## CHAPTER I

"Coordinator Perich'," the voice echoed, icily, throbbing with anger.
Jivane swiveled his tall command seat with the stubby, padded back that looked out over the huge holo-screen lying horizontal over 150 square feet-in front of him in the middle of the big roomshowing the battlefield at $1 / 100$ scale. The wall opposite had another holo-screen, this one vertical, showing space. From his vantage point he could see everything. Moreover, there was a strange atmosphere in the huge, high-ceilinged room occupied by men and women in dark gray uniforms. Every workstation-composed of several screens with operators giving orders either vocally or by typing on the keyboard in front of them-was lit by a cone of pinkish light coming from three feet above them, though the precise source remained hidden. All the lights together allowed ever part of the room where work was going on to be seen clearly but without really being able to distinguish the stooped faces.

Jivane thought fleetingly, and felt badly about it right away, that he only knew their backs... Except when he had to move around or go off duty. At his level of responsibility he was there essentially during the periods of ground combat. The other sifts, in progress for example, were headed by old Lieutenants of one service or another.

It was not true, of course. He did not know only their backs during the time he worked with them. But he was in a bad mood today, considering what was happening on the ground. And he had the tendency to be hard on himself...

One detail would immediately strike an observer. Some people in the vast room looked a lot alike, depending on the workstation. Not all of them much different, but on looking carefully, one would realize that there were maybe 20 different groups of faces among the 60 or so different men and women working in the Operations Room. However, each group was made up of identical individuals, give or take a scratch or scar. They were exactly alike. Clones. But well-worn. No longer in the flower of youth, in fact. Those on whom the sea of life had left its mark.

Another thing was bothersome. Their impassiveness. No, that is not the right word. Their features expressed very few emotions. One could see by the rings around the eyes that they were tired but their wrinkles were no deeper and their movements did not betray their fatigue. It was as if they were acting and had to look right. Except for the piles of cups nearby, evidence that they had been there for hours.

All of them, on their right breast, wore a red badge and an insignia with their name and two numbers: the year of their birth.

Jivane, instinctively, raised his left hand to replace his communication earpiece. He had noticed, instinctively, the tinny sound of Commodore Jenssen's voice, the Commandant on board, indicating that he was calling him on the open line and not on his personal frequency. Everyone was hearing...

The voice resumed, "Coordinator Perich', you were told to send more troops on the left flank of the $33^{\text {rd }}$ Division. They just got hit hard, I'm told. Our men have certainly all been destroyed, you see!"

Jivane felt himself getting angry as well. Jenssen might be human but he had nothing to say concerning the operations. If he had reinforced that part of the front, they would have lost more people, it's that simple! It was the enemy artillery, its Sonic weapons, which they had to destroy. The sound projectors, the same as the armies of the Great Federation had, which the enemy had positioned high up in the distance, had been wreaking havoc since the start of the battle two days earlier. He did not agree with their strategy of attack: the $63^{\text {rd }}, 33^{\text {rd }}$ and $102^{\text {nd }}$ Divisions, heavily reinforced. He had told them so in the General Staff meeting when they made their decision. But a clone Commander, even an Operations Coordinator did not count for much among the human Generals and Admirals. He noted the decisions taken and stayed quiet most of the time. Only his experience, his reputation, the campaigns, the landings, whose insignia were lined up in five rows on his chest, gave him the authority to speak up. Or so he thought...

He had seen right away that the terrain was unfavorable. The troops were going to set down in a place that would be threatened by swells of land where nothing would be visible but his instinct, which said that that was where the enemy would be waiting for them. And that was what happened...

These numskull Chiefs of Staff of the $28^{\text {th }}$ Force had found nothing better than to launch the operation with the excuse that it was imperative to get it done with, to wipe out the enemy units that they figured were entrenched there. They were deliberately looking for a clash, a confrontation, to quickly eliminate some of the enemy resources in this sector of the galaxy. As always they thought themselves stronger than the Vegian enemy.

