Chapter 31: Drake

Ves started selecting his parts, all the while keeping his intentions honed to a specific image. He wanted to build a versatile workhorse, a mech that doesn't have flashy features but is able to use the tools it has to their fullest effect.

Building a mech started with the internal frame. As the basic skeleton of the mech, it determined the mech's shape, height, and weight capacity. A sturdy mech not only demanded strong armor, but also a robust internal frame that could hold up its weight under pressure.

There were many frames to choose from. Most adopted a standard humanoid shape of two arms, two legs and and upright posture. Some looked like cats, others like birds and reptiles. Each form had its advantages and disadvantages, but generally the humanoid mechs offered great balance as long as its two legs remained intact.

As Ves wanted to design a mech with flight capabilities, he chose to pick a medium frame that was on the lighter side. The frame's construction featured a clever arrangement of gaps, hollows and grooves. It saved a lot of weight while keeping its structural integrity intact as much as possible, though not always succeeding. Nevertheless, the frame held up to stresses as long as it wasn't used to heavily for years.

Fortunately, the contest also automatically supplied the compatible artificial musculature. Though for the best original designs, it was best to form it from scratch, the amount of time it took was immense compared to borrowing an existing design scheme.

Next up Ves considered the contour of the mech and the configuration of the limbs. Humanoid mechs differed widely in size, bulk, thickness and so on. While some designers preferred to complete the internals first before considering the exterior, Ves wanted to do the opposite in order to set his

limits beforehand. He already had a purpose in mind for his mech, so it was important he get the outer appearance of the mech done first in order to make it easier for him to visualize his intentions.

"First up, the legs."

As the mech’s base, the legs determined the machine’s speed, weight limit and stability. Humanoid mechs boasted a wide variety of legs, from ones that specialized in long-distance efficiency to those that came built-in with boosters to facilitate powerful jumps. Ves envisioned a mobile medium mech, so he kept his selection limited to the lighter armored legs. He patiently dug through the pile of junk for a suitable pair of leg design schemes.

"God, these legs are shit." Ves muttered as he dropped the next pair of legs in disgust. Most legs he encountered were either light but frail, or sturdy but too heavy for his tastes. It was as if the organizers didn’t want contestants to settle for boring, mediocre legs with the most optimal compromise between armor and speed.

"It’s impossible for me to pick a heavy pair of legs if I want my mech to be capable of at least a modicum of flight. I would either have to pick a pair of skinny legs, or..."

As Ves looked at the pile of animal-shaped legs, his newly upgraded jury rigging sub-skill tingled in excitement. Mech components and parts had always been designed to accommodate a certain level of modular compatibility, but Ves had seldom heard of cases where a designer attached animal legs to a humanoid upper body. Such things were possible, but it brought a lot of problems concerning reworking the musculature and making sure the mech’s walking and running posture remained balanced.

"These raptor legs look ideal."

He approached the pile and highlighted a pair of fairly robust raptor legs. Raptor shaped mechs usually featured powerful running gaits that provided fairly good speed at a good amount of endurance. However, they were designed in a way that attached them to the sides of the waist instead of the bottom. Trying to mate the legs to the torso of his mech would take a lot of thinking.

"Let’s finish the rest of my selection before I figure this out."

The size of the torso determined the maximum size of the engines, power reactor and cockpit. Larger components were generally more powerful, but Ves had to keep the total weight below the total lifting capacity of the legs. Furthermore, certain shapes offered more advantages than others. Lean feminine torsos were light, barrel-shaped torsos offered lots of volume, V-shaped torsos looked incredibly masculine and offered expanded volume at the upper end of a mech.

What Ves ultimately chose was a fairly broad torso out of the available parts. It provided a good amount of space at the bottom side of the mech, allowing for more extensive modifications in order to make it compatible with his raptor legs. While the torso weighed heavier than Ves would have liked, it was still within tolerance.

The arms followed next. Raptor mechs usually chose to work with smaller arms or converted them to weapon mounts. As the unfinished design needed to be capable in both melee and ranged combat, Ves started looking for a fairly robust arms that were capable of mounting wrist-mounted weaponry.

"There’s nothing suitable here. The selection is too limited."

Most of the humanoid arms in the junk pile were bare arms. Cheap, sturdy and a form factor that allowed for pilots to synchronize with them to up to 100%, these arms specialized in wielding mech-sized firearms. Some arms

also specialized in wielding melee weapons, featuring strengthened musculature and higher gripping strength.

"I think I'm going to have to clunk something together again." Ves concluded as he skipped the unorthodox-shaped arms. He lacked the time to work on fitting both the animal-shaped arms and legs onto a humanoid mech.

He settled with a pair of thicker arms that performed well in melee combat. With some effort, he might be able to attach some sort of ranged weapon to it, though its performance would suffer if he rushed the implementation.

Next up was the head. It was the least important limb of a mech, since all heads pretty much offered the same options except for the lightest and heaviest configurations. Ves toyed with picking a reptilian head, but he discarded it and picked a human one in order to avoid making his mech too flamboyant and ruin its theme. A regular human head did the job just as well.

"Now, the flight system."

What Ves had in mind was a mech that could traverse short distances quickly. The gauntlet only lasted a short time, so the flight system would not need to focus on efficiency and reaching high speeds. Unfortunately, the ideal flight system that Ves wanted were not available. What he saw were mostly large, sweeping wings that provided a great amount of aerial mobility, but also painted giant targets on the mech's back. It wouldn't survive a 10 km gauntlet intact.

He eventually picked a sturdy but large pair of wings designed for medium mechs. Ves preferred it over the others due to its lift-off power and its ability to operate even under heavy damage. He had a use for that last attribute.

"I'll have to finish picking parts first."

For the internals, his design called for prioritizing durability. It had to hold up even when the mech was being banged around a lot. He picked a powerful

engine, one that provided lots of power at the cost of horrible energy efficiency. For the power reactor, he went for a slightly under-powered one, but it was the only one that left enough space for the engines within the mech’s internal structure.

In order to power the mech sufficiently for the entire gauntlet, Ves added in lots of capacitor energy cells for a quick boost of instant energy. The sensors he chose were some of the most durable ones available, meant for a heavy gorilla mech. They provided no guidance or targeting assistance, but their viewing range was decent and besides their toughness was almost as good as armor.

"That should do it for the basics." Ves thought as he scanned the components again in order to make sure he hadn’t missed anything. "I’ll look at weapons later."

First, he had to put the basics together. First, he needed to make adjustments to the internal frame in order to accommodate the raptor legs. If Ves wanted to do it perfectly, he’d use the Mech Designer System’s many tools to redirect certain mechanical components in order to achieve a sideways attachment. Unfortunately, his comm was disabled, and even if it were not, he’d be stupid to reveal the System.

So he used the basic designer program provided to every contestant and made some crude and drastic changes. He creatively applied his jury rigging skills to clunk something up between the legs and the lower torso. It took a little more time than expected, but by the time he finished the legs appeared to work decently in the simulator, though there was a higher than expected loss in the conversion of motive power.

Still, Ves shrugged off the losses, focusing instead on his gains. As long as his vision of a versatile workhorse mech could be achieved, the sacrifices

were worth it. "Though this mech is going to look like a very strange horse once I’m done with its design."

He spent the next two hours carefully integrating the engine, power reactor and cockpit inside the torso. After adding in some other minor components such as the energy cells, he attached the torso to the modified raptor legs. The balance was a little off, but Ves could adjust it later. First he had to finish attaching limbs.

After the troublesome legs, it was a breeze attaching the head to the torso. Ves only made minor adjustments to the bog-standard human head in order to accommodate the gorilla sensors.

The arms took a bit of effort to attach to the torso. Though not as extreme as with the legs, the arms were designed to accommodate a different chest profile, so Ves had to shave off and flatten a few bits in order to clunk the disparate parts together.

The designer provided by the organizers locked a lot of advanced features. However, it did automate a lot of the most tedious and time-consuming work that did not really showcase the strengths of the designers working with it. The software’s powerful processors automatically took care of laying down power cables and piping according to industry standard.

What the designers could do after that was spend some time adjusting them in order to optimize their placements. In his case, Ves had to rework major sections of cabling between the waist and the legs. Somehow the standard software got confused when it tried to mate the connections between the two incompatible components.

Only four hours remained after he finished putting together the limbs and the internals. The mech possessed the minimum qualifications to present itself as a complete machine, but it wouldn’t survive the gauntlet this bare.

The flight system came up next. Ves wanted his mech to be mobile in order to add to its options, but he didn’t want the wings to dominate the mech and burden it excessively. So he straightforwardly cut off major portions of the wings, especially the parts that extended too far from the back. It left the flight system looking clipped.

"I cut over sixty percent of the parts but still managed to retain thirty percent of its thrust."

It was a fairly generous ratio, helped by the fact the manufacturers paid attention to this issue. Most wings that lost so much length only provided enough flight capability to allow the mech a controlled crash. The wings Ves was left with weren’t powerful, but they provided a sufficient amount of traversing speed, though he shouldn’t expect the wings to let the mech fly high.

Attaching the wings to the torso provided little trouble. Despite the fact that the torso wasn’t built for flying, it still possessed all the modular connectors that eased the fusion between the two parts. The flight system looked remarkably compact compared to the larger and heavier torso, but that was the image he was going for. The smaller the wings, the longer they stayed intact.

"It kind of looks like a dragon bred with a human who delivered this mech into the world."

The raptor legs provided the mech with a lot of leg power and mobility while still able to bear a generous amount of weight. Together with the hefty torso and arms, the mech’s weight classification was approaching the upper limits of the medium standard, though it was not as bad as the Caesar Augustus and its variants. The wings provided enough thrust for the mech to help it move around as long as its weapon load-out wasn’t excessive.

The great thing about the junk pile was that Ves could pick the best weapons from it without worrying about licences and fabrication. He rummaged through the pile and found a fairly thin but serviceable sword. He added a pair of lightweight backup knives before picking up a medium-sized round shield for defense. This took care of the mech's close-quarters combat needs.

The ranged options were bound to be trickier. The mech only had two arms, enough for it to carry the sword and shield. He'd either have to resort to external add-ons, or force the mech to holster its unused weapons on its lower back, which did not offer much space due to the wings.

Ves also wanted the ranged option to be something other than an afterthought. Unfortunately, that was difficult if he wanted a weapon that could pack a punch while simultaneously keep the mech light enough to maintain its mobility. His experience with the Caesar Augustus and the Marc Antony taught him that a pair of mid-powered laser cannons did not kill opponents fast enough, so for a ranged option he also needed a weapon that packed a punch.

This was very difficult to deal with. As the time limit grew closer, Ves felt a little anxiety infect his mood, which he absolutely did not want. He took a small break from tinkering and refreshed his mind by having a small meal and taking care of his bathroom needs. Once he exited the toilets, he regained sufficient calm that he was able to focus on envisioning his desired mech again.

He thought up a bold idea when he took a leak. It would test his jury rigging as well has many of his other skills, but if it worked, the mech could gain a short-term ranged kill capability.

As ballistic weapons weighed too much and missile weapons lasted too short, Ves chose to take a pair of high powered laser rifles as his weapon of choice. The rifles the junk pile offered packed a lot of punch, but were prone to overheating and gobbled up energy like there was no tomorrow.

The first thing he did was strip their stock, optical sight and other useless doodads. Then he took a pile of light armor plating and crafted a rectangular shell around the rifle as protection. He then stuffed as much energy cells as possible within the casing, and linked it all to the rifle as its primary energy source.

He then took a pair of turreted ballistic cannons, cut off their swivels and crudely welded the armored laser cannons onto it. After that, he installed the slightly over-sized pair of boxes onto his new mech’s shoulders. The mech had reached its limits in terms of weight, but the shoulder-mounted laser rifles offered substantial firepower at a distance as long as they didn’t overheat.

Ves spent the remainder of the time refining the coordination between the different parts. He especially had to recheck the programming of the swivels, and made sure that it acted according to the characteristics of energy weapons instead of ballistic weaponry. As his strange, crude Frankenstein of a mech came into being, he attracted a fair amount of unflattering attention.

"Compared to the elegant lines of Patricia’s mech, this boy’s work is a total mess."

"I don’t know why he even bothers with the runty wings. It’s not like the mech’s going to fly in the first place with all that weight."

Ves took no notice of the jeers. He knew his mech better than anyone else. The mech would work as advertised, at least for the duration of the gauntlet. Alongside its formation, Ves tried to keep his intent focused on one single concept, and he felt he did a decent job with all the limitations surrounding this contest. He wasn’t able to fabricate the parts by hand, and most of them were also designed for mechs fulfilling different purposes. Such a disparate gathering of parts might even nullify the X-Factor entirely.

"I’m taking a big gamble here, but I’m confident I’m not wrong in taking this route."

His strange mech married a humanoid upper form with a pair of raptor legs and some limited flight capabilities, so he named it the Drake. The mech carried his hopes of a victory in the qualifiers, and therefore allow him to come up to the big stage tomorrow where he could gather plenty of attention. Enough to attract a customer, Ves hoped.

"Time is almost up. Please finalize your designs."

Chapter 32: Gauntlet

When the presenter finally announced the end of the design phase of the competition, a lot of young men and woman groaned. While Ves was able to finish his mech with a bit of time to spare, other designers lacked the skill to jury rig disparate components together without spending a lot of time making the connection work.

"You gave us too little time!" A young woman complained as tears fell from her stressful face. The mech she worked on only appeared half finished. "Give us more time!"

"Twelve hours is too little!"

"This is unfair!"

"Silence!" The presenter ordered with a bloody air, instantly causing the meek the designers to quail. "The terms of the qualifiers are published beforehand so you should have prepared for this round. Last year’s qualifiers also took twelve hours. We’re on a tight time table here, and the main round happens tomorrow. We won’t postpone the event just so you can put the finishing touches on your work."

When Ves looked around to see the progress of his fellow contestants, he judged about a third of them hadn’t finished their designs. Many people

tripped up because they spent too much time forcing components designed for different mechs to work together. Such failures proved they didn’t possess much knowledge beyond the basics in mech design. It was interesting to see that the organizers place a lot of emphasis on this when holding the qualifiers.

Some other designers lost too much time due to faulty judgement. One heavy mech featured highly advanced engines and power reactor. That was all fine and dandy, but the designer spent way too much time adding a lot of toys to make full use of that capacity. If he kept the twelve-hour limit in mind and kept his choices modest, he could have made it through with his level of skill.

In general, the contestants who left unfinished designs at the end of the period chewed more than they could handle. If they picked simpler, less mechanically complex components out of the pile of junk, then they’d at least leave a functioning mech at the end, showcasing their competence in working under pressure.

"Although I can’t say I blame them for being ambitious."

Ves might have been one of these losers if his father hadn’t left him the System. If he was participating in the contest and wanted to have a shot at getting past the qualifiers, then he couldn’t settle for average among 150 other contestants. The mech had to perform better than almost anyone else’s work, so taking risks was unavoidable.

As he looked at the dejected contestants who were forced to give up on the qualifiers due to their incomplete designs, Ves felt a little guilty he cheated his way out of this circumstance. Before the System’s arrival, Ves was like any other novice mech designer who graduated from a local university. He possessed basic knowledge but never excelled at anything other than mechanics, and even that impressed no one because he learned outdated techniques that would be laughed at in more advanced states.

His father gave him the System to circumvent years of dedicated study and experience. Why did he deserve to benefit from this miracle when many other of his former classmates were left to wallow in their mediocrity? He wasn't a saint, he never donated to charity, he wasn't even nearly as good in his studies as some of the others.

