

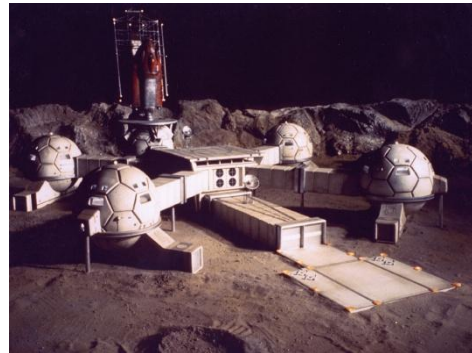
Glitch in the Machine

A UFO Story

Written by Matthew R. White

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Based on the Characters and series created by
Gerry Anderson



Historian's Note: The events depicted here take place about two months after Matters of the Heart.

Prologue:

Keith Ford was not having a good day. In fact he wasn't having a good month. SHADO had just finished the installation of a new fiber optics communications system, using the latest cutting edge voice over IP technology. The system was years ahead of its time, and would not be seen in civilian systems for another twenty years. The first phase of the project was to connect HQ to all the outlying installations on the British island. If that worked as planned phase two would do the same in the United States, Canada, and Mexico. Phase three would be worldwide.

Worldwide my ass, thought Ford. *I can't even get this to work right inside the building.* Captain Ford was the sharpest communications officer in SHADO and it was rare for him to be stumped with a problem, but this time he knew he was out of his league. The technology was too new and no one but a factory trained technician

would be able figure this out in a timely fashion. He was going to need some help.

Ed Straker was not in a very good mood when Ford walked into his office. *This is going to be painful*, thought Ford.

“I could use some good news right now Keith.”

“I wish I had some sir. Things are not going well at all.”

“I thought this system had been tested?”

“It was, in fact using the test sets it shows one hundred percent reliability. As soon as we start putting live traffic on it, the system starts running bit errors, dropping traffic, switching to the redundant links for no reasons. It doesn’t make any sense.”

“What does the manufacturer have to say about it?”

“They think it has something to do with the heavy encryption we are using but that doesn’t make any sense. The data pattern in the QRSS test signal is just as complicated.”

“Well we’re going to have to figure it out. I just got off the phone with Henderson. It seems the IAC wants to drop all those T1 carrier lines that we have been leasing for the past fifteen years. It’s a big chunk of change when you add it all up. That’s why they authorized the building our own fiber backbone. If they find out that the new system doesn’t work after spending all that money, heads will roll.”

“I’m going to need some help sir.”

Straker knew what it cost Keith personally to say that, and he had pity on him.

“All right Keith, let me see what I can do.”

“Who can we get sir, I mean we can’t very well bring one of the factory techs in here and it will take me a month stateside to learn the system.”

“I’m sorry about that Keith, you were supposed to go to training six months ago, but with the scheduling conflicts I had to push it out. That’s my fault. But we do have someone who is qualified on this system.”

“Who’s that sir?” Keith asked, not knowing of anyone in the organization who had experience with the system.

“Virginia’s husband, Matt Hewett, he trained on, and helped to install this system at NORAD six months ago.”

“That wasn’t on his G6 was it?”

“No it wasn’t and Henderson was quite upset about it. We wouldn’t have investigated him had we known that he had that type of clearance.” *And Virginia never would have left,* he thought to himself.

“I could certainly use his help sir.”

“It’s late enough now I’ll call over and tell him he being activated. After all he is considered reserve personnel,” Straker said with a smile.

Chapter 1:

In a secluded quiet neighborhood in western Connecticut Matt Hewett, and his wife Virginia Lake-Hewett, were hanging pictures in their living room.

“No I don’t like it there, can we hang it over on the opposite wall?”

“Virginia?” Matt said feigning annoyance.

“Please Matt,” she said as she batted her blue grey eyes at him.

“You don’t play fair.”

“True, but I really want to see that from the couch. My mom painted that for me and it reminds me of home. Besides, I didn’t complain

about that monstrosity in the back yard,” she countered, playing out the lover’s tête a tête for all it was worth.

“Virginia my dear, I’ll have you know that my tower and tri-band antenna is a work of art unto itself.”

“Yeah, abstract art maybe,” she said teasingly.

The newly married couple, of six weeks, had moved into their new home only three weeks ago, and they had finished unpacking and putting things away, except for the wall hangings in their living room. It was a cool fall Saturday and Ginny wanted to tackle this project first thing that morning. Once they finished it, the house would be done and the two of them could enjoy the rest of the day.

As Matt hung the picture the phone rang, and Virginia walked over to pick it up.

“Hello.”

“Well hello stranger,” said the voice on the other end.

“Oh, hi Ed; how are you?”

Matt stopped what he was doing and looked over at her. Commander Straker was too busy normally to make social calls; he suspected that something was up.

“I’m fine, how is married life treating you?” asked Ed.

“It’s great when you find the right person.”

“Virginia, I need to speak to Matt. Is he there?” he asked suddenly serious.

“All right, he’s right here, hold on,” she said somewhat surprised.

Virginia walked over and handed Matt the phone with a worried look on her face.

“Ed, how are you.”

“I have a problem over here Matt. How familiar are you with the Mark V fiber system?”

“I installed one of those at NORAD six months ago, it’s a complex system, but I am certified on it,” said Matt remembering how much of a nightmare the job was.

“Good, I need you to get to London as soon as possible. An SST will be leaving from JFK around 15:00 your time.”

“I take it this is a problem no one has been able to grasp.”

“That is an understatement, from what Ford tells me the system works fine with the test sets but it starts having problems with live traffic. The factory says it’s because of the heavy encryption we use.”

“Commander they’re full of it. That’s not the issue, although I don’t know of anything that could cause that particular symptom. It might take a week or two to figure it out. You haven’t dropped your other lines yet have you?”

“No and that’s part of the problem. The IAC is looking to save a buck.”

“All right Ed I’ll be on that flight. I’ll see you soon.”

Matt hung up the phone and looked at his wife.

“You heard?”

“Yeah, you’re going to London. Why?”

“I’m afraid so, some problem with the new fiber communications system. It has Keith stumped. Can you break away this week?”

“Not really, Blake screwed up the finance figures on the DSV project. It’s going to take me all week to straighten them out. I have to present them to the commission next week and I was going to see if you could go over with me, for a couple of days,” she said not looking forward to unraveling the mess.

“It looks like I’ll already be there. Well let’s get this finished so I can pack. My flight leaves JFK at three.”

“Never mind this for now, we can worry about it when you get back,” she said taking his hand and headed for the stairway.

“Where are we going? I don’t have to pack yet.”

“Packing isn’t what I have in mind, you’re going to be gone for two weeks, and I’d like to say goodbye to my husband properly,” she said with an impish grin.

“Oh, I think I like where this is going.”

That afternoon, Virginia and Matt landed their single engine Mooney at Kennedy International. It was around two and the highways were all jammed up for one reason or another but the plane ride was only thirty minutes long. She taxied the small aircraft off the runway and headed to the Shadair terminal.

“I’ll bet the tower is scratching their heads on this clearance,” said Matt.

“Yeah, I didn’t think about it because normally I’m flying a Lear when I use that code. I wouldn’t be surprised to find security waiting for us at the terminal.”

“Oh, you mean the goon squad.”

“Relax Matt, you’re part of the family now,” she said with a laugh.

“Gin, did you hear that new song on the radio yesterday?” he asked changing the subject.

“You mean **UFO Rocks**? I did, and the name of the band is the Saucers. At least your country music is down to earth. I don’t know what I’d do if you were into that kind of music,” she said factiously.

“Admit it, you’d still love me.”

“You, yes, the music well, you’d be spending a lot of time in your ham shack if you wanted to play that stuff.”

“I was waiting for General Jim to have Ed haul them in for a music video.”

“I still can’t get over you calling Henderson that,” she said.

Ginny pulled the aircraft into an unused spot and shutdown the engine. As expected, security was there to greet them along with Captain Bill Johnson.

Captain Johnson came up to the door that Matt had just opened.

“Hey Bill, what’s going on?” asked Ginny.

“Hello Colonel, I’ve got orders to take off as soon as your husband is aboard. They come from the old man himself. Mr. Hewett, these men will grab your bags for you.”

“They’re the two in the back.”

Matt turned to his wife, “Well you might as well get back in the air. I’ll see you next week when you come over.”

“Count on it,” she said as they embraced. “Have a safe flight Matt, I love you.”

“Be safe Virginia, I love you too,” he said as he gazed into her eyes, not wanting to say goodbye.

Matt quickly kissed her one last time and got out of the plane and closed the door while waving to his wife. He walked to the waiting SST along with Bill Johnson. When he reached the hatch he heard Virginia start the engine of the Mooney and he turned to watch her taxi away. He found that he was already missing her.

Ten minutes later the Shadair SST was next in line for takeoff. Matt could just imagine the furor in the cockpits of the other aircraft that had been bumped by the priority clearance. Twenty minutes later the SST was over the North Atlantic bound for Heathrow International in London.

Matt arrived at HQ just after 17:00 and walked into the front door of the studio. Surprisingly he remembered exactly where Straker’s office was.

He opened the door to the reception area and walked in.

“Hello Janice,” he said to Miss Eland, Straker’s secretary.

“Oh hi Matt; how’s Ginny?” she asked pleasantly.

“She’s well, she sends her love.”

“Are the two of you settled in yet?” she asked.

“Just about, we were hanging pictures in the living room when Ed called over,” he said ruefully.

“Well make sure you give her my best when you get home.”

“She’ll be here a week from Monday, but I’ll tell her when I call her tonight,” he said wishing she would be over sooner.

“Please do.”

Matt walked into the inner office as the door closed behind him. He opened the cigar box on the desk and spoke into it.

“Yesterday is already a dream, and tomorrow is only a vision, but today, well lived, makes every yesterday a dream of happiness, and every tomorrow a vision of hope.”

Voiceprint positive, Hewett, Matthew R.

“I guess there’s no fooling you,” Matt said to himself, as he pushed to button to activate the lift.

He was still amazed at the scope of the organization he now was part of, it was an honor indeed, but he made sure that his SHADO ID was visible as he was not very well known at HQ and he didn’t want to risk the wrath of the goon squad as he still called it. When the lift reached the bottom he walked out and headed for the control room.

The control room was a busy place and Matt noticed the alert indicators were at condition red. Straker was standing behind Ford watching the situation screen. The three dimensional display showed three alien craft heading to Earth. It looked to him that the Moonbase interceptors were getting into position for an attack.

He knew very little about the procedures used to intercept the UFO's before they hit the atmosphere, other than what his wife had told him. He was still in awe of her knowledge and abilities.

“The interceptors are in position,” said Ford.

Straker nodded watching the screen as the space interceptors closed and attacked. Three new blips appeared on the screen. Matt knew these were the single nuclear missiles carried by the SHADO spacecraft. He watched in silence as the missiles closed on their targets. A few

minutes later the blips for the alien craft disappeared from the screen.

“Moonbase confirming; targets destroyed,” said Ford.

Straker walked to the communications console and flipped up the mic, “Pass my congratulations to the interceptor pilots, Colonel Barry.”