This relatively minor planet with a rarified atmosphere was not inhabited and was not located in a sector dominating a group of important planets. Nothing justified going into battle here. Nothing except the Vegians. It was nothing but a preposterous rock of sandy plains with scanty, stunted vegetation at this altitude and rugged ground everywhere else, from north to south. But the Vegians were here, there was no question about it. A long blockade would produce the same result as a battle but without the huge losses that the Great Federation had been racking up over the last 48 hours now.

The Commodore continued in his nasty voice, "What are your Ground Coordinators doing, Perich'?"
"They got burned, Commodore. I've only got one left."
Traditionally the Ground Coordinators were elected from the Commandants, the Battalion Chiefs, chosen by the Ops Coordinator, who had come from the Ground Coordinators. Thus every level of command elected the man whom it thought most fit for promotion. Therefore, an Ops Coordinator never went down to the ground; he had already been there and his experience was too valuable to go back into combat.

He clearly heard the exasperated sigh of the Commodore as he went on, "The honor of my Vessel is at stake. I'll give you one hour to rectify the situation, Perich'." Then he added coldly, " Maybe it'd be better for you to take charge of it yourself. You're the specialist in these situations, aren't you?"

Honor... Jivane did not care about the honor of their Transport, of the TT 1102! Just like the men and women who were there in the room. And even more so those who had landed on the ground and were being bombarded, pounded for hours... the survivors at any rate. Because the Armored Units and the mobile Batteries of Heavy Weapons, brought to the ground too soon, were now reduced to scrap iron. The $28^{\text {th }}$ Federated Force was getting crushed, annihilated!

He did not answer immediately, taking time to control his anger. The Commodore did not like him. He had been hostile to him since his arrival on board three months ago. Having been recently promoted Jenssen was still a young man, 28 years old. A Commodore in charge of a Series 1000 Troop Transport at this age either had friends in high places or was truly very good. Nothing so far, however, showed that he was particularly adept... But maybe he was simply hoping for the command of a more prestigious Destroyer-he had come from one-than a Transport, even if it was the biggest in the Force? He seemed very ambitious. He was in the Space Navy, so playing transporter for the Army probably did not look very glorious to him, in spite of the ingenuity required by the situation to place his vessel in a position to land under such conditions.

The TT 1102 was the biggest Transport of the $28^{\text {th }}$ Force, which meant that the landing was mainly on his shoulders and consequently on the shoulders of his Ops Coordinator directing all the tactical maneuvers on the battlefield from the Operations Room. The other Transports-Series 800 and 900were basically carrying the armored units, the batteries of Thermals, supplies, etc... So, the ground operations were directed by the personnel on this Vessel, the 1102. Maybe Jenssen was hungry for glory, for space combat? No doubt about it...

In spite of sounding like a suggestion, Jivane knew that he had just received a formal order. Of course, he could ask the advice of the General Commander of Troops, but the Commodore would never forgive him, whatever decision the General made.
"Yes Sir, Commodore," Jivane finally answered. "I'll prepare the units."
He changed the frequency on the left armrest of his chair to speak alone with his second-incommand, also sitting on a high seat on the other side of the big, horizontal screen. "Commander Stef,

I'm going down to the ground. You're in charge here from now on. Just limit the damage while waiting for me to get set up down there and try to organize this mess that the fat brains have caused."

He wanted to say more but he kept quiet. Stef had heard everything, of course, like everyone, and knew what to expect. He would figure out what Jivane intended to do down there. He had been a Ground Coordinator of Troops for a long time, had combat experience, no need to give him specific instructions, especially since Jivane was probably going to have to wing it. To introduce an element of surprise down there, if he wanted to turn the situation around. He shut down and locked his seat so that no one could use it and give orders in his place. Only Stef's post would work. He had the right to do that. It certainly would not please the Commodore if he decided to come to the Operations Room-which had never happened before in the clone's memory-and sit in his post, but he could not say anything. It had taken Jivane 21 years to get this post, so the little bastard Commodore was not about to take it! He would never take it! In fact, he did not have the right or the desire, in truth. The Officers in command and their Officers in the General Staff were human, not clones. O Humans. O for origin. The bridge on all the vessels was led by humans; no clone Officer could command here.

