great that it was impossible for a baseline human to keep track of all of the variables!

"Can you handle it, Ves?" His friend walked over and asked with concern. "If you prefer to work with more familiar workshop equipment, I can request someone to materialize a copy of your AP-VEX Superfab."

"That won't be necessary. If I want to become a first-class mech designer, I will have to work with this caliber of production equipment sooner rather than later. It isn't every day that I get to play with some of the best workshop machines that the Red Association has to offer. I don't need to master all of the operations of the machines at once. I just have to gain a solid understanding of the basics before I am good to go. I will try to set up the accelerated growth of the three Carmine Systems first before I tackle one of these superfabs."

It was best to set up the growth of the organic components that made up the Carmine System for his three experimental first. Time mattered a lot for biomechs and biomachines. The longer they were allowed to grow, the less defects and deviations they exhibited.

The best biomechs had to be grown over a span of months or even years in order to attain the highest degree of quality!

It was not necessary to wait that long for Ves to produce his current batch. The Carmine Systems he had in mind were predominantly made out of fortified and modified human flesh.

Although the organic parts were rather weak and unable to cope with the rigors of heavy campaigning, they should be quick and easy to grow to full size. That was already sufficient for a bunch of test mechs.

"Ugh, what sort of stuff do mech designers grow with this organic synthesizer?" Ves let out a frustrated breath as he tried to make sense of the manual and the overly complicated control interface. "Who owns this workshop anyway?"

He eventually got the blasted machine to process his order without adding any unusual chemicals or strange organs. The Carmine System was just an oversized and glorified vascular system when it came down to it. There was no need for Ves to make it any more complicated.

He spent a few more minutes hovering around the strange biotech production machine in order to verify that it wouldn't produce an unholy mutation of flesh and machine.

His few personal experiences with biotechnology had taught him that he could never be too careful when messing around with biomechanical production.

"Alright, let's proceed with fabricating the conventional parts of our Carmine mechs."

The high-end superfab that Ves chose to do his work was extremely powerful.

Its production speed was blazingly fast when he tried to fabricate anything simple. It was able to process the tougher and more troublesome exotic materials with such great power that Ves could proceed with the next step in a matter of seconds instead of minutes.

In fact, the superfab worked so quickly that Ves actually had to adjust a few settings to slow it down! If the large and complicated device ran through the queued processes too quickly, Ves wouldn't be able to exert enough control over the individual operations, thereby preventing him from putting his personal touch on all of the fabricated components!

Ves thought about employing additional enhancements such as Blinky's design network or his recently developed Living Workshop ability, but he held himself back in the end.

There was no need to go all out and reveal his extraordinary work methods in one of the strongholds of the Survivalist Faction!

It wouldn't help that much anyway. The Carmine mechs he intended to fabricate were all based on rushed and flawed designs. It was impossible to make any of them look good to the high-minded mechers anyway.

"I just need to fulfill the job, nothing more."

Hours passed by as Ves and Jovy fabricated the first three test mechs with increasing proficiency.

Once Ves got a handle on the basic operation of the high-end superfab, he began to accelerate his pace while simultaneously exerting greater manual control.

He started to get a better hang of what mech fabrication was like at this level. Ves knew he was only scratching the surface of what was possible.

The superfab was meant to be used to fabricate powerful and incredibly sophisticated first-class mech components. Using it to fabricate a large collection of second-class parts was overkill.

Nonetheless, the more Ves studied its options and its technical properties, he was able to envision all of the variables a qualified first-class mech designer needed to master in order to fully realize all of its possibilities.

Ves did not particularly feel enthused by the prospect of overseeing all of these overwhelming options. They seemed excessive from his perspective.

His approach to fabricating mechs was a lot more holistic and esoteric. That meant that he was fine if the mech parts exhibited minor defects and misalignments so long as they did not compromise the safety of the mech as a whole.

He actually felt that all of these random and seemingly chaotic deviations added a special sort of subtle charm to a mech.

Unlike the lifeless and completely 'correct' mechs produced through materialization, the mechs produced through manual fabrication always bore the marks that were unique to the production machines as well as their human operators.

These slight variations and differences caused each of his products to develop their own unique flavors and personality. They might have been derived from the same design, but each copy started out with a unique identity and continued to diverge when put to use.

Ves felt he was able to impart a slight amount of personal touch to every part. He was not able to do this as well as he hoped, but it should be more than enough to impart a sufficient amount of life in the three Carmine mechs.

The assembly process did not present Ves with any complications. Despite utilizing a new high-end assembly system that directly utilized strong and focused applications of gravitic forces to lift up gigantic metal components as if they were as light as a feather, the basic control scheme was not that different in the end.

Ves had deliberately kept most of the design elements fairly simple in order to avoid the need to employ any complicated assembly procedures.

The only stressful moments in the assembly phase was when he needed to gradually integrate the rapidly-grown bioparts of the Carmine System into the mech frame.

The extensive networks of gigantic blood veins and other bioprogrammed tissue could not be tossed around like normal metallic components.

He had to keep them at the right temperature range and prevent them from losing too much moisture. He also had to fit them in place in just the right way before merging any contact points with the mechanical systems of the Carmine mechs.

Fortunately, Ves did not make any serious mistakes, and all of the parts behaved as expected.

He only encountered a few annoying complications when he attempted to integrate a down-sized version of the Carmine System into the half-open frame of the demimech.

The tighter spaces and his overall lack of experience with working on machines of this size forced him to slow down in order to do everything properly.