"There's no point dwelling on these feelings. I'm different from the others. They all made their choices in life when they chose to go down the path of mech designing."

The mech design career path was one that led to fame, riches and prestige. However, it was also a cutthroat business that couldn't fit too many competitors. For every designer that clawed its way to the top, at least hundreds or thousands of others were resigned to lesser jobs like full-time fabrication or maintenance of other people's mechs.

After sending off the losers, the presenter gestured to those who were still in contention. "Please clear the main stage and stand to the side. Our pilot Hans will soon test the bold designs our young talents have whipped up."

A very fancy simulation pod was brought at the very rear of the stage. Hans, fitted out in a skin-tight piloting suit, waved at the audience before entering the pod. The venue darkened and the stage began to light up in a fully realistic projection of a slim but elegant light mech wielding a polearm twice as long. The rest of the environment lighted up after that, showing hints of the urban landscape ahead that represented the testing grounds for all of the mechs.

"First up is a creation by Natalie Montag. Hans will put mech the Lance Star to the test after five minutes of acclimatization. This preparation period applies to all other mechs tested today."

Carlos walked over to Ves and whistled at the polished design in the projection. "Natalie sure worked her magic. She’s always been a light mech fanatic."

"She spent too much time polishing the exterior. I’m not sure the internals underneath the armor can withstand heavy duty." Ves judged with a critical eye.

Twelve hours left designers with too little time to create a good mech. Give them a week, and most of the contestants here could roll out designs that performed at least 50-100% better than what they rushed out. Eliminating errors and weak points in the design offered the biggest bump in performance and could be done in two to four days, while constant optimizations allowed the mech to perform a little better over the remainder of the time.

When Hans finished familiarizing himself with the Lance Star, he entered the testing stage.

The presenter offered spectators an overview of the gauntlet. "As everyone knows, testing a mech as fair as possible can be difficult. Many smart people have wracked their overstuffed brains to find a solution before coming up with the gauntlet. They come in different lengths, duration and difficulties, and randomize in configuration with each separate run. That means that Hans will face similar challenges with each mech he pilots without being able to use his last run’s experience to help him overcome his current challenges."

Technically, since no run was the same, their difficulties actually diverged in many different ways. If Hans faced smooth sailing up to the end where he get whacked by an overwhelming ambush, he’d be able to score higher than in many other situations.

For example, if he faced constant harassment right at the start, leading to his mech’s destruction midway due to his inability to find time to recover. In both

gauntlet runs, the amount of mechs and their strength remained the same, but the way they exerted pressure different drastically, leading to different results.

There was no point complaining about it though. Ves knew that the gauntlet was a long-held custom in the mech world, and that its inventors had plenty of time to curb much of its faults.

The Lance Star moved. Its thin and lightweight design spoke of a great retention in motive power. Natalie Montag evidently possessed real skill for getting a mech traverse so smoothly. The machine flitted through the debris-filled streets of the gauntlet like a dancer.

When the Lance Star encountered enemies, Hans piloted the mech as a high speed scout. It dodged aside the attacks sent in its way and avoided traps and entanglement whenever possible. If a mech was able to come up to its front and present an obstacle, the Lance Star only dealt enough damage with its lance and auxiliary pistol to squeeze its way through.

Natalie’s mech started stumbling when Hans couldn’t avoid a couple of laser beams. The gauntet’s computer controlled opponents might not be very smart or skilled, but they possessed overwhelming numbers so it was impossible to keep out of reach no matter how many times Hans dodged.

"Ouch." Carlos winced. "The mech is getting bogged down and surrounded. It doesn’t have enough firepower to break through."

The Lance Star only used its polearm as its main weapon. It possessed no ranged weapons at all. Hans had no way to pressure his opponents at a distance. When more and more opponents gathered at range, the Lance Star finally suffered a critical hit in its thinly armored ankle. This practically halved the light mech’s mobility, leading to the mech getting hit much more often. It lasted a respectable amount of time and took out a few more mechs in its death throes but the simulation finally ended at its destruction.

The presenter came back in focus as the simulation projected a lot of statistics, such as the distance traversed and how many opponents the mech took out of action. "The Lance Star has reached a distance of seven kilometers, during which it killed five mechs and damaged twenty more. I don’t know about you guys, but I think this is a great performance for a mech put together in just twelve hours."

The crowd offered a polite applause. Natalie was too conservative in her design, which led to the Lance Star’s one-dimensional performance. Other than its speed and lack of major design flaws, the mech boasted no other advantages.

A heavy mech called the Thunderstorm came up next. It possessed a quadrupedal design, its four heavy legs supporting an incredibly tough and stable firing platform. The mech looked a little strange as the upper body of the mech sported two thick cannons as its arms. The presenter introduced the mech and its designer briefly as everyone waited for the five minutes of preparation to pass.

When Hans stepped out into the streets, the Thunderstorm rolled over the mechs in the vicinity. Its prodigious firepower with its main weapon being two ballistic cannons destroyed every mech if they got hit a couple of times. Though slow and inaccurate against light mechs, the Thunderstorm also incorporated half a dozen laser mounts on its shoulders and back to fend them off.

A substantial volley of missiles fired from a kilometer away. They arced upwards into the sky, following a parabolic trajectory as they rocketed downwards towards the Thunderstorm. Hans hastily turned around and fired his lasers in rapid-fire mode in order to shoot down the missiles, but this left him vulnerable to the other light mechs again who all took advantage of the opening to slip in some damage.

The missiles hadn’t delivered too much damage, as the Thunderstorm still had plenty of armor to spare. But as Hans piloted the heavy mech forwards while trying to destroy as many enemies as possible, the missiles continued to pour in from above, each wave leaving behind more explosions and more damage.

The sad thing about the Thunderstorm was that it performed well enough against enemies in reach, but offered no solution to the constant long-ranged missile bombardment. The mech possessed almost no mobility, allowing the missileer to stay out of reach. With no line of sight nor a set of targeting data, Hans couldn’t even switch his cannons to artillery mode and fire back lobbing shells. He tried a few times when the combat reached a lull, but it obviously represented nothing more than a gamble with very long odds.

When the Thunderstorm finally got wrecked by all the missiles, the presenter came back on stage and analyzed the statistics. "I am mightily impressed with the Thunderstorm. Hans achieved a whopping thirty kills and damaged twice as many other mechs. While he hasn’t moved far from his starting point, his damage scores are more than ample enough to vindicate this mech."

The main goal of the gauntlet was to get the mech to pass through ten kilometers. Regardless of success, a run was scored on damage inflicted and distance reached. This gave both light and heavy mechs an equal chance in reaching a high evaluation.

Yet for every mildly successful run, at least three more failed spectacularly.

One medium mech sported a highly visible gap in its arm connections. The mech’s armor couldn’t cover up the musculature of the arms, leaving them prone to damage. Even with Hans’ best efforts, a couple of missile strikes fouled the connectors pretty quickly, leaving the mech with only barely functioning arms. Suffice to say, the handicapped mech hadn’t lasted long at all.

Another mech was designed as a solid, sturdy knight with an excellent sword and shield. However, when Hans put its endurance to the test, a solid cannon shell to the chest disrupted the mech’s internals. The knight’s sturdy exterior covered up a bevy of flaws, most of them related to sloppy work into putting the internals together. The big hit practically disrupted the engine’s connections, leading to a heavy slowdown in the knight’s operation. In addition, due to the loss in strength, its sword was unable to strike down opponents.

Someone next to Ves shook his head. "Again, it’s a shame we weren’t given a lot of time. It’s so bullshit."

When Carlos’ mech came up to the stage, the young man in question hugged Ves in a show of nervousness.

"Damn it, I hope my baby will do well. This is the first time my creation is tested in public. I hope I won’t disappoint my parents."

The mech Carlos spent twelve hours on looked like an ill-fitting mess. With its over sized legs, the humanoid mech seemed confused whether it wanted to be a medium or heavy mech. Carlos evidently faced the same problem as Ves, but solved the problem by going into a different direction.

Though people often disparaged medium-heavy hybrids, the Huntsman Carlos cobbled up performed fairly better than anyone expected. The legs caused the mech to move slower than normal, but it also became incredibly resistant to damage. With a shield in one arm and an awkward sawed off heavy rifle in the other, the mech gunned down plenty of mechs in its way.

However, the lack of melee options dragged the Huntsman down. It was only able to deal with mechs that came close by dropping the rifle and unsheathe its backup knife. This turned the mech into a competent defender, but allowed

the rifle mechs in the distance to shoot at the Huntsman with impunity. This envelopment eventually resulted in the Huntsman’s death.

The presenter gave the Huntsman an average evaluation. It did not do very well, but at least it hadn’t failed outright in the gauntlet. Ves wrapped his arm around Carlos and tried to cheer him up from his dispirited mood.

"You did quite well there. You’ve proven yourself at the stage that you have the chops to be a mech designer."

"Yeah, but my score is way behind. Nevermind the top 8, I can’t even reach the top 32."

"All of the people who score that high are talents." Ves sighed even as he figured he was also one of them. "Don’t aim too high. You’ve got opportunities many of your other colleagues wish they have."

His job working on quality control at a large manufacturer was facilitated through connections from his parents. Carlos already had already stepped one foot in the mech designer industry. After a couple of decades of working up the ladder, Carlos could have the opportunity to join a mech design team and contribute his rich knowledge to the formation of a new design.

"Up next is our lovely Patricia Schneider’s Rosaria!"

The announcement attracted everyone’s attention. The top graduate of this year’s cohort was about to show her fangs.

Chapter 33: Performance

The crowd already built up a sense of anticipation for Patricia’s grand performance. The young woman in question stood proudly in front of the contestants, certain that her Rosaria could wipe the floor with any other mech tested so far. She attracted attention more than just her prodigal performance. As the unattainable princess of the campus, she attracted admirers wherever she went, able to mesmerize her fellow students with her striking red locks

and her enviable figure. Like a crane among chickens, her appearance made everyone else look plain.

The Rosario she crafted out of the pile of junk also looked too good to be true. Despite its undersized legs and arms, Patricia somehow managed to keep the mech’s weight under control. The medium mech’s main feature was its modified shield. Patricia took a regular kite shield, made it a little thicker and added a lot of spikes and sharp edges to it. She turned the shield into a melee weapon no weaker than a sword.

Its other arm held a flamethrower, which fed off the fuel cells installed on the mech’s back. They were cellular, which meant that each fuel cell was detached once it ran out of fuel. It was a good way to keep the mech’s weight under control, though it suffered from it at the start. The Rosario offered no other offensive options besides a backup knife and pistol strapped to its back. The mech weighed lighter than most other medium mechs on display so far, especially once its fuel cells ran out.

In contrast, everyone else including Ves just wanted to cram as much in their mechs, so if they chose to go with a mediumweight, it always weighed close to the maximum allowance.

"I bet the Rosario is going to make it to the end."

Carlos laughed at that. "I’d be a fool if I take you on that bet."

"Why not? The Rosario’s only armed with a flamethrower and a spiked shield. It’s

"Patricia isn’t stupid. I think her mech is going to surprise all of us."

When Hans directed the Rosario out of the gates, he immediately came under fire. A small ambush had been set at the start of the gauntlet. A lot of mechs would suffer severe damage with all the incoming laser and cannon fire. Hans utilized the Rosario’s remarkable mobility to dodge the initial volleys and

moved his shield in front to block what he couldn’t avoid. As Hans successfully reached cover, he managed to preserve his undersized and under-armored legs.

"That was close!" Carlos said as he was already sucked into the race. "Do you think Hans is going to turn the tables on them?"

Ves shook his head even before Hans sneaked away. The mech possessed enough mobility to do so without attracting too much attention. Also, so long as the Rosario kept its flamethrower in reserve, the mech kept its heat profile under control, making it difficult to detect out of line of sight.

Hans actually progressed three entire kilometers into the gauntlet without getting caught. It showcased Patricia’s unwavering faith in her mech and the pilot in designing a lighter than usual mediumweight mech. The Rosario also possessed unusually long-ranged sensors, whose functioning had been tweaked to detect enemies further at the cost of longevity. Nevertheless, it lasted long enough for the gauntlet.

Only an unusually high concentration of enemy mechs stopped the Rosario from sneaking its way throughout the entire gauntlet. With no other choice, Hans dove into the group of enemies and activated the flamethrower.

A liquid white-hot stream escaped the nozzle of the fiery weapon, spraying the unprepared mechs with a shower of heat. The gaggle of mechs all spread out in terror as their armor melted while their softer components burned. Hans left the lighter mechs behind but gave the medium mechs an extra smack. As for the heavy mechs, unless they were armed with missiles and artillery, he left them behind to waddle in his wake.

"The Rosario’s mobility is overwhelming. I’m surprised it holds up under heavy use. How did she do it in only twelve hours?" Carlos wondered.

"She’s got a strong grasp of the basics." Ves answered based on his own experience. "As long as you know your stuff, you don’t have to spend a lot time wrangling two different components together even if they are slightly incompatible. Don’t look at the flashy flamethrower and shield, its the seamless arms and legs that really make it stand out."

Compared to the clunky patch jobs many of the previous mechs showcased, the Rosario looked as if the mech had been worked on for weeks instead of half a day. Hans brilliantly pushed his mech to the limits. As his fuel kept expending, he dropped more and more fuel cells, lightening the load which in turn raised the Rosario’s speed. Any mech in its way got burned, and those that held out a little longer got bashed by the Rosario’s deadly shield.

"It’s starting to accumulate damage." Ves noted. He already expected something like this to happen. The gauntlet had a grueling reputation for a reason.

The light mechs was the Rosario’s Achilles heel. These mechs took advantage of the Rosario’s lack of long-ranged weaponry and kept out of its range. Their superior speed allowed them to dog the Rosario and keep pelting it with lasers, rockets and ballistics. Though their threat was minimal, the numbers added up to a significant amount over time. Hans couldn’t avoid taking more damage.

The gauntlet ended before the light mechs finished the job.

"Give it up to Patricia Schneider! Her Rosario is the first mech to successfully pass the gauntlet!"

The entire crowd including Carlos and Ves gave Patricia a hearty applause. It truly impressed them all for accomplishing this much in only twelve hours of time. The woman basked in the cheers with a modest smile, as if the victory took little effort.

A couple of other contestants followed next. None stood out too much except those made by the elites among the developers. Like Patricia, the designs of their work were sober, featuring not too much toys but using the few they had to their fullest potential. Their designs also focused on maintaining integrity, allowing Hans to push their mechs harder without letting it fall apart around him. Most of the other competitors couldn’t even accomplish that much, leading to some embarrassing moments when a leg or an arm fell off. One mech even lost its head after it got hit by a single shell.

After about half the contestant’s work had gone up the stage, the presenter announced the end of the testing. "Due to a shortage in time, we will pause the testing and resume it later tomorrow morning. Don’t worry, Hans will continue familiarizing with the rest of the mechs tomorrow in order to allow him to run the gauntlet without interruption."

The day had stretched on rather late. Many of the contestants hadn’t eaten a proper dinner even. Ves dreaded the interruption as his mech hadn’t gone up yet. Carlos came up to him and slapped his back, relishing the chance of comforting Ves instead of the other way around.

"Haha, don’t stay up all night. It’s going to be okay. I looked at your mech and its a badass design. Nothing will go wrong tomorrow."

Ves exited the venue with all the other contestants. Half of them already shook their heads with resigned expressions, while the other half dealt with the anxiety in a variety of ways. Unlike most of them, Ves possessed a decent amount of confidence in his design, so he didn’t stew too long over the wait.