There were clone Technicians at every post, even up above in the Bridge, in the command post, but no decision-making clones, no, that did not exist. At best they transmitted orders or more often carried them out. Although the Officers had complete authority over the clones of their crew, the latter still had some rights, albeit few, according to the Clone Charter. They were given the dirty work, for sure, but it was theirs alone. No human had the right to infringe upon their domains. But as far as the Law was inflexible toward the clones, who would remain a subrace under the O humans, so also were their rights protected. The humans were like that.

Jivane slid out of his seat, stiffly, and walked to the left along the horizontal screen flickering with silent explosions. It was going badly on the ground. He got in the doorless elevator and barked, " $15^{\text {th }}$ level," watching floor after floor pass by. Current technology on inhabited planets was far superior but on board the ships this old system was more effective for security.

As hard as he tried to breathe deeply, to fill his lungs and exhale slowly, he could not calm down. The idea surged up that he was about to go into combat under the worst conditions. Not only because it was going badly but also because he was not in shape for combat. He had been up for 48 hours straight... The Commodore knew this, of course, which meant something, but he could not figure out what.

On the $15^{\text {th }}$ level he jumped out of the elevator. A Troops Sergeant saluted him. He nodded and said, "Get the $3^{\text {rd }}$ Intervention Brigade together in 50 minutes, ready for a quick descent, fully equipped, for an operation in the zone of undetermined duration. I'll be jumping with them. Prepare the shuttles. All unit chiefs will join me in the briefing room in 40 minutes. I'll gear up myself. And prepare a Command Group with all its electronic material to land with me and stay with me."

For two centuries the intervention troops-the soldiers-had been made up of clones, both men and women. It was the very reason for their extraordinary development at the start: the need to build an inexhaustible army, infinite as it were. The perfected cloning of animals had long ago solved the problem of food on inhabited planets in the Great Federation at the start of the grand expansion, the migration of the human species into the Milky Way. The same for the store of human beings used in medicine and surgery for organ transplants. They were like monsters with perfect organs. But there was an outcry of self-righteous humans. And then the wars of expansion between different human colonies demanded a lot of soldiers, more than the society of O humans could provide, seeing how modern warfare was such a huge glutton for entire units. That was when they came up with the idea of the systematic cloning of men and women with higher than average physical qualities, mostly the old soldiers. At first to make them into soldiers, then as the years passed to make them workers and finally technicians on the planets. Now every productive job was held by a clone. The system functioned well... according to humans.

Therefore, at first, they chose and cloned big, strong humans who were obedient but far from idiots, destined for the Army. There were 198 models of clone soldiers chosen from different types of humans. Nevertheless, in the basic unit of the Army-the Company with around 120 soldiers-there were, most of the time, very few individuals exactly alike, coming from the same model. Afterward they searched for good human technicians to clone, genetically improving their physical and combat qualities along with
their intellectual characteristics in order to replace the technicians on board the Army ships before resorting to the same system in civil life. Here, however, the number of models was more limited: 120, so that there were more copies of each. Over the decades they also selected, improved and combined 350 O human models to produce 198 destined for any function whatsoever depending on the training.

Henceforth only the Officers of the Space Navy and Army were O Humans. But there were several ranks among the clone soldiers, from the basic fighter around 20 years old, just out of training, up to the Officers of Troops whose official rank, the highest rank, was Battalion Chief or Commander. Like Jivane. This system was in general use throughout space occupied by ex-Earthlings. Their current enemies, the Vegians, also coming from Earth ancestors, practiced the same cloning system and their army was made up of clones, exactly like the Great Federation, but not looking the same because they were cloned from a different population. Even the pilots of the Shuttles, Fighters and Attack Ships, the huge Heavy Vessels, were clones today in both camps.

However, Jivane belonged to a small core of clones. His combat skills had proven so proficient and he had made such a career, so quickly too, going up the ranks among the ground troops-wounded several times but always recovering-that he had finally been appointed Ground Coordinator, then Ops Coordinator, as they usually call it, two new posts exclusively for clones now. Everyone started at the bottom of the ladder as simple soldiers before rising through the ranks, one by one, in the campaigns if their luck held out! An Ops Coordinator had been a soldier, a Sergeant, a Sergeant Major, an Officer, etc.

