

Tech System 571

Chapter 571 Let it Come

“For god’s sake, I just woke up!” Aron grumbled. He hadn’t even been awake for an hour before Gaia and Nova had dragged him back into the simulation for a briefing on the upcoming Carrington event.

{The situation is critical, Your Majesty. So there’s no time to waste, since we’ll need to respond to the situation as early as possible, depending on your approval,} Gaia said. She knew that Aron was still feeling lethargic after coming out of his induced coma, especially since he was still dedicating a portion of his mind to sorting the new knowledge that had been downloaded into him.

“What is it with shit always happening when I’m out of commission? What kind of bullshit is that?” Aron continued grumbling as Nova massaged his headache away. Still, his briefing had been thorough and included the options presented to him by the people in the earlier meeting.

{It’s the opposite, sir. Things are always happening, but while you’re ‘in commission’, they immediately get dealt with. It’s only when you’re unavailable that things pile up awaiting your decisions,} Nova coaxed. She increased the strength of her massage, the medical pod connecting her virtual actions to real world effects.

Aron groaned in relief as his headache rapidly faded, then took a moment to think about what he had just heard about the ongoing situation.

“I agree with Nyx. Let the coronal mass hit. Gaia, develop an action plan with Minister Al-Mutairi and bring it to me for approval in... let’s say one hour real time.” An hour in reality was almost four days in the simulation, which would be plenty of time for them to develop an action plan. “We’ll implement it as soon as it’s finalized.”

{Yes, Your Majesty.} Gaia’s virtual figure flickered as she sent a message to Youssef. She was just about to move to the next topic when Aron spoke again.

“What about Mars? Will it be impacted as well?” Mars was currently on its nearest approach to Earth, so it would definitely be in the affected zone when the CME happened in a week. There were still millions of kilometers between them—roughly 58 million, give or take—but in astronomical terms, that was virtually like the distance between one apartment and the apartment next door.

{I was about to mention that,} Gaia said. {The answer is yes, but not really. Even though the upcoming CME is predicted to be the worst we’ve ever faced, Mars should be plenty far enough away that the disruption there will be minimal. The mass isn’t thrown out in a concentrated shape, but more like a very broad cone, almost fan-shaped. So while it’ll still be concentrated enough when it reaches Earth, by the time it hits Mars, it’ll be too dispersed to cause much of an issue there.

{Even though Mars lacks a molten core, it contains an immense amount of iron in its crust. That iron generates localized magnetic fields around each of the tectonic plates that are up to ten times as

strong as Earth's magnetic field. So it'll effectively block what little solar mass actually hits them, at least for the most part. And any negative effects, like the resulting EMP, will easily be countered by the hardened nature of ARES equipment. After all, the Mars base is an important military base, so it's designed to take quite a pounding without crumbling.}

As she spoke, Gaia threw Aron a file with the simulated effects of the upcoming Carrington event, both on Earth as well as Mars.

Aron sighed in relief as he looked at the simulated CME and read the data on its effects. "That's a few trillion END I won't have to explain spending in our military budget."

The entirety of Mars was being built up to create a solid fortress that could weather any number of storms. The surface installations were almost all weapons, and the reinforced underground tunnel network would allow for rapid transportation of men and materiel anywhere within a very short amount of time. And Mars' solid core was perfect for housing the immense reactors, capacitor banks, and even the living areas for the millions of ARES personnel that would soon be stationed on the red planet.

The budget, even considering that the construction and materials involved were free, was still considerable and ran into the trillions of END. Most of that cost was in certain rare earth and other minerals procured through the empire's burgeoning asteroid mining industry, as Mars still lacked a lot of the materials needed for the massive construction processes. Even with constructor swarms, GEMbots, and atomic printers, they couldn't create something out of nothing.

And even though Aron was personally shouldering 70% of the budget, if the Mars base was delayed by the impact of the upcoming CME, it would still have cast a shadow over the empire. After all, 30% of the cost was still multiple trillions of END, which was a lot of money to lose in a single incident.

But that was only by the Terran Empire's current standards. Once the diaspora and colonization efforts began in earnest, trillions would be a much smaller amount by comparison.

Aron swiped the file closed and paused for a moment, updating his plans. "Looks like I'll need to visit Mars sooner than I'd originally planned," he said. He would need to personally erect a planetary defense shield there regardless, but the upcoming Carrington event had lit a fire underneath him. Just because the solar system had survived billions of years, if not trillions, it didn't guarantee that something would happen the very next day that would render the entire area uninhabitable.

{I'll add it to your upcoming itinerary,} Nova said. She was responsible for all of Aron's movements, making her perhaps the most powerful secretary in the history of Earth.

As she spoke, everyone who would be going with him in his entourage, all the way from his emperor's aegis down to his personal chef, received notice of the upcoming trip and immediately began making preparations.

Chapter 572 Monsters, Inc.

Nova having returned to her previous calm demeanor remained standing behind Aron observing what he was typing. Currently Aron was writing the instruction set of the runic CPU's he was soon to create.

The silence in the room continued for a few hours before he was done evidenced by him reclining back and stretching himself just like during his first time.

“Okay let’s look for a programming language befitting of the CPU” he said as he opened the system shop and without wasting too much time he filtered through all of the programming languages leaving behind rune specific language before he bought the best doing the same as when he had bought Prometheus++ without even wasting a moment as it only costed a few millions and not the billions price tag he was spending when he was buying civilization defining technologies as he wanted to always use the best and most optimised programming language to remove the need for later updates when a better language is required which was going to be costly and time consuming on the empires side.

Due to the size of the knowledge and the advance of his brain he didn’t have to event enter coma as he assimilated with the language for a short moment before it was done with him feeling nothing but a mild headache that came and went for a short moment.

“Now let’s create the CPU shall we” he said as he brushed his hands with each other before they moved to one of the machines in the lab, it was the atomic printers.

He took control of the machine as he started the creation process, he started by creating a three-atom thick but large circular wafer using the most mana conductive material available in the solar system.

The moment the creation of the wafer was done it was immediately bombarded with concentrated amount of mana with the material being created with a structure made with the specific mission of trapping mana from the inside with the structure of atoms acting as one way gate to make sure it gains the mana prefix in a short period of time and not lose it.