Neither Ves nor Jovy had accrued any experience with demimechs, so both of them had to be able to improvise a lot of new solutions on the spot!

These additional challenges would have probably produced significant delays for Novices and Apprentices, but the two Seniors were far too competent to get stumped by these issues.

They ultimately got the hang of it and managed to complete the third and final Carmine product of this batch!



Both Ves and Jovy stepped back and took a few minutes to catch their breath and admire their latest handiwork.

"I must say that it is a novel experience to work alongside a mech designer as unconventional as you." Jovy spoke up first. "Your approach to mech design is much more haphazard than I expected. My teachers within the Association would have ripped you apart for breaking so many rules. I find it interesting that you somehow found a way to make it work and turned it into one of the strong points of your design style. I have the sense that these Carmine mechs would have never become so alive if you employed a more structural approach."

Ves always liked it when others stroked his ego. He did not dare to take full credit, though.

"Too much chaos isn't always a good thing. You're not so bad yourself. There are good reasons why mech designers from your Association are regarded as the best in the business. You have mastered an endless amount of best practices that have been meticulously developed and formulated by entire generations of Masters and Star Designers. A part of me is envious of you for having the privilege and the cognitive ability to not only memorize them, but master them all. You mechers are really something else, Jovy."

The two had only worked together for less than a day, but already developed a strong degree of mutual respect and familiarity towards each other!

#### Chapter 5207 Introduction to Juggernaut Design

"The Carmine mechs all appear to be sound." Jovy reported as he studied the results of the deep scans conducted on the recently completed machines. "They show no obvious defects or other concerning signs. That does not rule out the possibility of other errors. Our scanners cannot determine whether the Carmine Systems of these three machines will even work."

"I am not too worried about that." Ves spoke as he stroked his palm across the metallic surface of the Carmine Raider. "I have performed multiple examinations on them. The Carmine Systems show no obvious signs of mutations or deviations that I can detect. Their E energy structures are all working properly."

That caused Jovy to "My Eye of Providence has noticed that your mechs are actively absorbing a small amount of E energy radiation in the local environment. That is going to raise a lot of eyebrows, you know that? I am decently certain that you are not the only mech designer who has managed to create a mechanism where mechs can fortify their properties by themselves over time, but the group is bound to be small."

Ves already knew this, but he did not really care about what kind of signal he sent to the higher ups. It was hardly a secret considering that tens of thousands of living mechs had begun to cultivate a variation of the Larkinson Metal Guardian Mantra.

"This feature is an important part of my current design approach. These Carmine mechs may only be experimental mechs that we could only develop in haste, but they are still proper living mechs from my perspective. Three human lives will forever be bound to them. I am sure that you Survivalists will ultimately upgrade them all into proper first-class multipurpose mechs once you are done with most of your tests. I want to set these machines up for success to better serve their pilots down the line."

"That is kind of you, but I am not sure our superiors will appreciate the additional variables and complications."

Ves shrugged and continued to examine the spiritual foundations of all three Carmine Mechs.

It was important for him to ensure that the spiritual settings for each individual Carmine System were all in order.

Ves had yet to meet with the candidates chosen to serve as the permanent test pilots for these experimental machines.

However, he was able to prime his products for their intended users with the help of blood samples and a huge amount of recorded information.

There was no way to be absolutely certain that his Carmine mechs could safely be piloted. The tech was simply too new and Ves did not have enough existing cases to draw upon.

The only way to find out whether he and Jovy did a good job was to see them in action.

He looked at the time and saw that he roughly had four hours left before the deadline had passed.

There was one more design that he had to deliver to the Survivalist Faction. It was by far the oddest and most excessive request of the four.

Juggernauts had gone out of vogue centuries ago! The mech industry deemed them to be far too wasteful and inefficient to employ in any serious capacity.

The mech designers of old had already formed this conclusion in a time of relative abundance and optimism. The availability of resources back in the Milky Way Galaxy was much greater than in the Red Ocean, and even then people chose to set juggernauts aside for conventionally sized mechs!

Still, as ridiculous as this request may seem, the potential benefits if they worked out were massive!

"Do you think it is plausible that a juggernaut piloted by an ace pilot with the help of both a neural interface and a Carmine System will be able to approximate the power of god mech?"

Ves frowned in thought. "I seriously don't know. It is you guys who came up with this notion, not me. I suppose there is a thin basis to this hypothesis that makes it plausible, but... there are too many uncertainties to know for certain. I think it is way too premature for any of us to think that far ahead. This juggernaut request isn't meant to be paired with a high-ranking mech pilot, right?"

"No." Jovy shook his head. "The candidate chosen to test pilot the juggernaut once we have fabricated it in a different facility will only be a standard mech pilot. Don't worry about his qualifications. He has received special training and served as the test pilots of numerous experimental juggernauts of different sizes. Just because our industry has condemned this extreme mech variation doesn't mean we have forgotten about it entirely. There are always a few curious mech designers within our Association that developed the ambition to revive these giant machines for one reason or another."

Only the mechers had the enormous amount of resources and facilities to spare on frivolous experiments at this scale.

Ves crossed his arms. "You guys don't happen to have a few textbooks or manuals lying around that can give me a crash course on how to design a juggernaut mech, do you? I am pretty confident in my ability to design super-heavy mechs as they are not too far removed from what I am usually working on. I do not share the same degree of confidence anymore if the machine has to be as tall as dozens of mechs stacked on top of each other."

Jovy nodded in agreement. "I am in the same position. I have already taken the liberty to search and pull up several articles and textbooks related to this subject. They are all written by reputed Masters who have personally designed and produced juggernauts over their careers."