He went back to the hotel and embraced a grouchy Lucky when he entered his room. "Hey there buddy. I hoped you haven’t missed me long."

The cat bit his hand a little to let his dissatisfaction known. It quickly perked back up when Ves fed it a mineral he picked up along the way back. Lucky’s

company distracted Ves from his worries, letting him fall asleep even as Dorum’s nightlife grew vibrant at the end of the first half of the Young Tigers Exhibition. Many new young talents had shown off their chops, and the most shining stars among them would compete in the second half of the competition tomorrow.

The next day came with an alarm. Like the previous day, Ves had to wake up early, though he didn’t really need to be present during most of the gauntlet runs. Win or lose, Captain Gillian would inform him anyway. Still, Ves left his bed and prepared to leave early as he didn’t want to miss anyone’s gauntlet run. Just looking at how each contestant used the same circumstances to build wildly different mechs taught him a lot on how to build a design that was out of his comfort zone.

The crowd that came to watch the testing had been reduced by a third. Many contestants who failed had dejectedly bowed out of the competition and left the stage for the real contenders. Ves thought it was a shame, but everyone was different.

Like yesterday, the presenter came back up to the stage while Hans entered the simulation pod at the back. "Thank you for your patience. I hope you had a good night’s sleep, because we are starting the show again. First up, give the stage to Edwin McKinney’s Sky Ripper!"

While Patricia’s Rosario awed the crowd in showcasing the Bright Republic’s best, it didn’t beat the prestige of graduating from an institution of the New Rubarth Empire. The gigantic super state possessed the best mechs, the best education and the most cutting edge research. Edwin merely stood at the side looking completely unaffected by the glances thrown in his way. It was as if he was beneath such shallow pageantry.

The Sky Ripper used a light and nimble avian design scheme, which different from humanoid mechs in many different ways. Its main divergence is its large,

armored wings that integrated flight systems in a deeper level. Overlapping ’feathers’ shielded the vulnerable portions of the flight systems without excessively blocking thrust and allowing them to maintain flexibility. The mech could move the wings like arms, allowing the pilot to adjust its course in swift and delicate ways. It turned Avian mechs into the fastest and most maneuverable mechs around.

When Hans brought the Sky Ripper into the gauntlet, he transformed the light mech mech into a king of the sky. The mech flew rapidly in the air, avoiding plenty of ordnance thrown in its way by maneuvering through the fire with its graceful way of manipulating its massive wings.

"There comes the first obstacle."

The gauntlet’s reputation for nail-biting arduousness did not exempt flyers. If anyone thought a flying mech would get a free pass by flying really high in the air in order to reach ten kilometers in a minute or two, they were wrong. The gauntlet adjusted to flying mechs with a little cheating by changing most of the light and medium mechs with flight-capable versions. The heavy mechs that remained received no change, as they were quite capable of throwing an incredible amount of ordnance at any flier that was foolish enough to fly around in the open air.

Hans encountered a couple of formation of fliers. He reacted to their appearance by diving low and using the structures as a way to cut their line of sight and interrupt their firing lines. Through a mix of hit-and-run tactics and luring the enemy out of position, the Sky Ripper masterfully decomposed a large group of flyers into a bunch of wrecks and disoriented machines. The Sky Ripper’s dominance relied on its impressive flight system, its unparalleled flexibility and its aerial speed dominance over the clunkier light mechs.

When the Sky Ripper went all out, it utilized two devastating ways to tear its opponents apart. First, the beak of the avian mech opened up to reveal a

compact cannon. It didn’t fire a lot due to the limited ammunition the light mech carried, but every shot made at close range felled a light mech. Its second option to kill were its incredibly sharp talons. Edwin modified them with sharpened armored spikes that allowed each swoop and diving attack to tear straight through the thin armor of flying mechs.

The only mechs that presented a threat to Edwin’s masterful implementation of a flyer were the heavy mechs on the ground. While the urban environment posed many problems in firing at the low-flying Hans, they still utilized their indirect fire weapons to great effect, especially missiles. Benefiting from the sensors locks the light mechs maintained on the Sky Ripper, the many missiles honed in on Hans as if a hive of bees got enraged by a bear that stole their honey.

The Sky Ripper responded by spreading its wings and firing rapid-firing lasers at the missiles. Edwin somehow managed to strip most of the housing of laser weapons and mount them on the wings with minimal weight impact. He furthermore linked them to a set of high quality targeting sensors embedded in the thin mech’s chest. Hans was able to rely on the auto targeting to shoot down most of the missiles while keeping his attention focused on evading or killing the flyers.

Hans easily reached the end of the gauntlet after suffering only superficial damage.

"The Sky Ripper absolutely smashed the gauntlet!" The presenter went up the stage again and highlighted the eye-popping statistics. "Edwin has produced a virtual masterpiece, easily transforming a couple of parts into a coherent mech that dazzles the mind. Let’s give it up for Edwin McKinney everyone!"

Everyone present applauded Edwin, who still looked as if the event meant nothing to him. He easily beat Patricia’s records and took absolute first place in the gauntlet runs. Everyone either admired him or wished they could take

his place. Sadly Edwin kept his socialization to his circle of sycophants, making it difficult for other admirers to even come close.

Hans took a couple of mediocre mechs out on a spin, this time showing that reaching Edwin and Patricia's level was difficult. Ves thought back on the performance of the two mechs and had to admit they had a much better grasp on the fundamentals than him. It really showed in how well the two integrated the components seamlessly into a whole, while Ves forced his jury rigging skills to forcefully fuse different components.

Ves could claim superiority in only one aspect. He designed his mech with a focus on the X-Factor.

Edwin's avian flier was a technical marvel that astounded the crowd with its high capabilities. However, outside of its great build, Ves felt the mech was a lifeless brick. Edwin invested virtually no emotions in its construction, as if the mech was nothing but dirt underneath his feet. Even Patricia did better than him, as she put a tiny bit of care in her own creation.

He shook his head. The X-Factor might be fine and dandy, but the bottom line was that strength trumped over everything. Who cared if the X-Factor allowed pilots to make the most out of their mech if it was built out of paper.

"On to our next contestant, this bad boy here is the Drake, designed by Ves Larkinson. I love the mix. I'm looking forward to see what Hans can magic up with this beast!"

This was the moment Ves had been waiting for. It was do or die. All Ves could do now was to pray for Hans and hope his mech held together long enough to make it to the end.

Chapter 34: Arm and Leg

Hans stepped into the gauntlet with a running start. The drake raised eyebrows when it first appeared. Its humanoid form moved around with raptor

legs and featured stubby wings on its back for an extra boost. While its rounded shield and good quality sword told everyone that its main role was a knight, the Drake also featured two strange elongated boxes on its shoulders.

"Did you put together your own shoulder mounted lasers? What was wrong with using the readily available ones?" Carlos asked in confusion.

"The ones from the junk pile don’t bite hard enough."

"Oh. The shoulder mounts look like they weigh a lot. Is your mech able to handle all of it?"

"That’s why I went with the raptor legs in the first place. They are able to maintain their speed better even when carrying a bigger burden."

"Yeah, but they’re made for raptor mechs in specific. The balance of your half-humanoid mech must be hell."

"I spent some time adjusting its default modes, and I’m sure Hans can handle the rest."

"That’s a lot of trust you’re putting in the test pilot."

Indeed he did. While Ves was able to accomplish a lot in twelve hours, he couldn’t optimize the balance of the mech completely. He hoped that with Hans experience in piloting all kinds of mechs would come to good use here. And from the look of the Drake’s fluent gait, he encountered no insurmountable problems.

The clipped flight system came brilliantly to life. Hans took advantage of its diminished output to put an extra spring in his steps. At certain moments, the Drake moved faster than light mechs even as it weighed as much as the heavier medium mechs. While it wasn’t able to avoid detection due to the heat it generated, it was able to outrun a couple of groups.

When the Drake encountered an ambush of two heavy mechs and a smattering of other weight classes, Hans aggressively charged closer despite the disparity in firepower. The large round shield drew most of the firepower, allowing the Drake to come closer enough to make a few quick attacks with his sword that disabled most of the vulnerable weapon mounts on the heavy mechs.

Having taken care of the heavy firepower, Hans darted back and forth and dueled the more mobile mechs at their terms. With the wings acting as jump jets, the Drake was often able to close the distance abruptly with the enemy. While the laser cannons suffered from poor accuracy and tracking, if the Drake came close enough, the damage they caused always slowed down the opponent, softening them up for a lethal sword blow. The Drake progressed forward on a bloody path.

Unfortunately, the constant activation of both its flight system and laser cannons rapidly built up heat while draining the mech's energy. Ves wasn't worried about the energy, as he had packed the Drake with enough energy cells to last the entire gauntlet. Heat was a very different problem, and once the Drake neared its limit, its effectiveness would drop drastically.

Heat accumulation troubled designers ever since the first mechs came into existence. Even after 400 years of mech development, modern mechs still faced the plain old dilemma of balancing power and heat. Newer power reactors outputted higher amounts of energy, while energy cells packed more and more capacity with each new iteration. Heat absorption and heat dissipation technology only barely kept up with the times.

Air was a very poor conductor of heat. This was a good thing for some people, as it meant their coffees and soups wouldn't cool down to room temperature in seconds. For mechs, this presented a big problem, as even the most effective passive radiators could do so much in normal Terran-standard air conditions

that so many worlds had terraformed into. It was worse in locations of low air and vacuum conditions like on lifeless moons.

The biggest advancement in heat dissipation happened about three hundred years ago. The first heavy mechs introduced primarily used missile and ballistic weaponry. Their ammunition took a lot of space, but they generated much less heat than pure energy-based weapons like lasers.

A heavy mech built-in with lots of lasers was seen as an unrealistic fantasy by most mech insiders at the time. As long as they kept shooting their lasers for a couple of minutes, their mechs turned so hot you could cook an egg on its surface.

Out comes a mech designer who one day thought while mechs were not so good at dissipating heat into the air, then what about the ground? Their feet always touched the ground. So the mech designer reworked the internals of a mech and basically reinvented the concept of legs not just as a way of moving and a way to support weight, but also as a tool to help mechs transfer heat into the ground. Through incorporating sophisticated heat-conducting alloys, that brilliant mech designer developed revolutionary new legs with widened feet that could actually siphon off heat pretty decently.

Shortly after this bombshell invention got out, other mech developers got into the action. If two legs conducted this amount of heat, what about four legs? The first quadrupedal mechs were born. These so-called animal and centaur mechs looked highly unusual, but having more legs offered many advantages besides increased heat transfer. The introduction of spider mechs followed quickly after, but that was when the whole leg craze peaked. The one man who tried to design a centipede mech failed miserably, and his abomination was quickly forgotten.

Methods to deal with heat had come a long way since then. From the use of evaporating coolants, to the incorporation of replaceable heat sinks, mech designers had more choice in how to handle this problem.

Ves hadn’t included any of that in his mech. Worse, as Hans often hopped and glided around, the Drake’s feet wasn’t touching the ground, thus further limiting its heat dissipation. Hans kept avoiding the heavy mechs with his mobility while cutting down the medium mechs by jumping close and taking them out with his sword and shield. Only the light mechs posed a problem as the laser cannons couldn’t be fired too fast in order to avoid overheating the Drake. Worse, the laser fire the Drake received only increased its heat levels.

About 7 kilometers through the gauntlet, Hans decided it was enough and detached the laser mounts and stubby flight system from the Drake. The mech lost a lot of its mobility and ranged options, but at least its heat generation was cut. Through a mix of clever positioning and a lot of running, Hans was able to pilot his lightened Drake through several blockades.

The entire crowd adopted strange expressions when they saw Hans kept surviving ambush after ambush. The Drake often slipped past by the skin of its teeth, its exterior armor and its shield accumulating more and more holes and burn marks. Yet despite the extensive damage, none of them hit anything critical. Hans was somehow able to keep going with the Drake even when the mechs of other contestants would have malfunctioned at this point.

"Damn son, did you really spend just twelve hours on your mech? It’s still going strong!"

"I haven’t done a thing." Ves helplessly shrugged his shoulders. "I was on the stage just as you. It’s not even possible for me to cheat."

"Maybe you got word of the competition format beforehand. This must be why Patricia aced the qualifiers. Did the two of you do some unspeakable actions in order to get an advantage?"

Ves really hadn’t cheated. He behaved so scrupulously ever since he arrived at Bentheim that he never once opened the System on his comm. The city was really too crowded, so there were many people of all sorts of affiliations spying on each other. He didn’t trust the hotel, the wireless net signals or even the open air to be clear of spying eyes.

Meanwhile, the gauntlet reached the endgame as the finish line was in sight. Hans valiantly squeezed the Drake through many tight spots, though his enemies accumulated at his heels. The light mechs posed a great problem to him as they were impossible to shake off for long. Only through taking creative routes such as crashing through thin structures could Hans stay ahead of the baying wolves.

Its shield blocked so many shots and sword attacks that it collapsed at a critical moment when the Drake defended against a pair of knights. While Hans crippled the left knight, the right mech was able to hack off the undefended shield arm. The Drake explosively retreated in order to buy time for Hans to adjust his mech’s posture. He was barely able to escape getting enveloped by hopping inside a large parking complex.

Ves’ heart dropped at the crippling blow. While the Drake already made it far into the gauntlet, he wasn’t certain it would be enough to pass the qualifier. Besides prodigies like Patricia and Edwin, there were at least 5 other geniuses who graduated from renowned institutions of second-rate states competing.

"Come on, Hans. You can do it." He gripped his fist, hoping that his efforts in incorporating the X-Factor in the Drake could make a difference, even if he hadn’t noticed anything so far.

The Drake remained immobile as Hans tried to vent as much heat as possible during the pause. The mech stopped glowing in the dark, and the reduced heat slightly increased all of the mech's parameters. As Hans mentally prepared for the end sprint, a group of light mechs abruptly sniffed him out of the parking lot.

The powerful raptor legs exploded into action. The Drake took the light mechs by surprise by hopping into range, letting the mech ruthlessly cut them down with a couple of quick sword strikes. The Drake bashed aside the falling mechs and ran out into the streets.

Dozens of mechs converged around the Drake. No matter where Hans turned, he always confronted at least four or five mechs. As his maneuvering space got smaller, the enemies achieved more hits. His armor flaked off and his power reactor started to sputter. However, the engines were well protected so they kept running at full tilt while the Drake's powerful raptor legs maintained a steady gait even with half of its armor in tatters.

Hans hacked and slashed at his opposition with unprecedented ferocity. He even started kicking and shoulder bashing the mechs in his way, all to create openings to escape. The amount of mechs that crowded around him grew so large that they started to block each other's efforts.

The Drake, desperate to break through the mob of mechs, sprinted forwards and used its powerful legs to jump. The sudden action practically broke the remainder of the mech's leg armor. The Drake landed awkwardly atop a puzzled mech, crunching it with the weight of a mech's fall. It opened up sufficient space for Hans to slip past and reach the last 100 meters of the gauntlet.

A sniper round cut the unarmored ankle of the Drake, finally felling the mech at the last moment. Everyone let out gasps of appreciation and disappointment. The Drake managed to come so far, outshining almost every

other contestant. However, its scores took a big hit if it failed to reach the end of the gauntlet, which was a giant pity.

"Not yet. It’s not done yet!" Ves thought as he gripped his fists so tight he squeezed all of the blood out. He kept mentally praying for Hans to pull a miracle. "There’s still more you can do with a single leg."