It only took half an hour before the material gained the prefix which Aron immediately restarted the printing process this time for it to close the so-called atomic lead sealing the mana at the centre of the material.

“Okay start the etching process.” The moment he said that Nova took over and started the printers runic imprinting function to start the rune etching process.

Twenty minutes is all it took for the etching process to take place in etching billions upon billions of runic words that acts as the runic switches, something that usually took hundreds of runic scribes to accomplish in months, yet it was impossible for them to create them in such size and at such high quality.

Nova immediately started the process of cutting the wafer into different parts for different purposes before she immediately created the complete chips together with ram and memory all from part of the same wafer but with each of them being uploaded the different instruction sets for their expected tasks that Aron had spent hours creating.

With the creation of them now completed she just materialised the rest of the needed components and there it was, humanity’s fast magical or either runic computer siting on the table silently waiting for Aron to test it.

Aron with excitement still on his face moved at alight speed to the seat as he couldn't wait any longer to test the computer if it has reached the standard that was in the knowledge he bought.

He immediately powered it on allowing the computer to take in the electricity that was coming from the wall going through the computers power brick that immediately converted it to mana before it was sent to all the components of the computer and immediately completing the powering up process.

The operating system that was embedded together with the instruction set came to life and the screen came to life showing the logo of GAIA technologies something that Aron had never forgotten to put.

"Let's see how it function" he said as he selected one of the many apps that Nova had already converted to runic language making them capable of running on this computer to test the speed .

After fiddling with the app paired together with him having already gotten used to the speed of the quantum computer he wasn't really impressed by speed since it was about the same albeit a bit faster on single threaded operations.

"But can it run doom....."

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A week later.

Aron could be seen sitting on the same table this time there was another computer on the other side with the exterior looking like wood indicating that it was either a wood cover or it was the biological computer with those who guessed the second being right.

He had spent more than a week in his private simulation time creating and testing the different iterations of the two technologies he had bought and currently he was quite satisfied with what he had accomplished.

"When it comes to RAM QRAM is the fastest as for CPU for single threaded operations the runic computer is the fastest and multithreaded operation nothing beats quantum computing and when it comes to high density storage biological computer is unbeaten" he said having come to the conclusion after spending the entire week testing all of the new computers to the limit.

"Instruct the lab city to start the integration of all the technologies into creating a single computing system that encompasses all of the benefit of these tech without the weaknesses, they will be the flagship computers for imperial operations since it is difficult to hack three different systems than one plus it in the possibility that we are met with a tier2 civilization that are advance in one of these computing technologies we will be able to at least put a fight against them with the other two" Aron ordered deciding the direction of research the empire was going to be taking regarding this technological aspect.

Something that might save the empire in the future.

“As for me I should start creating the other two pieces of my puzzle.” He said as he returned to his main computer and started coding this time too using the runic language since he had already finished the quantum side of creation he was planning on finishing the creatin of the runic and biological side of his puzzle in the remaining time as he waited for the advancements of the nanomachines side of things for all of the three technologies he bought.

Chapter 573 Sharpening the Axe

Aron had advantages that made all of the problems the early pioneers of runic computing encountered complete nonissues. He was the perfect, or perhaps worst, person to have ever gotten their hands on that technology; it only depended on whether you were friends or foes in his eyes.

For the mana requirements, he had an adapter that would convert electricity into mana, even if the ratio was steep. For material needs, he had atomic printers. And for the issues the original creators had run into regarding mass production of runic computers, he’d upgraded his atomic printers with the capability of printing runic constructs. All he would have to do is gather up the pre-printed materials and channel his mana into them for a while.

And even that would cease to be a problem as soon as he worked out a way of automating the process of imprinting intent into runic constructs that were created by his atomic printers.

Aron laughed out loud after he finished explaining his plans. He was quite excited about finally having bought something from his system that wasn’t an immediate necessity in terms of his offensive or defensive capabilities. It was quite refreshing, he thought, that he was finally able to buy something he could afford to play with before putting it into immediate use to counter some crisis or other.

From the very beginning of his explanation, Nova had been sending his ideas to the researchers in Lab City. Thanks to all of them being mere digital copies of living people, they didn’t require any extra time to download information into them, so they were able to immediately get started on the projects Aron had outlined in his rambling.

It would spark yet another round of innovation from the enthusiastic researchers, who loved nothing more than getting their hands on new things and using them to innovate. No matter how ridiculous the idea was, it would be tested and researched until it became obvious that it would only ever be viable as an inspiration, rather than reality.

Over the perceived centuries of Lab City’s existence, the researchers had found many “inspirations” like that. And every time they found another one, they would jokingly refer to the “round file”, which was code for a trash can. In a similar vein, when they were at their wits end with an active project, those same researchers would go “dumpster diving in the round file” looking for inspiration to jolt them out of whatever rut their thought processes had ended up in.

“Let’s continue with Project Protagonist,” Aron said after recovering from his manic laughter. He stretched his fingers, as he was about to embark upon a second round of creation, this time ending in the creation of the world’s first three-way hybrid

computer. After all, sharpening an axe had never delayed the felling of trees. At least according to Sun Tzu, anyway.

Nova returned to her position standing slightly behind and to the left of Aron, paying close attention to what he was typing. At the moment, he was writing the instruction sets of the runic part of the computer—the motherboard, RAM, graphics card, and a suite of software designed to take advantage of runic speed. The CPU would still be a quantum computer, as would the graphics processing unit in the graphics card, and the hard drives would be purely biological in nature.

Next, he would need to create an entirely new hybrid programming language that would allow all of his hardware to properly work together. But first, he would build one of each computer to give him a better idea of what he would require in terms of programming languages and hardware.

The hardware itself was rather intuitive. Quantum computers had immense flexibility and an absolute advantage in terms of running multiple processes on a single CPU. Since each qubit was like a gate that could be open, shut, or simultaneously open and shut, it allowed a relatively small number of qubits to take the place of traditional silicon CPU cores.

That flexibility was an advantage over runic computers, which were capable of insanely high speeds, but limited flexibility. Each line of runic code was capable of performing a single task, but that single task would be completed nearly instantly thanks to a completely dedicated pathway for each individual task. Plus, all of that runic code, no matter how finely it was etched, took up space and limited the amount of data that could be stored in a certain area.