Once Ves received a package of virtual documents, he quickly skimmed through their initial pages and roughly understood the gist of juggernaut design.

"Some of these texts are really old. Centuries old."

"Many of the references may be out of date, but the overall theory should still be sound."

"Mmhmm. We'll see. I have already spotted a couple of helpful tips."

There was no time for Ves and Jovy to thoroughly read and internalize all of the theories contained within all of this academic literature.

The best they could do was to skim over the minutiae and take note of the most relevant and salient points.

Fifteen minutes passed before Ves spoke up again.

"We will have to make a few design choices right away. Juggernauts designed to operate in space are vastly different from ones that are also rated to operate on land. The designs of landbound juggernauts are extremely bottom heavy. Their legs and lower torsos are absurdly thick compared to what goes on top. It makes sense as you don't want their center of mass to be too high and make it easy for them to tip over. Spaceborn juggernauts don't share the same concern depending on their overall design and layout. What do the bigshots want from me? I don't want to waste my time on designing the wrong variation."

Jovy frowned for a moment. He called up the list of requirements and saw that it did not mention any specific demands in these aspects.

This was not an oversight. It was impossible for the likes of Master Wintress and Master Goldstein to make such a trivial mistake.

"Compared to the previous three Carmine mechs, we don't have to meet as many specific criteria as before. The message here is that we can decide for ourselves. Whether it is strictly landbound or spaceborn doesn't matter. Our Association can make either of them work. We can always overhaul the enormous machine at a later date."

"Okay," Ves said. "If that is the case, then let us go for a landbound juggernaut mech."

"Are you sure about that? Landbound mechs are normally simpler to design than any other alternative, but this rule does not necessarily apply to juggernauts anymore. At this scale, there is so much mass that you will have to take so many additional variables and relationships into account. You need to prevent the feet from sinking far too deep in softer soil. You need to ensure that the mechanical parts will work properly and in a predictable fashion at varying levels of local gravity."

We'll be able to reduce a lot of these problems if we set out to design a quadruped or octoped juggernaut."

Ves shook his head in rejection. "I don't have a lot of experience in designing four-legged or eight-legged beast mechs. I am by far the most comfortable with working on humanoid mechs, so let us stick to two legs despite how precarious this choice may be for juggernauts. Having less limbs will at least reduce the complexity of the giant machine, which will result in less work for us and less strain on the candidate. That last part is extremely important given how even a simple juggernaut is reported to be at least an order of magnitude more data intensive to pilot."

One of the reasons why humanity originally phased out juggernauts was because they imposed huge demands on the pilot.

Only elite mech pilots with A-grade or B-grade genetic aptitudes were able to handle the enormous demands of a juggernaut without overloading their brains.

Even though the raw firepower of a juggernaut was awesome to behold, the vast majority of highly talented mech pilots preferred to stick with conventional mechs.

The latter offered a lot more skill expression. Juggernauts were far too slow and heavy for mech pilots to fully showcase their piloting skills. Their ability to maneuver and outplay opposing mech pilots was much greater if they were paired with mechs that were faster and nimbler.

This reminded Ves that he needed to adopt a completely different set of priorities in order to design his first real juggernaut.

"Do you have a length in mind?" Jovy asked.

Ves briefly thought about the few juggernauts he encountered throughout his career.

The most iconic and memorable one was the Uranus, the failed magnum opus of the Supreme Sage.

It was a demented attempt by a foolish human biotech researcher to attain supreme power and physical immortality in a single giant leap!

With the knowledge that Ves possessed today, he believed that the Supreme Sage had a much better chance to pull off his taboo experiment if he scaled down his work by a couple of hundred meters.

The old man who founded the Life Research Association had been too greedy in the end. With his lifespan starting to run out, the Supreme Sage ultimately decided to make an enormous gamble and attempt to turn himself into a god with a single leap of faith.

The Uranus was around half a kilometer meters long. While that made the titanic biomachine exceptionally powerful, it was also way too much for a first attempt.

"Let's settle for 200 meters."

"200 meters is too conservative." Jovy lightly pushed back. "The purpose of this request is to test how employing your Carmine System alongside a conventional neural interface can improve the operation of a juggernaut. The juggernaut needs to be more challenging to pilot in order to properly conduct this study. We should go for 400 meters."

That length was a lot closer to the infamous Uranus!

"I don't think we can handle a juggernaut of this size. Let's settle for 300 meters. I don't want to risk failure due to committing basic design errors."

Jovy let out an exasperated breath. "Very well."

He and Jovy huddled together and quickly sketched their first draft of a humanoid juggernaut.

They tried to keep it as simple as possible. They could always add more complexity later on if necessary, but it was a lot harder to simplify a design when it had reached a more advanced phase.

After a short discussion, the two Seniors decided to add a basic weapon loadout to their juggernaut. They paired up their juggernaut with an enormous mace and a simple but extremely large caliber laser rifle.

The shoulder-mounted weapons were a little special. Ves found it funny to mount a pair of formidable secondary gun batteries on the shoulders of the juggernaut!

Although this design choice caused the machine to become a lot more top heavy as a result, the balance hadn't been thrown completely out of whack, and that was good enough for Ves.

## Chapter 5208 The Power of the Association

It was impossible for Ves and Jovy to properly design a complete juggernaut mech in less than 4 hours.

They were working so far outside of their comfort zone that they couldn't directly reuse any of their old design solutions.

Juggernauts were just too different. The 300-meter long mechanical monstrosity possessed a volume that was comparable to a starship.