It turned out that the Drake wasn’t out of the picture yet. Amazingly, the mech threw away its sword and bent forward. It used its single remaining arm to support the mech’s upper body. Hans awkwardly piloted the two-limbed mech forward. Its intact leg hopped forward with powerful force, while the arm kept the mech’s forward portion from crashing on the ground. With each misaligned hop, the mech awkwardly neared the finish line even though the arm took more damage from the stresses of carrying so much weight.

The sniper shot again, this time taking off half the Drake’s arm. Hans couldn’t avoid falling forward, yet he kept fighting defeat by practically crawling his mech forward. Only several meters separated victory from defeat, and even as other mechs fired potshots at the Drake, the crippled mech wriggled its remaining leg in a way that allowed the Drake to slide past the line.

The entire crowd was speechless. Even the presenter looked dumbfounded at the Drake’s incredible integrity and Hans’ brilliant performance.

"I... contestant Ves Larkinson has designed a magnificent piece of work. The Drake has officially conquered the gauntlet! Congratulations!"

The applause Ves received reached the level of Patricia’s. Many contestants and spectators looked at him with a renewed eye. This gratified Ves, though he didn’t let the praising contestants coming up to congratulate him get to his head. He participated in this contest in order to make himself known to potential customers. Already Ves started to eye the couple of servicemen and mercenaries in the crowd.

"Hmm, it’s not time yet. Let’s wait until I officially passed the qualifiers."

Most of the other mechs that went through the gauntlet after that failed to excite the crowd. It trudged on, and besides the contestants whose mechs were on display, Ves was growing bored. He had seen most of the varieties of mechs by now, and many designers failed to think out of the box, resulting in many similar mechs coming out one after another. Well, if Ves hadn’t benefited from the System, he’d probably design a similarly crappy mech as well with his once-horrible 0.3 Creativity score.

After a couple of excitements involving the mechs designed by the geniuses, the end results were clear. The presenter enthusiastically announced the 8 lucky designers that could go on to the main stage of the YTE this afternoon.

"-and the sixth place goes to Ves Larkinson!"

"Congrats pal! I already knew you’d win!" Carlos hugged Ves tightly.

Ves kept a small smile on his face as he basked in his first victory. If he couldn’t make it this far with the help of the System, he had no reason to be here in the first place. It was a sure thing to pass the qualifiers.

As for the main event, he was not so sure. Both Edwin and Patricia were strong, while the rest of the contestants who studied abroad couldn’t be underestimated either. Still, two of them slipped up during the qualifications, causing Hans to fail before he reached the end of the gauntlet with their mechs.

The next phase of the design contest happened in the afternoon while the mech pilot competition ended its semifinals. The start of the design competition would be put on the front stage in front of a live audience of thousands. His face and image would also be projected to the rest of the Bright Republic, which was an unprecedented glory for him as he never really excelled in anything before.

He sighed at the happenings. "No wonder so many of my colleagues chase after fame and fortune. It not only feels great, it’s also good for business."

While the crowd started to disperse, Ves already turned on his meager business charm as he walked over a group of idle mercenaries. Hopefully he could generate some interest for his product to these battle-hardened men and women.

Chapter 35: Main Stage

Despite turning on the charm, Ves only managed to generate noncommittal interest for his mech. He expected it to be a challenge, but the soldiers and mercenaries all treated him like a fly. Oh, the potentates were polite about it, but the disdain and dismissal was clear in their eyes. His status as a promising young mech designer who just got through the qualifiers meant nothing to them. He lacked the opportunity to show off the Marc Antony as they brushed him aside after a minute of polite talk.

"My apologies, my department is not in a hurry to procure a new mech."

"Our budget is tight. We don’t make a lot of profit per operation. We can barely keep our mechs afloat. I’ll look into your products a couple of years later when our current fleet of mechs needs replacements."

"The crew I’m running already trained in a specific configuration of mechs. Introducing a different type of mech will disrupt the balance."

"I’m not specialized in melee combat. A mech that uses a mace and shield is not suitable to an unskilled pilot like me."

The excuses sounded the same no matter where Ves tried to find a customer. As the people left the venue in order to grab a bite or visit the main event in the central stadium, Ves was left with empty hands.

"Hello there Ves."

He turned around to see an unexpected sight. Hans came up and addressed him personally. "Hans! What brings you here?"

"I just want to let you know that out of all the mechs I've piloted today, yours is one of the few who took the comfort of the pilot into account."

Ves raised his eyebrow. This was definitely the X-Factor at work! "I design my mechs with the user in mind. My products are more than the sum of its parts. I put my heart into each of my designs. I've refined my craft by designing and producing many mechs for Iron Spirit, where I've enjoyed a substantial amount of sales. I'm currently trying to branch out my real world business."

That sounded professional enough, right?

The pilot nodded, and looked interested. "I'd like to see more of your work."

"Ah." Ves quickly activated his comm to swipe his virtual sales page to Hans. "My digital storefront is here. Please feel free to browse my wares, though I advise you to look at my Marc Antony variant first. It's based off the Caesar Augustus, but I've reworked it extensively with more affordable armor. This is also the design that I'm offering for sale from my real universe workshop."

"You are able to produce a variant of the Augustus?" Hans sharpened his eyes a bit at that news. "I don't know much about the business, but I do know that the production license alone must cost an incredible sum of money. How could you get a hold of such a premium license?"

"I've been fortunate to attract the attention of some people who took note of my talent in mech design." Ves said as he shamelessly weaved a tale of bullshit in order to cover up the existence of the System. "A renowned Rubarthan grant institution even granted me a couple of production licenses to give my startup a push."

"That is impressive. It is not easy to attract the attention of the Rubarthans."

"Ah, don’t misunderstand me. The institution is only based in the New Rubarthan Empire, probably for financial and privacy reasons. The real owners probably have a more modest origin. As for their exact identities, I’m not sure, but with such deep pockets they certainly have clout."

Ves chose to steer the conversation in a risky way. By not-so-subtly talking about the non-existent rich people behind his back, he was weaving an illusion of having the support of a mysterious and powerful backer. While rich people often like to waste their money, they never threw away their wealth to useless people. Ves therefore implied that he possessed a unique talent in mech design that distinguished him from the hundreds of other contestants who took part in the qualifications.

The fact that it was one of the few truths he tried to convey helped sway Hans over. The man rubbed his blond stubble. "You’re an interesting fellow. I’ll keep my eye on you."

Hans stepped past Ves and exited the building. Ves felt as if his tricks were seen through somehow, but then he shrugged. Whether Hans committed to looking up the Marc Antony in the game was more important.

"Gee, at least give me a solid answer instead of letting me hang."

He left the building and joined Carlos for dinner at one of the many eating venues available. As Ves took a bite out of a meat pie, Carlos enviously gazed at his friend who seemed to be reborn ever since they graduated.

"I feel like you took everyone’s luck except Patricia for attracting such a ridiculous grant. C’mon, how many billions of credits does the Caesar Augustus license sell these days?"

Ves shrugged again and again as he denied any wrongdoing. "I really don’t have a sugar mommy, let alone a daddy. You know I don’t swing that way."

"Pff. Give me a couple of million credits and I'll gladly go down on my knees no matter how old and smelly."

"Ugh, thank you for that image. I still haven't finished my lunch."

When Ves described his difficulties getting his first sale, Carlos shook his head.

"You haven't grown up here in Dorum, so you don't have a good picture of the people who buy mechs. You're expecting too much out of the Mech Corps and the mercenary corps. Forget about selling a private mech to a government mech. They have no decision making power in the spending of their units. They pilot whatever mechs the brass shoves at them. As for their private lives, no serviceman has enough credits hanging around to buy a mech for off-duty use, at least not before they are retired."

"And the mercenaries?" Ves asked, feeling rather grateful Carlos was willing to lay it all down for him. He wasn't a local of Bentheim so his knowledge about the business mainly came from textbooks.

"Their finances are tightly regulated. A good contract can set them up with a couple of millions, but a bad luck streak might wipe out tens or even hundreds of millions of credits off their balance sheet. Sure, they have a large stash of credits in the bank, but that's their plan B, or in the worst case their retirement fund."

From Carlos' words, there was still a small a chance Ves could push his product on them, but it had to be worth spilling their savings. "So I have the best chance if I approached retirees or those close to retirement?"

"That's a decent angle to take. The old guys who retire from active duty can't scratch their itches unless they hop into a real cockpit. The popular simulations such as Iron Spirit is too casual and fake to satisfy their needs. Don't underestimate the pensions they earned in their years of service."

Mech pilots were hard to come by, and their services were important in securing locations and projecting power. They earned a nice share of wealth of whatever it was they were defending of attacking as ’taxes’ or ’protection fee’. It was an accepted reality in human space that the fist trumped over laws. Only the fact that the Bright Republic was just a poor, third-rate state kept it from being embroiled in constant wars over territory.

A lot of money exchanged hands whenever mechs took to the field. However, most of it got spent on maintaining the mechs and paying off other expenses.

"I do have an idea." Carlos said as he finished his burrito. "You should try to approach the rich guys, in particular the collectors. They love collecting unusual mechs and admire them for hours in their private mech stables. Some of them aren’t even potentates. They just love the feel of owning unique mechs."

Ves thought his chances there were bigger. "That’s a good angle, but they’re often inapproachable, right?"

"If you’re some average hobo, then yeah the security won’t let you come close. But what if you’re the winner of the Young Tigers Exhibition? Collectors love unearthing gems in the rough. If they can snap up the very first handmade mech of a budding mech designer with bright prospects, they don’t care about the piddling millions of credits they have to throw at you. It’s peanuts compared to the potential collector’s value when you become a household name in the Republic."

This was a tall order for Ves to fulfill. This year’s competition was incredibly tough, and even he couldn’t guarantee victory against seven other talented geniuses. It all depended on the format of this afternoon’s competition.

After finishing their dinners, they walked over to the gigantic stadium at the center of the exhibition. A large crowd of fans cheered as they saw their

favorite pilots triumph over their opponents. It took quite a bit of squeezing for Carlos and Ves to reach the crowded entrance. The security portal let both of them pass without issue once they identified themselves as mech designers who participated in the design competition. It was a nice freebie given to them by the organizers. A regular ticket to attend the competition in person reached in the tens of thousands of credits.

The well-planned layout of the interior of the stadium allowed the two young designers to get a glimpse of the excitement all around. Through the clever use of height and depth, the entire venue was transformed into a three-dimensional set of arenas where spectators could sit and watch the matches safely from above. Highly durable protective screens protected the onlookers from incidental projectiles and impacts, though the violence still led to some frightening moments.

The Young Tigers Exhibition introduced the true world of mechs to its visitors. Ves gobbled it all up like a junkie getting his fix. He eagerly approached the nearest arena battle, showcasing a tense sword duel between two nearly identical medium mechs. Both of them had been at it for a while, damaging their shields to such an extent that they were forced to throw it away.

The red mech, piloted by a talent from Bentheim, circled around the purple mech painted in the livery of an academy in Rittersberg. The two core planets of the Bright Republic often competed against each other in any field imaginable, from sports to mech competitions like this. The usual stereotypes were that the people of Rittersberg were polite and stuffy, while Bentheimers were cosmopolitan and greedy. However, when one met the other, they both turned into raving madmen eager to put the other down a notch.

As a native of Cloudy Curtain, Ves had no stake in the match. Even though he studied at Rittersberg, he possessed no sense of belonging of that beautiful

but ultimately elitist planet. As for Carlos, he felt a bit torn between rooting for his home planet or the planet where he spent much of his time partying.

"Shit, who’s going to win?" Carlos bit his lips.

Neither of them were pilots, nor did they possess the aptitude to become one. Their knowledge on mech fights largely came from entertainment and the occasional classwork in college. Ves only possessed a slight advantage over Carlos due to his Larkinson military family background.

"The Bentheimer is a bit too impatient." Ves judged as he took in the tempo of the match. Both sides looked evenly matched, but his eyes discerned a little bit more due to his studies of the X-Factor. It left him more sensitive to the emotions of the pilots running the mechs. "He thinks he’s running out of time. The longer the wait, the more the Rittersburger is accumulating strength. The Bentheimer is trying to find an opening before his opponent erupts."

The blue mech sporting Bentheim’s planetary symbol darted forward and poked with his sword. The Rittersberger refused to take the bait, slipping back just out of range. The two mechs continued to circle around as they let the anticipation among the crowd grow.

The purple mech took the blue mech by surprise as it jumped forward. The mech from Bentheim hastily parried the sword slash, only to receive a punch on the mech’s face when it tried to retreat. The disruption of the mech’s main sensors gave the Rittersberger enough of an opening to stab his sword past its defenses.

As the tip of the sword touched the armor plate just in front of the cockpit, both mechs immediately immobilized. The safeties had engaged, bringing the match to an end in favor of the purple mech.

"That was a good show." Ves commented with appreciation. "The Rittersburger had a great grasp of timing. He struck when the Bentheimer thought he was in for the long haul."

Carlos shook his head as he looked perplexed. "Dunno. The guy from Bentheim should slap himself for letting his opponent get close enough to deliver that punch."

They took the time to spectate the other matches, enjoying the visceral feel of real mechs clashing against each other with the naked eye. Experiencing such mech battles personally was a treat, and Ves improved his understanding of mechs every time he watched the pilots exert their mechs to the utmost.

After having his fill of mech battles, Ves parted with Carlos and reached the backstage area. After a stern search by security, an attendant guided him to a waiting room where the seven other finalists of the mech design competition waited. None of them smiled or took any note of Ves. Only Patricia gave him a second look, and it was more of the likes of recognizing a tiny mouse that scurried underneath her feet now and then. The group hadn’t acknowledged him, which suited him fine.

A lull appeared as the sounds of weapons fire and crashing mechs ceased. A couple of attendants exhorted the mech designers to get ready to step onto the main stage.

An announcer introduced the upcoming event. "Citizens of the Republic. I hope you have enjoyed the clashes happening so far. I certainly have! Well, if you think we’re holding the quarterfinals next, then be prepared because we have something special to introduce to you this year!"

The projectors behind the announcer lighted up in a collage of mech designers and fabricators working diligently on their mechs.

"A good pilot can’t do without a good mech. For every pilot on the field, there are at least ten to twenty people supporting him from behind. It is at the hands of mech designers that a new mech comes to life. We here at the Young Tigers Exhibition wish to do our part in honoring this important profession. Now, let me introduce the eight brightest mech designers of the year!"

The eight of them stepped forward onto the stage. The audience gave them a polite applause. There was modest interest in their appearance, but they’d rather go back to seeing mechs bash their heads against each other.

After a brief bow, the announcer detailed the upcoming contest. "I’m sure it’s fascinating to see our budding engineers tinker with machinery, but it can get a little tedious if they go on for days. We’ve taken your comments to heart about last year’s event, and decided to put a new spin on the format this year!"

Uh oh, that didn’t sound so good, Ves thought.

Chapter 36: Fusion Cup

The announcer let the anticipation build up a little before detailing the mech design competition. "As you know, many talented pilots have the opportunity to show off their skill on stage. Where there are winners, there are also losers. Mech warfare can be a cruel business, but what if some of our pilots have a second chance? Are you willing to see them compete in a separate bracket?"

Most of the crowd cheered enthusiastically. Many pilots competing today lost their chances to reach the quarter finals. Many fans hoped their underdogs could shine on the stage once again.

"We’ve come up with the Fusion Cup! Eight eliminated pilots with the best scores will receive the opportunity to work together with these eight fine ladies and gentlemen on the stage! It will be the first competition in this side of human space where both pilot and designer compete jointly for the top and win the prestigious cup!"

A two-toned tournament cup appeared on the stage. It was gold on one side, and silver on the other side. A small partition in between showed that both halves of the cup could be put together or remain separate.