In this system the O human Officers had, in fact, shown their limits. Never engaged in combat, their experience remained at a very low stage in this field after the arrival of the clones: merely distant observers. They were aware of this shortcoming and never tried to go in the field, of course, and besides, there were too many losses among the ground troops! They had been trained, destined to be commanders in chief but not in the field...

Indeed, their training was very complex. They became strategists, theoretically experts, all being potential Generals but nothing else. Furthermore, if the Space Navy held a certain aura, the Army no longer attracted the young humans, fewer and fewer of whom enlisted in spite of the good career awaiting them, seeing that the lowest rank coming out of their military schools was Major! In short, to coordinate, organize and direct the field of action of the troops called for people who knew the work, who had experience in it. Therefore, they were forced to create from scratch these new posts and ranks not equal to the humans: Ground Coordinator and Operations Coordinator (or Ops Coordinator), both Commanders. In reality these posts were like the old ranks of Brigadier or Major General. But it was out of the questions to give such titles to clones. They were reserved for real humans, for O Humans...

On the other hand, the humans had set up an odd system of nomination. The Ground Coordinators were elected by the other Commanders, the Battalion Chiefs, with their choice only being confirmed by the humans, which was not so stupid. It was in the best interests of the Battalion Chiefs to choose the best among them, just to survive a little while longer! Who better to rate the value of a Commander in the heat of battle if not his colleagues? And the Ground Coordinators elected the Ops Coordinators for the same reason. The humans almost never challenged their choices. They did not care. Except when a notoriously incompetent Ops Coordinator damaged the military potential of a Transport by maneuvers that resulted in heavy losses. Then he went back to the field... not for long, of course! In practice there was only one Ops Coordinator per main Transport of a Space Force, with a second-in-command, a former Coordinator as well. The transfer from one Force to another was rare, motivated by the exceptional quality of an Ops Coordinator being requested by a more powerful Force or by the creation of a new Force.

The position of the Coordinators, moreover, made the O human Officers uneasy. They were often clumsy compared to the clones. Clumsy and blunt. But since nobody could do the coordinating work in their place, they had to tolerate the Ops Coordinators, for example at the General Staff meetings where their presence had its importance. Nevertheless, the humans were often racists, Jivane suddenly thought while changing clothes in the small room painted bright red-to motivate its occupants, the outbound Officers-where the higher ranking clone Officers found all their equipment. He stood still for a moment in his underwear, one leg raised up, thinking of that old word, racist... Where had that come from? He must have read it one day, a long time ago, no doubt. But it was the first time that it came to mind. Plus,
he was not really sure what it meant, so he would have to look it up in the data bank of the big computer of the TT 1102 when he got back... if he got back, that is.

Entering the spray cabin after plugging his nose with the little caps full of four minutes of oxygen and breathing, he gazed at his reflection in the shiny surface of the door. He saw the image of a well-built man. 6'1" tall, chest and legs riddled with scars, burns mostly, a quite slender waist, a face that did not hide the fact that he had just passed 40, high cheekbones, fairly hollow cheeks, gaunt features, with little wrinkles around the mouth betraying a sense of humor and dark blue eyes. Army Blue as the clones scoffed, to underline the fact that most of them came from men with blue eyes... Even though his were really very dark, barely acceptable he would say when laughing privately. In his left armpit were the numbers that all clones bore, the first number designating the Nursery where they were born, the second being their ID number followed by the year of their birth.
"Pretty successful these 76 Bs ," he mumbled under his breath, referring to his clone model with slightly humorous cynicism. "Good legs and a big chest with well-ventilated lungs. Top quality junk!"

He stepped forward and the door closed behind him while a barrage of jets exploded on all sides of his body. As always his body tightened up at the assault but after a full minute he started to relax. The various products mixed with the water gradually had their effect. He felt his weariness wash away. Another three minutes of bombardment before the warm, dry air blasted him, drying him off in a few seconds.

He left, automatically plucking out the empty air caps. His brain kicked into gear while he put on the usual combat gear made of crossed layers of metallic tissue, flexible but airtight, surprisingly sturdy and light. Once dressed he did not move any slower; he even felt lighter, almost naked. He was rediscovering the feeling after not wearing this for a damn long time... On his chest he put the badge showing that he was an Ops Coordinator and on his thighs, like before, he hung the holders for the weapons that he chose thoughtfully. Thermal grenades, first of all, which would stay connected to him when he tossed them and for a few nanoseconds create a thermomagnetic shield to protect him against the unbearable heat at the moment of their explosion.