The quantity of parts that made up a juggernaut was an order of magnitude greater than that of a conventional mech at the very least!

While Ves and Jovy were able to skip a lot of additional work by multiplying the size of parts by a lot, they weren't able to apply this approach on every single part.

There were still a lot of functions that couldn't be solved in this manner. The pair of Seniors had to tackle a lot of design problems the hard way.

In order to shave away a lot of time, the two mech designers resorted to several expedient solutions that they normally eschewed because it would put their professionalism under question.

Jovy spent a lot of time browsing the expansive library of existing mech designs in the Red Association's internal database.

The database was one of the most precious assets of the Mech Trade Association and its Red Ocean off-shoot. It contained hundreds of years worth of accumulation from a huge amount of mech designers.

Although the database was understandably lacking in juggernaut designs, Jovy received special permission to access the full design schematics of almost every relevant entry.

This gave Jovy a lot to work with. He could easily borrow ready-made parts and design elements from thousands of unique landbound humanoid juggernaut designs.

While it was never proper to straightforwardly copy parts of an existing design and paste them into your own design, nobody was complaining at the moment.

If the Survivalists were willing to exhibit more patience and give Ves a few months of time, then he and Jovy would have been able to whip up a much more acceptable juggernaut design based on their own efforts!

"Are you doing alright, Jovy?" Ves asked with a touch of concern.

"I am not experiencing any issues worth mentioning for the time being." The other Senior replied from his own station. "The borrowed design elements that I am reworking will not be pretty, but they will do the job. The juggernaut will be substantially slower and less resistant to damage, but it will function without losing its balance or misaligning any of its movements."

"Good."

While Jovy was busy with reworking bits and pieces from other juggernaut designs, Ves ended up using a tool that he had used only once.

He never expected that he would end up utilizing the auto designer once again. Just the thought of depending on this highly automated design tool caused him to question his principles as a mech designer!

Still, whatever objections he held towards the auto designer program were irrelevant in the face of the demands from the higher ups of the Survivalist Faction.

At least Ves was able to work on his juggernaut design in his own name. He could employ his own design style with its usual flair and quirks without needing to hold himself back.

The auto designer program developed by the mechers was a lot more elaborate and tailored for professional use compared to the one utilized by Alexar Streon a long time ago.

The older and outdated program that Ves used to design the Ouroboros in a rush could aptly be described as a toy. It was designed with laymen in mind and presented a user-friendly design interface that was simple enough to be used by teenagers.

The Red Association developed a much more robust and advanced automation tool for its own mech designers. Although it was capable of automating almost every design task, Ves was able to access a seemingly endless list of settings that he could use to finetune the behavior of the powerful AIs.

He could tell them to selectively automate specific design tasks while making sure to leave other design tasks for himself.

The degree of specificity and granularity could be as low or high as he wished. If he was feeling really lazy, then he could automate almost every aspect aside from a few settings. That would allow him to input a few data points before pressing a button that resulted in a nearly complete and usable mech design!

However, this was the most shallow application of the Association's version of the auto designer program.

The auto designer program could turn into a powerful tool in the hands of a real mech designer. Apprentices, Journeymen and even Masters could easily shave days, weeks or even months worth of design work while still preserving much of their unique characteristics in the final output!

This was not just due to the extreme degree of customization and specification of the auto designer program.

It turned out that the auto designer had access to the very same database that contained all of the mech designs that the Red Association had on record!

This included mechs designed by Ves over the course of his career!

Ves actually grew quite annoyed when he saw that the database contained more than just the design schematics of the commercial mechs that Ves had designed for the mech market.

He did not mind the fact that the database contained the designs of commissioned mechs such as the Valkyrie mech line that were never formally submitted to the Association in order to get validated.

Those mechs were so widely used and produced throughout different parts of human space that the mechers had to be incompetent if they couldn't get their greedy hands on those designs.

What really pissed Ves off was that the mechers had actually intruded into the core of his clan and obtained copies of the full designs of all of his Larkinson-exclusive mechs!

His expression grew more and more cross as he browsed through the extensive list that had no right to exist.

The Bright Warrior. The Rigid Wall. The Rigid Spine. The Stingripper. The Signal Bearer. The Transcendent Punisher. The Transcendent Charger. The Redlance.

All of his standard mechs for the Larkinson Clan were on the list, including the ones he barely contributed to.

The files in the database included more than just the essential design schematics. It also included his logs, his informal notes, the raw calculation output as well as the complete recordings of his fabrication runs of the listed designs!

Yet as much as Ves felt pissed that the mechers got their hands on the full design files of the aforementioned mech models, he grew really angry when he looked further down the list!

The Amaranto. The Riot. The Everchanger. The Minerva. The Bastion.

They even stole his Phobos!

Ves recalled that he had been extra careful about information security when he designed this highly strategic expert stealth mech!

Yet for all of he and his clan's attempts to keep its design along with all of his other files and documents secure, the mechers easily defeated his efforts and retrieved his work anyway!

Though Ves was filled with rage, his better senses soon caused him to feel a chill of fear.

He did not think it was a coincidence that he managed to gain access to this list. He would rather assume that it was a deliberate ploy rather than an accidental oversight.

Ves became brutally reminded by the power of the Association.

No matter how much he had improved and no matter how much his status had risen, he must never forget that he was far from the top dog.

The Red Association was led by multiple god pilots and Star Designers. It also had access to a lot of remote support from their much greater parent organization in the Milky Way Galaxy!

Even if Ves had his mother in his back pocket, that was far from enough to defy the Association!