The limited storage space of runic computers wasn't an issue with biological computers. Take the human genome, for example; when stretched end to end, a strand of human DNA would measure a little over a meter in length. It contains about three billion base pairs, and when acting as binary bits, would allow for around 750 megabytes of storage. When wrapped around a spindle, however, it only took up about ten nanometers of space. But what it gained in compressed storage space, it lost in flexibility and definitely lost in speed. Information transmission via messenger RNA took, at a minimum, seven minutes.

So, intuitively speaking, Aron already had an idea of the hardware architecture of his planned three-way hybrid computer that would take advantage of the flexibility of quantum computers, the speed of runic computers, and the storage capacity of biological computers. The problem he was currently solving was how to get all three branches of computer technology to interface such that it would have the advantages of all three types of computers, while removing, or at least greatly mitigating, the weaknesses.

And to do that, he would do two things: create a new coding language that was capable of interfacing with all three types of hardware, and modify the runic computer components he planned on using in the final product. But in order to do that, he first had to build a runic computer and a biological computer so that he could deepen his familiarity with the technologies and choose which operating systems to make part of his final coding language out of.

Taking advantage of the universal simulation, he could create each component with the wave of a hand, should he so choose. But that would be counterproductive to his goals; he wanted to deepen his familiarity with the system-purchased knowledge, not simply use it as is.

Aron watched as the atomic printer in his lab whirled to life, printing the base materials he would require to build his runic computer. Block after block of pure minerals slid onto a waiting tray, beneath which he had already carved a mana condensing runic construct linked to a fusion reactor the size of a golden retriever.

“Nova, increase the time dilation around the condenser as high as it can go,” he ordered.

Nova nodded and waved her hand; the condenser construct was immediately increased to a time dilation factor of 1100:1. In reality, they could do the same thing by increasing the size and output of the runic construct and fusion reactor, but that wouldn’t fit in Aron’s personal lab, virtual or not.

“While that’s working, let’s see what the system has for programming languages that’re compatible with runic and biological computers,” he muttered to himself, bringing up his system shop window and giving Nova access to his senses with a blink.

“Hmm... you,” he began, “and... you.” He moved a runic programming language and a biological programming language into the system shop’s cart and clicked purchase.

Dozens of millions of SP were deducted from his remaining amount. And due to the size of the languages in question and his enhanced brain structure, he didn’t have to be put into a coma before downloading them. All he felt as the download completed was a brief stab of pain between his eyebrows, which rapidly faded and left nothing but the new knowledge behind.

It may have seemed like he had made random choices, but he had actually judged them rather thoroughly before making his decision. His personal implants, as the emperor of all humanity, were all on the absolute bleeding edge of the best technology the empire had, courtesy of Nova and his frequent stays in the extended-stay edition of the VR medical pods. So his current thinking speed and processing abilities were roughly a thousand times that of non-enhanced people, which was evident in the time dilation he could easily handle when necessary.

The two languages he had chosen weren’t necessarily the best, nor were they the most expensive, but they were carefully selected with flexibility and open-endedness in mind. It would make his upcoming job of fusing them with Prometheus++ much easier, as well as postpone the need for later updates until he was ready to purchase the tier 2 versions of all of his tech.

{The materials should be ready now, sir,} Nova announced, having kept track of the manaforging process while Aron was busy shopping and downloading new knowledges.

“Excellent!” He rubbed his hands together like a shady merchant in an underground bazaar. “Let’s get building, shall we?”

He picked up a cylindrical mana alloy made of vanadium, manganese, gold, platinum, silicon, and beryllium. It practically glowed to the naked eye and was nearly blinding in his mana sense. Placing it back into the atomic printer, he shaved slices off of it that were approximately three nanometers thick. Any thinner and he wouldn’t be able to carve runes on it, and if it was any thicker, it would cause transmission issues, throttling, and bottlenecks. Not to mention the size and form factor.

Once he had hundreds of identical wafers, he began swiping his fingertip back and forth across them, leaving trails of glowing golden runic script behind his steady movement. The material he was working with, which he had dubbed mana steel, was very brittle and fragile, though it was highly conductive when considering both mana and electricity, so he was being very careful as he carved the runic script into the wafers.

Twenty hours later, the carving was complete and line after line of brilliant golden runic symbols had been carved on the hundreds of wafers. In total, there were trillions of runic words that acted as switches, replacing the ones and zeros of humanity's binary number system. And Aron had completed the carving process in less than a day; if the originators of the technology were to see that, they would be absolutely flabbergasted. It took hundreds of their runic scribes months to accomplish a task that a single human had just done virtually with a wave of his hand!

Aron stacked the wafers atop each other in a set order, then fused them together with a flood of mana. His first runic computer's processor was complete.

He repeated the task for each of the remaining critical computer components, then assembled it and screwed it into a case that Nova had manifested for him. The case didn't need to be hand-crafted; a simple steel box the size of a Playstation 5 would do just fine.

Now that the hardware was complete, he sat at his desk and manifested a keyboard that would work with the runic coding language he had selected and began coding an operating system for the newly assembled hardware. Five hours passed and his fingers were still dancing over the keys, practically leaving afterimages as he transferred the code from his head to his keyboard. The eight hour mark came and went and he was still singlemindedly focused on his task.

It wasn't until twelve hours after he had started the coding process that he finally hit enter and his raw code was sent to a compiler.

"Finally!" he cheered, leaning back in his chair and throwing his arms straight up for a deeply satisfying stretch. "Now we just have to wait for it to compile and I can benchmark the new hardware."

{Congratulations, sir,} Nova said.

"Thank you. Now it's time to build the biological computer since I've got some time while the compiler runs on the runic OS. That one will be much easier than the runic computer. All I need to do is mix up a growth medium and seed it with blank nucleosomes, then wait for them to propagate and grow."

Anticipating Aron's request, Nova waved her hand and manifested a completed biological computer. Due to the relative ease of manufacture, neither of the two people in the lab found it necessary to go through the step by step process of growing the "hardware" itself.

Another twelve-hour coding marathon later, Aron flexed his fingers and shook his hands before picking up a sterile syringe containing a virus that had been engineered to deliver his new operating system to the nucleosomes floating in his biocomp vat, suspended in their nutrient solution. He inserted the syringe into a sterile port and the "programming" of the computer began.

Chapter 575 But Can it Run Doom?