The projection behind the announcer highlighted two lists of names. One set contained the names of the pilots, and on the other the names of the designers.

A lot of people looked confused, but that didn’t diminish their enthusiasm. Ves tried to maintain his easy smile to present an image that there was nothing wrong. However, inside his mind he was already churning his brain on the competition format.

"So what are they competing on? Well, for the pilot, it remains the same. Just enter the cockpit and wallop their opponent on stage! The key is what kind of mech they are piloting. We wouldn’t involve the designers if they have nothing to do! So can you guess what kind of role they can play in the short six hours that they have until the matches start?"

Six hours was way too short to create a mech from actual parts. Ves thought the competition might happen in a virtual space, which would be a shame as he’d miss out valuable experience in building up a real mech.

"The pilots won’t be changing the mechs they last piloted. Only the most critically damaged components such as the difficult to replace engines have been replaced. This allows the mech designer to repair and tune up the mech using the various tools and resources available, courtesy to the Mech Corps. You will be able to see with your own two eyes how pilots and designers can work together to reinvent their mechs like phoenixes rising from their ashes!"

Thousands of cheers and applause thundered the stadium as the crowd lapped up the new concept. However, Ves looked a little troubled. He was

used to depending on himself. Now he had to work together to repair and modify another pilot’s mech. What if their opinions clashed?

"The fortunes of the designer and the pilot are tied together. Winning for both the pilot and designer will depend on which mech reaches first place in combat. If the designer does a bad job, then the pilot can do nothing even if he puts 200% in his piloting. On the other hand, if the pilot is having a bad day, then it doesn’t matter if the mech turned into a juggernaut."

A couple of boos sounded out from those remarks.

"What? You think it’s unfair? Well, so what? The real world isn’t fair! However, we’ve made efforts to match the two groups of people based on their previous performances. The top scoring pilot will be matched with the top-scoring designer from their qualifiers. The second-best pilot is partnered with the second-best designer and so on. Though their starting points are the same, what the pairs accomplish together is still up in the air."

The eight pilots participating in the Fusion Cup took their turn to take the stage. The pilots were directed to the partners who took over responsibility over their mechs.

As the sixth-scoring mech designer, Ves got paired with a native of Bentheim called Charlotte Hoffmeister. The fiery dirty blond-haired woman was built like a leopard, and seemed to regard him that way as well with the narrowed eyes scanning his skinny form. He felt as if the young woman dismissed him as a threat.

"Hi. I’m Ves Larkinson."

The woman’s phoenix eyes narrowed at his introduction. "You don’t look like a Larkinson."

"Not everyone in my family is a potentate." Ves helplessly shrugged.

"Whatever. Just fix up my Kirby and don’t mess things up. Larkinson or not, I’ll string you by the balls if you cost me my revenge."

After prying a bit more information from the taciturn woman, Ves learned that Charlotte suffered a humiliating loss against her rival Miranda del Rey, who is now the second-ranked pilot in the competition. She wanted to take advantage of her second chance on the stage to give her rival a comeuppance.

"Damnit, that’s Patricia’s partner." Ves grumbled. The second-best pilot paired with the second-best mech designer made for a very formidable pair of opponents. "I’ll have to put in all my effort and more something special if I want to make it that far."

Everyone went to the improvised workshops that the organizers put up in the unused side arenas. The wrecked mechs the pilots used already rested on a lifting platform.

When Ves saw Charlotte’s Kirby, his heart dropped to the bottom of his stomach.

"Your Kirby is.. a heavy mech."

"Yup." The woman smiled with obvious affection. "It’s the best damn partner a girl could ask for. He’s been my buddy since my final year in the academy."

The Kirby was in actual fact a Raisling Inc. Turbofire RTF-581. The Turbofire was built around the concept of overwhelming mid-range firepower. At the time, it was an excellent fire support mech that provided a powerful amount of suppressive firepower in the battlefield. It was not a mech suitable for arena duels.

The organizers knew this, and came up with a long list of demands ever since the first few YTEs resulted in severe injuries. The firepower of all projectile weapons were reduced substantially. In return, melee attacks also got

reduced in power by lowering the mech’s arm power. Naturally, the latter could be circumvented by putting the weight of the entire mech in the blow.

This also resulted in melee dominating over ranged weapons in the tournament, which Ves supposed was the intention of the organizers. Too much firepower strained the protective screen that kept the spectators safe from the explosions.

In any case, Ves had to get this lumbering, bipedal gun platform in working condition in just six hours. This might not sound like a problem, but when he saw what Miranda del Ray did to it, he practically despaired. The Turbofire’s legs both suffered amputations, which led to the scrapping of both whole legs. In addition, the rest of the mech’s surface sported nefariously thin sword marks, which made it easy to exploit the damaged sections.

"This is going to take a lot of work to fix up." Ves said grimly.

Luckily enough, he shored up just enough of his skills to conduct the repairs within a decent amount of time. The only problem was that he could only work on the most critical parts, and leave the cracks in the armor alone due to lack of time. Heavy mechs demanded a lot more resources and time with regards to maintenance and repair. This was one of the reasons why light and medium mechs significantly outnumbered the heavy mechs in service.

Ves tried to discuss making some modifications to the mech to make it more viable to the limited range arena format.

"No. Absolutely not."

"A sword or a mace really helps out if the enemy gets close."

"Zip it, nerd boy. I don’t want to tarnish my Kirby by using him as a caveman."

Helplessly, Ves dropped the topic for now. Charlotte adamantly insisted on maintaining her tactic of pouring overwhelming firepower at the enemy before

they could get into range. This worked great against inexperienced opponents, but as her thrashing against Miranda revealed, skilled pilots had answers to this one-pony trick.

"Very well, I'll go work on your mech and get it up to working condition."

He had more ideas, but thought it prudent to keep his mouth shut. He got the measure of Charlotte now and knew he couldn't get a word through her stubborn mouth. It frustrated him a little that the organizers forced him to work with an uncooperative client.

Everything they did in the competition was broadcasted live to the rest of the Republic. If Ves and Charlotte lost at the first round, they'd end up as laughing stocks. Never mind finding a customer for his Marc Antony, all the pilots would simply laugh at him for failing so drastically on stage.

The Kirby took a long of wrangling to get into an optimal position to replace the legs. In his own workshop, such a job took days, of which most of the time was spent on fabricating the huge legs. Fortunately, in the interest of speeding things along, the organizers provided a number of parts along with nearly state-of-the-art fabrication tools. The cost of the 3D printer and assembler was worth at least five times more than the second-hand goods back home in Cloudy Curtain.

"This is the power the government has at hand." Ves thought ruefully as he started to inspect the damaged underside of the Kirby. "Any small mech designer will just get crushed if it tries to compete against the wealth of an entire state."

He shook his head and even slapped both of his cheeks. He needed to get his head in the game and avoid any distraction. "I wonder if I can impart some X-Factor magic with my repairs."

Theory made it possible, but frankly Ves was dubious it could work this time. The organizers already fabricated and supplied most of the parts, which meant he had no opportunity to build up a mech using parts he designed and fabricated on his own in a significant amount. Still, he spent his time refocusing his thoughts in order to keep a narrow intention in mind.

"I want to make the Kirby a worthy partner for Charlotte."

This was the angle he went for. Charlotte obviously already developed affection for her mech and piloted it for an extended time. If he could reinforce that connection in a minute way, it might mean the difference between victory and defeat.

With the help of the loaders, Ves was able to get the mech into a position to remove the useless remains of the upper legs. He turned the assembler machine into disassemble mode, which allowed him to gently pry off the legs and clear the sockets underneath the torso of any remaining debris.

The installation of the new legs went smoothly. He selected a pair of legs identical to the old ones from the limited selection available. He had no reason to change the model of the legs. Attaching them to the Kirby was similar to assembling the legs of a new mech, though there were a couple of differences, the most important was that the internal frame needed to be attached perfectly to the legs. While Ves had done such things many times in Iron Spirit, doing it for real on stage brought about immense pressure.

Still, the legs attached perfectly to the mech in the end. It helped that Ves avoided thinking negative thoughts by adamantly adhering to his intentions. He wanted to seriously repair and tweak the Kirby until it became a great tool of destruction in the hands of Charlotte. Maintaining mental discipline allowed him to work on his mech in a calm fashion, which slightly impressed the spectating crowd.

As the mech designers quietly worked on restoring the functionality of the mechs, the quarter finals of the YTE continued. Only one match took place at a time, which had the effect of drawing most of the spectators away to the main arena. The people who watched the matches only turned around and looked at the mech designers busy in their work as the matches ended and the new one had yet to start.

Hours passed by as Ves diligently used his knowledge in mechanics and what he learned from the System to make repairs. He replaced faulty bolts and other minor parts and tested to see if any of the components needed replacing, as the main sensor did as it sported a hairline crack.

After that, he tackled the fractured heavy armor of the mech. This was a tricky problem. The right thing to do was to replace the damaged armor plates with newly fabricated ones, but that took days. He could either crudely bolt over the cracks with additional plates, which unnecessarily thickened the armor and burdened the mech, or he could fabricate a special armor solution that he could use to fill up the cracks. Both solutions weren’t ideal, so he asked for Charlotte’s opinion.

"Hah, just fill up the cracks. Don’t you dare put more weight on my Kirby. I need my mobility for something special I have planned to get back at that bitch Miranda."

Ves could only follow Charlotte’s decision. Personally, he thought that if Charlotte insisted on sticking to her ranged weapon focus, it was better to turn her mech into an armored firing platform. Too bad her obsessive hatred of Miranda gave Charlotte a phobia of turning into a sitting duck again. She wanted Ves to install a couple of knife holsters onto her Kirby, as if she could actually wield them with her heavy mech’s sluggish arms. It’d be like a bear trying to play table tennis.

He worked quietly to fulfill the basic needs of the Kirby. After filling in most of the holes and finishing a quick weld to affix the holsters onto the mech’s hips, Ves noted he had less than two hours of time to make a single substantial change to the mech. He considered making adjustments to the mech’s formidable laser and ballistic weapon loadout, but he hadn’t received permission from Charlotte to tweak such a fundamental aspect of her mech.

"I can overload the lasers and intensify the programming on the shells of the Kirby’s weapon mounts. It’ll wear down the weapons drastically, but it can give the guns a good boost in power even if the competition technicians already neutered their power once."

Naturally, the rules of the competition explicitly forbid reversing the safety measures, but there were many ways of increasing the prowess of a weapon. The problem was if he asked Charlotte for permission, she’d just shoot him down again. Ves felt tempted to just bypass the smoldering woman and let her deal with his work in the arena.

"It’s better to ask for forgiveness than beg for permission."

Most of his instincts called for going through, to do what was nagging on his mind and therefore increasing the odds of success. But...

"There are billions of people watching this competition. Can I do something this despicable in broad daylight?"

Also, what would Charlotte think of him? He’d be betraying her trust. He constantly focused on his purpose to make the Kirby a good mech for Charlotte. If he wanted to follow this creed in good faith, then he had to keep in mind that what he thought was a good mech might not be what Charlotte preferred. Also, if he dared pull this trick when billions of people were watching the YTE, he might never enjoy a good reputation in the Bright

Republic ever again. He had to perform scrupulously proper on stage if he wanted to attract future customers.

Ves eventually firmed up as he stuck to principles. "I'll ask for permission first."

Chapter 37: Kirby

Charlotte glowered at him. "Are you fucking kidding me? No! I won't sacrifice my Kirby's long-term health for a short-term boost. Only scum do those kinds of things!"

No matter how many times Ves tried to explain it, the pilot kept sticking to her stance. He understood then that to Charlotte, her Kirby's health was more important than even getting one up over the hated Miranda.

"Maybe we've gone off the wrong foot. Let's try this a different way." Ves said in a conciliatory tone. "Tell me more about your Kirby."

"Why'd you wanna know that?" Charlotte looked at him with suspicion.

"We've got two hours of time left and maybe I can make a few tweaks here and there if you'd let me. The only way I can do that is if I know more about the mech and be able to suggest improvements in line with your thoughts."

Though she showed she still had misgivings about it, when it came to her mech, she felt better if she bragged about the Kirby. "I won the top marksmanship prize in the academy tournament. They loaned me the Kirby as the first place prize. It's the best mech I've ever piloted so far. He's an old training mech, but he's got the best specs among the heavies in terms of firepower."

Charlotte went on and on as she gushed about the mech's substantial firepower. She really obsessed over the ability to turn an enemy mech into Swiss cheese before they even reached her. Ves thought the reason why she personalized the Kirby so much wasn't because she considered the mech a

person, but that its weapon loadout featured tons more firepower than all the other piddling mechs she practiced with. In her words, those smaller medium and light mechs were pansies.

"I think I see what you want." Ves nodded his head. "Your training mech is a great fire support mech, but Miranda is going to destroy you with her sword again if you go on stage with the same mech. You have to plug your vulnerability to close ranged mechs if you want to stand a chance of winning the cup."

"I don't want you ruining my Kirby."

"No no, I've got something different in mind. I'd like to install some temporary additions to the Kirby. What do you say about bolting more guns to the Kirby's frame?"

The prospect of even more guns exciting Charlotte a bit, and after Ves detailed his plans based on the Kirby's build and the available parts, she enthusiastically gave her approval.

As a Turbofire model, its design had proven itself over the years as a sturdy and reliable way to deliver heavy firepower. It featured a large, stocky bipedal build, allowing it to hide behind hills or structures and fire its weapons over the top without exposing itself excessively. Its main weapons were its two heavy cannons that took the place of the arms. This left the Turbofire with a well-integrated pair of weapons that could easily be fired around corners and over other obstacles. Naturally, this also prevented the mech from wielding external weapons such as rifles or swords.

Though much of the mech was devoted to supporting the two cannons, the mech also featured twin laser shoulder mounts. Each mount carried three medium-powered lasers and normally fired in rapidfire mode in order to take down missiles and light mechs.

The Turbofire design incorporated extra large and extra sophisticated sensors. Their best feature was their strengthened targeting systems, allowing the laser mounts to fire more accurately at fast-moving targets. Charlotte always relied on the autonomous shoulder mounts to take care of rushing mechs.

Unfortunately for her, Miranda knew about this detail and confronted the Kirby with a knight-type mech. The shield was specifically prepared for this arena duel. Hiding behind the reinforced shield, Miranda was able to dodge the heavy cannon shots and shrug off the laser beams long enough to reach Charlotte's rear. As the Kirby lacked any way to turn her weapons around, Miranda had ample opportunity to do all manner of things to the lumbering heavy mech. Even the shoulder mounts couldn't turn around due to their excessive length with the mech's large head in the way.

To plug this gaping weakness in the Turbofire's design, Ves offered to add a small change to the Kirby. He wanted to add a couple of rear-facing weapons on the Kirby's back. With relatively little experience in this area and only less than two hours to accomplish the job, Ves knew it wouldn't look pretty. But right now he needed to impress the crowd and just sticking to safe and boring repairs wouldn't cut it. The Kirby also deserved better.

Mounting weapons on the rear of the mech was a tricky operation. It couldn't be something with a long barrel such as a cannon because the enemy mech could just stand to the side or even cut it off. The weapon should also be limited in weight, or else it could shift the mech's center of gravity too far backwards, making it easy to trip on its back.

"Hm, lasers could do. There's a couple of smaller mounts available. Still, they don't pack enough of a punch."

There was really only one solution. Missiles.

The basic ranged weapons available to mechs consisted of three separate choices.

