

Down time (a Rapid Response Team 4 adventure)

Chapter 1

The Federation has what's called a "Tax slider" when you pay for something that has a sales tax you can set the slider to bias your taxes between towards the State or the Church (the Jedi) , It is a way to "vote with your money" . After the Antarctic operation people all over the federation were nudging their sliders towards the state to show their approval for the very successful operation , well a little nudging spelled a lot of extra funds , so it was decided to take one *frigatebird* at a time out of service and completely overhaul and upgrade them . The carpets that had held the xenon gas were replaced with fireproof rubber flooring , the wings , underfloor areas and behind the instrument panels were sealed against chemical/biological/radiological agents making the planes much easier to decontaminate if necessary , the propellers were replaced with new larger "paddle blade" propellers that increased the altitude capability of the planes by an additional 6,000 feet from 47,000 feet to 53,000 feet giving the planes a better ability to fly over storms , stainless steel structural components were replaced with components made from a new stronger federation powder metallurgy alloy , saving about 150 kilograms of weight , the countermeasures "suite" that had preformed so well , was given a major upgrade with new software , numerous additional antennas and black boxes , radar and communication jamming capability , and a updated threat library , all of which added about 150 kilograms , erasing the gains from the powder metallurgy components , the auto pilot was replaced with a new one with artificial intelligence designed to "learn to fly through storms , by flying through storms", and in typical federation fashion everyone was sent back to school for additional training for 5 months while the retrofit was underway.

Chapter 2

With additional training 4 days a week and one day of discretionary schooling where they could choose their subject (if it was not chosen for them by someone in a position of authority) Rapid Response Team 4 (except for Myung-Hee who was allowed to use the rental building in Cape Town till the rent ran out in three weeks for her honeymoon) had become full time students for the next 5 months while the retrofits were underway.

Nakamura and Griffin were assigned classes in meteorological science followed by simulator storm flying . Sane and Nicoló were attending Dr. Mallory Locroix's classes on the treatment of radiation poisoning , and Patty , Rutger , and Aleksei were assigned french language class followed by advanced diving classes , if , the Wallfacer could convince some members of *club de plongée sous-marine spécial Français* to come to the federation as honored guest teachers , and no one doubted that for a moment !

Chapter 3

The team had got into the routine of going up to the industrial level after class and roller skating the the entire circuit of the city. The school was on the outer rim of the underwater level and the large oval windows gave a nice view of the underwater world , Sane and Nicoló stood by one of the windows admiring the view and waiting for the rest

of the teams classes to let out . Patty , Rutger , and Aleksei rolled up and Aleksei said “the underwater world a source of endless fascination , look at that magnificent animal” a sting ray had swam into view . Nakamura and Griffin rolled up and said “ sorry to keep you waiting , wow that ray is incredible !” Aleksei replies “ Don’t even mention it , we were admiring the world of Jules Verne , I for one look forward to reading his famous novel *Twenty Thousand Leagues Under the Sea* in his native language !” Rutger said “ yes he was French , I had forgotten that” , Sane said “today myself and Nicoló have a surprise for you all , but first we skate”. The team skated over to the police sector and put their thumbs one at a time in the health scanner that checked their temperature , heart rate , blood oxygen level , and blood pressure , any abnormal readings or trends would have triggered a message telling them to visit the hospital , but everything was normal today. Sane paid the 2 “K” and everyone entered the elevator. The Elevator led up to the Radiological office on the top level , which looked more like a factory than an office , the “office” contained 2 other elevators , a huge X-ray machine that was designed to X-ray then X-ray sterilize a entire 40 foot “High cube”, a overhead crane system for moving containers and a mezzanine level that ran along three sides and contained workshops where Tritium lights , heat/light/power generators , and medical isotopes were prepared and assembled. In addition there was a secure section that was devoted to preforming tests for the police while preventing any possibility of evidence tampering. By having the police at the lower end of the elevators and the Radiological office at the upper end , in the case of a Chernobyl like accident it is possible to evacuate the upper levels , positively shut down the elevators , shutter the upper levels and turn on the high pressure external sprinklers.