Aron, still giddy with excitement, ran to his seat at lightning speed. He couldn't wait any longer to test the computer and see if it met the standards outlined in the knowledge he had purchased from the system. He plugged it in and powered it on, allowing the computer to draw electricity from the wall through its power brick, which converted it to mana to power the components, thus completing the bootup processes.

The operating system he had written into it came to life, lighting up the screen with the GAIA Technologies logo, something he was careful to never leave out of his innovations.

“Let's see how it holds up,” he said as he pulled up the benchmarking program he had written alongside the runic OS.

But after fiddling with the program for a while, he was left less than impressed by the runic computer's speed of operations. It was fine for single operations, but didn't even include the ability to hyperthread to at least emulate the ability to multitask. Perhaps starting with quantum computers had spoiled him somewhat.

“But can it run doom...” he muttered to himself as he pulled up the venerable computer game.

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A week later.

Aron was still sitting at his desk in his virtual lab, this time with a shining stainless steel cylinder in front of him. It stood six inches in diameter and another six inches tall, and had a clear window in it. A murky, light yellowish liquid with streams of bubbles was visible through the window, which stretched from the base of the cylinder to near the top. Anyone who guessed that the cylinder was a biological computer would have been right.

Aron had spent the past week of Earth time in his virtual lab, creating and testing iterations of the two technologies he'd bought from the system. Currently, he was rather satisfied with what he had already accomplished, though he knew there was much further to go.

“When it comes to RAM, qRAM is the fastest. As for single-threaded operations, runic processing is hands down superior to the others. But for multi-threaded operations, quantum processors take the cake. And I doubt I'll find a better high-density storage media than a biological computer's DNA storage,” he dictated to Nova, having finally come to his conclusion after his experiments with the new computing technologies.

“Nova, pass what I've got here on to the gold labs in Lab City. Tell them to begin integrating it all into a single computing system that takes advantage of the strengths of the three technologies while mitigating their weaknesses as much as possible. I don't expect much out of tier 1 tech, but the new incorporated computer systems will be the flagship computers for the empire moving forward.

“Not only will integrating everything into a unique whole make it nearly impossible to hack, but I estimate that the original product will be right up at the tier 2 line, if not even higher. This project might be our first tier 2 technology, and we’ll have come up with it ourselves. But even if it isn’t, the three paths seem to be the main ones in use throughout the universe, so if we come into contact with an enemy that’s chosen one of the three paths, we’ll be able to use the other two to put up a fight against them.” Aron’s choice could perhaps save the empire from subjugation in the future.

[Right away, sir,] Nova replied, her figure flickering as she passed on his marching orders to the researchers.

“Next item on the agenda: creating a bridge that I can use to integrate the three programming languages.”

Aron returned to his work, this time focusing on creating a program that would allow three wholly unique languages to flawlessly blend together into a singular new language. It would be needed as soon as the researchers in Lab City came up with a way to integrate the hardware into a single computer.

Without a unified programming language that was capable of porting instructions from any of the three languages into any other language, the new hardware would be useless. After all, no matter how shiny and excellent a computer’s hardware was, it would still be useless without programs that ran on it.

But if that was his only reason, he would have left it to the researchers in Lab City to create alongside the new computer system. In fact, it would even be more efficient to do it that way. However, the programming language was important for another reason: he needed it to be able to communicate with all three systems in order for Project Protagonist to function.

With his understanding of the languages, it took him virtually no time at all before he had written a program that blended them together and created an entirely new language. The new language wasn’t quite as streamlined as any of the source languages—Aron alone couldn’t possibly be compared to a collection of generations of the greatest minds of alien civilizations—but it was an astounding act of creation nonetheless.

During testing, it was shown to only require an average of a femtosecond longer to operate a program when compared with running that same program on dedicated hardware with matching programming languages. And a femtosecond of lag time was an absolutely outstanding result, especially given that he was still working on version 0.1 of the new language.

“Now to finish the Project Protagonist code.”

Upon finishing his new programming language, he immediately moved to create the remaining two segments of code for his plan.

Waving his hand, he manifested a runic computer and began writing code for the runic integration in his project. Twelve hours later, he fed it into his compiler and switched to a biological computer and biological code. And fourteen hours after that, he began compiling that segment of code as well.

And with that, he stood and stretched, letting out a contented groan as he was no longer used to remaining physically inactive for long periods of time. But now all that was left was to recompile the three segments of code and run it through the converter he had created, turning it into a program capable of adapting any medium or biological body it found itself in.

“It should be about time for the show to start, right, Nova?” he asked, waving his hand and teleporting to just a few hundred kilometers away from the simulated Sun, where he would watch as the predicted Carrington event began.

[Just a few hours now,] Nova answered.

“Is that Earth time or simulation time?”

[Simulation time, sir. You have impeccable timing.]

Aron nodded and turned his attention to the raging surface of the Sun.

Chapter 576 Ignorance is Bliss

Meanwhile, around the Sun.

The detectors launched by the imperial space agency that had first discovered the signs of the impending disaster finally let out an alert as the sunspot stretched to the verge of breaking. Shortly after, with a flash of light, all of the detectors vanished as the eruption began.

A mass of nearly liquid hydrogen and helium the size of Earth was ejected from the sun in a 120 degree arc. Its velocity was such that it would reach Earth in just over twelve hours, and Mars about two and a half hours after that.

And all of it was being broadcast live to everyone in the solar system, courtesy of the imperial space agency.

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Some people believed that, if something beyond their control was about to happen to them, it would be better if they were caught off guard by it. That way they wouldn't spend the time leading up to the event in anxiety and panic. “Ignorance is bliss,” they claimed, and in a sense it was the absolute truth, because the moment one was notified of a crisis they could do nothing about, the panic would set in. That was why, in the face of crises in the past like pandemics, people would make some truly weird decisions... like buying all of the toilet paper in stores everywhere.

And now, everyone in the solar system was experiencing that sense of deep, visceral, hopeless terror while they awaited their devastation at the hands of the Sun and the knowledge that there was nothing they could do to stop what was coming.

The imperial space agency, in conjunction with the imperial press corps, was even doing everything they could to ensure that everyone could see what they thought was their doom approaching. There was a timer in the corner counting down to when the CME would arrive at Earth and end everything they knew, and the past eleven-and-a-half hours had seen people glued to their screens with a sense of morbid curiosity as expert after expert was paraded past their eyes, all of them virtually shoveling doom and gloom into viewers.