Laser weapons boasted high accuracy, weighed relatively little and required no physical ammunition. They also slurped energy like a thirsty hog and generated incredible amounts of heat. However, their light speed damage delivery meant that if a mech's sensors were good enough, it could even detonate explosive shells in mid air.

Ballistic weapons, which included solid projectiles as well as explosive shells, often fired through an electromagnetic barrel. This caused them to consume energy and build up heat, but in a much lesser proportion to lasers. They generally delivered a lot more damage at the cost of accuracy and having to carry around ammunition.

Missiles in these days were basically considered self-propelled and self-guided explosive shells. They boasted a substantial amount of firepower and did not require a large and sophisticated weapon platform to launch. The simplest missiles could even be launched from an improvised pipe. They demanded the least in terms of heat, weight and space out of the mechs, but they were also the most troublesome to reload since they took an incredible amount of space.

Still, their ease of delivery made them popular alternatives to ballistic weaponry. These missiles also came in hundreds of different varieties. The most dominant type of missiles were long-ranged missiles, which could travel at long distances and arrive at a target with pinpoint accuracy as long as it was supplemented with decent targeting.

What Ves decided to incorporate in the Kirby's back was something different. Long-ranged missiles were all fine and dandy, but the close-ranged nature meant that much of the propellants in the missiles would never be fully utilized. He decided to go with short-range rockets instead. While they didn't

possess enough propellant to travel beyond a kilometer of distance, they used up all of the freed space for extra explosives instead, leading to a bigger boom.

Their relatively low-tech and self-contained natures meant that mounting the launchers carrying the rockets was as simple as welding a metal box to a surface. Ves installed three separate launchers on the Kirby's broad back in a slightly angled, semi-circular arrangement. The middle launcher pointed its rockets straight ahead, while the two launchers to the side angled a bit to the left and right respectively. This eliminated the Kirby's blind spots. Naturally, the actual installation was a bit more complicated than described, but he still managed to hook up the launcher systems to the Kirby's operating system.

"Alright, time's up! The first match of the Fusion Cup will commence in a single-elimination bracket style. Matches will last at most twenty minutes, after which each mech can be serviced until the time they are called up to the stage again. You won't have too much time between matches, so make the best of your time and conduct only the most essential repairs."

The rules of the Fusion Cup posed slightly harsher restrictions compared to the main tournament. In the normal YTE competition, repairs to the mech were always done by a team of professionals. The Fusion Cup placed all responsibility on the mech designer alone. In practice this meant that Ves could only spend a small of time effecting repairs before Charlotte took the Kirby for another match. Therefore, to make it to the finals, Ves had to make the best use out of a very limited window of time, while Charlotte was forced to defeat her opponent while suffering as little damage as possible.

Ves refused to look down on Charlotte's opponents. Five of them achieved a higher ranking in the main tournament, and all of them were well aware of her fighting style by now so they could prepare countermeasures. The only good thing about the Fusion Cup's rules was that the announcer revealed the

randomized match ups at the end of the modification period. This prevented Charlotte’s immediate opponent from bringing in a mech specialized in taking down heavy gunners.

The announcer revealed the brackets. As expected, the organizers probably nudged a few things here and there in order to make sure that the first and second place teams faced each other at the finals if they won all the matches. Ves wouldn’t be dealing with Edwin and his partner just yet. Instead, their first match surprisingly coincided with what he desperately did not want to see.

"Let the first match begin! Charlotte Hoffmeister and Miranda del Rey, please enter the arena!"

A light and heavy mech both entered the stage. Charlotte’s Turbofire’s footsteps cracked the surface of the arena with each step due to the additional weight. Though the rear-mounted rockets weighed relatively little, that was only the case compared to other weapons. It made Charlotte’s mech into an even bigger sitting duck once its ammunition ran out.

Miranda’s mech was a statement in elegance. Not unlike the Fantasia, Miranda’s training mech looked thin and feminine. With his familiarity with the Fantasia, Ves spotted commonalities that convinced him that Miranda’s mech was designed by Kezia Armaments as well. Only this company insisted the most on feminine appearances.

"Say goodbye to winning, because this lady is going to teach you a lesson." Charlotte taunted as they waited for the ready signal.

"Heh." Miranda arrogantly trash talked, not even bothering to keep her conversation private. "I whooped your ass once, I’ll whoop it again."

"Oh yeah? Well I got a few surprises ready. I’ll spank you and send you back to your mom if you think you can get the drop on me again."

Ves just palmed his face. Why did it seem like he was back in high school? Coincidentally, he looked at Patricia, who looked similarly exasperated. Mech designers possessed cooler minds. They had to in order to endure the mind-numbing texts they had to read. Mech pilots on the other hand favored boldness and intuition. Too much thinking led to hesitation, which was not at all desirable when shells and missiles flew above the pilot's head.

In any case, the signal went green. Miranda's female mech exploded into action, moving rapidly in a zig-zag motion in order to confuse Charlotte's aim. Her mech's highly advanced ECM systems pumped into action. Other auxiliary systems made their presence known as well. One module caused distortions to appear in the naked eye, the result of a special smoke that hindered optical targeting systems and fed them a whole bunch of garbage data.

However, Charlotte showed the audience that she wasn't a heavy gunner specialist for nothing. Without waiting for her targeting systems to punch through Miranda's ECM, she fired her cannons and lasers in a wide spread without fine-tuning her aim. The chaotic spread of laser beams and projectiles failed to hit Miranda, but some of it came close to damaging her just by proximity.

Miranda stopped fooling around and circled her way forward at an oblique angle, always making sure she never closed the distance in a direct path that allowed for easy hits. Despite Charlotte's prodigious firepower, none of her weapons hit. Only when Miranda reached halfway did she suffer minor damage to her mech's legs when an explosive shell detonated a bit too close. It peeled a few layers of armor but nothing more.

"I told you Charlotte, you'll always be beneath me!"

Charlotte appeared to have panicked a little and overloaded her laser mounts. The weapons pushed past their maximum cycles and fired until the launchers

overheated. Ves winced as he thought how troublesome it was to repair the launchers. Overheating affected laser weapons a bit more severely than other components due to the high demands of integrity the weapons required. If the focusing elements were a little bit off, then what the barrels spat out wasn't a tight beam, but a wide spread that felt more like a tanning machine than a deadly weapon.

Miranda suffered a number of hits not just due to the increased frequency of shots but also due to the shorter distance. Getting closer meant her profile grew in Charlotte's targeting vision. This increased the heavy mech's chances of hitting the light mech.

However, as Miranda continued to close the distance, the hit rates decreased even as the lasers kept their frantic firing. Her mech's sideways dodging increased the amount of degrees Charlotte had to adjust her aim once the distance between the two narrowed.

It was like the difference between shooting a clay pigeon five meters away and fifty meters away. If the clay pigeon was thrown in the air from a distance, the shooter only needed to shift his weapon a couple of degrees at most to track the projectile. If the clay pigeon flew a lot closer, then the shooter might even be forced to turn his body over a hundred degrees single second.

Heavy mechs notoriously turned their mechs slowly. Even the Turbofire's large but sluggish laser mounts failed to keep up with Miranda's mech.

"Haha, if you think I'm going to fall for your stupid trick, then think again! My partner's not blind and neither am I!"

Miranda's mech struck out with her sword as she kept to the sides of Kirby. Ves was afraid of that. While the Kirby posed a lot of threat at its front and rear arcs, the sides could not be covered by any weapons. Patricia must have

recognized what Ves cobbled up and reminded Miranda of the threat to Kirby's rear.

However, just because Ves was afraid of the option didn't mean he or Charlotte anticipated the action. Ves passed on a tactic he learned from the online adventures of his cousin Melinda to his partner, hoping she could utilize it at the right time.

As the sword was about to hit Kirby's arm, Charlotte chose to retaliate by forcefully detaching the nearest laser launcher. The overheated component blocked and foiled Miranda's sword strike, causing the light mech to pause. In the meantime, Charlotte successfully used the time she bought to turn her mech about forty-five degrees, enough for one of her rocket launchers to face the gobsmacked feminine mech.

The launcher disgorged its entire complement of rockets practically right at point-blank range.

Chapter 38: Tough

What happened if a launcher spat out its entire complement of rockets at once? Something really fantastic and terrible, depending on who you asked. Miranda immediately became aware of the crisis and proved her chops as a young elite by throwing her sword forward while huddling behind her shield with both of her mech's hands, making sure to crouch to present as small of a profile as possible.

The sword knocked a couple of rockets aside. Due to the safeties built into the warheads, they failed to detonate early due to their close proximity to the launcher. Instead, they flew or fell to the floor largely inert. As for the other rockets, the upper portion harmlessly flew past the crouching mech while the lower portion exploded harshly against the shield. Due to the decrease in lethality among all projectiles, the rockets failed to penetrate the shield,

though they did cause quite a few layers to peel off. The force of the explosions also rocked Miranda’s mech backwards.

"Hah, I’ve got more where that came from!" Charlotte taunted as her heavy mech turned another 45 degrees so that her Kirby’s back faced her opponent at a straight angle.

"Shi-" Miranda got cut off as another volley of missiles came in her direction.

She tried to do a roll while keeping her shield forward. This successfully let her avoid most of the rocket barrage, though the lower corner of her shield finally fell apart from the few projectiles that managed to hit it with sufficient force.

Before Miranda could celebrate her survival, Charlotte’s final launcher disgorged its payload.

"You moth-"

The feminine mech finally escaped the last wave with the skin of its teeth. The few rockets that detonated against its armor managed to crater a portion of the chest.

"It’s checkmate for you." Charlotte gloatingly said as she kept turning slowly, allowing her to present her outstretched cannon and laser mount. The weapons at that side spat out a furious salvo that further damaged the bedraggled Miranda and her mech.

"Damnit, if it wasn’t for those stupid rockets, I’d have peeled your limbs off by now!"

Ever since Miranda dodged further away in order to escape the rockets, she lost the initiative. Her mech needed time to build up speed, and before she built up her momentum, Charlotte got a prime opportunity to sneak in a lot of damage.

The Kirby sinisterly aimed at the legs, hoping to impair Miranda’s mobility. A lucky high explosive cannon shell managed to detonate close to the legs, which stripped off the rest of the armor of the female mech’s feet. The force of the small explosion also unbalanced Miranda’s gait, causing her to lose crucial speed.

"Alright, I wanted to save this for the finals, but you leave me no choice now! Let me show you what Patricia gifted my mech!"

Uh oh. Ves bit his lip as Miranda finally took the match seriously. He knew that Miranda always kept something in reserve, as a mech designer as renowned as Patricia wouldn’t just let her partner go out in a boring stock mech.

The female mech’s back armor opened up to reveal a stubby flight system. Ves almost couldn’t believe what he was seeing.

"That fucking Patricia stole my design!"

Patricia not only stole his idea, she improved upon it. She expanded and sloped the back armor in a way that freed up space while not making it obvious a miniature flight system was attached in that location. The amount of engineering it took to create such a hidden surprise boggled Ves’ mind. He had to admit that Patricia possessed terrifying competence.

Miranda’s mech ceased to care for its damaged legs as the compact flight system allowed it to travel above the floor with sufficient speed. The light mech’s ability to dodge improved substantially. After building up sufficient speed, it flew towards the Kirby for a second showdown.

Charlotte gritted her teeth inside the cockpit. Her rear armor was burdened with empty rocket launchers. Though they already released their payloads, they still weighed her down a little bit. In addition, she sacrificed one of her shoulder mounts in order to fend off Miranda. With only one laser mount left, she was sorely pressed to keep off the looming threat.

The match entered another act, and this time even if Miranda had thrown aside her sword, she still possessed enough lethality once she unsheathed her backup knife.

Yet it never came to use, as Charlotte finally achieved a critical hit to the light mech’s weapon arm. Miranda managed to swap the knife to her mech’s other arm, but the damage it suffered when holding the shield caused the fingers to grip the knife unsteadily. The distraction allowed Charlotte to get in another couple of shots. When her next cannon shell impacted the light mech again, the competition’s inbuilt safeties kicked in and turned the projectile inert.

Everyone was silent for a moment, then cheered massively as they experienced an upset. The number two favorite of the Fusion Cup surprisingly lost to the 6th ranked contenders. Charlotte whooped through the microphones even as the people rooting for the other side stood silently, as if still not believing this was happening.

Both pilots exited the cockpits while technicians lifted the damaged mechs back to their workshops. Two pilots and two mech designers met in the middle of the arena to congratulate each other and shake hands.

Smugness overwhelmed Charlotte’s grin as she beheld her defeated rival. "It was a good match. I got lucky."

Miranda snorted at that. "They should penalize heavy mechs even more in these bullshit tournaments. Your mech weighs at least three to four times as much as mine."

"Well the rules don’t say you can’t bring one too. You’re welcome to join the heavy club. We got the fattest asses around!"

The defeated pilot just huffed in reply.

As the two pilots talked smack, Ves hesitantly shook hands with Patricia. Her gentle smile and soft, small hand mesmerized him for a moment. Being this

close to her amplified the effect of her striking red locks and her lovely dimples.

"You did a really great job with integrating the flight system to the chassis. It’s a lot better than welding a couple of boxes to the armor like I did. If my mech partner hadn’t achieved a lucky hit at the end, then this contest might end differently."

Patricia shook her head. "Don’t belittle yourself. What you chose to augment worked out much better in the end. You chose to plug a gap while I doubled down on Miranda’s strength. I don’t think either choices are wrong, but as you said, it worked out better for you as the extra firepower was a lot more useful than flight capability in our matchup. To be honest, both Miranda and I expected to fight a medium or light mech. Yours is the only heavy mech in contention."

The two babbled a bit about the design choices they made for their respective mechs. What actually Ves had in mind was trying to facilitate the X-Factor, but that was something of a secret weapon to him. He instead diverted Patricia’s attention by pointing out he had a hard time convincing Charlotte of making any changes. She only approved the rockets due to agreeing with her affinity for more weapons.

"Miranda gave me the lead instead." Patricia explained. "As a gifted pilot, she’s proficient in piloting many variations of light mechs, so when I proposed to adapt your flying system scheme to her mech, she readily agreed. Now that I think about it, I should have involved my partner more in the shaping of her mech."

The two teams parted after the announcers called in the next contestants. Charlotte and Ves returned to the workshop where the beat-up Kirby rested. While Miranda ultimately inflicted no damage, Charlotte caused enough of it to

compensate. The mech’s left shoulder was absent a laser mount, and the entire mech still suffered minor internal damage due to overheating.

An overheating mech posed serious problems in terms of repairing them. A mech that ran as hot as an oven all over meant that the damaging heat penetrated to the very deepest interior of the mech. To repair such a mech to maximum readiness, Ves was required to pull the mech apart and go over each component one by one. Thin wires and small components were especially vulnerable to damage from excessive local heat.

"It’ll last. It’s not the first time I cooked the Kirby. He’s built to take a pounding." Charlotte nonchalantly declared as she sank down in a nearby sofa and sipped her energy drink.

Ves sighed in exasperation. "We only have about an hour to two hours before we’re called up on the stage again. That’s barely enough to refill the rocket launchers and roughly slap another laser mount on the Kirby’s empty shoulder. I don’t have the time to do the repairs I’m certain this mech needs."

"Then don’t. I’ll just roll with the punches. If my Kirby’s a little slow, it’s no big deal. I’m already used to moving at a snail’s pace."

Ves really preferred not to hand his chances of winning over to fate. Their stunning upset against Patricia and Miranda attracted some attention from the crowd, but most of them attributed their win to a faulty strategy by their opponents. Winning a match by getting lucky didn’t prove his mech designing skills. If Charlotte and Ves somehow manage to scrounge up another win in the next match, they could prove that they possessed real skill.