If Ves ever wanted to distance himself from the mechers in the future, he at least needed to ensure that they couldn't steal his files willy-nilly.

In hindsight, it hadn't been the best idea to let the mechers upgrade the Spirit of Bentheim to a quasi-first-class factory ship in one of their very own shipyards.

"What the hell can I do?"

Nothing.

"I should move on." He muttered.

While Ves was not happy about this unwelcome discovery, he soon discovered the benefits of all of this theft.

The auto designer was actually capable of absorbing all of the aforementioned data and tailor its automated design processes to simulate his own design style!

Ves watched on with amazement as a procedurally generated mech design looked awfully similar to how he would have approached this project.

The auto designer somehow understood his decision-making well enough to include all of the appropriate design quirks and preferences without adding anything that was inappropriate in this context!

When Ves altered the instructions in order to make changes and corrections, the deviously clever auto designer perfectly accommodated his intentions and spit out new mech designs that just happened to match his demands!

He couldn't hold himself back.

"Jovy?"

"What is it now, Ves?"

"Can you tell me more about this auto designer? Why is it so good, and why does it seem that it is exceptionally suited to be used by high-ranking mech designers?"

His friend smirked. "I'm not surprised at your reaction. The auto designer used to be neglected by us as we rightfully considered it to be a crutch. It was only when the Polymath rose up and made a pass at the auto designer program that it gained several powerful new uses."

Ves almost froze at the mention of a certain name. "The Polymath updated the auto designer program in person?"

"She practically reformed it from the ground up." Jovy proudly replied. "Her Excellency excels in this sort of work, you know. She is able to draw on so many disciplines at once that she can turn any



piece of trash into treasure. Under her concerted efforts, the auto designer has gained at least three new uses. The most basic one is to employ it as a teaching tool. Several of our mech design schools have adopted a teaching method that gives young mech design students access to the auto designer and allow them to complete their assignments at a high degree of automation."

"Oh! Those schools are using it as a set of training wheels!"

"Indeed. The concept is not difficult to understand. Students can automatically generate a wide variety of designs. There are only a few variables left untouched that they need to solve through their own efforts. Once they grow older and learn more and more theories, the auto designer will gradually disable one automated setting after another. The student must gradually take on more and more responsibilities, but never to the point where they get overwhelmed. Once they have reached the final years of their studies, they can remove the last training wheels and design complete first-class multipurpose mechs from scratch. This new teaching method has attracted a lot of criticism, but it has proven to be highly effective at teaching less talented and augmented mech design students."

Ves could easily see why this was the case. There was a lot of handholding, so much so that the students might grow too dependent on external help to design their works. It would be hard for them to fully shake off this persistent habit after years of using the auto designer.

"What about the second use?"

"The more traditional use of the auto designer program is to use it as a time saver." Jovy replied. "That is what we are supposed to be doing at this time. While it is anything but ideal, mech designers are occasionally pressed to deliver a fully functional mech design in exceedingly short time frames. A properly configured auto designer that has access to an extensive library of your own works will be able to simulate outcomes of your more superficial design tasks with an impressive degree of accuracy. The more of your mech designs in the database, the more faithfully it can reproduce your work. It isn't able to replicate your design philosophy, so you don't have to be afraid that it will replace your job... for now. Who knows what the Polymath can do if she makes a second pass at the auto designer program?"

Ves shuddered in fear at the thought. The power of this Star Designer was too great!

"I get it. I have to admit that the Polymath has succeeded awfully well at giving us a tool to save a lot of time. What about the third use?"

"Well, I am sure that you have discovered that it can replicate your design style extremely well. It can do that for any mech designer whose works are on record. Rational mech designers are able to use the auto designer as a research and learning tool by simulating the work of other professionals. This was probably the function that the Polymath had in mind when she upgraded and expanded the auto designer program. A lot of rational mech designers have become especially grateful to her after this. Many of them took the initiative to join her camp."

"I see."

Chapter 5209 The Web Of The Association

Ves and Jovy barely managed to complete their juggernaut design within the 20-hour deadline.

They both had no compunctions about borrowing from existing juggernaut designs and making heavy use of the auto designer to fill in a lot of gaps.

If not for the fact that the highly intelligent and accurate auto designer program lacked any form of spirituality, it would have been capable of replacing the work of at least 90 percent of all mech designers!

Ves couldn't help but grow increasingly more frightened at the monstrous capabilities of the auto designer program.

Though it was backed up by the potent tech and the gigantic amount of processing power of an RA research battlecarrier, Ves could completely foresee a time where it could easily substitute the work of every Senior Mech Designer lower-ranked mech designers.

Would there still be a place for younger mech designers in the mech market by the time the auto designer program became available to the general public?

Perhaps the mech designers who fell outside of the Red Association might all be driven out of the real mech market and become forced to ply their trade in an elaborate virtual environment like the Design World.

Ves truly hoped that this day would never come.

So long as the Red Association was governed by enough mech designers, it was unlikely for them to tolerate the spread of the auto designer.

Its existence threatened their core interests!

The mechers in charge of the Association would be stupid to release a program that threatened the foundation of their existence!

Fortunately, enough people recognized the threat of excessive automation. Technology existed to make humanity stronger. If the excessive convenience provided by automation went too far, then it would have the opposite effect!

This was why the mechers restricted access to the auto designer.

Ves learned from Jovy that outside of special schools that relied on the auto designer as a teaching tool, it cost mechers a decent amount of MTA merits to utilize its functions.

This was not only to prevent them from growing too dependent on this tool that had the potential to substitute months if not years worth of crunch work

The limitations also served to prevent the auto designer from demanding too much processing power.