“I will sir, thank you, Moonbase out.”

The Commander turned and saw him standing on the upper platform.

“How long have you been standing there Matt?” he asked somewhat surprised.

“Long enough to see you score three more for the good guys, Commander,” he said as he shook his hand.

“I wish they were all that easy. You remember Captain Ford, don’t you?”

“I do, nice to see you again Keith.”

Keith and Matt shook hands vigorously.

“Keith, why don’t you take Matt to his quarters so he can stow his gear then we can meet in my office in about fifteen minutes.”

“Yes sir, this way Matt,” said Keith.

As they walked to the living section of HQ the two men continued their conversation.

“Well Matt, how are you and Colonel Lake settling in?”

“We bought a new home in western Connecticut a week after we got married and we moved in about three weeks ago. The house I owned was too small for us and the commute that Virginia would have to make every day was way too long. She was flying our single engine aircraft from Providence to a field not too far from the New York research facility every day for a couple of weeks.”

“That must have taken a lot out of her.”

“Yeah, it did, between that and moving, by the end of that month we were both bushed. But we’re just about done now, just some hangings in the living room left to put up.”

“Make sure you tell her she’s missed here at HQ.”

“I will, I know she feels the same way,” said Matt as they arrived at his quarters.

Fifteen minutes later Straker, Ford and Hewett were sitting at the conference table looking over the notes Ford had taken while troubleshooting the system. Keith had covered all the obvious stuff as well as some of the more in depth analysis. Matt wasn’t at all surprised at the extent of this man’s knowledge. He hoped to learn a few things from him as well.

“Well Commander, looking at this I can tell you this is not going to be an easy problem to solve. Captain Ford has made all the standard tests as

well as a few abstract tests most people wouldn't dream of. He's pretty much covered everything the SSC would take you through on the phone and then some."

"I don't get it," said Keith. "We bench tested all the components before they were installed under actual operating conditions. We even put live data through the setup in the lab to verify operation under real world conditions. The system worked flawlessly."

"Could it be an incompatibility with our old equipment? We are still using some of the channel banks correct?" asked Ed.

"I'm afraid not Commander, the WAN side of a channel bank is a T1 or DS1 standard. And it works fine on the leased lines. Instead of going into a leased line you're plugging into a DSX3 multiplexer which multiplexes 28 T1 lines at 1.544 Mbps to a DS3 rate of 45Mbps. These are all industry standards, which the phone companies have been using for a while. If it

were an incompatibility the test sets would show it,” said Matt.

“And you don’t think the data encryption is the problem?” asked Straker pointedly.

“No Commander and I’ll tell you why. As far as the system is concerned data is data. Ones and zeros, that’s all. It is spit out in pre defined blocks or a packet as it’s called in the IP world. The only way the encryption algorithm could cause a problem would be if it was changing the packet size without modifying the headers and if that was the case you would see the same problem on the old system.”

“That’s just great! So how do we go about fixing it?” asked Straker clearly upset now. He hated it when technology did not cooperate.

“A system level approach may not work here. What I plan on doing is removing two of the affected components and doing a functional analysis on the bench. Keith and I will make sure the items pass all the specs and look for

evidence of cumulative timing errors. If the equipment passes those tests, we'll reinstall the modules and start troubleshooting from one end to the next. When we get to the point where we have problems, we'll focus our efforts there."

"Keith, you've been quiet, any thoughts?"

"The plan that Matt has outlined makes sense. The only thing I not sure of is how are we going to duplicate the traffic density of a fully loaded system."

"We're going to cheat, Keith," said Matt. "We'll test the individual T1's first and if they pass, we'll loop them through so that the signal runs back and forth between the multiplexers. That will put traffic on all twenty eight of the T1 channels. If it's a latency issue it should show up on that test."

"Well Keith?" asked Straker.

"It's a sound idea Commander. We've tried everything else."

“All right gentlemen, keep me posted. I’ve got a two hundred pound gorilla on my back about this,” Straker said ruefully.

“Tell the General that Matt Hewett says he should relax.”

“I don’t even want to tell him you’re here until this is fixed. Henderson will want to come down and talk about old home week. I still don’t know why he didn’t do it with Virginia. I found out they knew each other by accident a year ago. He fought me tooth and nail over her promotion. And she never said anything either,” said Ed still confused by that fact.

“She wouldn’t have, she gave her word. Henderson was probably trying to avoid looking like he was playing favorites. We talked about that situation one night. The whole thing really bothered her as she wanted to tell you, but the General asked her to keep it quiet. She didn’t even realize who he was until you introduced them after she finished her tour on Moonbase.”

“I see,” he said, seeing the situation in a new light. *That makes perfect sense I should have seen that,* he thought to himself. Ed remembered the day that he introduced the General to Lake, and he thought he saw recognition and surprise in her eyes. But she never said anything and he didn’t pry. He watched as the two men left his office.

Matt and Keith walked to the elevator that led to the communications lab below the main complex.

“So Keith, how long have you been with SHADO?”

“Almost fifteen years. I was one of the first recruits, but I didn’t get assigned to HQ until about two years before we installed the utronic equipment.”

“What did you do before you joined SHADO?”

“I was a military communications specialist during my time in the service. When I left the RAF I became an investigative reporter,” said Keith remembering the circumstances that landed him here.

“That’s where I know you from, that was what, sixteen years ago?”

“That’s right. That job is what inadvertently got me into SHADO.”

“I see you dug to deep and they gave you a choice,” said Matt.

“That’s right. Commander Straker can be pretty persuasive.”

“I’ve noticed. But from what my wife tells me, he’s the most dedicated man in this organization, and the best boss she’s ever had.”

“That is true, although he has his moments,” Keith said recalling some unpleasant moments on the Commander’s carpet.

“Yeah, she told me that as well, but according to her, his wrath is never out of malice and that speaks highly of him. I’ve only met him a handful of times but I’m impressed with what I see. But how about you Keith; wife; family?”

“I got married about six years ago. Carol and I have two children, our son David is five, and our daughter Sarah is four.”

“I’m surprised that you could have a family life with all the security issues,” said Matt pensively.

“It used to be much worse. The Commander modified the security protocols not long after his divorce. At least four other marriages failed during the startup period.”

“Your wife doesn’t know what you really do, does she?”

“No the IAC would never have approved that, but our spouses know that we are part of a military organization. In order to be in the program my wife had to go through the full G6

as well as a complete psychological workup. The procedure is almost as extensive as a recruit would receive. If they pass the security assessment they are told certain aspects of our positions. All the interceptor and Skydiver crews go through it as a necessity. The procedure is optional for HQ personnel but still highly recommended. After the program was instituted the divorce rate dropped significantly.”

“That must keep Dr. Jackson pretty busy.”

“Yeah, Jackson and his tender mercies, I don’t like him poking around in my head,” said Keith a bit testily.

They walked into the lab as Matt finished, “You know Keith; I think he’s much more human than people give him credit for.”

“We’re talking about the same person right?”

“I had a chance to talk to him at length during my evaluation. The man has a deeply rooted spiritual side,” said Matt.

“You’re putting me on right?”

“Virginia had the same reaction when I told her, but trust me there’s more to that man than meets the eye. I think he keeps his distance because of what he has to do.”

“Well you can’t prove it by me, the man seems like a cold fish,” said Keith remembering his last unpleasant visit with the good doctor.

They walked up to the bench and surveyed the equipment that was laid out.

“Well let’s get this set up for an end to end test, I’m going to need two data encryption units,” said Matt.

“All right, but what are you going to do with those?”

“I’m going to put them between the test sets to simulate encrypted traffic.”

“I didn’t think about that,” said Keith. “Good idea.”

The two men got to work setting up the equipment for the diagnostic procedures.

Colonel Wallace walked into the Commander’s office with two cups of coffee. He was busy looking over a report and didn’t look up right away until he smelled the aroma emitted by the steaming liquid. Looking up he saw her handing him a cup of the steaming liquid.

“That smells good Jen. Where did you get it?”

“Well I can tell you that it wasn’t in the mess hall, I don’t know what kind of reconstituted stuff they serve but it sure as hell isn’t coffee.”

Ed gave her a smile as he took the cup from her.

“Thank you Jen, I do appreciate it.”

“You looked like you could use it sir,” she said as she sat down in the corner seat next to the

desk. “When I saw you earlier you look like a cat had eaten your favorite canary.”

Damn she’s perceptive, he thought.

“You miss her don’t you?” she asked.

“Miss who?” Ed asked not very convincing.

“You know who I’m talking about.”

“Life goes on Colonel,” said Ed getting upset and then realizing that he just broke his promise to Virginia about first names.

“Ever since Alec passed away she’s been my best friend, Jen,” he said more softly.

“I think she was far more than that, sir.”

“Jen, I really don’t want to talk about that,” said Ed more sharply than he meant to.

Jennifer Wallace seemed unruffled over the reprimand.

“I’m sorry, being a native New Yorker; I’m used to saying what’s on my mind. Ginny tried her damndest to break me of it, but it’s too

engrained in me sir,” she said more in a matter of fact way, than apologetically.

Ed looked up at her emerald green eyes noticing how captivating they were. He still didn’t really know her that well but she was easy to talk to.

“I’m sorry Jen; I didn’t mean to be sharp. To answer your question, yes she was.”

“May I ask why you never told her?” she asked quietly.

Straker seemed to be lost in thought for a moment before he answered.

“I don’t know; protocol maybe, fear that it wouldn’t work, and maybe fear that it would. Take your pick,” he said contemplatively.

“It must be difficult having her husband here,” she added.

“Yes, it is. But I knew the first time I met him that he was a good man. That takes some of the sting out of it.”

Jen regarded him for a moment, not saying anything.

“Well sir, I have to get back to duty. I’m due to relieve Colonel Grey.”

As she got up to leave Ed called her, “Jen?”

“Sir?”

“Thanks, for the coffee.”

“You’re welcome sir.”

Jennifer Wallace was almost twelve years younger than Ed but she carried herself much in the same way that Virginia did. She was confident in her abilities and in herself. Ed began to appreciate her and saw why Virginia was so impressed with her.

He also, for the first time, noticed how beautiful she was.

Chapter 2:

Matt found it hard to get to sleep the first night at HQ. He looked at the clock and saw that it was almost two in the morning. *I'm not going to be worth a damn tomorrow*, he thought to himself. The truth was he missed his wife and this was the first time they had been apart since the night he proposed on the dance floor, two months ago.

Knowing that staying in bed tossing and turning was going to accomplish nothing; Matt got up and got himself dressed. He decided to take a stroll by the control room and see if anything was going on. He knew enough to stay out of the way if an alert had been called.

He walked into the control room and spotted a familiar face at the command console. He walked up to the young red head and said just loud enough for her to hear, "I see they suckered you into the low watch."

She turned to look at him and her face broke into a smile when she recognized him.

“I guess security left the door unlocked again, how are you Matt?”

“I’m fine Jen, Ginny sends her love and she wants to know when you’re getting hitched?”

“Tell her I have to find the right guy first, I mean just because I caught the bouquet doesn’t mean Mr. Right is going to fall out of the clouds. That kind of thing only happens to her,” she said ruefully.