Chapter 4

The team rolled out of the elevators and down a ramp to the first section of the second level , this along with the 11th section was where the city's heavy industry was located , a large bio-gas turbine driven electrical generator , pulltrusion plant , container assembly line , garbage sorting and recycling plant , powder metallurgy rolling mill and forge , air Liquification plant , rubber factory , ammunition plant , textile mill , boat shop , and the main fire department were all in sections 1 and 11. After leaving section 1 they went through a “corner piece” of the city that had a lot of small business that were not possible to have in a pressurized underwater environment mostly because they required more ventilation than was practical when ventilation air had to be compressed and piped down instead of just opening a window . This area had electronic assembly shops , plating shops , coating shops , wet suit assembly shops , printing shops , motor and generator winding shops , several different kinds of composite shops , and all kinds of welding shops. This area was one of two areas like this , the other was near the other end of the heavy industry area and very often these business were subcontractors to the heavy industrial concerns in sections 1 and 11. After the small business area they entered section 2 , section 2 contained 6 of the 54 , 47 meter diameter and 2.5 meter high methane generators that produced about 275,000 thousand cubic meters of methane a day which after being burned in a very efficient Kawasaki gas turbine provided a little over 34,000 kilowatts or about 77% of the electrical power that the city used. The methane generators looked a lot like the oil storage tanks you see in oil producing nations , but if you touched one it was not cold like the steel oil storage tanks , instead it was slightly warm and made from the same strong , fireproof , rust proof , basalt fiber and

phenolic resin composite that comprised most of the city. Skating past the methane generators the team entered the second “corner piece” but unlike the previous one this one served as an industrial mall , most of the company's that did a substantial amount of business with the federation had a sales office here , Company's like Luxfer , a Italian company that sold countless SCUBA , inflation , and air storage cylinders to the federation had a representative here that was a very valued technical resource for the federation , so the federation went to great lengths to make these people comfortable and feel at home , unlike some countries that made foreigners feel unwanted , every federation citizen knew from the day they were born that foreign trade was essential for the very existence of the federation , It might sound quaint but housewives would often bake a pie or some cookies for the foreign representatives especially if one appeared to be working extra hard on a federation request , this “cookies and milk diplomacy” was a key part of what made the federation a success. After passing a second set of 6 methane generators the team came to the consumer mall and Patty , Rutger , and Aleksei rolled into the Morakniv representatives sales office to look at dive knives Patty said “Aleksei were Moraknivs available when you lived in Russia? “, “yes they were , not expensive and look good”. Nicoló said “my daughter is having her birthday soon , and you know she want's to be a glider pilot and just recently she has been making drawings of a long wing version of the Me-163 , sort of a glider first , rocket plane second , I want to get her a Me-163 and some extra plastic sheet to make longer wings with , for her birthday” Nakamura and Griffin both offered to help and the three of them went over to where a number of plastic model makers had their sales offices . The Jedi , who studied the science of learning had determined that children that grew up making models became more skilled craftsman then the ones that did not , and with this information the Wallfacer had made it his personal goal to attract as many model making companies to the federation as Possible. Sane rolled over to one of several dairy product representatives offices , this one had the words New Zealand Dairy Board(NZDB) above the entrance. After everyone had made their purchases the team left the consumer mall and skated past another 6 methane generators and entered a large open corner piece the center of which was dominated by a Roller hockey rink and surrounding bleachers. The rink was always open day and night and could be reserved on line , there was a couple of teams in uniforms having a game and the team 4 stopped and watched , Rutger bought a large bag of popcorn and passed it around. When the game was over the team took off and Rutger threw the popcorn bag over the low wall into the ocean where it's starch construction promptly dissolved , in the past there was some debate weather it was better to recycle or use this starch “plastic” but the Wallfacer settled the matter by saying “when both solutions are as closely matched as these are , a second factor becomes the issue , more government or less” put that way it was quickly agreed to make both solutions legal. The team skated past 6 more huge methane generators and came to the last “corner piece” on this side of the city it was a gym , some of the Jedi were training a class in the federation martial art using training robots , these padded robots had sensors to measure the force and speed of blows and were designed to emulate an attacker with a gun or some other weapon the robots were able to emulate a 70 percentile , 80 percentile , 90 percentile , 95 percentile , and 99 percentile attacker and the students could quickly learn that *this speed of attack was sufficient for 90% of attackers starting at a distance of 3 meters* for example . The training taught the students to cover several meters and jump kick the attacker in the head before he could fire a single shot , It was