All of the computers, chips and other hardware needed to perform countless calculations were not cheap!

Even if the Red Association ranked at the top or close to it when it came to amassing an enormous hoard of processing power, its availability was ultimately finite.

A lot of mech designers as well as other professionals depended on processing power to do their work

From mineral analysis to modeling the performance of a fleet of human warships fighting against a phase whale, every department of the Red Association required a lot of processing power just to undertake their essential responsibilities!

"The auto designer can deliver excellent results when used to its full potential, but the processing power needed to perform all of those calculations are massive." Jovy told Ves in order to reassure the latter's concerns. "It is impossible to make the auto designer available to any private individual or company because there simply isn't enough processing power to satisfy all of their needs. What we can do through a combination of mental digitization and human ingenuity, the AIs programmed by the Polymath can only complete their work through brute force calculations. The latter is much more inefficient than the former."

Ves nodded in understanding. Ultimately, this economic reality was one of the driving reasons that preserved the viability of human mech designers. It was simply cheaper and more efficient to allocate a lot of work to the large amount of mech designers active in the industry today.

It also prevented rational mech designers who augmented their work with the use of the auto designer from becoming too dominant. Their signature ability to imitate the design philosophies of other peers was quite scary, but their work tended to be fairly worse than the real deal.

"Mech design is not cheap." Ves remarked as he put the finishing touches on the nearly completed juggernaut design. "I never really saw it this way, but the higher you go, the more financial resources are needed to get ahead. Third-class mech designers can go by without any form of augmentation or powerful computers for a time, but once they reach the Journeyman stage, it becomes exponentially harder for them to conduct their research and design more complicated mechs. I bet that Seniors can't become Masters unless they invest a lot more in augmentation as well as many other expensive toys. There is no way for them to turn an impossibility into a reality by relying on a low-budget design lab and mech workshop."

Ves thought about the former Skull Architect. That guy had remained stuck as a Senior for a long time while he languished outside of civilized space.

It was only once he returned to proper civilization and gained access to a lot more resources that he started to make real progress again.

Organizations mattered. Individuals were too small and insignificant in the face of major states and organizations that had access to a lot more resources.

Only by integrating into them and earning a greater share of those collective resources would mech designers be able to break past their limits in a more efficient manner.

This was probably the reason why second-raters rarely if ever managed to advance to the rank of Star Designer.

The few ones that managed to do so had worked hard to promote themselves to first-raters, thereby abandoning much of their original identities for the sake of becoming part of the most dominant groups of humans.

Ves followed a similar trajectory now that he thought about it from this angle. Here he was, trying to develop a bunch of Carmine mechs in record time just so that he could work towards a higher galactic citizenship tier.

The myriad of benefits bestowed by people who reached tier 3 and higher had completely aroused his greed and propelled him to work earnestly to please his new masters!

Ves belatedly realized that he had fallen into a trap.

The mechcers were certainly devious. They knew that there were a lot of stubborn and selfish mech designers out in the wild. The more talented and capable they became, the more they prized their independence.

However, just because these independent mech designers wanted to keep to themselves didn't mean they could escape the growing need for access to greater resources.

Ves had long been accustomed to treating the MTA and now the RA as a convenient store and service center for much of what he needed to boost his work.

From purchasing access to restricted knowledge to paying for powerful tools such as his AP-VEX Superfab, he had already become enthralled by the mechcers without realizing the depth to which he had fallen into their sphere!

Even now, the prospect of becoming a 3 galactic citizen and everything that came with this bump in status did not frighten him as much as he should.

Honorary membership to the Red Association? Yes please.

An escort fleet that consisted of actual first-class warships and mechs whose sole mission was to keep him safe and allow him to work in total peace in comfort? Yes please.

Entry into various ruling councils and other clubs where he could hobnob with fellow human leaders and have a say in how to shape the future of red humanity? Yes please.

The deeper Ves entered the web spun by the mechcers, the harder it became for him to pull himself away!

Which mech designer would be stupid enough to reject the option of gradually transitioning to a position of leadership in one of the most powerful human organizations in modern times?

It was no wonder why so many top mech designers gradually cut off their ties to their former states and accepted the identity of a mecher!

This model worked with great success for over 400 years for the Mech Trade Association.

It did not seem likely that the Red Association would do any worse considering that mech designers had very little alternatives to get what they truly wanted as they progressed.

Ves silently glanced at Jovy.

The Survivalists had employed a concerted effort into making him feel more connected to them. From inviting him to this conference to letting Jovy stick to him like an adorable guide hound, Ves had to admit that their tactics were working.

Ever since Ves started to get in touch with the Transhumanist Faction, he had developed a greater kinship towards Master Termaneo Dervidian and the ideals of his group.

Ves had started to drift away from the Survivalist Faction.

This was no longer the case. Ves built up so much understanding, kinship and gratitude over the course of just 5 days that he would likely consider himself as their brother long after this event had ended!

Becoming aware of this dynamic did not solve his 'problem' per se, but it was a good first step towards a more palatable resolution.

As Ves and Jovy finally finished the juggernaut design after a lengthy design session, they both felt a sense of satisfaction as they beheld their total sum of work in the last 20 hours.

Not only did they design and fabricate three functional Carmine mechs of varying sizes and properties, but they also designed a relatively functional Carmine juggernaut!

Of course, there was no way that the pair of Seniors could fabricate a 300-meter tall monstrosity in a simple mech workshop.