If Ves sufficiently proved his capabilities, then he’d have a much easier time selling off his own mech. He still kept his ultimate goal in mind. Winning the Fusion Cup was not a life or death matter. It only helped fulfill his other goals.

He got on with the repairs while keeping an eye out for how his competitors were doing. Most of them involved high speed duels or tense battles where both sides clashed their swords against each other. This excited the crowd much more than the one-sided shooting fest Charlotte went through in the previous match.

Refilling the empty rocket launchers took very little effort. It only took a little time because the machines available to Ves could only put in one rocket in its tube at a time. After that Ves dug into the pile of spare parts the competition offered and picked the closest looking equivalent of the Turbofire's standard laser mount.

Removing the damaged remains from Charlotte's emergency dismounting of the shoulder mount was a delicate operation. If Ves screwed up here, the new laser mount wouldn't fit in the standardized socket, which enabled the laser mount to link into the mech's targeting systems and draw power for its rotation. Luckily, the mech appeared to have been built for these kinds of actions, as Ves encountered no bumps into making the socket clean.

After carefully attaching the laser mount, Ves spent some time making sure the mech's processors correctly adjusted its targeting system to the new mount. Different models required different parameters in order to fire accurately. It didn't perform as well as the original model, but for a quick fix it did the job.

Ves swept the moisture from his forehead as he finished the essential repairs. Barring the damage the mech previously suffered before its entry in the Fusion Cup, the Kirby recovered its highest combat state.

In the meantime, a couple of other matches took place in the arena. Mechs sporting different amounts of damage and variation entered the stage and duked it out with their counterparts. What Ves paid the most attention to was the match that decided his next opponent.

The match progressed in a one-sided fashion. A hapless knight who ranked eighth in the previous tournament was forced to use his backup pistol against a skirmisher-type mech. The skirmisher wielded two submachine guns and ran circles around the mech with ruthless patience.

"Looks like that SMG fellow will be my next opponent." Charlotte remarked as she already sized up her next likely opponent. "I hope my armor will be up to the task."

The skirmisher fell under the medium weight class but moved almost like a light mech. Ves checked the names of the participants and learned the skirmisher's pilot was called Alexander Steel. His mech designer was a fellow named Michael Dumont, who studied at a private institution based in a second-rate state.

"This guy looks tricky. Unlike Patricia who merely mastered the basics to the utmost level, Michael is more familiar with new advancements and better techniques. I think Alexander is holding back the full potential of his mech. His current opponent isn't worth exposing his trump card."

Charlotte's easy smile turned into a serious frown. She had reason to worry if Alexander's skirmisher possessed a hidden card. Normally, heavy gunners easily shredded skirmishers solely due to the difference in firepower and armor, but what if the skirmisher changed his weapon loadout?

"The submachine guns work great against knights because they can't catch up to you and don't possess enough firepower to compete at range. But that's obviously not going to work for you, Charlotte."

She nodded at that realization. Unlike her own mech whose weapons were pretty much fixed, Alexander could just put down the SMGs and take a more appropriate weapon into battle, such as a heavy shield or an armor-piercing

rifle. This flexibility was an intrinsic advantage all humanoid mechs with functional arms enjoyed.

Ves paid attention to Alexander's mech. With his previous experience in optimizing the armor for the Caesar Augustus and Marc Antony, he recognized the mech battling it out in the arena followed a completely different design philosophy. It looked lean, sleek and aerodynamic, as if it wanted to pursue speed much harder than a light mech. And in a major sense it mostly achieved such a result at the cost of limiting its onboard loadout of weapons. The mech lacked any indications of possessing wrist, shoulder or back-mounted weapon platforms.

By the time Alexander achieved victory over his humiliated opponent, Ves knew he had very little time left to make some last minute changes. Should he improve the Kirby's targeting system? Perhaps add a couple more armor plates to increase its bulk?

He disliked falling into this guessing game. Every decision was plagued with an indeterminate fog. Did a choice lead to riches or ruin?

"Stop procrastinating, Ves. You're not even going on stage, yet you're sweating bullets."

After taking a deep breath, Ves regained much of his composure. "You're right. With the time we have left, I doubt I can make any substantial changes to your loadout. I'm going to work on refining the Kirby."

"I didn't say anything about keeping my Kirby barebones. You've done right by Kirby, and I appreciate it. You mech designer types aren't as stuffy and close-minded as everyone says you guys are. You're cool."

"Uh, thanks. So what's your idea?"

Charlotte recovered her cheer and grinned deviously at him. "Seeing as I'm going to face another speedy type, I'd like you to make the following tweaks..."

Chapter 39: Luck or Skill

When Ves sent off the newly repaired and modified Kirby, his expression was mixed. The modification Charlotte suggested changed the Kirby in a way that hopefully would come as an unwelcome surprise to Alexander Steel. Michael Dumont must be thinking the same thing. The low-key fourth-ranked mech designer from the qualifications hadn’t raised eyebrows like Patricia or Edwin, but he possessed real capabilities to make it this far. The skirmisher’s smooth and practically undamaged form was a testament to his repair skills.

The Kirby’s heavy, burdened form stepped forward into the arena yet again. Its steps echoed the quiet arena as it beheld its opponent. The medium mech looked as spotless as ever, though it exchanged its twin submachine guns for double kite shields.

"Damn, this is ridiculous." Ves muttered to himself as his eyes widened at the ridiculous loadout.

It wasn’t unheard of for mechs to bring double shields to the battlefield. Two shields offered a great amount of protection against ranged damage. Knight type mechs holding a defensive position often made for great defenders for their more vulnerable comrades if they carried two shields for maximum cover. Some savvy manufacturers even got in on the action by selling purpose-built tower shields that weighed like a brick but could withstand incredible punishment.

That was why the notion that Alexander carried a pair of heavy shields for his swift and agile mech sounded ridiculous. Why give up his advantage in mobility to gain an average amount of durability? The shields may prove useful against the Kirby’s guns, but their weight turned the skirmisher into a sitting duck, allowing Charlotte to pound Alexander into a pulp before he’d even reach his enemy.

"Could it be that Alexander is carrying another weapon?"

The timer counted down. Plenty of people in the audience took note of this match. Not only did it determine which team entered the finals, it also signified a battle between two unusually modified mechs. The crowd was beginning to come around to the idea behind the Fusion Cup. It not only tested a pilot's judgment and skill, it also involved his partner's craftiness. The mech designer's role might not be as flashy as the pilot's, but his every move affected the battlefield in a way that was no less influential.

Ves feared Michael quite a bit for this reason. The man hid his competence well, for the skirmisher that he fixed up revealed no hints of what lurked beneath its spotless facade.

"Three, two, one, START!"

The match exploded into action as Charlotte fired all her guns without waiting to engage her targeting systems. Her manual aim proved sufficient as pretty much both of its explosive shells detonated squarely against the skirmisher's shields.

Surprisingly, the shield held against the immense assaults. The lasers fired from the Kirby's shoulders merely splashed the shield's surface with ineffectual heat. The second volley of shells from the Kirby's arm cannons failed to deal any substantial damage to the sturdy shields. The skirmisher calmly stepped forward, leaning its posture square against the shields just before Charlotte fired. While the shields contributed much to the Skirmisher's unyielding pace, Alexander's impeccable piloting skill made sure his mech maintained its balance.

"How can this... I don't even..."

Ves tried to parse the sight in front of him. The shields were able to withstand incredible punishment far beyond the materials provided by the organizers should be able to withstand.

"Are they cheating?"

In front of a crowd of millions? Likely not. Such blatant rule breaking threw away all credibility for the Young Tigers Exhibition. Then considering all the state-of-the-art machinery the mech designers had at their disposal, then Michael must have treated an existing pair of shields with a highly advanced composition so far ahead that it must involve some secrets from a second-rate state.

He grimaced at the guess. "The organizers were probably overjoyed when they get to peek over Michaels' shoulders. The technique he used might not be known to the higher ups at the Bright Republic. Perhaps the Bright Republic introduced the Fusion Cup for reasons other than allowing mech designers to gain some fame alongside pilots."

This implied the Republic was desperate to steal new technologies, which was ridiculous. Though it only ranked as a minor star country, it still possessed unimaginable wealth compared to most corporations. The income they made off Bentheim and the budding mech industry there insured they possessed the resources to enhance their tech base.

"There must be something else behind the Fusion Cup. Something I can't see yet."

In any case, nothing Ves figured out could change the situation in the arena. The shielded skirmisher came quite close and only failed to reach the Kirby due to the kinetic force of the explosions pushed it back.

"HARGH! What does it take to crack open your shell?!" Charlotte shouted in frustration as she slowly stepped her mech backwards while continuing to fire her cannons. She kept her laser mounts silent. The lasers inflicted negligible damage to the shields. It hurt her more than the enemy if she kept shooting to the point of overheating.

When the Skirmisher finally came close enough to engage in melee, Alexander patiently waited for another pair of shells to impact his dented but still intact shield. The moment the cannons fired off their payload and loaded another round, the shields dropped and a twin pair of heated knives entered the mech’s hands.

"So that’s what you were hiding!" Charlotte yelled as she finally reengaged her lasers. At this range, a barrage of shots created a couple of awful burn holes in her opponent’s armor. Yet the lasers lacked the punching power to stop or hinder the skirmisher in any way. Mechs often used rapid-fire lasers to deal a great amount of constant damage in an efficient way, but such a narrow focus made them vulnerable to sudden strikes like the one Alexander performed.

The skirmisher jumped in the air and landed both ends of its knives into the Kirby’s shoulder mounts, instantly piercing them and rendering the lasers scrap.

Too impatient to wait for her next shells to reload, Charlotte simply based her cannon tubes against the hanging Skirmisher, successfully lodging it off her mech’s frame. Unfortunately, the shock dealt some damage to the internal modules of the cannons, causing their reloading process to stop.

Instead, Charlotte engaged her surprise. "See you, sucker!"

One of the three boxy rocket launchers started to flare as the boosters hidden within came to life. This was what Charlotte requested Ves to incorporate. In her opinion, three rocket launchers mounted to her back was a little excessive. She’d rather replace one of them with some boosters angled in such a way that it could help her turn her mech around rapidly.

Most heavy mechs turned like whales on land. Charlotte loved her new rocket launchers, but she was aware her opponents wouldn’t obediently stand behind her and let the rockets launch at them with a smile. So she conceived

of the creative idea of hollowing out one of the launchers and stuff some acceleration boosters in its place.

As a pilot, she lacked the background to appreciate the challenges involved in such an operation, especially since they were short on time. Nevertheless, his budding jury rigging skill worked full tilt in order to produce a solution that turned the impossible into something that might work.

The operation had to finish swiftly in order to make it in time for this match. In record time, Ves managed to hollow out the launcher, crudely using an advanced cutting and scraping tool to crudely scrape away the internal space. Then, he went to the pile of parts and dug up a pile of small, emergency boosters. Mech designers often mounted these one-use booster units on light or medium mechs to provide a one-time emergency boost or to launch a module outwards. Such boosters weren’t designed to support a heavy mech’s entire bulk. But if the Kirby borrowed the additional force produced by the boosters to turn faster, then they possessed just enough power to make the trouble worthwhile.

Alexander responded quickly at the sudden turn of events. Before the Kirby could turn around and present its rockets at him, he used his superior speed to keep up with the rotation. The response came a little late. Charlotte already fired her middle launcher as soon as she caught him in her firing arc.

Most of the rockets that launched failed to hit anything and miserably flew away to explode on the ground or against a security screen. A couple of rockets managed to catch the Skirmisher in glancing blows. Their proximity detonations crumpled and damaged the mech’s right arm, causing the poorly armed mech to drop a knife. The explosions also caused the skirmisher to lose its balance, an almost fatal consequence for a mech that relied on speed.

"Take another round!" Charlotte yelled with vicious glee as she activated her second and final rocket pod. The rockets flew out uncontrollably in multiple

directions, a sign of poor and shoddy installation. Nevertheless, the inherent spread of the rockets helped Charlotte cast her net wider, causing the skirmisher to get hit near its waist, buckling a few armor plates and disturbing the engines that rested nearby.

Right now, both mechs were at an impasse. Charlotte emptied her rockets and lost her lasers. She re-engaged her cannon arms and prayed her mech could reload them as fast as possible. Alexander on the other hand lost an arm and got some damage onto its armor. While he hadn't suffered a fatal hit, his mech was dangerously off-balance and out of position to attempt another attack. He had to get close.

It took a bit of time, but Alexander's mech passed by Charlotte's still-loading weapon tubes. With a lunging stab, he struck the Kirby's head, successfully damaging and disabling its main sensors. The sudden strike caused Charlotte to flinch, but she retained enough sense to kick out with one of the Kirby's heavy leg.

The medium mech's legs took a glancing blow, crunching aside armor and damaging a couple of sensitive knee components. Alexander tried to command his mech to pull out its knife and stab the Kirby again, but his mech lost its balance for just a tiny moment due to the damage.

After switching over to the Kirby's chest-mounted backup sensors, Charlotte aimed again with her freshly reloaded cannon arms. She shot her left cannon as soon as the barrel tracked her opponent. The weapon fired just as the skirmisher's knife sliced into one of the Kirby's armor gaps.

"Shit!"

The explosive shell failed to detonate due to impacting within its minimum safety range. If the shell detonated its explosive payload at full strength, both the target and the Kirby would get hit by the blast radius. The Kirby's

ammunition was significantly tuned down for this tournament so the Kirby might have stayed safe, but the safety range remained unimpacted, which led to Charlotte’s curse as she realized her mistake.

The knife impacted the gap near the Kirby’s left arm joint, which disabled the arm cannon. But before Alexander could pull out the weapon and retreat, Charlotte went berserk and knocked the Kirby’s upper torso forward, causing it to fall in Alexander’s direction. Still recovering from its previous attack, the skirmisher failed to disengage in time, causing it to get caught into the Kirby’s falling momentum.

No one spoke. Even Ves stood with his mouth wide open. Everyone just watched as the skirmisher comically tried to wriggle its remaining limbs underneath the Kirby’s prodigious weight. It was like watching a tiny mouse scurry from underneath the paw of a cat. Nothing worked. Charlotte could just keep rocking the Kirby’s weight against her opponent to crush it into a pancake.

"The winners are Charlotte Hoffmeister and Ves Larkinson! Their team has successfully advanced into the finals!"

An alarm went up as the referees activated several safeties. Thick robotic arms emerged from underneath the arena floor and lifted up the Kirby with difficulty. The people in charge obviously feared the Kirby might actually crush the thin medium mech’s cockpit with its bulk. Ves couldn’t blame them. The skirmisher looked as if it sacrificed even the armor around the cockpit to get it to move so fast.

As the pilots exited their cockpits, they all met at the center of the arena to shake each other’s hands.

"Congratulations on your win." Alexander haplessly said as he shook Charlotte’s hand. "You caught me good with that fall. It would be reckless

suicide to pull off such a stunt in a real battlefield, but in a duel situation I guess it worked out very well for you."

Charlotte huffed at the excuse. "If it were up to me, those shells would have shredded your mech. Those safeties are bullshit. My Kirby can take the punishment."

While the two pilots kept exchanging excuses, Ves and Michael Dumont met each other a short distance away.

"Great engineering. I don’t know how you made those shields so durable in such a short time."

Michael gave out a sullen smile. "It’s just a trick. It can’t compare to reaching the final round when you’re ranked near the end."

Ves didn’t like the mech designer’s tone. He maintained his composure though.