“Yeah, I still can’t believe it. Thirty three hours, and thirty three years.”

“You know Matt, when she told me the story I almost...no I did cry,” she paused. “So what are you doing up so late?”

“I can’t sleep, so I figured I’d come out here and see if our alien friends were up to no good.”

“It’s been quiet since the three that were splashed this afternoon. So what’s wrong, you missing your honey?” she asked teasingly.

“This is the first night we’ve been apart. I mean we’re still newlyweds.”

“Oooo, I see some fireworks when you two get back together. So how long are you going to be here?” she asked pleasantly.

“At least a couple of weeks; in fact, Ginny is supposed to come over next week to give a report to the commission. I’m going to try to talk her into staying until I’m done.”

“I’m sure you won’t have to do much talking. I talked to her earlier today and she told me that she misses you terribly.”

“How are you doing Jen? It must be a big change working for the Commander directly?”

“I don’t know yet. He’s nothing like any man I’ve ever met. His responses are in no way a typical male response. It’s enticing and I certainly see why Ginny was so taken by him for so many years...oops maybe I shouldn’t have

said that,” she said putting her hand to her mouth.

“No that’s quite all right. Virginia and I don’t keep secrets from one another. She told me all about her past infatuation with the Commander. She gave up on him about a year ago. I still tease her about it every now and then. She’s really quite beautiful when she’s angry.”

“You like to play with fire don’t you Matt?”

“It’s all in good fun; she’ll give me that look. You know the one; hands on the hips, head cocked slightly, a look that would freeze water. I just smile at her and then she starts laughing and then she’ll throw a pillow or a cushion at me. I’ve only pushed the limit once. She was sitting next to the pool reading a book. She had her bathing suit on so I decided...”

“You didn’t?” she asked as her eyes went wide with disbelief.

“I decided that it would be fun for us to go for a little swim, so I walked over to her and got her attention. When she put the book aside I picked her up and carried her to the deep end and jumped in with her. You see Virginia doesn’t like to just jump in. Needless to say she wasn’t pleased; she didn’t talk to me for ten minutes,” said Matt, fondly remembering the moment.

“You’re lucky that she didn’t do something else to you. Has she taken her revenge?”

“Oh yeah; the next morning I had to get up early to fly into Boston to meet with a client. When I got up I thought she was still asleep. So I quietly get into the shower. Well now, she wasn’t sleeping at all, while I was in the shower she went downstairs and closed the hot water valve. Boy did that wake me up. I get out of the shower to see her leaning against the door frame arms crossed with a wicked grin on her face.”

“Did she give you the what for?” asked Jen as she giggled.

“Not in so many words, but she did mention something about being nice and comfortable when some unnamed individual picked her up and tossed her in the pool. Touché!”

“You should be careful; ask Paul Foster about her temper.”

“I heard, speaking of Paul, I didn’t see him today.”

“He has the day watch; I think the Commander is going to be in as well,” she said contemplatively.

“I suspected as much; this communications glitch has got him worried. I only hope the overnight test Keith and I are running will give us a direction to go in.”

“Well you should try to get back to sleep; it sounds like you’re going to be hard at it tomorrow. Why don’t you call her Matt? It’s only ten thirty in the evening over there.”

“Yeah, maybe I will. She should be having her tea about now. Thanks for the chat Jen. I’ll give Ginny your love.”

“Please do. Good night Matt.”

He walked back to his room hoping that he would be able to sleep after he talked with his wife.

The next morning Matt was already in the lab looking over the results of the overnight test when Keith came in. About halfway through the night it had started acting up but when Matt bypassed the encryption modules, the system ran error free. *This makes no sense at all!*

“Good morning Keith.”

“You’re hard at it already?”

“Yeah, I didn’t sleep well, so I started in early. Is the Commander in yet?”

“No but I would expect him shortly, he’s got a real burr under his saddle over this,” he said with apprehension in his voice.

“I figured as much. Anyway the test started failing about three hours after we started it. Now here’s the part that doesn’t make sense. If I remove the encryption modules from the circuit the system runs error free. And if I put the encryption modules back to back, bypassing the system they also work fine.”

“So we’re back to square one?” asked Keith.

“Yes and no. We’ve simulated the problem here on the bench so let’s start with the multiplexer unit. What I want to do is take a dual trace oscilloscope and put one channel on the fiber output of the transmit side and monitor the TX common signal with the second channel. We’ll use the second channel as the sync source. Do we have a high speed logic analyzer?”

“Yes we do, I’ll get it.”

Keith walked to the other side of the lab and rolled the large monitor over to the bench.

“How do you want to hook it in?”

“For now let’s just tap off the channel outputs on the back of the scope,” Matt said.

“You want to sync channel two?”

“Yes, please.”

Keith hooked up the analyzer and the two men watched the logic wave patterns come up on the screen. Every few minutes the patterns would shift and the waveforms would go out of sync with each other.

“Did you see that Keith?”

“Yeah, it’s losing sync.”

“More than that, the data pattern is changing. Let’s start a chart recording of this.”

Keith switched on the storage function of the analyzer and inserted a diskette.

“I’ll save it to disk and we can print it later.”

“Oh, that’s a good idea. Who here at HQ is savvy with computer machine language?” asked Matt.

“Ironically your wife is probably the best person for the job.”

“Yeah, but she’s tied up this week, anyone else?”

“Well there’s Colonel Wallace or Lt. Colonel Kelly.”

As they were talking Commander Straker and Colonel Wallace walked into the lab.

“So gentlemen, how are we making out, is it fixed yet?” Ed asked hopefully.

“Nothing would please me more Commander, I could go home then. We did manage to simulate the problem here; unfortunately it leaves me with more questions than answers,” said Matt.

“We’ll that’s a start right?”

“Yeah, it is. Commander we’re making a disk of data patterns. Does Colonel Wallace have time to review the logic sequencing?” asked Matt.

“She’ll make time; any resources you need to solve this will be at your disposal. If I’m not here tell the duty officer what you need.”

Matt removed the disk from the logic analyzer and handed it to Wallace.

“What am I looking for Matt?” asked Jen.

“Track one contains the data stream from the fiber output of the multiplexer. Track two is the data coming off the TX common card. They are supposed to be exactly the same. But for some unknown reason the two signals don’t match for brief periods of time when the encryption algorithms are used. I need to know if the packet headers are being modified by the encryption routines.”

“This will take some time,” she said.

“I figured as much, but it will take what it takes. I’m beginning to think I’m looking at multiple problems here.”

“We’ll let me know what you find,” said the Commander as he turned to go.

“Will do Commander,” said Matt.

When Straker had left Matt looked up at Jen and Keith.

“Matt you look like hell,” said Jen.

“I’m dying for a good cup of coffee, not that bilge water they serve in the mess hall.”

“You’re lucky you’re not on Moonbase, I hear the stuff up there is worse. I do however have a solution. Do you want some too Keith?”

“I’d love a cup Colonel, thank you.”

“I’ll be back in a bit.”

When Jen had left Keith looked over to Matt.

“That failure interval looks quite regular,” Keith said.

“You noticed that huh? It’s exactly two hundred and thirty seven milliseconds of data, spaced six

point three seven seconds apart. That's a tad too regular for a random failure."

"What else could it possibly be?"

"I'm not sure; I've never seen a failure like this before in my life Keith. This is what I'm going to do. The laser transmitters contain a randomizer circuit. Most of it is on one chip and it's the only circuit on the board that manipulates the data stream in any way."

"What's the purpose of the circuit?" asked Keith.

"These boards use solid state laser chips that use the thirteen hundred nanometer wavelength. The duty cycle is supposed to be kept at fifty percent or below. When there is no data coming into the multiplexer the randomizers keep the lasers from duplicating the all ones pattern and burning out the laser."

"They're that sensitive?"

“Yeah, they are and the cost to the factory is three thousand dollars apiece,” said Matt.

“For that little thing, somebody is getting rich.”

The laser was a sixteen pin chip with a fiber optic pigtail coming out of one end. It could fit into the palm of a hand.

“Let’s change the randomizers on these four boards, and then we’ll rerun the tests,” said Matt as he activated one of the soldering stations.

A few hours later the repaired multiplexer units were running flawlessly and both Matt and Keith were sure that they had found the problem. That is until another problem reared its ugly head.

“I don’t get it Matt, it was working fine.”

“Let’s put the routers back to back and make sure they’re okay.”

The two men disconnected the routers from the multiplexers and connected the two routers together. Matt looked at the test set and saw that the errors were still present.

“Well that explains some of why this was so hard to find. We were looking at multiple problems,” Matt observed.

“But why did it run flawlessly for almost four hours?”

“I don’t know Keith; it could be a heat problem. Let me log into this router and look at the firmware.”

Matt took out his portable computer and plugged it into the console port on the router. When the system had booted up he opened a terminal screen and logged into the router. He looked through his notebook and compared the directory listing and firmware revision numbers to the list he had written down. He found one file that wasn’t on his list.

“Keith did you or anyone else, add any exe or script files to the configuration directory?”

“No, the units came preconfigured from the factory. Why?”

“This file, sliv.exe, doesn’t belong here.”

Matt set the computer up to do a tftp transfer and downloaded the file to his computer. As soon as he did the antivirus routine on his computer flagged and quarantined the file.

“Well that’s a big how do you do.”

“A computer virus?” asked Keith watching over his shoulder.

“It would seem that way, and a few of the file sizes in the router have been modified. Keith, do we have a spare that hasn’t been touched yet?”

“Yeah, I’ve got one more left. Let me get it.”

While Keith went to the storage area to grab the spare Matt checked the other router finding the same problem. *This is damn peculiar.*

“You found the same problem with the other one I take it?” asked Keith when he came in.

“Yeah, the same unknown file, but the modified files were larger.”

“That one had been in service quite a bit longer.”

Matt felt an icy ball form in his stomach.

“Keith, were these units hooked up into any critical systems?”

“Yes, the primary link to the SID ground station a few miles away.”

Matt remembered what Virginia had told him about the space tracking network and how the three SID satellites were the backbone that joined the system together. Without them the system was a cumbersome hodgepodge of independent tracking units.

“Doesn’t SID use the same switches and routers for the network communications?”

“Yeah it does; the same model routers....” said Keith his voice trailing off.

“If this virus got into that network, it could disable the entire system,” said Matt voicing what they both knew.

Keith walked quickly to the phone and dialed a number.

“Commander, you had better get down to the lab. We have a problem.”

Chapter 3:

“So would someone please explain to me how the hell a computer virus got into this equipment?” asked Straker clearly upset.

Matt had never seen the Commander this angry before although his wife had warned him of his legendary wrath. Seeing it first hand was not a pretty sight to behold.

“Well Keith?”

“I don’t have an answer Commander. I don’t know of any way this could have happened.”

“I have a thought on that,” said Matt.

“Well Matt, don’t keep me in suspense,” Ed said somewhat tersely.

“It’s a pretty wild idea Commander.”

“Trust me it won’t be the first time I’ve heard a wild idea.”

“Keith and I found four boards in the multiplexer unit that had defective components. The integrated circuits we replaced are used to keep the duty cycle of the laser at or below fifty percent. The problem with the multiplexer was eliminated once the boards had been repaired.”