"It is a shame that we won't be able to see this design come into fruition with our own eyes." Ves lamented in regret. "This is the first juggernaut that I have designed. I really want to see it in action up close. It's so powerful that it can crush any ordinary mech by relying on brute force alone."

Jovy, who did not look winded at all despite working hard for a long stretch of time, made an odd expression.

"That is not what I expected to hear from you. Shouldn't you despise this final design for being too unauthentic?"

Ves casually shrugged his shoulders. "I am not pleased with how this design contains so little actual input from me, but what can you expect in just a couple of hours? It has been a novel experience to design such large and imposing mechanical monstrosity with the help of the auto designer. It is a substantially different experience that has added a lot of variety to my life. I don't consider our Carmine Titan to be a product of human ingenuity. It is a living monument of the enormous synergy between humans and technology. I kind of understand the Polymath's vision a lot better now that I have experienced the power of her auto designer."

The Polymath probably regarded human society and technology to be heavily flawed and underutilized.

There was so much potential being buried that she couldn't do all of the waste and missed opportunities!

Only by gaining absolute dominion over red humanity would she be able to exert her transcendent intelligence and abilities to the fullest!

So long as she gained enough authority and recognition, the Polymath could employ the same kind of problem-solving approach she used to upgrade the auto designer on everything else, thereby making existing red humans a lot greater than they were before!

Ves rubbed his hairless chin. He wasn't sure whether he would get the opportunity to cast his vote on the final day of the conference, but if he had the chance to do so, he was currently inclined to throw his support behind the Unity Plan.

Despite the hidden danger that the Polymath represented towards fragment holders like himself, right now they were both stuck inside the same crashing starship.

They first needed to work hard to prevent the ship from meeting her doom before they could even think about determining anything else!

## Chapter 5210 Gathering Proof

The time had come to present their work to the ones that had shown a great interest in the potential of the Carmine System.

Proof was all that the leadership of the Survivalist Faction lacked. Now that Ves and Jovy had worked hard in the last 20 hours to deliver 3 whole Carmine mechs as well as a ridiculous juggernaut design, it was time for this affair to enter the final stage.

Surprisingly enough, all three members of the secret panel reappeared once again.

Their schedules must be incredibly busy given how they all had to meet with a lot of important figures in order to undertake their duties as the envoys of their respective faction leaders.

Master Xena Wintress, the Mace of Retaliation and Master Vayro Goldstein all looked as strong and impeccable as ever as they teleported inside the secure mech workshop.

Their eyes immediately drew towards the three Carmine mechs that were awaiting their inspection.

Even though the machines that Ves was able to produce in this short timespan did not come close to representing his best efforts, the way these three distinguished figures gazed at his Carmine mechs made it seem as if they were all masterworks!

The ace pilot spoke up first. "So these are your works, Professor Larkinson. I can truly appreciate how novel it is to come into contact with mechs that are... alive. The stories and the records do not do your work justice. It is this quality that enables your Carmine System to increase the cooperation between a mech and a mech pilot, is that correct? Is there no possibility that your Carmine System can be employed on a non-living mech?"

Ves nodded as he stood aside his three works. "You Survivalists are certainly welcome to try, but based on my current theories I see no way to make this happen. The Carmine System is not really the most important part about all of this. It is the Blood Pact that truly enables people to bond with their mechs in a more intimate fashion. You cannot form a metaphysical bond if there is no valid receiver on the other side."

He genuinely did not want his Carmine System to become overly dependent on living mechs.

It sounded contradictory as it went against his own interests for people to become less dependent on his work, but he did not want to deprive people of the ability to choose when they had the option to pilot a mech with the help of the Carmine System.

He ideally wanted the decision to pilot a living mech and develop a deep and permanent bond with one to be as voluntary as possible.

Ves believed that only the pilots who proactively chose to pilot living mechs could utilize them to the fullest.

However, he saw no viable way to detach the Carmine System from living mechs. The former worked as an extension of the latter.

"Are these mechs ready for use?" Master Xena Wintress asked.

"The designs should be sound enough." Jovy answered this time. "We have encountered no major issues during the fabrication process either. Theoretically, these mechs should be safe and adequate enough to be piloted in a regular fashion. The only uncertainty is the Carmine System. Professor Larkinson has designed three unique versions of it to accommodate the specific circumstances of every test machine. In every case, the variations are the first of their kind to exist in reality. Neither of us are able to guarantee their safety and performance."

"That is understandable." Master Goldstein said in a gentle tone. "We are well aware of the potential risks and dangers of testing unverified tech. If our conditions were better, we would have been willing to extend more time to attain the results we desire. Sadly, we do not enjoy that luxury. We are pleased that the two of you have successfully completed your assignment in a small span of time. We recognize and appreciate your skills."

The three high-ranked figures moved closer to the three Carmine mechs and inspected their frames and design characteristics in their own ways.

The three machines could not hide many of their secrets from the sight of two powerful Master Mech Designers. Both Wintress and Goldstein were easily able to trace the design process and many of the design choices that Ves and Jovy had made over the course of the design process.

Only the Carmine System eluded their understanding for the time being. All of their knowledge, experience and other advantages did not avail them much in their attempts to decipher all of its secrets.

This was why they wanted to see it at work so badly. After a decent delay, they finally had an opportunity to gain the missing piece that could complete the puzzle surrounding the mysterious Carmine System.

"Interesting." The Mace of Retaliation spoke as he brushed aside the Carmine Trooper and the Carmine Knight so that he could get a closer look at the undersized Carmine Raider. "What has led you to settle on this size?"