Some were questioning what the empire wished to achieve with the morbid spectacle. Was it just Nero playing the fiddle as Rome burned? Or was there some deeper meaning to it? Even people who were the proudest of their skepticism when faced with conspiracy theories were finding it difficult to believe that there wasn't some conspiracy behind the news coverage. Especially since the empire was going out of their way to sow anxiety, when previous governments would have put their best effort toward hiding the news as long as possible, then make herculean efforts toward keeping the people as calm as possible.

Most of the conspiracy theories died stillborn, though, as people were too busy discussing the kind of damage they could expect rather than the whys and wherefores of the empire's actions.

Thus, if the empire's aim was to incite fear and panic, it was becoming ever more obvious that their goal was being achieved... at least among a specific group of people.

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A man in his thirties was watching the broadcast on a small TV that was suspended over a hospital bed. The TV was muted, so he had no idea what they were saying; he hadn't even bothered turning on the closed captioning. He was dressed in a sterile suit that covered him from neck to ankle, his shoes were covered in sterile booties, and on his head was a sterile cap and a face shield. His face was half covered by an n95 surgical mask and surgical gloves covered his hands. The only sounds in the room were the soft hissing and beeping of monitoring equipment.

On the bed was a woman with dozens of wires and tubes attached to her body. A PICC line connected her to a dialysis machine, a nasogastric tube was connected to a hanging bag of liquid food, and a dozen different wires attached to her chest connected her to the 12-lead EKG machine. Another wire ended on a probe that connected her fingertip to another machine, and a sphygmomanometer cuff was connected to the same machine as the fingertip probe. She had been intubated and was breathing via ventilator, and on her head was a tight-fitting cap that gathered data and displayed it on the screen of an electroencephalograph machine. Running from under her hospital gown was yet another tube, through which her waste flowed.

If one were to pick up the medical chart hung on the foot of her bed, they would see a bright orange sticker that read "DNR: DO NOT RESUSCITATE" and the diagnosis of end-stage multiple organ failure. Her prognosis was grim, to say the least, and she wasn't expected to survive the oncoming crisis.

Suddenly, the wail of a baby overpowered the sound of machinery and the man looked at the incubator next to the hospital bed, within which lay a prematurely delivered baby swaddled in a light blue blanket and wearing a matching beanie on his head.

The man crooned a soft melody and rocked the baby from side to side by pushing and pulling the incubator. "Don't worry little guy... mommy will be just fine. Shhh, shhh, shhh..." he continued, trying to soothe the baby that was barely bigger than his two palms combined.

That continued for a little over ten minutes before the baby ran out of energy and fell asleep again. The man drooped in his chair, obviously exhausted, and lay his head on the side of the woman's bed and gazed at her hand. He prayed for it to move, and... it remained still, just like the last thousand times he had prayed for her to show a sign of survival, some evidence that she was fighting for her life and hadn't given up yet.

His eyes moistened, then tears dripped on the blanket covering the woman and his shoulders shook in silent sobs. He wanted to wail at the top of his lungs and shout curses to the sky, but every time he was tempted to give in to that urge, he couldn't help but remember the premie that was currently struggling to survive, or the woman on the bed who was doing the same... he hoped.

Chapter 577 All According to Keikaku

"Babe," the man said with a choked sob. "I know you'd rather die than become an impy. I know what happened to your family in the war... but I can't do this by myself. I need you." He clenched her blanket in his fists, then used it to wipe his tears. On some level, he knew it could cause more problems, but a man drowning in an ocean of tears wouldn't fear the rain.

"It isn't just me, either. Our son, our son!" He sniffled back the snot that was about to drip out of his nose. "I can't do it alone! You need to live, not just for me, but for our son. He needs a mother, not a stepmother or a nanny. And you promised me forever!

"What happened, happened, but you can't punish our son for the mistakes of others. Your pride is punishing us, and for what? What did we ever do? Is it fair to punish us just so you can keep your pride? Is it fair to make us feel the pain of losing you? The people you're angry at don't even know who you are! You're just a number to them... but you're everything to us!"

He broke down in silent sobs again, doing his best to choke them back to avoid disturbing the premie in the room.

After a few minutes of silent sobbing and sniffing, he continued, "Why did you have to create a beautiful life with me if your pride would just force you to punish me and your son? He never asked for any of this. He didn't ask to be brought into this world only for you to leave it out of spite and your misplaced pride!"

There was another long pause, as if the man was struggling to come up with a way to say the words he needed to speak. Minutes passed like that before he turned to his son. He gazed at the boy that had been born ten weeks too early when his wife's health made it too risky to keep the pregnancy, but too late to terminate it without making everything worse. His eyes were filled with love and pity as he gazed at the too-small infant in the incubator.

A sense of resolve came over him then, and his shuddering stopped as he turned to his dying wife. "I've done everything I can to honor your wishes, my love." He caressed her forehead with a gloved hand, grasping one of hers with his other hand. "But the Sun has made its decision. If I don't do anything now, you'll die... and I can't let that happen.

"So for once, I'm going to be selfish. For me and for our son."

After he said that, he took one last long look at his wife and son, then stood and walked out of the room. He passed through the airlock and took off his sterile outer clothing, revealing the t-shirt and jeans he was wearing under them. Then he opened the locker next to the airlock door, took out his phone, and, as if he had granted himself permission, dialed 000.

The line only rang once before it was picked up. “Imperial immigration agency, how may I help you?” the voice on the other end asked.

With trembling hands, the phone to his ear and took a deep breath. “My name is Sunday Khan, and I officially request imperial citizenship for me and my family.”

The phone call continued for a few minutes as Mr. Khan provided all the details the imperial immigration agency required.

“Mr. Khan, I’ve dispatched a recovery team for your family and am in the process of notifying the hospital to expect their arrival. Please stand by for our team, the expected arrival time is in... approximately eighteen minutes. Do you have any other questions, concerns, or needs?” the immigration agent asked.

“No, as long as my family can live a healthy life, I’ll be satisfied, thank you.”

“Excellent. We look forward to having you as imperial citizens,” the agent said, then fell silent as it was only his third day on the job and he didn’t quite know what to say in this particular situation. “Well, uhh... goodbye then, and good luck!”