He was about to enter a combat where there was potentially a probable risk of hand-to-hand combat, so he took a Ruptor of molecular cohesion. Not a very cumbersome gadget- 12 inches including the bulb at the end of the barrel-that shot either a spread of rays (but effective only up to 20 yards) or a ray so fine that you had to aim with utmost care in order to kill. These Ruptors were pretty new and gave the Great Federation Army a certain advantage. The ray broke up the molecular cohesion of any material in their path. A muscle hit suffered necrosis, died, like from gangrene, turned gray, but only at the place of impact. A limb, arm or leg, became unusable in less than a minute. But the gangrene did not spread. To stop an enemy in its tracks you had to hit the head, the brain, the neck or the heart. Then the whole body was paralyzed before death came on, rapidly. In this case the range of the Ruptor was long, 5,000 yards. (The precise aim needed was why a lot of soldiers were a little reluctant to carry them. They preferred the good old Thermals with conic beams that burned almost everything within 100 yards-but not exactly everything - and you needed to carry a lot of recharge-batteries, ammunition of a sort.) Additionally, the anti-heat shields were pretty effective against the rays of Heavy Thermals. They were even talking now about heavy-duty combat uniforms to protect against them.

In the holder on his left thigh he stuffed four energy recharges for the Ruptor, which was plenty, and in the flat sack on his back he slipped in a 3-day-plus-water and food pack. If it was not enough, it would mean that all was lost. On the ground they did not have the technical means to engage in combat for so long.

Afterward he grabbed the helmet and examined it closely, looking for any possible damage that might render it useless. Only the back, from the nape of the neck to the ears, was metal. Three quarters of it was a transparent but armored visor so that the person was clearly recognizable from the outside. Then he chose the frequencies he would need down there. He knew them by heart now after the last two days. Setting the helmet next to him he started thinking. He still had the Operations Room screen before him and no need to refresh his memory. Everything depended on the enemy's Sonic weapons.

The weapon, which was effective only on a planet with an atmosphere-even with thin air-was a kind of huge cannon shooting an air bubble at supersonic speed that exploded on contact with a hard surface. The explosion was so powerful that nothing could resist it, no armor, no body. Men did not become deaf, they were pulverized!

The Vegians had devised a clever plan by setting them up on this aging, uninhabited, rather hot planet on this wide plain that was perfect for a landing. Jivane wanted to go up to the General Staff room on the second level and tell them what they were incapable of seeing. And the fat heads could take the blame because when the expeditionary unit of the $28^{\text {th }}$ Force was pounded on the spot it was because the Admirals and Generals were stupidly following a trail that the Vegians had laid out in space leading them here. The trap had been set a long time ago! How could they be so naïve as to... He forced himself to think of something else.

The size of the trap led him to believe that the Vegians had thought of everything. The armored unit attack that was launched on the flat ground had no chance of making it to the rugged terrain where the Sonics were installed. And from every direction of course. The rolling hills were obviously part of the trap. Instead, they had to surprise the Vegians. But how? Their leaders were damn smart and clearly had time to plan everything!

No matter how hard Jivane racked his brains he could not think of a way to destroy the Sonics. Stay under cover? Yes, that would work, for a time, to limit the casualties. But you don't conquer an enemy by staying under cover. You have to move, to maneuver. The Vegians (Jivane was sure now) must have been luring them, the most powerful arm of the Great Federation, into this part of the galaxy for a colossal battle that would last for who knows how long and would keep the Federation from mobilizing elsewhere, leaving themselves free to act somewhere else. It was all part of a huge plan. They must have a considerable supply here of both energy and lives to last out a virtually endless siege.

Everything depended on the Sonics. That was the key of the battle. He finally got up and went to the computer screen that every Officer's quarter contained and typed in his question. He chose not to use the voice interface because sometimes he preferred silence so he could think at the same time.