"I am not a big fan of turning the demimech into a glorified suit of combat armor." Ves replied.

"The difference between mechs and suits of combat armor is in the method of control. I wanted to rule out any possibility for manual movements to control the movements of the demimech, so I made sure its torso is large enough to encompass the entire body of the pilot."

"I do not entirely see the value of this Carmine Raider of yours." The Mace of Retaliation frowned. "I admit that it is large enough to possess a great advantage against infantry, but its size prevents it from passing through most corridors and other indoor spaces that are fairly tight. It also happens to be small enough that any serious mech can crush them in an overwhelming fashion. It possesses too many vulnerabilities and shortcomings to be useful on a wider scale."

Ves did not deny all of the criticism. "That is true. If we weren't so short on time, I would have been able to design a smaller Carmine demimech that would have been more suitable in smaller scale engagements. I am not confident that I can shrink the Carmine System down to such a small size. It is designed for a mech, not a suit of armor. There is too little space to accommodate it if I shrink the demimech too much."

"Understandable. We did not request a demimech and expect it to be used in any serious battles. We merely want to test out one of our ideas."

Both Masters nodded at each other once they completed their inspections.

"We can proceed to the testing phase." Master Goldstein spoke with a smile on his face. "We have already readied the test subjects and prepared a small but secure hall to conduct the first activations. Let us move."

The leaders did not want to spend additional time on transporting everything to their next destination, so they teleported straight over.

Ves, Jovy, the three envoys along with the three Carmine mechs all appeared in an empty space in a different section of the Khamatar Reign.

The research battlecarrier was large and expansive enough to offer a lot of space for the purpose of testing mechs.

Three pilots were already present in the chamber. Each of them had suited up in special protective piloting suits that looked a lot more elaborate than any piloting suit that Ves had seen.

"Let me introduce you to the pilots." Master Goldstein said as he approached the saluting pilots.

"This is Pilot Tina Ekland. Her genetic aptitude is B-, which is enough to pilot most of our standard mechs, but it is hard for her to compete against her more fortunate peers. We have a theory that your Carmine System can help her close the gap between herself and the pilots who have been able to derive more benefits from their superior aptitudes."

The female mech pilot conveyed herself with a professional demeanor that betrayed no unsolicited emotion or reaction.

Nonetheless, Ves could sense a strong drive and hunger for improvement. She did not want to remain stuck in the middle of the pack. She wanted to stand out and defeat her rivals who always had it much easier due to their incredible talents!

He had to admit that selecting a highly motivated pilot like Tina was a good choice. Not only did she possess the motivation to accept the tradeoffs of the Carmine System, but her mediocre results thus far made it a lot easier to make comparisons once she bonded herself to a new machine.

"Is there anything you would like to convey to Pilot Ekland before she enters the cockpit? Do not worry about confidentiality. The pilots here are fully cleared to know about the Carmine System."

That made life a lot easier for Ves.

He faced the test pilot directly. "The Carmine Trooper is the third mech with the Carmine System that I have designed. I am not sure how much documentation you have read about living mechs, but try to show respect and treat it as an equal partner. It might not be as alive as my more proper works, but it still has its own feelings and emotions. If you treat it with sincerity, it will take care of you to the best of its ability."

Pilot Ekland seriously took his advice into consideration. "You make it sound as if your mech is a horse."



"That is a good analogy. Just keep that image in your mind. If you want to pilot my Carmine Trooper, then you can't just hop onto its back and gallop away. You will have to merge your bodies with it and exchange each other's blood. This is one of the most intimate ways in which two different beings can connect with each other, so do your best not to show any hesitation or rejection. This advice applies to the rest of you as well."

Master Goldstein moved on to introducing the second candidate.

"This is Lieutenant Leon Di Maggio. He is a tactical officer stationed on this ship. He is trained in infantry combat and possesses enough knowledge on mechs to assist in planning mech operations. He is also an avid virtual mech enthusiast, so he is not completely out of his depth if he ever finds himself in a mech cockpit."

This was a soldier who possessed both brains and brawn in good abundance. Though the lieutenant tried to remain just as calm and professional as the other two candidates, his emotional turmoil was by far the greatest!

"Do you have confirmation that he does not possess the right genetic aptitude?" Ves asked.

"We have confirmed it many times over, Professor Larkinson. His genetic aptitude is F-, which is the lowest possible measurement that we can record in our system."

Ves had actually possessed a genetic aptitude of F- as well a long time ago. Somehow, that got upgraded to plain F sometime ago for whatever reason.

It did not make any difference as far as he was concerned. He was still as untalented and unsuited to pilot mechs in person as before.

"I do not have any idea what else is required to pilot a mech by relying on the Carmine System alone." Ves frankly admitted. "There is a significant chance that the burden of piloting a second-class mech is too great for a norm, even one that has received plenty of cognitive augmentations. I cannot rule out the possibility that an accident will occur."

"We are no stranger to sacrifices, Professor Larkinson. Do not think that you are doing a disservice to Lieutenant Di Maggio. It is the opposite. You have bestowed him with great honor. He stands to become the first human individual with poor genetic aptitude to pilot a real mech through a novel and practical control system. If these experiments succeed, his name will be recorded in history as a volunteer who has dedicated himself to contribute to a revolutionary new invention that has brightened the Age of Dawn."

If the upcoming tests proceeded well, then Master Goldstein was right. They would be making history today. Their names would be recorded and remembered for many years after the conclusion of this testing session.

All it would take for Ves and the lieutenant to become a prominent part of red humanity's historical record was for the Carmine mechs to do their jobs!