“All right, but what does that have to do with the computer virus?” asked Ed impatiently.

“Bear with me Commander, I’m getting there. One of the things I noticed about the failure was

the precision in the timing. The interval between failures was six point three seven seconds, and I suspect that the precision was much higher than that. The other thing that caught my eye was that the failure took the form of a two hundred thirty seven millisecond data burst. When I had Jen run those logic comparisons I expected her to find that the packet size was being altered somehow. It seems that the chips were sending a data stream aimed at the routers in the system. I think you are looking at a case of sabotage.”

Straker’s look was unreadable as he contemplated the scope of what he had been told. While he considered the matter Colonel Wallace came into the lab with a printout in her hand.

“What did you find Jen?” asked Matt.

“There’s no question about it. The data burst was a telnet session into the routers, and it

looks like it was trying to download one file, sliv.exe.”

“That’s the virus filename,” said Matt.

“Do we know what it does?” asked Ed.

“Not yet, Commander, but I’m sure it’s nothing good. I’ll give Jen the file and hopefully she can make some sense of it.”

“All right,” Ed paused and then turned to Ford.

“Keith, take the suspect components down to Colonel Kelly and have him open one of them up. I want to know what is inside them.”

“Yes sir.”

Matt copied the infected file to a disk and handed it to Colonel Wallace.

“This is the file Jen.”

“Thanks,” she said taking the disk.

She walked out of the lab and Matt assumed she was going to the computer lab down the hall. He

figured that she had been up almost twenty hours herself.

“You suspect alien technology don’t you Ed?” asked Matt after Jen had left.

“Yes I do.”

“If that’s the case you’re going to find the world’s smallest computer in those chips. It would have to discover all of the IP addresses used in the system in order to download the virus.”

“We’ve seen them that small in medical implants we’ve removed from compromised operatives.”

Ed regarded Matt for a moment before he spoke.

“You’re not going to like my next decision Matt, and to tell you the truth neither am I. She’s still my best friend.”

“You’re sending Virginia to Moonbase, aren’t you,” he said.

“If we lose the SID’s someone is going to have to cobble the tracking network back together. She’s the best person for the job, but I’m not going to lie to you, she’s going into harm’s way.”

Matt regarded the Commander with mixed emotions; he finally said, “I knew what she did when I married her Ed. As her husband I don’t like the idea one bit, but as a member of SHADO; well I took the same oath that both of you did. I understand what’s at stake here.”

“Let’s go to my office, we’ve got a phone call to make.”

Virginia had gone into work that Sunday afternoon to catch up on the finance figures for the DSV project. She was hoping to get a jump on the work so she could leave before the end of the week. She knew Matt was up to his eyeballs with this communications problem and he wasn’t used to dealing with the Commander.

She hoped to get over there early and run interference for him.

She was startled when her vidlink buzzed.

“Ed what are you doing in on a Sunday?”

“I could ask you the same question, but that’s not why I called. This communications problem is much more widespread than we thought. The entire tracking network is at risk. Do you remember when we lost SID a few years ago?”

“Yes, all too well...” she paused. “You need me up on Moonbase don’t you?”

“I’m afraid so, and once you get there I’m initiating Washington Square.”

“Shutdown!”

“Yes, I don’t want anyone en-route to or from Earth until we get this problem straightened out. How soon can you be ready?”

“I assume I’m leaving from the New York facility.”

“Yes I’ll schedule the flight to leave as soon as you can get there.”

“All right I’ll be there at 19:00. Is Matt there by any chance?”

“He’s right here.”

Ed got up from his chair and said, “I’ll be in the control room.”

“Thanks, Ed,” said Matt as he sat down.

“Hey there,” he said to his wife over the vidlink.

“Hey yourself, you don’t know how much I miss you.”

“Yeah, I do, and now you’re off to Moonbase. Do you think I could get away with stowing away on the module?”

“You might if I was leaving from London. So what the hell did you and Keith find?”

“Gin it was the strangest thing I’ve ever seen. One of the integrated circuits in the laser board

had some type of artificial intelligence routine built into the chip. It would search the network and open a telnet session downloading a virus to all the routers in the system. As far as we know every multiplexer in the system had these chips.”

“Oh my God; is this alien technology?”

“Ed seems to think so. Lt. Colonel Kelly is examining one of the devices now, and Jen is decompiling the virus to see what does.”

“I’m confused, what does this have to do with SID?”

“While they were installing and testing this system it was hooked into the SID uplink facility a few miles from here. If that virus got into the satellite network...”

“It could shut it down without warning, leaving us defenseless,” Virginia finished. “We almost lost Moonbase the last time this happened.”

“I’m painfully aware of that honey. But Ed’s right you’re the best person for the job.”

“I’m sorry Matt, I didn’t mean...”

“Don’t worry about it. Just come home, safe, because if you don’t, I’m going to throw you in the pool again.”

That comment brought a smile to her face.

“You still have penance to do for that you know,” she said seductively.

“Yeah, I know, what did you have in mind?”

“Well I could be really mean and tell you I want to go to the opera, I’ve always liked *Wagner*,” she said with a grin. She knew Matt hated opera; it was the only interest of hers that he couldn’t stand. “But I’ll be nice and let you take me to see *Cats* instead. The show is coming to New York City in a few weeks. That’s assuming that they let me out of that tin can on the moon.”

“Virginia, if you get home safely and you really want to go see *Wagner* I will take you, no complaints, and I promise I’ll even enjoy it.”

“No I wouldn’t do that to you, you’re being punished enough already. We both are.”

“I know, all kidding aside, you stay safe up there, okay.”

“I’ll do my best, I love you.”

“Love you too Gin.”

Matt sat back in the Commander’s seat for a moment, thinking about the awesome responsibility that sat on the shoulders of the man who normally occupied this chair. Even to sit here as a guest, was an honor to which he felt unworthy. Up on the lunar base were twenty five souls, soon to be twenty six. While Matt only knew two of them, Commander Straker knew each one of them. *And if God forbid if something happens, Ed would suffer each loss as much as I would suffer the loss of my wife.*

A few hours later Ed, Keith, Jen, and Matt had gathered in Joe Kelly's lab looking at two pictures projected on the screen.

“These are high resolution macro photographs of two integrated circuits,” said Lt. Colonel Kelly, explaining his findings. “The image on the right is of a standard MC10134 ECL multiplexer taken out of spare stock. The photo on the left, also an MC10134, is the chip that Mr. Hewett pulled out of one of the laser transmitter boards a few hours ago. As you can see from the pictures the internal structure of the substrate is different. If you look at this section in the lower left corner of the substrate you see extremely high component density. This technique is known as VLSI or Very Large Scale Integration. It's just now being researched by most of the civilian major chip manufactures. The process has been around with military contractors for a few years.”

“All right Joe, what is the significance of this?” asked Ed.

Kelly flipped to the next slide and continued, “If you look at these photos you will see a close up view of the VLSI section on the right. The image on the left is a close up view of the chip found inside an alien medical implant found in the skull of one of our operatives a few years ago. While there are differences in the circuits it’s plain to even a casual observer that this technology has the same source.”

“Alien technology,” Ed said aloud. “Jen, how is the analysis coming along with the virus program? Are we any closer to an answer there?”

“As you know, virus programs are a rudimentary form of artificial intelligence. They have the ability to reproduce and propagate through a system in a relatively short period of time. This particular program is extremely complex; we still don’t have any idea what it is

designed to do. So far the computer analysis has not been able to decipher its purpose.”

“Keith, how are we coming along with the communications system?” asked Ed.

“We were able to identify and isolate all of the components affected by the virus. Matt and I wrote up a procedure for reworking the laser boards and purging the system of the virus. By this time tomorrow we should be ready for a system wide test.”

“That is good news,” said Ed. “What about the SID network Keith?”

“All the diagnostics indicate that the virus never made it to SID. We can’t find any trace of it in any of the three satellites. I think we dodged the bullet sir.”

Matt sat and listened to the briefing still having a feeling of unease that he could not explain. *This was too easy, we missed something...*

“I see something hovering around you Matt. What are your thoughts?” asked Ed.

“It strikes me as very odd that the aliens would have been so sloppy in their execution of a plan to disrupt our communications. There are too many unanswered questions here. Where did these chips come from? How did the aliens know SHADO was going to implement a Mark V fiber system? And if the only purpose of the virus was to disrupt the fiber system encrypted data, why can't we see that in the programming? This was too easy Commander; I just have a feeling that we're overlooking something.”

“Those are all valid questions and hopefully our team will be able to pull together some answers. Do you have anything else on your mind?”

“Is there a way to get someone out to one of the SIDs and physically verify the programming?”

“How familiar are you with orbital mechanics Matt?”

“I do know that the three satellites are parked on the libration points, L3, L4, and L5 if I’m correct.”

“That’s right, and the only booster capable of mounting a mission to those points is a Saturn V rocket. And I’m sure you know that NASA doesn’t give those away.”

“I take it we can’t reach them with a lunar shuttle.”

“They don’t have the fuel capacity, they could get to the L4 or L5, but they wouldn’t make it back.”

“I see. How would we have handled it if the satellites had been infected?”

“We would use the emergency restart procedure. It forces the satellite into a cold start configuration allowing us to reload the firmware through the service channel on the telemetry data stream. Because it effectively shuts down the tracking network, the routine is

a command level only procedure. Only the senior officers or I can initiate it. That's something I'm not ready to institute without a good reason."

Matt understood the situation that the Commander was in but he still trusted his own intuition. Every fiber of his being told him that they had been set up.

"All right people that's all for now. Jen I want you to get some sleep, you've only had two hours in the past twenty four. Colonel Blake is going to cover your shift tonight."

"Thank you, sir."

"Matt, let's take a walk to my office."

When they arrived in the Commander's office Matt sat in the corner seat next to the desk.

"Can I get you a drink Matt?"

"No thanks Ed; I very seldom touch the stuff."

“How about some coffee?” asked the Commander.

“I could go for that, as long as it’s not the oil pan drippings they serve in the mess hall.”

“If you think that’s bad you should have the stuff they serve on Moonbase.”

“I heard, oh my poor wife, she’s not going to be very pleased,” said Matt.

“Fortunately being in command does have a few perks,” said Ed as he handed Matt a cup. “Light and sweet right?”

“Yes, thank you.”

“I could tell you have reservations about my decision regarding the SID network.”

Matt nodded as he contemplated the subject.

“It’s just intuition Ed. I don’t like it when I don’t have all the pieces of a puzzle.”

“You sound like Virginia. But intuition has always been recognized as a command

prerogative. And I'd be a fool not to at least listen to what you have to add. Maybe between us we can figure a way to verify the system integrity without a cold boot. Besides if I were going to order that, we would have to isolate the rest of the space born tracking assets from the network."

"That's an idea, could we isolate a few of the satellites at a time and verify that the data isn't being altered in any way."

"Yes, we can have Virginia do it when she arrives. She'll be on Moonbase in another couple of hours."

"Are you still planning a shutdown, Ed?"

"Washington Square is set to be implemented as soon as that shuttle lands. How long it stays will depend on what results our tests give us."