He asked the computer to give him the list of weapons kept on board the Transports of the $28^{\text {th }}$. In theory he knew it but he wanted to see it. What could help him once he was on the ground? The lines scrolled by without his mind reacting. Then he raised his eyebrows and stopped the scrolling. Something stirred inside him. He sat there staring blankly for a few minutes, his mind telling him that it was impossible, that these things were too old, outdated, that their presence was almost an anachronism, that the Vegians were not so naïve. On the other hand...

He made a gut decision. It was all or nothing. He knew, for hours now, that the expeditionary unit of the $28^{\text {th }}$ was lost anyway. He sat up straight and typed; his orders were registered under his name. He asked for the cargo to be brought immediately on the supply shuttles from the other ship. They would head out at the same time as the men, right behind the first wave made up of old, empty, broken down spacecraft piloted by remote control as a sacrifice to draw the initial fire, the most precise fire, from the ground. Then he had to think of what he was going to tell the Battalion Chiefs. After a moment he adjusted the big Multi-purpose combat bracelet on his left wrist, serving as an emergency radio, an image transmitter/receiver, a watch and a navigation instrument. Finally he looked at his reflection in the mirror, as he used to do before every departure, checking that he had not forgotten any equipment. Then he left carrying his helmet under his arm.

A young second lieutenant was waiting for him outside, standing perfectly straight at attention. "The Battalion Chiefs are waiting for you, Coordinator. If you would follow me?"

They marched toward a wide walkway that lined the immense hold where the men were sitting and waiting next to their jumping bags. The bags were fairly big, containing different weapons, for an individual or a team, equipped with a little anti-G system that made them float over the ground. Hooked up to each man by a strap they were not much of a hindrance for the soldiers who could very quickly pull out the necessary material for combat and their survival.

Jivane did not utter a word during the short walk and entered a small room where three tall women, their faces marked with deep wrinkles, and five men, a little older than he, were waiting solemnly behind
a table covered by a holo-screen. He entered and just nodded his head as a greeting. He knew them all, of course. He stood before the table and with a motion of his hand ordered the screen to be turned on. Right away he saw that the situation had hardly changed since he had left the Ops Room. The ground was a little more devastated in the eastern sector; the Sonics must not have left many of them alive in the area. Unless the Officers had been smart enough to order the soldiers to find cover quickly.

He checked the western sector where he had sent the $152^{\text {nd }}$ Brigade to land. It was the end of the afternoon down there and the sun was setting fast. But the planet turned from left to right on its polar axis, so their eyes would not be bothered by the light.

A female Commander immediately asked a question. "Why are you going down to the ground, Coordinator?"
"Commodore Jenssen gave me orders," he answered tersely and furiously.
He saw the next question in their eyes but skirted it by saying, "You see as well as I do that our men have fallen into one hell of a trap that the big brass geniuses couldn’t see..."

He felt the stress in the air. They were not used to hearing him speak like this.
He paid no attention and continued, "Take a good look at the screen. You'll see right away that there's no way for us to win this battle. If we can save anybody, that alone would be a real victory and that's my goal in this operation. This whole area, this whole planet I guess, is a trap. There's no need to look for a tactic to get us out-there isn't any. We should have thought about it before our men even landed. Apparently, that wasn't the case... Now we can only try to limit the damages."
"You don't believe in victory, Coordinator?" a Commander, who was a little younger than the others, not yet 40 years old, asked.

Jivane smiled at his name: Commander Vaastez. Recently promoted he had acted with exceptional bravery during the fight in the V 04 sector. For an instant he wondered whether he was dealing with a crazy soldier, with demented courage, mindless gung-ho, do or die, incapable of independent thought or simply an untried Battalion Chief. Then he told himself that the young man had been a Captain and led a Company for years. He would not be here if he was just a fighting dog who charged at anything, no questions asked. It was more a question of lack of experience at this stage, for sure.
"Look at the screen, Vaastez. Where do you see a way out? Where would you start the retreat to skirt the enemy's position? Where could you put your men safe from the Sonics but close enough for an attack? I don't think there's any place on this planet that's a more perfect trap. As long as their Sonics fire, we'll lose men and if you have some way to destroy them, I'm all ears."
"So we're going to let the expeditionary force get massacred, Coordinator?"