With that, the agent ended the call.

Sunday closed his eyes and clasped his phone between his hands. He raised it to his forehead, as if in prayer, and said, “Whatever happens when you wake up, whatever you want, I’ll accept. Even if you want to divorce me, I’ll accept it. At least you’ll be alive to hate me.” He closed his eyes, feeling like a huge weight had been lifted from his shoulders.

A few minutes later and a whole lot lighter, he opened his eyes and looked at the television screen in the waiting room that was still tuned to the coverage of the incoming disaster. The timer on the bottom corner of the screen still showed six hours to the end. “So this is what they were after...” he muttered to himself, then slumped in the chair he was sitting in and laughed at his own powerlessness.

Similar scenes were playing out all over the world, or at least in the non-imperial areas of the world, anyway. The more fear people felt, the more firm their decisions to join the empire became. Some even threatened to abandon their more stubborn relatives who were steadfast in not joining the empire under any circumstances, even the impending death and destruction they were sure to face.

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Imperial palace, three hours before the event.

“How’s the situation coming?” Minister Rogers asked.

[As expected, Minister Rogers. Millions of noncitizens have already requested citizenship, and millions more are rushing to do so. We’ve had to activate the VI system to process all of them, and we expect that as we come closer to the shockwave, the numbers will grow exponentially. Other than neo-luddites and people with firm religious beliefs, we expect that the majority of pre-imperial remnants will request citizenship before the CME impacts Earth.

[The only ones who'll still refuse will be hardliners, and we'll require alternative methods of dealing with them. I have some ideas and will put it on the agenda for the next council meeting. But for now, things are progressing according to plan,] Gaia reported.

“Excellent. For a unified Earth,” Jeremy said, wishing he wore glasses so he could push them up the bridge of his nose like his favorite anime schemers.

Time inexorably ticked on, and soon the countdown timer on every screen in the world reached zero.

There was no Earth-shattering kaboom, no mushroom cloud of devastation, no blast radius, nothing. In fact, it was rather beautiful as an aurora spread from Earth's magnetic poles that could be seen as far as the equator. On the dark side of the planet, night became day, and on the day side of the planet, the day became just a little bit more gorgeous as the aurora spread to the backdrop of transformers fizzling out and electrical appliances that hadn't been unplugged shorting.

Almost every electrical appliance outside the empire fizzled out into uselessness as Earth suffered a planetwide EMP.

Chapter 578 Coming Out Swinging

The fallout from the EMP was relatively small, considering that it only really affected a minority of the population. It also helped that the empire hadn't been caught off guard and had had time to prepare. Thus, the damage was relatively minor, only in the billions of END. And most of that was the damage to old “legacy” versions of their tech, as anything that had been released over the past six or eight months had been well shielded and hardened to resist EMP attacks. Even civilian tech was the same.

As for the electrical grid, that had been shielded from the very beginning. Thus, nothing connected to it faced any issues due to surges in the grid itself. Still, as part precaution and part political theater, the imperial press agency had reminded imperial citizens to ensure that any electrical appliance was unplugged at the time the CME hit, and for at least two hours afterward in case of any residual effects.

However, the same couldn't be said for things that weren't reliant on the grid and couldn't simply be unplugged. Things like airplanes, cars, other vehicles, HAM radios, and so forth were still affected. Most of those were major purchases or passion projects, so they hadn't been replaced with newer hardware, as in the case of airplanes and vehicles, or they hadn't been made to the exacting standards of imperial hardware, such as in the case of hobby electronics or passion projects like RC vehicles and HAM radios.

That was where the majority of losses came from on the empire's side, as most of the citizens' hardware had already been upgraded to the newer, more protected versions.

But the same couldn't be said for noncitizens. Other than religious luddites like the Amish, Mennonites, and some Hutterites, or the small tribes that hadn't even come into contact with modern technology like the Sentinelese, the rest of the world was severely impacted. Power grids were overloaded, generators failed—and in some cases, exploded—hospital life support turned into impromptu electroshock therapy devices, and even the so-called “hardened” military technology,

like toughbooks, turned out to be not so impervious to EMPs as non-imperial scientists and researchers had claimed during the development and bidding processes.

But as hundreds of millions of people had finally caved and joined the empire, leaving only a little over a hundred million or so noncitizens, the effective damage was limited. Most of it, ironically, was environmental damage caused by shorts and surges. Minister Al-Mutairi had reached out through the imperial diplomatic corps with an offer to aid in extinguishing the roaring wildfires and helping with the recovery efforts, but other than the Russians, who were still led by Vladimir, most of the remnants declined the offer. Some rather more politely than others.

Still, the remnants had been chokeslammed back to before the industrial revolution and a lot of effort would be required to lift them back to what passed for modernity to them. And that was something that Aron wasn't willing to do.

To prevent accidents and limit the loss of life to the greatest degree, the empire had issued a shelter in place order for all imperial citizens beginning three hours before the CME hit Earth. They also, through the Ministry of the Exterior, asked the remnants to do the same. And to limit the damage to the economy, the empire also promised to allow citizens to trade in any damaged goods for identical items, or for partial credit toward more advanced versions of the same things.

The shelter in place order was quite effective for the empire. They suffered almost no casualties at all; only a few hundred people had ignored the order and most of them even survived. But the same couldn't be said for the remnants, who died in the millions when their pacemakers shorted in their chests or their hospital life support electrocuted them to death. And, at least outside of mixed cities where impies and remnants lived side by side, the material losses were almost total.

Basically, there were two outcomes of the Carrington event. Even though it had affected the entire planet, the humans living there were either completely unscathed or completely obliterated. There was no in between.

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Two weeks later.

[Your Majesty, the crime rate has been on the rise over the past week. Especially remnant-on-citizen crime,] Gaia reported during Aron's weekly update meeting with her, where she gave him a high-level briefing on events around the world.

"I have a wedding in a month," he groaned. "Can't the police handle crimes by now?" Though he said that, he knew that if it was important enough to be included in his weekly briefing, it wouldn't be an easy problem to solve.

[We've caught most of them, yes. But it's difficult, as the remnants are all anti-empire hardliners and are more than willing to shelter the criminals and help them escape. Naturally, we catch the ones who do that, but... solving the problem at its root is proving much more difficult.