"I hope I'm wrong Commander," Matt said contemplatively.

"That makes two of us."

Chapter 4:

The lunar module landed on Moonbase just before 03:00 GMT. Virginia had never seen herself making this trip again, not that she minded the ride. But as a newlywed, she was missing her husband and she didn't know when she was going to see him again.

She rotated her seat forward and climbed down the ladder remembering the first trip almost four years before. Her life had taken some interesting twists and turns since she had commanded Moonbase. She had gone from a three year stint as executive officer back to heading the research section; where she had started with SHADO. Her career had come full circle, as had her love life. She was now married to the man she had met when they were both children thirty three years ago and the magical thing about it was they didn't recognize each

other until a family friend showed them a picture from the past. Ginny marveled at the symmetry her life had taken.

“Ginny,” called a familiar voice from the reception area.

Virginia snapped out of her daydream and ran to meet Nina Barry, one of her best friends.

“Nina, how are you?”

“I should be sleeping but when I heard that you were coming to Moonbase I wasn’t going to miss the opportunity to greet you. So tell me all about married life.”

“It’s great, you’re going to find out soon enough, and how is Steve?”

“He’s well and I’m glad he’s up here with me and wasn’t Earth side when the order came through. We think the date is going to be sometime in December. I’ll let you know, you’re still going to be my matron of honor right?”

“Just try to keep me away. To answer your question, married life is great. We finally got settled in and...

“Red alert, red alert, interceptors immediate launch!” Carol Miller’s voice came over the PA system.

Ginny dropped her bags and the two women ran for the control sphere. Ginny quickly looked at the radar screen seeing multiple targets less than twenty miles away from the base. An icy ball formed in her stomach. They had gotten through somehow. *And we’re sitting ducks!*

Matt tossed and turned in restless sleep occasionally talking out loud in the dream he was living in. It was more like a nightmare and he sat up quickly yelling, “Virginia!”

He got his bearings and realized where he was. He looked at the clock seeing that it was a little after three in the morning. Knowing he wasn’t

going to get back to sleep he got dressed and walked out of the room only to be greeted by alarms going off in the complex. Matt broke into a full run to get to the control room. He caught up with Jennifer Wallace who was also running to the same way.”

“Jen, what the hell is going on?”

“Moonbase is under attack, the UFO’s came out of nowhere.”

The pair arrived in the control room and both walked to the command console where Colonel Geoffrey Blake was watching the battle unfold. He turned to the pair.

“What’s going on Geoff?” asked Jen.

“Moonbase caught them on local radar about twenty miles out; they were only able to get one set of interceptors off the ground. The other three were destroyed on the pads. So far they’re holding their own with the new particle beam weapons.”

“How many craft are they up against?”

“They initially reported nine. The interceptors got four and the ground weapons got three more. They still have two more to deal with.”

“How the hell did they get by the tracking network?” asked Matt.

Colonel Blake turned to him and said, “You must be Virginia’s husband; we’ve never been introduced. I’m Geoff Blake.”

“Matt Hewett,” he said as he shook hands with Blake.

“To answer your question, I don’t know; in fact the tracking system still indicates that there is nothing out there.”

“I was afraid of that. Is the Commander on his way in?”

“Yes, he had just gotten home when I called. He’ll be here in twenty minutes.”

“Moonbase to SHADO control, they’re coming around again. We’re not going to be able...”

The signal abruptly disappeared, leaving nothing but static on the screen. An eerie silence fell over the control room as everyone room paused in shock of what just happened. Matt felt his knees go limp and Jen grabbed his arm to keep him on his feet.

“Matt, are you all right?” asked Jen.

He just nodded not trusting himself to speak and he forcefully pulled himself together. He looked at the screen in disbelief. *Virginia, my love, my wife, the brightest star in my sky...*

An hour later, Matt was in the Commander’s office with Ed and Jen discussing the situation with the tracking system and the undetected attack. They had received a voice message from Moonbase stating that the remaining two UFO’s had been destroyed but the base had been

severely damaged. The aliens had effectively removed it as an obstacle to their plans. Matt knew that there were casualties on the base but he didn't know if his wife was among them.

Communications with the base was sporadic as the main antenna had been destroyed in the attack. Ed had ordered the SID's into an emergency restart mode, but the satellites would have to be reinitialized before they could be used. To make matters worse two of the three telemetry stations had been destroyed by UFO's that slipped in during the Moonbase attack. The third site located only a few miles from HQ was down for a maintenance cycle. It would take two days working around the clock to bring it back online. The only other place to load SID remotely was from Moonbase.

“So let me get this straight,” the Commander said already in a foul mood from lack of sleep. “We have no way the reload the firmware from Earth right now?”

“That’s correct Commander. The aliens just pulled our shorts up over our head and tied them in a knot. They pulled a beautiful number on us,” said Matt.

“I take it the purpose of the virus was to lure us into a false sense of security. Damn it, why didn’t I see that?”

“Don’t be so hard on yourself Commander,” said Jen.

“Why not, I had someone practically give me their game plan, a civilian no less and I waited instead of acting. It should have been as plain as the nose on my face.”

“I could have just as easily been wrong, it was a judgment call and you could have gone either way. This is war Commander, and both sides are playing to win,” said Matt.

“Do we know if the Moonbase tracking and telemetry antenna arrays survived?” asked Ed.

Jen looked at the preliminary damage report.

“According to this only the communications array was destroyed,” she answered.

“So we can reload the system from Moonbase?” asked the Commander.

“We should be able to, providing the telemetry equipment itself wasn’t damaged.”

“In that case Colonel, get packed. I need you to get that system back online,” Straker said decisively.

“I’m going to need some help sir.”

“I’ll go with her Commander,” said Matt.

Straker looked at him, “I appreciate the offer, but you don’t have the astro training and you’re not cleared for Moonbase.”

“That’s irrelevant Commander and you know it. You can authorize my clearance and the astro training is not a big deal either, at least not for this mission. You can’t send Keith because you’re going to need him to get the telemetry station back online. With all due respect sir, I

don't see that we have a choice. Besides I'm expendable."

"I don't consider anyone expendable, Matt."

The two men looked at each other the conversation being finished without words. Finally Ed spoke, "How soon can the two of you be ready to leave?"

Three hours later Matt watched the monitor as Lunar Module Five separated from its mother ship bound for Earth orbit. Matt would normally been exhilarated by the experience but his emotions were tempered by his concern for his wife. He didn't know if she was dead or alive as the initial report only indicated casualties. He looked over at Jen knowing that this was her first trip to SHADO's lunar base as well.

Matt watched the monitor as the sky went from deep blue to black as the lunar module gained speed and altitude. The digital altimeter showed

that they had crossed the one hundred fifty thousand foot mark and they were at Mach 8 and accelerating rapidly. In less than ten minutes they would be moving at seventeen thousand five hundred miles per hour at an altitude of four hundred thousand feet; Earth orbit.

Matt had always dreamed of being an astronaut but his eyesight precluded that from the realm of possibility. Even though his contacts corrected his vision to 20/20 he was still ineligible for the program. In fact it stopped him from pursuing a career in aviation all together.

“How are you doing Matt?” asked Jen.

“All right, I wish that I could enjoy this, I’ve always dreamed of being up here.”

“Don’t worry Matt, Ginny’s a survivor, she’ll be okay. Boy will she be surprised to see you.”

“I hope so Jen.” *Dear Lord, please let her be okay.*

Twenty minutes later the main motors fired for the TLI or the Trans-Lunar Insertion maneuver. Having followed the space race since its inception Matt knew all the catch phrases and buzz words associated with space travel. As he watched the stars on the monitor he was mesmerized by the absolute beauty of space. The Commander of the Apollo 8 mission was so moved by the view that on Christmas Eve in 1968, he and the other two crew members read a passage from the Book of Genesis. He remembered the furor it had raised back on Earth when the mission was over.

Matt switched the monitor to the stern view watching the Earth slowly recede, knowing that he was moving at a speed much faster than the astronauts of the Apollo program had ever

traveled. They would be on the moon in less than two hours.

At HQ, Keith Ford had his hands full, as he supervised both the communications refit, as well as the tracking project. It had been over four years ago when a UFO attack had taken out SID leaving the tracking system all but disabled. While Colonel Lake pieced together the space born assets, Keith had inherited the ground based portion. He had worked feverishly to restore his portion of the system and the Commander had written him up for a commendation.

Ford had saved all his notes and written a step by step procedure for implementing this protocol should it ever be needed in the future. But he never thought it would be needed with three SIDs. He was tying in the last assets when Straker walked over to his station.

“How are we doing Keith?”

“I’m just about ready to bring the system online, sir.”

“Good, Colonel Wallace and Matt Hewett should be arriving at Moonbase about now. Have we had anymore contact with them?”

“No sir, well nothing readable.”

“Very well, I’ll be in my office, Keith,” the Commander said quietly.

“Yes sir.”

The computer landing system on Moonbase was out and the pilot had to land using manual control. Captain Whitmore was piloting the ship and he had written the book on manual approach procedures.

“This is just like landing the old LEM,” he said to his copilot.

Skillfully Whitmore lined the craft up with the target markings on the landing pad and the

lunar module settled onto the pad. He shut down the engines and engaged the airlock docking procedure. When the ship was safely coupled with the airlock Whitmore keyed his intercom.

“We’re secure, it’s safe to disembark.”

Matt had already familiarized himself with the entry and exit procedures on the lunar module and he pressed the recessed button on his left armrest. His seat rotated forward and the ladder came into view. He climbed down and waited at the bottom for Jen.

“Let’s grab our gear and go find your wife Matt. We can start on the repairs right after.”

Matt followed her down the ladder that led into the reception dome. They saw people being brought into the reception area with various injuries. Straker had lifted Washington Square and this flight was due to leave for Earth with a load of casualties. Matt didn’t see Virginia among those heading Earth side, to him that

meant that she was either all right or....He didn't want to think about it.

Matt noticed a luggage set in the corner of the room that looked like Ginny's He set his bags down and looked at the tag.

"These are Virginia's," he said to Jen.

"The attack happened right after they landed. She probably went right to the control sphere. It's this way Matt."

Although Jen had never been to Moonbase she knew the layout well. As they walked, Matt looked around noticing that the damage on the outside was not apparent in here. That was until they reached the control sphere. The place was a mess of burned out circuits and relays. The lighting was poor and panels were hanging from the bulkheads by wires. Jen went over to the command console where Captain Johnson was working.

"Ayshea, where's Colonel Barry?"

“She’s in the infirmary with Colonel Lake. They were both injured during the attack.”

“What happened?”

“They were both struck when a panel let go over their heads, Ginny caught the worst of it.”

“I see. Ayshea, I need a complete damage report sent back to Earth, including operational readiness. Make sure it gets on that shuttle before it lifts off.”

“I’m just finishing it now ma’am. We’re transferring control downstairs to the auxiliary control center. There is too much damage up here to run the base.”

“All right, I’ll be in the infirmary, come on Matt.”

Virginia had been slipping in and out of consciousness since she had been brought in. When she came to again she was sure that she was dreaming until she heard his voice.

“Hey lady,” he said to her.