"I admit I’m lucky enough to be paired with a good pilot with an uncommon mech. Her heavy mech poses a lot of problems just by carrying so much stuff around. I know it put you in a tough position."

The modesty only soured Michael’s expression even further. "If this year’s mech design competition hadn’t switched to this bullshit Fusion Cup, then you’d be congratulating me. You’re right in that you got lucky, punk. Your team beat mine fair and square, but if it came down to a showdown between just you and me, then I’d wipe the floor with you ninety-nine times out of a hundred."

If Ves wasn’t aware that quite a number of recorders were pointed in his direction, then he’d give the prick a piece of his mind. Instead, he kept up his smile and straight-up turned his back at Michael, signaling that the conversation was over as far as he was concerned.

"You should gracefully resign now while you can." Michael gave his parting shot. "Don’t think you can overcome Edwin McKinney. He gained the qualifications to study in the New Rubarth Empire for a reason. You can’t imagine the depth of his knowledge!"

Fair enough. The Kirby looked awfully wrecked, having lots both of its shoulder mounted lasers while getting one of its arm cannons disabled as well. More troubling, the Kirby’s abrupt fall at the end of the match left repercussions in the mech’s internals. Mechs simply weren’t built to fall like that with all their weight shifted into another direction.

The organizers fortunately took their situation into account and gave Ves a generous amount of time to fix up the Kirby as best he could. Shortly after they cleared the arena, the main tournament went back into swing. The quarter-finals and semi-finals took quite a bit of time to complete. Ves and Charlotte were scheduled to battle against Edwin and his partner’s team just before the finals of the main event took place.

"I don’t know how strong Edwin will be, but even if it’s inevitable that we lose, I’m not going down without a fight!"

Chapter 40: Finals

When the Kirby entered the workshop, Ves looked grim at the amount of damage it sustained. The fragile shoulder laser mounts were total losses while the knife wound that disabled one of the arm cannons was very hard to fix. In addition, the overheating damage from the first match still plagued the mech’s internals in addition to the abrupt fall that certainly knocked a few things loose.

All in all, the Kirby could be fixed in a week. As it was, Ves only had an hour or two at most before the Kirby was scheduled to enter the stage for the last time tonight. He glanced at the arena, where the top favorite of the newly instated Fusion Cup trounced his opponent handedly.

The top pilot of the cup, Christopher Yang, happened to be the number three seed of the Young Tigers Exhibition. Unfortunately for him, he got knocked out in the main tournament by getting matched against the predicted number one mech pilot. Thus, everyone inferred that the YTE offered somewhat of a second chance for him to win an actual prize.

His medium mech sported thick armor and a vicious loadout hated by arena goers everywhere. His wrist-mounted flamethrowers and stubby shotgun-like heat projector turned his mech into the penultimate close-ranged striker. The damage his weapon caused might not be as overpowering as solid projectiles, but they had the nasty property of cooking the enemy inside his cockpit.

In optimal circumstances, the striker tanked everything its opponent threw at them and simply blasted them with constant heat, leading to an inevitable victory when the enemy’s machine practically looked like it took a dive inside a volcano.

Such a mech was terrifying already in an arena environment, but Ves cared more about Edwin McKinney. The prodigal son who returned from one of the biggest human superstates, Ves really dreaded what he cooked up. From what he saw so far, the striker moved more fluently than he’d expected of such a well-armored mech, and he spotted no gaps at all in its defenses. Christopher’s current opponent managed to test his mech a little bit, but not to the point of actually threatening Christopher’s lead due to the damage he sustained in the previous match.

Charlotte grunted at Christopher’s indomitable performance. "Christopher’s an arrogant son of a bitch, but he has the accomplishments to back it up. He rose up to become one of this year’s top graduates due to his own hard work. He overcame poverty and lack of training resources to beat a lot of other mech pilots who were born with a silver spoon in their mouths."

Ves could imagine how tough that was, being from the Larkinson family as well. Pilots in well-off families and organisations enjoyed specialised diets, personal mech simulators in your home and sometimes even private tutors instructing you from the ground up.

"The longer the match goes on, the more advantages Christopher accrues. We'll need to configure the Kirby in a way that will help end the match quickly."

"Tell it to me straight then. How's the arm? Can you fix the knife wound?"

After consulting a high-powered scanner, Ves grimaced at the results. "The knife dug in too deep. That heated knife cut through several essential cables and feeds. I can't fix it without dismantling the entire arm. It's better to dislodge the arm from the shoulder socket and stick another arm in its place."

Obviously, Charlotte disliked the idea very much. The Turbofire sported a very specific set of arm cannons. The spare parts provided by the organizers didn't include a weapon arm of the same model. She'd have to get used to a different weapon or switch over to a fully-fingered humanoid arm.

"What about the shoulder launchers?"

"I can replace them with generic launchers. They don't have to be lasers either. When Alexander wrecked your laser mounts, his knives only penetrated the casing and inner components. They stopped piercing through after that, leaving the modular sockets intact. If you don't care about fast and accurate targeting, I can whip up a new pair of shoulder mounts for you in a rush, but don't expect a good performance."

Charlotte considered her options for a moment. "Do the shoulder mounts first. If you can, mount rockets or something else that packs a heavy punch. As you said, my only chance to win is if I punch Christopher first."

Nodding, Ves immediately went to work, selecting the same pair of rocket launcher mounts that he already mounted on the Kirby's shoulder. Due to the lack of time he hadn't bothered replacing or refilling the back mount that turned into an improvised booster. This should still leave the Kirby with five rocket pods in total, which would wreck any mech at close range if fired upon successively.

Ves worked hard in accomplishing the job in time. Even as the main tournament caused plenty of mechs to get wrecked while crowds of fans shouted the names of their favorite pilots, Ves fully concerned himself with bringing the Kirby back to a semblance of life. He poured as much of his emotions into the work as possible, hoping it could knock the presumptive champions off their thrones.

What resulted from his hour-long frenzied tinkering was a heavy mech with two crude shoulder-mounted rocket launchers affixed to its shoulders. Unlike the stream-lined laser mounts, the boxy, oversized rocket pods weighed the Kirby down significantly more. Together with the pods affixed to its back, the Kirby was dangerously top-heavy in its weight distribution.

"I can't do anything about the balance." Ves warned Charlotte as he moved on to working on replacing the arm. "You'll have to move carefully and never let yourself get tipped over."

"Right. I'll keep that in mind."

The work on the arm proceeded even faster and shoddier than Ves thought. He practically ripped the damaged cannon arm from the Kirby's shoulder socket, rendering it even more damaged, but Ves hardly cared at the moment. He inspected the socket and hastily removed whatever debris remained. Then, he picked up a generic heavy mech arm from the pile of parts and hastily installed it in the empty shoulder cavity.

Even as the semi-finals of the main tournament started to wrap up, Ves hastily connected all the necessary cables without testing them to make sure they properly exchanged information and power to the empty arm. He skipped the fine-tuning and calibration of the arm entirely, which was a big taboo in his profession. An arm that wasn't tuned right felt like a crude prosthetic to a mech pilot. The responsiveness of the arm suffered greatly, but it couldn't be helped. The competition pushed Ves into cutting pretty much every corner he could find.

The announcer already got ready to warm the crowd up as Ves asked Charlotte what weapon she wanted to wield for her new arm.

"And now, get ready for the final round of the Fusion Cup. Who will win the grand prize? Will it be the twin stars of the Bright Republic, the mighty Christopher Yang and the genius Edwin McKinney? Or will the underdogs Charlotte Hoffmeister and Ves Larkinson triumph once again with Lady Luck by their side?"

Granted, Ves could give the announcer a prize for adeptly making the finals sound dead even. Whether the match resulted in a favorable outcome, nobody knew. Ves didn't dare analyze his chances. Instead, he quickly gave the Kirby a heavy tower shield and sent it off to Charlotte.

Both pilots entered their cockpits and entered the arena. After they stood on their designated positions, the security screens came to life, protecting the audience from the violence that was about to ensue.

"Commence!"

Christopher's striker sported the same loadout as the last match, which was an excellent decision on his team's part. Heavy mechs could be tough to peel apart, and a pilot as good as Charlotte wouldn't let an enemy come in close without paying for it, as she had proven in her first two matches.

The first seconds of the match happened to everyone’s expectations. Charlotte fired off her sole arm cannon while keeping her tower shield to the side for the moment. The cannon detonated squarely against Christopher’s thick chest armor, but only managed to leave a lot of soot and a shallow crater behind. Charlotte waited for her cannon to reload and shot again at the same spot, managing to dig a little deeper.

"Oh, what’s this? Christopher is nakedly provoking his opponent! He’s not bothering to dodge at all!"

The naked arrogance in Christopher’s heart came out in full display. The striker kept striding forward in a slow but constant pace. Each shell that exploded against its chest only managed to deal surface damage to the armor. The internals remained entirely unaffected.

"I’ve got more in store for you!" Charlotte frustratingly yelled as she launched the rockets from her shoulders.

She actually fired them a bit further than optimal, but perhaps she figured it was better to make her move before Christopher changed his pattern. The inaccurate but powerful rockets flew straight ahead, most hitting nothing but empty air or the arena’s security screen. What rockets did hit Christopher’s mech spread out their damage, leaving the machine a bit disheveled but still fully intact.

Ves gaped at the sight. It was one thing to treat a shield’s armor, but to adjust the entire armor scheme of a mech in just half a day’s time boggled the mind. "This goes beyond the competence of a novice mech designer. Edwin’s at least a journeyman in the standards of the Bright Republic. Perhaps he’s even a master."

This was the first time he truly felt he was a frog in a well. The galaxy possessed limitless wonder and countless treasures. Though it irked him to

admit his current capabilities could not even touch Edwin’s shadow, he was confident the Mech Designer System could pull him up to the standards of the bigger and wider galaxy in time.

"I wonder how the System is doing. It must be feeling a little cramped and lonely in my comm unit."

Though Bentheim welcomed every visitor with a smile, Ves was under no illusion that much of his actions were monitored. Perhaps he might not warrant personal attention from an actual human, but he was sure there were dozens or hundreds of automated programs tracking him from cameras, microphones and countless other sensors. Only in the safety of his workshop where he meticulously controlled his own workspace did he truly feel safe in activating the System.

"Keeping my System locked in my comm unit is tempting fate. I should try and find a better solution to house the System once this ordeal is over."

In any case, Christopher reached his optimal range. With one arm, he activated his flamethrower, and with the other he fired his stubby heat projector. Waves of visible and invisible heat combined with each other to crash against Charlotte’s practically immobile frame. Much of the heat was absorbed by the shield, but due to its shoddy materials its forward facing layers already started to melt.

Christopher fired his weapons constantly from the same position, essentially battering the shield with heat. Charlotte kept up firing her sole cannon, only to slowly peel off the chest armor layer by layer at a snail’s pace. It truly impressed the entire crowd how well Christopher’s mech withstood the barrage.

Seeing that her shells got dispersed without effort, Charlotte grunted in frustration and tried to charge forward. Unfortunately, the tower shield

weighed down the Kirby too much, but even without the burden Christopher widened the distance with ease. It was perverse how Christopher's mech boasted armor almost as good as Charlotte's but with only a fraction of the weight.

The match wound down as the Kirby suffered a slow death. Charlotte's ballistic cannon finally malfunctioned due to the internal damage it accrued by all the heat cooking the mech from the inside. It signalled the end of her chances of ever killing her opponent's mech.

"And we have a winner! The crowning champions of the Fusion Cup are Christopher Yang and Edwin McKinney! Congratulations to Larkinson and Hoffmeister for putting up a valiant struggle. Please give it up for our hometown boy and girl."

Perhaps admitting that this competition's balance was grossly out of whack, the audience clapped appreciatively at Ves and Charlotte's efforts to fight to the very end.

Somehow, Ves felt most of his frustrations fade away. He got over the unfairness of competing against a prodigy who studied at an elite institution and using his advanced knowledge to his advantage.

"Second place is good enough, especially since I never intended to compete to the very top in the first place."

From all the attention placed on him, Ves felt optimistic he could find a customer in the crowd. While Edwin proved his overwhelming dominance in the local mech scene, he was too unapproachable. Everyone could guess he was meant for greater things. As someone who never left the Republic in his entire lifetime, Ves put up a respectable fight, overcoming two opponents with luck and skill. Well, mostly skill. You didn't get to reach the finals if you lacked the qualifications to work as a proper mech designer.

As the two teams met in the middle to shake each other’s hands, the organizers set up an impromptu podium nearby. They waited for the announcer to finish his spiel so that they could accept their awards.

"So, can you give me a hint on how you made Christopher’s mech so durable?"

The elite mech designer peered his eyes at Ves as if he was an unworthy bug.

"Okay, so you don’t want to talk, hehe." Ves awkwardly remarked, and discretely pulled back.

In contrast to his frosty conversation, his partner had an amiable conversation with Christopher. The young man wore a friendly smile as he explained the decisions he took in the battle, not that it required much effort on his part due to the overwhelming superiority of his mech.

The announcer first awarded the third place to the team that lost to Ves and Charlotte in the second round. Though Alexander and Michael’s mech had been crushed by the Kirby’s incredible weight, the operational capability of the mech remained intact, if a bit battered.

Their opponents for the third place had lost against Christopher’s devastating heat armament, which meant pretty much the entire mech was half-fried from the incredible heat. Repairing such damage when it spread out to the entire mech was a nightmare, and Ves didn’t begrudge the mech designer for losing. Michael Dumont did a decent job fixing up Alexander’s skirmisher to the point where it could wield a rifle.

"And now for the winners of the silver medallion. Please welcome our young talents Ves Larkinson and Charlotte Hoffmeister!"

A much louder applause met the two young graduates as they ascended the podium and accepted the silver medallion from the floating cases in front of them. With smiles plastered to their faces, they both waved cheerfully at the

crowd. Ves found it wasn’t bad being appreciated for once. The celebration truly affected his mood for the better.

"In addition to receiving a commemorative medal to the first ever Fusion Cup held in the Republic, our two winners will also receive a cash prize of 200,000 credits each, along with preferable treatment akin to veteran status by the Bright Republic."

The cash prize was a nice surprise, but it was a drop in the bucket considering the immense cost of business Ves had to deal with. It also clearly dwarfed the prize money of last year’s mech design competition. What surprised him was that the Republic actually handed out preferable treatment to the two of them. Even Charlotte perked up significantly when she heard the words. Normally, only the champions of Young Tigers Exhibition enjoyed preferable treatment.

"Damn, so I can strut around like a veteran now?" She dreamingly asked. Veterans and other notables enjoyed many small benefits as payment for their many years of service. "Hah, everyone of my classmates will have to give me the right of way. I can be among the first passengers to board a transit ship. I even get to pimp my mech if I enter the Mech Corps this year."

Ves cared little for such social courtesies. What he cared about more was that preferable treatment entitled him to looser regulations and more favorable treatment by the government in matters such as applying for permits or the right to manufacture live ammunition. Though Ves wasn’t about to run up to Cloudy Curtain’s planetary government right now, he kept the details in mind for when he might need to expand his operations in the future.

Naturally, Ves wasn’t actually a veteran, having contributed nothing to the Republic’s defense. While the special treatment might impress the hicks, the more distinguished people in the audience were hardly impressed.

"Any little bit helps." Ves muttered to himself as he already scanned the audience for a potential customer. "I don’t believe no one’s impressed by my work."

His real struggle started now. With only half a month left before the bank demanded their 5 million credit interest payment, Ves had to find a market for his mech. The Marc Antony wasn’t going to sell by itself.