[The remnants were virtually crippled by the recent Carrington event. They're suffering hardships they weren't prepared to deal with. Food shortages are practically reaching the level of famines, lack of transportation, lack of waste management, electricity, running water... they were basically catapulted back to the early twentieth century in terms of technology and are having severe difficulties adjusting to the new normal.

[And when you consider that most remnants can see our citizens living in virtual luxury compared to them, it becomes understandable that they're upset. No matter how many of them we arrest, more just crop up and act out against us, whether because they're jealous or because they're forced to by starvation or disease.] Gaia threw the data file compiled by Nyx over to Aron.

He quickly scanned the file and asked, "What's the damage estimate so far?"

[Mostly property damage, with a few injuries. The injuries are easily fixed, but the property damage is... less so. And it's increasing as articles are published in newspapers, social media, and broadcast media. As you know, with tensions rising, it's like we've been put in a pressure cooker with the valve stuck. Adding in the wild card that is blessings....]

"And all it'll take is a single incident to trigger a pseudo-race war," Aron finished for Gaia.

"What are we doing about it?" he asked.

[The imperial police agency has increased the number of patrol ships, but it's a bandaid patch at best. Police are reactive by their very nature, and they can only catch the criminals either in, or after the act. Prevention is impossible for them, but it's the only cure.]

"I hope the situation resolves itself," Aron sighed and rubbed his temples. He could feel a headache coming on. "God help them if they do something I can't tolerate. If they push me that far...." He was far from as calm as he appeared on the surface. The damage report was already beginning to make him angry, but it was still manageable as no deaths had occurred... yet.

Although he had been as benevolent as he could since the founding of the empire, that didn't mean he was incapable of being ruthless. But people had short memories, and it was becoming obvious that they had already begun to forget what had happened during the Last War.

And though he hoped the police could deal with the rising crime rate, it didn't prevent Murphy from coming out swinging.

Chapter 579 Knock, Knock, Knockin' on Heaven's Door

As Murphy said, anything that can go wrong, will go wrong, and at the worst possible time. Just hours after Aron received his weekly briefing about the increasing crime rate, an event that would change his stance on the remnants began.

Former Somalia.

Sahro Hassan was sitting on a bench on the side of a street in Mogadishu, overlooking the ocean. The street itself was very clean, considering how much conflict the nation's capital had gone through. It had been through wars between warlords, pirate groups, terrorist attacks, and riots, all within the young man's memory.

But now, all the traces of destruction had faded and the city was, on the surface at least, at peace.

“Those were the good old days,” he sighed, reminiscing on his early life. He had lived like a prince in Somalia’s troubled times, as his father was not only a warlord himself, but also a high-ranking member of the terrorist group Al-Shabaab.

Those early years had shaped his personality, fostering an extremist interpretation of Islam that, through very convoluted and cherry-picked quotes taken out of context, justified the group’s atrocities. So in his eyes, he was the proper owner of Somalia, now that his father and his men had been captured or killed by the empire.

After the empire took over, he had been left with just a house and a few other things that were under his name. The impies had confiscated everything else; thus, thanks to his corrupt religious belief and the lingering resentment over his father’s capture, he took a very hardline stance against joining the empire with his mother.

Despite that, his life could still have been considered very good, thanks to the things he had, both open and hidden. But then doomsday had struck and destroyed some of his most precious things and fanning the flames of his jealousy-inspired hatred of the empire. Add to that, his mother had fallen ill and outright told him she wanted to become an impy so she could be treated.

However, due to their traditional leanings, he was the head of the household now that his father was gone. So he strictly forbade his mother from joining the empire, as, to him, that would be a betrayal of everything his father and his “religion” stood for. If she died, she died, and he would consider her just one in a long, long line of martyrs and receive her rewards in paradise.

As he was reminiscing, he noticed a small white shuttle with a bright red cross painted on the side flying over him. That wasn’t an uncommon sight, lately, but this one had caught his attention because it was flying overhead in the direction of his house and slowing down. He turned and watched it as it landed on his front lawn, then four people disembarked. Two of them were wearing white coats and guiding a hovering stretcher between them, and the other two were ARES troopers in full armor, acting as guards for the medical team.

The two in the white coats walked into his house, accompanied by one of the guards, while the other guard stood ramrod straight outside the front door of Sahro’s house. And before the young man could even react, the medical team exited the building with his mother on the stretcher, an oxygen mask on her face.

The medical team and their guards boarded the shuttle and it lifted off seconds afterward. The entire process had happened so fast that Sahro hadn’t been able to react. By the time he reached his house, he found himself silently standing in front of the open front door, his body slightly trembling.

After standing in silence for a few minutes, he clenched his fists so hard that his fingernails drew blood from his palms, then raised his eyes skyward and screamed his hatred aloud.

“First you took my father, and I could do nothing. I was powerless to stop you! But now you impy dogs stole my mother without my permission!?” he growled, his bloodshot eyes beginning to faintly glow red. His hair also began turning bright red, like the heart of a fire. “This place will BURN!”

He raised his bloody fists and shook them in the direction the shuttle had flown off. “You and that bitch who chose this world of sinners over paradise will regret this!” he shouted, then turned and looked at the bustling street, seething in anger. The empire had taken too much!

They had taken his father, they had taken his father’s loyal men, they had taken his lavish lifestyle and his high status that made him untouchable. All of it was gone... gone! He had been forced to live like a rat, hiding and subsisting on the scraps of his life that once was. And now his mother, a woman that he’d had firmly under his control, had betrayed him and joined his enemies! She had taken the last of his honor and showed with her actions that he was unworthy, that he had failed, that he couldn’t be the man his father once was.

In that instant of pain, rage, humiliation, and loss, he decided that if his mother didn’t want paradise, he would take it from her as his first, and final, act of revenge.

He turned and slowly walked toward the beachside marketplace, his strides even and inexorable as wisps of fire rose from his eyes and the tips of his hair.

A massacre was about to begin.

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Twenty seconds.

Not even half a minute later, the emergency response team arrived and found nothing but a sea of fire burning in an eerie silence. There were no screams, no crashing of collapsing buildings, no roaring of the flames. It was as if the fire itself had included sound with the rest of the fuel that normally allows blazes to exist.