“Hey yourself, how did you get up here?”

“I convinced Ed that I was needed. We knew the base had been hit but communications has been sporadic. The only thing we knew for sure was the base had survived the attack. When nothing was mentioned about the tracking network, Ed assumed the worse. He was going to send Jen up here alone until I volunteered to come with her.”

“He agreed?”

“Well, after a fashion.”

“I would have liked to have been a fly on the wall for that conversation.”

“Jen can tell you all about it later. She was coming with me to see you but she got sidetracked. Speaking of which, I’ve got to give her a hand in auxiliary control. I just wanted to make sure you were all right.”

“I’m fine, now that you’re here, I missed you.”

“I missed you too.”

Matt leaned forward and gently kissed his wife.

“The uniform looks good on you Matt.”

He was wearing the standard silver suit worn by most of the male personnel on the base complete with the SHADO logo.

“Thanks honey. I’ll check in on you later.”

“Bye,” she said as she watched him leave. She slowly faded back to sleep.

Chapter 5:

The auxiliary control center on Moonbase was chaos as five people tried to squeeze into a room designed for three. Matt was getting frustrated as there just wasn’t enough room to work.

“Jen, are the SID telemetry controls topside still functional?”

“It’s a hell of a mess up there but let me check,” she said as her hands flew over the keyboard initiating the diagnostic routine.

A few minutes later the readout scrolled up the screen and Jen quickly scanned through it.

“Yes, everything we need is still functional topside with the exception of the antenna aiming routines. But that’s an automated system; once it’s on we don’t have to touch it.”

“All right let’s get everything moved topside, I need room to layout the test equipment and manuals.”

Ten minutes later they had moved to the control sphere and they staked out the section where they needed to work. Two other Moonbase techs were working in the dome trying to repair the damage from the attack, but they knew enough to stay out of the way.

“So how’s Ginny?” asked Jen. “I still haven’t had a chance to go see her.”

“She was fading back off to sleep when I left her. She’s got a lump on the back of her head, and her neck is sore but she’s no worse for wear. The doc says she’ll be all right. Nina should be back on her feet later today,” said Matt.

“I was going to ask if you saw her. That will make Ayshea happy.”

“Who?”

“Captain Johnson, you met her when we first walked into the dome.”

“Oh yeah, I guess I was preoccupied.”

While they chatted Matt had logged into the router onboard SID 1 through the console service channel. He verified that all of the firmware in the components had been wiped clean and started the flash download procedure.

“We’re going to have to add network security to all these routers or disable the telnet functionality,” Matt noted.

“That’s how the virus infected the system was through the telnet command.”

“That’s right; a login name and password will certainly help but I’m more concerned about the hardware aspect of this attack. They were able to smuggle a smart chip into a piece of SHADO equipment. How the hell did they pull that off?”

“The Commander has a theory. There was a UFO incident a few miles from the plant where the multiplexers were manufactured. It’s quite possible that one of the employees was compromised. Security is looking into it now.”

“Terrific. You know something Jen? These red suited SOB’s are becoming a real pain in my ass!”

Jen giggled saying, “I’ve never heard it put quite that way before.”

The flash download finished on the first router and Matt started the procedure on the

redundant side. While he was working, the doc came into the control dome.

“Mr. Hewett, do you have a moment?”

“Be right with you doc. All right Jen, this one is started. It should take about ten minutes. I’ll be right back.”

Matt got up from where he was working and went over to speak to the doctor privately.

“What’s going on doc? Is Ginny all right?”

“Yes, she’s fine. In fact I wanted to send her back to Earth on the next shuttle. But you should first be aware of the risks considering her underlying condition.”

“What underlying condition? I was told that she’s got a bump on the head and mild concussion. What else is going on?”

“I’m sorry, I assumed that you knew.”

“Knew what?” asked Matt getting irritated. “I think you had better start from the beginning.”

“Judging from the blood work I did this morning I’d say she’s about three weeks along.”

Three weeks along... Matt stood there looking dumbfounded as he realized the significance of the words.

“Like I said Mr. Hewett, I thought you knew.”

“No I didn’t know, and neither did she. Virginia never would have come up here if she knew she was pregnant.”

“Do you want me to tell her when she wakes up?”

“No don’t say anything; I’d like to tell her myself. So tell me about the risks; I’m assuming it has to do with cosmic radiation and G-forces.”

“The G-forces on reentry are somewhat higher than liftoff, but certainly not high enough to cause major problems. The pilot can fly a slightly shallower reentry path to mitigate them somewhat. Cosmic radiation is another matter.

We can reduce her exposure significantly by putting her in an EMU suit for the return trip.”

“When is she being sent back?”

“Not for at least a couple of days. The flight that is leaving later today is taking the last of my critical patients. Straker sent word up that once this flight leaves he’s suspending any further flights until reliable communications has been reestablished.”

“All right thanks doc, I’ll be in later to see her.”

Matt walked back to the console where Jen was working.

“What was that all about? Is she okay?” asked Jen concerned.

“Yeah, she’s fine. I’ll tell you the rest later.”

Jen was one of Ginny’s best friends, but Matt wanted to tell his wife the news before anyone else found out. He found it hard to contain his excitement, except for the fact that they were

still in harm's way. *Another attack could finish this base*, he thought to himself.

Keith Ford walked into the Commander's office seeing his boss with his head in his hands. Straker had been up four nearly thirty six hours now and it was starting to show. He looked up to see his communications chief standing in front of his desk.

“What is it Keith?” he asked tiredly.

“The new communications system is operational sir.”

“That's good news, so we're off the leased lines completely now?”

“Yes sir. I wouldn't have found the problem on my own. Matt's help was invaluable,” he said thoughtfully.

“So noted, speaking of Matt, have we heard anything more from Moonbase?”

“No sir, not even a test signal,” said Keith. “There’s a lunar flight scheduled to leave in about ten minutes. That should put it in communications range a few minutes later.”

“Good, after we make contact with the shuttle, and I get the latest status report, I’m going to bed for a while.”

A SID tracking update only took about ten minutes but a complete firmware and software reload done remotely took hours. Jen and Matt were two and a half hours into this one and it looked as if it would be another hour before the satellite could be restarted. While they waited for the upload to complete, Matt took a look at the communications system. The FTL system was completely inoperative and it looked as if the utronic modules were defective. Matt would check the storage section later to see if they stocked field replacement units. The Moonbase techs had stated earlier that the units were

defective and he had found nothing to counter that.

The older backup system used conventional S-band microwave. Matt understood this technology and had determined that the antenna alignment was only part of the problem as they were hearing HQ's test signal fairly strong. The backup system was self contained and connected directly to a small dish antenna on the command sphere. When it was switched to loopback mode it worked flawlessly. He pulled the prints on the system and began tracing the wiring. The connection to the outside antenna was near the damaged section of the sphere where the ceiling had fallen down. He grabbed a step ladder and climbed up to look at the wiring. The area near the outlet port seemed undamaged which didn't make sense. However the cables for both the microwave transmit signal and antenna aiming actuator were damaged.

Matt tackled the aiming actuator wiring first as it was cut in several places. He re-soldered the broken wires adding shrink tubing to insulate them from each other. When he connected the last wire he heard the actuator engage to move the antenna. The signal from HQ cleared up immediately and the video came through.

“Matt you got it!” said Jen.

“Almost, the transmitter cable is still defective. It will take me a few minutes to fix that.”

Matt unscrewed the hard line connector from the TX antenna port and removed it from the cable carefully to avoid damaging it. When the connector was removed he cut off the damaged part of the RF cable and reinstalled the connector. He looked around the room and saw a set of test cables lying on the floor. They had male ends on one side and female ends on the other, *just what I need!*

“Jen, would you hand me one of those test cables that are lying on the floor next to you?”

“Sure Matt.”

She picked up one of the cables and brought it over to him and he proceeded to connect it to the cable he had repaired. The jumper was just long enough to reach and Matt reconnected to the TX port on the antenna.

“Jen, try the transmitter now. It should be working.”

She sat down at the radio console and switched on the transmitter.

“Moonbase to SHADO control, Moonbase to SHADO control, how do you read?”

“This is SHADO control, reading you loud and clear on the S-band Colonel. How are things going up there?” asked Keith Ford.

“We’re still alive. Captain Johnson sent a detailed status report with the flight that is on route to earth now. Is the Commander available?”

“I’m waking him now. He’s going to want to talk to you.”

Jen looked over at Matt giving him a thumbs-up and he responded in kind.

When Matt walked into the infirmary to see his wife, he found her wide awake, and she was arguing with the doctor about being released.

“I’m feeling fine, I don’t need to stay in bed...”

“I see somebody’s feeling better,” Matt said, interrupting her tirade, as he walked in.

“Good Mr. Hewett, you’re here, maybe you can talk some sense into your wife,” the doc said as he walked away shaking his head..

Matt sat down at her bedside as she gave the doctor a look that would kill.

“And you told me that the Commander was a difficult patient.”

She looked at him with the same glance for a few seconds before breaking into a grin.

“I just can’t seem to get angry with you Matt, even if you’re taking the doc’s side.”

“Well there is a reason he’s keeping a close eye on you, but I asked him to let me give you the news.”

“What news? That I got a bump on the head?” she said.

Matt was grinning at her now savoring the moment as he looked deep in her eyes.

“All right Matt, what’s going on?” she was getting a bit testy.

“How have you been feeling the past few weeks?” he asked quietly, redirecting the subject.

“Fine, although I was a bit nauseous the past few mornings...” She stopped mid sentence and looked at her husband with a surprised

expression as she watched him grinning ear to ear now.

“You mean I’m pregnant?” she asked both excited and surprised.

“The doc says you’re about three weeks along give or take,” said Matt as he collected her in his arms.

“Oh Matt...” she said as she held him tightly for a few minutes in joyful celebration. When the embrace ended Matt held her shoulders looking into her eyes.

“Have I told you how beautiful you are?” he asked lovingly.

“Yeah, you won’t be saying that, six months from now.” She paused for a moment and changed the subject slightly. “I’m sorry Matt; I wouldn’t have come up here had I known. Have you talked to the doctor about the risks?” she asked suddenly quite concerned.

“Yeah, there are a few but nothing really to worry about. He wouldn’t recommend coming up here again though.”

Matt started snickering about something and Ginny cocked her head at him.

“What? What’s so funny?”

“I just had a thought. I’m picturing you **knee deep in ironing.**”

“Yeah, dream on. That’s why they have dry cleaners. So are you going to get me sprung or what?”

“If we weren’t in such dire straits topside, I’d say no way in hell. But the truth is Jen and I could use your help. I’ll speak to the doc.”

Convincing the doc was not as easy as Matt thought it would be but in the end the doctor just threw his hands up in disgust. He walked away muttering something about people that don’t listen to medical advice. When Matt

helped his wife up and they walked to the control sphere he could feel her leaning heavily on him.

“Maybe the doc was right honey...”

“No Matt I’ll be fine, just as soon as I can sit down. Just don’t let go of me,” she said.

“My we seem to have lost some of our feistiness haven’t we?”

Virginia gave him an evil look before she broke into a grin and said, “Just you wait till we get home.”