amazing to watch an advanced student casually just standing there and then the robot try to draw a gun and the student explode into action , covering several meters and delivering a powerful kick to the robots head before the robot could use his weapon , and very often then attacking 2 or 3 or more robots nearby , eliminating the entire robot “gang”. Patty thought how much the students looked like Samurai in training and how the federation and the Japanese both were very polite societies *just doesn't pay to be rude to Samurai or these guys*. Leaving the gym the team skated past 6 more methane generators and entered the first corner piece on the other side of the city. This was the commercial dock , boats carrying seaweed , fish , and shellfish , were unloaded here , the seaweed was ground up and mostly sent to the methane generators , but some was used to make alcohol , and a long list of other chemicals , also some of the alcohol was further processed to make the 1,2 butadiene that the Rubber industry used to make synthetic rubber and the fledgling federation space industry used as a rocket propellant. On the opposite side from the commercial dock was a area set aside for rod & reel fishermen and an area that resembled the flight deck of a Aircraft carrier in miniature On the flight deck was an amazingly realistic 2 meter long RAH-66 Comanche slowly spooling up it's twin turbo shaft engines , The entire team stopped to watch the amazing aircraft take off. The pilot , wearing virtual reality goggles lifted the aircraft about 1 1/2 meters above the flight deck and slowly rotated it , training the lethal looking Gatling gun on the spectators one by one and finally settling on Patty , Patty looked at the model of the cybernetic killing machine and then at the pilot wearing the goggles , he recognized the woman , he had arrested her about 3 years ago for espionage , she had been using a model aircraft to record top secret torpedo trials , Patty was sure she had a buyer already lined up , patty arrested her but the buyer got away , then during the trial there came out a bombshell of a revelation , The camera had captured one of the torpedo manufactures employees crushed by a torpedo that was being lifted with a badly frayed strap , and the company's security personnel feeding the body to some sharks to cover up the negligent accident. In the end several company employees received long hard labor sentences , the company had to pay the family of the deceased employee triple compensation for the negligent accident and attempted cover up , and the woman Zalina Borgia received 9 months of soft labor for *flight to avoid arrest* , the the charge of espionage being dismissed on the so called “whistle blower defense”. The helicopter slowly backed out till it was over water and flew away , Zalina turned to face the the water intent on piloting , Patty thought to himself *dam she has a great backside*. Sane commented “someone you know?”.

Chapter 5

The team skated past 6 more Methane generators and came to the next “corner piece” a compact but beautiful park with an ocean view , Sane sat on a bench and started unlacing her skates , Griffin looked at Nakamura and Nakamura said “she has a surprise”. Everyone found a place to sit and change into their shoes then Sane led the team into the park and to a secluded grove with a large picnic table and benches and a view of the sun setting over the ocean, everyone sat down except Sane and Nicoló , Sane gave Nicoló a large wide mouth thermos full of ice water some glasses and a bag of New Zealand's finest powdered milk , Nicoló poured the powder into the thermos replaced the lid and shook it then started filling the glasses with cold milk. Sane who was standing at the head of the table said “As you all know this 7 year wallfacer term is the

first one where we truly had enough , enough energy , enough food , even enough shoes , we could have had it sooner but we all decided to become independent , we would “**Do without , till we could do it ourselves**” everyone nodded their agreement , Sane continued “ the earlier terms were devoted to the big things , energy , sufficient caloric intake , security , but this term has been the term where we worked on the little things , and just recently we reached a milestone” Sane produced a large lidded PYREX baking dish from her knapsack and said “the city of Alcyone now produces every ingredient , with a little creativity , needed to make Greek Baklava !” and she removed the lid and everyone clapped and cheered .

If you liked this story about Rapid Response Team 4 please let me know , I will be happy to wright more. Robert Lackey