Mogadishu wasn’t a tiny city. With a population of nearly 2.5 million people before the Last War, it could even be considered a thriving metropolis. Of course, the population had steeply declined after the war, between the losses caused by the war, the mass arrests afterward, and then the general exodus of people who had chosen to join the empire, so it wasn’t what it once was. Only a few dozen thousand people remained, leaving the rest of the city empty.

Thus, the emergency responders in the city weren’t fully prepared to deal with a catastrophe of this level. They were on guard and sufficient for things like gas line explosions or power lines coming down, and of course, the regular gamut of things that first responders dealt with on a daily basis. But this... this was on another level.

Despite the immensity of the threat, the police, fire department, and ARES responded per protocol, calling for reinforcements from the nearest cube as they bathed the surrounding neighborhood in fire suppressant foam in an attempt to prevent it from spreading. Once reinforcements arrived, they would move in to suffocate the blaze in its entirety.

At the same time, hospital ships had been scanning for survivors and people trapped in the fire. But they found nothing.

Chapter 580 A Shitshow From Start to Finish

High Earth Orbit.

After cleaning up the debris in orbit following the Last War, the empire had launched a few thousand satellites of their own. And among them was a constellation of satellites dedicated to

monitoring the movement of mana around Earth. After all, it was a new discovery, so they needed to know how it worked and why, so it was worth studying. And as an added benefit, the empire had gained the capability to track the changes mana caused in its surroundings.

Currently, seven of the satellites responsible for monitoring mana were sending alarms to the staff of the imperial space agency.

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Central Command, Ceres Station.

The imperial space agency had a dedicated secure section of the dwarf-planet-turned-space station, and their central command was based there. They were responsible for monitoring every imperial asset in space—barring the ARES and NIS assets, each of which had their own monitoring stations. As reliable as the VIs that ran the satellite networks were, and as much as they trusted Panoptes, they still maintained their own monitoring staff.

Even though the staff joked about being nearly as useful to the empire as an appendix was to a single human being, they still took their jobs seriously. They were the ones who had verified the information about the recent Carrington event and triggered the news going up the chain of command to the emperor.

The staff always came to work ready to receive all of the bad news and were, by and large, serious and dour-faced men and women. There was always something happening in the solar system that required their intervention, and because of that hectic, busy schedule, they only spent three days a week on the monitors themselves. The other two workdays were spent filtering and sorting the reports from other shifts.

And that day, things were going as usual, until an alarm whooped from the speakers in the room and yellow lights began flashing to grab their immediate attention.

Extreme use of mana within habitable areas detected [Damage: Medium] [Situation: Orange]

“Now that’s new,” the shift chief said as he read the notification. It was the first time there had been a mana-related orange situation alert.

“Fuck...” he muttered when he switched his monitor to a live satellite feed of the situation. Goosebumps popped up all over his body as he continued, “Pass this directly to the relevant agencies.”

{Report sent,} the AI replied almost as soon as the chief finished speaking. It knew best which agencies and departments would need the information.

“Which department did you send it on to?” the chief asked, curious as to which agencies would be responsible for acting on it. The more he knew, the better he could do his job in the future.

{The first responders on scene, imperial blessings agency, imperial police agency, and ARES,} the AI reported.

“What’s ARES supposed to do about a civilian situation?” the chief asked. It was the first time he had heard of the military being brought into a civilian matter. Normally, the police were plenty to handle any issue that cropped up.

{ARES is listed as the correct agency for an incident on this scale,} the AI answered.

“Oh, okay.”

The chief returned to his normal work; the universe wouldn’t take the day off just because something weird happened on Earth, though he did make a mental note to check up on the situation as it unfolded.

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At the hidden joint ARES-NIS base, a single yeet pod detached from one of the arms and oriented itself in a specific direction. It fired a deorbit burn, then fell completely silent as it dropped toward the surface. Its target? Mogadishu.

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“How’s the evacuation going?” the local Mogadishu police chief asked the emergency coordinator, who was standing next to him.

“We’ve fully evacuated a radius of a kilometer and we’re in the process of pushing out the cordons. But we still need to figure out a way to stop this fire from spreading, since it seems to be able to burn our firefoam,” the coordinator replied.

“Silver linings, I suppose. At least we’re ahead of it... for now. Keep me updated,” the chief said, then turned his attention back to the eerily silent fire and its slow, but steady spread.

The chief was alerted by a flashing icon in his glasses, indicating a virtual meeting he needed to join. He blinked the icon away and joined the meeting, which was in progress.

“Okay. Time to spitball. What do you all think is happening, and how can we deal with it? If the fire keeps spreading like this, it won’t be more than another hour and all of Mogadishu will be gone,” the head of the emergency response task force asked from his virtual control room.

“We’ve run out of normal methods to stop it. Firebreaks don’t work, firefoam doesn’t work, water doesn’t work... hell, we even tried flooding the area with halon. Everything seems to just contribute to the spread, so we were forced to stop and evacuate, since the more things it burns, the faster it spreads. We need to either deal with the awakener who triggered it or starve the area of mana,” the representative of the imperial blessings agency suggested.

“We haven’t picked up any life signs on our scans, which means there’s nothing living in that blaze. So how can we deal with the person if we can’t even find him or her?” the task force leader asked.

“There’s two possibilities. Either the awakener died and the fire is feeding on the mana in its surroundings, or he’s reached an understanding of fire mana that lets him literally become the flame. They’re both equally unlikely, but once you rule out the impossible, whatever is left, no matter how unlikely, must be the truth,” the representative explained.

“That makes sense. If the awakener turned himself into fire, it explains the lack of life signs in the blaze. So we should widen the scope of our life sign scan to the entire fire to confirm or rule out that possibility. If we can rule it out, it means this was accidental and isn’t being maliciously controlled, which should make it easier to deal with... at least in theory,” another aide interjected.

“Okay, let’s—” the task force leader began, but was interrupted by an incoming communication.

“This is QRF Bravo inbound, requesting field clearance.”

Before anyone could respond, everyone in the meeting got a direct message from the heads of their agencies ordering full cooperation with the incoming vessel.

The task force leader sighed in relief; the entire incident had been a shitshow from start to finish and he would be happy to let someone else take charge of it. He had done his best.

He opened up a wide channel and ordered, “This is task force command. Clear the field for classified ops.”