“Oooo is that a promise?” asked Matt teasingly.

“You just keep it up, and you’ll find yourself in the deep end off the pool next time.”

“Nah, I like the shallow end better, at midnight, with all the lights off, just the two of us, your skin bathed in starlight, love ballads playing in the background.”

“Matt, stop it, you’re getting me all hot and bothered,” she said blushing madly now. She continued, “You described that night so well, I wonder if that’s when it happened?”

“It was about three weeks ago wasn’t it?”

“Yeah, it was, we were both hot and sweaty from moving all day, and we couldn’t find our bathing suits,” she said snickering.

The doors opened and they walked into the control sphere.

“Hey Jen,” said Ginny.

“Hey girlfriend, what are you doing out of bed?”

Matt helped her into the seat at the command console.

“Are you all right?” he asked.

“Yeah, I’m fine now.”

“Ginny’s going to give us a hand,” said Matt.

“You and I weren’t sure on a couple of these

steps; Virginia can check our work before we do a restart.”

While Matt and Jen setup to load SID Two, Virginia double checked and verified the work that was done on SID One. Twenty minutes later she said, “All right you two, good work. You only missed one file, and I’m uploading it now. Everything else is fine.”

“What did we miss?” asked Jen.

“The routine for the secondary alignment platform; you wouldn’t have even noticed it unless the main system was down.”

“Are we ready for a restart?” asked Matt.

“Yeah, I’m keying in the startup codes now, it will take about ten minutes to boot up.”

While they waited they heard SID vocalize the test routines. Five minutes into the startup routine the FTL link through SID to HQ came up and the communications system

automatically switched over losing the pesky time delays.

Ten minutes later, SID proclaimed itself operational, and the trio in the control sphere let out a cheer. Unfortunately the celebration was short lived. Jen had called down to HQ to have them tie back into SID and Ginny was doing the same for the space born and lunar tracking assets. As soon as the link indicators went green SID started singing its dirge of warning.

Chapter 6:

Red alert, red alert. Have twelve UFOs on positive track. Area 165-255 Blue, range 40 million miles, speed SOL 6, Trajectory termination, Moonbase operations area.

“You know something ladies, these red suited clowns are really starting to tick me off,” said Matt.

Lt. Colonel Barry’s voice came over the speaker, “Interceptors immediate launch. All non essential personnel proceed to the shelters.”

Matt walked over to Ginny and said, “Honey I’m going to get you down to the shelter.”

“No Matt, I’m staying here.”

“Virginia I...”

“Listen to me Matt,” she interrupted. “The last time they tried a mass attack the aliens were packing some heavy weaponry. It’s not going to matter. Besides, I’m pregnant, do you have any idea what they’ll do to me if they take me alive?”

Matt paused not wanting to think about it.

“If I’m going to die Matt, I’d rather it be here with you, than on a laboratory table light-years from here.”

“Don’t you two give up on me, I’m not done with myself yet,” said Jen.

The three of them went back to work feverishly loading the routines into SID Two.

In the control room Ed watched the UFOs on the screen as they closed with Moonbase. Most of the base defenses were down and he had several close friends on the base. Their chances for survival were not good.

Matt Hewett didn’t yet know it but Ed considered him a friend. And then there was Jen. Ed was confused about his feelings for her as she had become a confidant in a very short period of time.

Ed still felt very strongly about Virginia, his best friend. He knew his feelings for her went beyond friendship and they always would and he still struggled to put those feelings in their right place. She was a married woman after all.

“Twenty million miles Commander,” said Keith. Ford had been up almost as long as he had; when this was over he was going to have to give him some time off to be with his family. *He’s earned it*, thought Ed.

“What’s the time on target Keith?”

“Thirty seconds sir.”

The interceptors closed rapidly with the twelve UFOs. Lieutenant Harris knew that they needed to score multiple hits.

“Leader to group, break formation.”

The three interceptors separated each one hoping to do the impossible. Take out four UFOs with one missile.

“Missile launch in five seconds.”

As the three SHADO interceptors launched their weapons Matt watched the tactical display.

The missiles closed rapidly with their targets and three of the alien craft disappeared from the screen.

“The interceptors only got three of them.”

“Six UFOs changing course, new trajectory termination, grid fifty one by zero, southern England.”

“They’re heading for HQ,” said Jen.

“Yeah, Ed will have to deal with them, what do we have left for perimeter defenses?” asked Virginia.

“One particle weapon, the one mounted on the reactor sphere,” said Jen.

“Terrific, they miss and hit the reactor they’ll blow us to kingdom come anyway,” said Matt.

“I told you life with me would never be boring,” said Ginny making light of a dark situation.

Ed watched as the UFOs broke formation, silently thankful that most of them were heading towards Earth. The people on Moonbase now had a fighting chance.

“Keith, scramble the London squadron and get Skydiver Five on the line.”

“Yes sir.”

“SHADO control to London squadron, scramble, scramble.”

In the North Atlantic Skydiver Five cruised beneath the waters. Her patrol had been extended since to attack on Moonbase two days ago.

In her cabin, Gay Ellis Bradley was filling out her logbook and contemplating her friends on Moonbase. She had heard through the grapevine that both Nina and Ginny had survived the attack and for that she was grateful as they were her two best friends.

The vidlink came to life with the image of Joan Harrington.

“What is it Joan?”

“Call from HQ ma’am.”

“Pipe it back here please.”

Joan was replaced by the image of Ed Straker.

“Hello, Gay. I’m going to have some action for you, interested?”

“Always sir.”

“We’re tracking six inbounds and it looks as if this base is the target, however the aliens have several other targets in the vicinity that they could divert to. The most important one right now is the SID telemetry station a few miles north of here. I want you to marry that station and don’t let anything through.”

“Piece of cake sir.”

“Good Luck”

Gay stood and grabbed her helmet and flight jacket. She exited her cabin and walked through the crew berthing area to the control room. Skydiver five was larger than her predecessors and had much better crew accommodations.

“Bring us to launch depth, XO,” she said as she came into the control room.

“Aye, skipper. Helm, ten degrees up bubble, make your depth one five zero feet.”

“Ten degree up bubble, making my depth one five zero feet, aye.”

Captain Ellis donned her helmet and jacket and walked to the front of the control room.

“Good luck, skipper.”

“Thanks.”

Gay jumped up into the access tube sliding into the pilot’s seat of her jet. The seat moved forward and then up into the cockpit. They and reached launch depth and Skydiver was already

tilting to the launch angle, as she strapped in and brought Sky Five's systems online.

“Standby for lift off.”

She pulled back on the launch lever and the jet surged through the water broaching the surface of the North Atlantic on two plumes of flame.

The UFO attack on Moonbase was a one-sided affair as the first shot from the aliens had taken out the particle cannon. Matt stood at the window with his wife in his arms expecting their lives to be snuffed out with the next barrage.

“What the hell are they waiting for?” asked Ginny rhetorically.

“Probably gloating over their victory,” Matt added sarcastically.

“They don't have emotions, at least none that we've seen.”

“The hell you say, I don't believe it.”

To their surprise the three UFOs started to settle and landed on the lunar surface less than a hundred yards from the base. These craft although the same design looked larger than any previous craft they had seen. After a few seconds, openings appeared on the sides of each of the craft. Red suited aliens with assault rifles exited the ships and started towards the base. Matt counted at least thirty aliens.

“Those are troop carriers, they’re going to try and take this base by force,” said Matt.

“They’ve never tried anything like this before,” said Ginny as she reached for the phone to dial down to the auxiliary control room.

“Nina, it’s Ginny, you had better get everyone armed. It looks like the aliens are going to try a frontal assault.”

While Virginia was on the phone Matt went over to where Jen was working.

“How are we doing?”

“This one is going much faster. I was able to steal some bandwidth from SID One and double the upload speed. It’s still going to take just as long as we’re loading the code for SID three as well. The good news is once it’s done the rest of the procedure is automatic.”

Ginny walked over to them. “Security is handing out weapons; they think they’ll be able to hold them at the airlock.”

They watched the aliens as some of the gathered at the airlock, but others were attaching cylinders to various points on the base. Matt moved the camera to zoom in on what the alien was doing. He noticed a small inlet port on the side of the dome.

“Virginia, what’s that port for?” he asked pointing it out on the screen.

“It’s an emergency oxygen inlet. It allows us to pressurize the base externally if needed.”

“So it’s a direct feed in, it doesn’t run through the air processing system?” asked Matt.

“That’s right, it’s completely separate.”

“Can the neurotoxin used by the aliens be delivered in a gas?”

“Yeah, it can, it can be inhaled or absorbed through the skin...oh hell”

Two technicians walked into the dome carrying EMU suits and firearms. While Matt grabbed the equipment from the techs, Ginny got back on the phone with Nina.

“Nina, get everyone into their suits now, the aliens are going to pump neurotoxin in here.”

The three of them quickly donned their suits and closed their visors. They had an assault rifle and two pistols. Matt handed the pistols to the two ladies and familiarized himself with the rifle. He only had one extra clip so he set the rifle for single shot.

“Do you know what you’re doing with that thing Matt?” asked Jen as she chambered a round in her pistol.

“Jen, I’ve got six generations of North Carolina marksman under my belt. Any red suit that sets foot in here is going to get its birth certificate cancelled,” said Matt very doggedly.

At HQ, Straker had his hands full as the attacking UFOs were not being brought down with one shot. At first he was horrified by the thought that they had developed shielding technology but to his relief a second hit destroyed one of the ships. By the time all of the invaders were eliminated SHADO had lost five aircraft; a third of the squadron. *This weekend had been bloody*, thought Ed as he mourned the loss of each and every person. *Three interceptor pilots, three trackers, two maintenance technicians, the twelve*

technicians at the two telemetry stations, now five aeroceptor pilots; where does it end?

Captain Ellis had scored two kills while narrowly avoiding being hit herself. Those UFOs had brought her total to twenty, a quadruple ace. She was only four behind Lew Waterman and eight behind Pete Carlin. *Time to write her up for a DFC*, thought Ed.

Ed was puzzled about the developments on Moonbase, *Why didn't they just destroy the base?* He was sure that he was missing something, something important. The only additional personnel up there were Jen, Virginia, and Matt, and they wouldn't have been there if ...*The telemetry link!*

“Keith, get me Moonbase!”

“Yes sir.”

A moment later, Nina Barry appeared on the monitor.

“Nina, what's going on up there?”

“The aliens pumped neurotoxin in through the emergency O₂ ports. They have control of D level effectively cutting us off from the surface. We lost four people in that section sir. The aliens butchered them like cattle,” she said as her voice cracked.

Straker had known Nina almost as long as SHADO had existed and he had only seen her, this shaken up once before.

“Do you still have communications with the control dome?”

“Yes sir,” she said regaining her composure.

“Patch me through please.”

A few seconds later Virginia’s image came on the monitor.

“Virginia, listen carefully, the aliens are going to try to gain access to the telemetry link. You can’t allow that to happen. If you have to destroy the equipment to keep them from getting to it, do so.”

“I understand. SID Two is almost reloaded, Jen is figuring about another twenty minutes.”

“Thanks. Good luck Virginia.”

Matt looked at the monitor showing the camera in the corridor to central park. Four red suited aliens were cautiously making their way to the command sphere.

“All right, gang here they come.”

Virginia and Jen drew their pistols and crouched behind one of the consoles while Matt ducked behind the center console with his rifle lined up at the door.

The door opened and Matt fired off two rounds in quick succession dropping the first two aliens. The third one dove in only to be shot by Jen as he landed. The fourth had ducked behind the door and was waiting for a chance to move.

“Virginia, can you see him on the monitor?”

“Yes Matt, he’s right behind the door. Please be careful.”

“Yes dear,” he said knowing he was going to hear about that later.

Matt fought the impulse to rush the door; he had the advantage and just had to be patient. As expected the alien poked its head around and Matt caught it with his last shot.

The door circuits had been tampered with so both of them were open to the corridor. Matt handed his wife his rifle and pulled the four dead aliens into the control dome. He closed both doors.

“Let them guess,” he said to the two women.

“That’s it,” said Jen. “SID Two is reloaded and restarting.”

While Ginny and Jen monitored the startup process on SID Matt sat down at the weapons console and punched up the diagnostic routines. He watched the screen as the results

scrolled up. One of the particle beam weapons was still operational but the aiming circuits were defective. By chance it was the turret located above the control dome. Matt had remembered seeing damaged circuits when he had repaired the backup communications system and he wondered. *It can't be that easy?* He pulled out the service prints and traced the circuits. He climbed up on the step ladder a somewhat harder task in an EMU suit.

“Matt what, in the world, are you doing?” asked his wife.

“Fixing the weapons system, dear.”

“And what do you know about particle beam weapons?” she asked somewhat amused.

“Nothing, nor do I need to.”

Virginia gave him a crooked grin and shook her head. Matt saw her bemusement and took pity on her.

“The problem’s not with the weapon itself, it’s the aiming circuitry.”

“Can you really fix this?”

“I should be able to providing the driver circuits aren’t blown.”

Matt found the cable and as he had suspected it was cut in several places. Repairing it with the heavy gloves of his EMU suit was going to be difficult and it wouldn’t be one of his neater jobs but it should work. He stripped back the damaged cable and separated out the damaged wires re-soldering each one and covering them with shrink tubing. He wrapped the cable with electrical tape to hold it in place.

“Jen can you check the weapons console?”

“Yeah sure, hang on a minute.”

Colonel Wallace tested the actuator and found it to be working for both azimuth and elevation.

“It’s good!”

“Can you program the system to take out those craft in quick succession?” asked Matt.

“Hell yeah I can.”

Her fingers quickly and methodically preprogrammed the weapons system to lock on the alien ships using the shortest time possible.

“Eat neutrons suckers!” she said as she executed the program.

The particle weapon fired at each alien craft in quick succession destroying the three of them. The base shook with the force of the explosions.

In the auxiliary control room the three women manning the consoles were in shock.

“What the hell was that?” asked Nina.

Ayshea Johnson brought up the camera feeds and saw that the three alien ships had been destroyed.

“Colonel, the alien ships look.”

Nina glanced over to the monitor to see the remains of the three alien craft.

“But how?” asked Nina.

Captain Johnson punched up the weapons system and noticed that one of the turrets was now operational.

“Someone repaired one of the particle weapons, ma’am.”

“I’ll bet you a coffee, it was Ginny’s husband. Call the interceptors and give them the okay to land. Tell them to watch out for small arms fire. There’s still a bunch of aliens running around outside.”

“Yes ma’am,” said Ayshea enthusiastically.

Chapter 7:

It took almost four hours to round up the rest of the aliens and purge the base of the neurotoxin.

They were only able to capture three of the invaders alive and the exercise had cost another life. Moonbase had lost thirteen people, half of its complement that weekend, mostly from the technical section. HQ was sending a pair of shuttles to replenish the staff and recover the dead. The damage to the base while extensive was repairable but it was going to take almost a month to bring the base back to full operational readiness. With one of the living spheres damaged and depressurized space was going to be tight for a while.

In addition to the shuttles three supply ships, with the capability to land next to the base, were en-route carrying much needed spare parts and equipment. Over the next month they would ferry the pieces needed to assemble three new interceptors to replace the ones that were lost.

Jen, Ginny and Matt, sat in the leisure sphere enjoying a much needed break. Matt had opted

for Earl Grey tea rather than risk drinking the atomic sludge that was called coffee on the base.

“Matt you really should try some of this, it will help your attitude,” said Ginny.

“What’s wrong with my attitude?”

“I don’t want you getting cocky, now that you think you can fix particle beam weapons.” She said grinning at him touching his nose with her finger.

“How about if I just get frisky instead,” he said as he pulled her closer.

“Matt...stop it, save it for later.”

“Is that a promise?” he asked looking deep into her eyes.

“Yeah, count on it,” she said drawing him in for a long gentle kiss.

Jen was sitting opposite of them and she could no longer suppress the giggles.

“Look at you two carrying on, isn’t love grand?” asked Jen still snickering.

“Yeah, it is. You should try it sometime Jen,” said Ginny.

“Oh I will, I’ve already got my eyes on Mr. Right.”

“Who?” asked Matt and Ginny in unison.

“You’ll find out, it’s sure to cause an uproar, and I know I’m going to have to chase him.”

“Somehow I can’t imagine you having to chase anyone,” Matt said turning to his wife. “What do you think honey?”

“I’d have to agree, I can only think of one man in the world that you would have to chase...You don’t mean...Ed?” she asked astounded.

Jen flushed slightly, her secret out, “I wasn’t going to say anything, knowing how you felt about him once, I feel kinda’ funny.”

“Jen, don’t worry about that, Ed and I were too much alike and I think that’s why he never gave me a second look. As it worked out, it was for the best as I ended up with my childhood sweetheart.” She said cuddling closer to her husband. “By the way Matt, I understand Nina wants to write you up for a commendation, as your actions saved the base.”

“Gin, I’m a civilian, how can she do that? Besides I don’t deserve anything special. I was just trying to keep us from getting killed or worse. No way, I don’t want any decorations, commendations, or ticker tape parades. If SHADO needs to honor someone, then honor the thirteen people who gave it all. Those people are the real heroes.”

“Well Straker will probably change your mind; he has a way of doing that you know. Anyway, I’m proud of you, very proud.”

Jen watched, as Matt look at his wife, and she could see that her approval was worth more to

him than anything else in the world. *Ginny is so blessed*, she thought.

The trio was Earth bound a few hours later and this time Matt was able to savor the experience. Jen was fast asleep and he and Ginny were engaged in quiet conversation. They were set to land in London rather than New York and they were debating staying in England until her meeting with Henderson. They wanted to visit her mother and give her the good news, and Keith had invited them to a family gathering that coming weekend. And of course there was the memorial service to attend and the thought of that damped Matt's enthusiasm considerably.

"What's wrong Matt? I thought you'd be in seventh heaven right now?" asked his wife noticing his change of mood immediately.

"I'm just counting up the cost; we lost thirty good people this weekend. Unlike the hardware, they can't be replaced. At least not right away,

and all their dreams, all they'd hoped for; all gone. They can never be replaced."

"You sound more and more like Ed every day."

"I'll take that as a compliment; God he must be going through hell right now. You know Gin; after I got off the vidlink with you, before you left for Moonbase, I was thinking about how Ed had to deal with all the loss of life, I don't know if I could."

"Don't sell yourself short Matt; I see a lot of the traits that make Ed the leader he is, in you."

"Come on Virginia, in my wildest dreams I could never do what he does. I don't have the knowledge or experience. I could never replace him, ever."

"All I'm saying is that you have the potential. Knowledge and experience we gain over time. One of the things that attracted me to you is I saw a born leader; someone who was willing to stand up for his convictions. Your passion,

about not wanting your book turned into a trashy movie, just to make a buck, impressed me immensely.”

“Gin, there’s a big difference between being passionate about a cause like a book and being passionate about SHADO.”

“How so; what’s the difference?” she asked.

Matt thought about it before he answered not being able to put the concept into words. Finally he said, “It’s the scope of the matter I guess.”

“But the emotion, the drive is the same. Matt you are right; we lost a lot of good people this weekend and they are going to have to be replaced. Ed is going to have to shuffle people around to get things done. There will be some new opportunities and you might find one come your way. I was serious when I told you that Nina was putting you in for a commendation. Ed has already seen your worth to the organization; he wouldn’t have sent you up here otherwise.”

The speaker came to life with the voice of the pilot, “EOI in fifteen minutes. All passengers prepare for reentry.”

When the announcement ended Matt continued, “Virginia, I’m going to be a father, and with your responsibilities in the research section, I’m going to have to be home more than I am now. I know that both our mothers have volunteered to help us but they can’t be here all the time and I don’t want our child raised by a stranger.”

“As soon as they install the new computer network I’ll be able to work from home. I’ll only have to go in once every couple of weeks.”

“When is that going to happen?” asked Matt.

“A few weeks from now, that’s why I wanted a room for a home office. I wanted it to be a surprise. With you semi retired we would have seen a lot more of each other. But things have changed and SHADO is going to need both of us.”

“What makes you think Ed will want to bring me on full time?”

“Trust me,” she said with a grin.

Matt looked at his wife considering the things she had said. He had only known her for a few months including the time they spent together as children, but he felt as if he had known her all his life and he knew she wouldn't make a comment like this unless she was sure. If she thought that Ed was going to bring him in full time then he needed to seriously consider it.

The next morning Colonel Wallace walked into Ed's office with two cups of coffee.

“Good morning Commander.”

“Good morning Jen,” he said without looking up until he smelled the aroma of her favorite blend.

He looked up as she handed him a cup as she smiled at him.

“For me? Jen you’re going to spoil me. If I didn’t know better I’d say you had an ulterior motive.”

“Who’s saying I don’t,” she said with a grin before quickly changing the subject. “Where’s Paul this morning?”

“I sent him to survey the damage done to the two telemetry stations he’ll be back in a couple of days.”

Straker finished the report he was working on and gave her his full attention.

“I just finished going over Nina’s report and I’d like you take on it, specifically the parts about Matt Hewett.”

“I read the report last night; I think her assessment is spot on. Matt’s actions saved the base, especially his work on the particle beam. That tipped the balance.”

“Do his actions warrant a bronze?”

“Well sir when the aliens tried to breach the command sphere, Matt took point. And I’ll tell you something, he’s one hell of a good shot.”

“That wasn’t in the report.”

“No sir it wasn’t and Matt asked me not to make a big deal of it. As he put it, he had a pregnant wife to protect.”

“But you think there was more to it than that?”

“Yes sir, I do. I got to spend some time with him just before he and Ginny got married and while we were on Moonbase. There’s a lot more to that man than meets the eye. Why do you think Ginny married him?”

“I could see that the first time I met him. Well it will be interesting to read Virginia’s take on this after I make my decision.”

“You’re not going to read it now, sir?”

“No, but not for the reason you might think. I don’t want to give the appearance that she influenced my decision in any way.”

“I see,” she said with a new admiration for her boss. So Commander, are you going to Keith’s on Saturday afternoon? Ginny and Matt will be there as will Paul and Jane.”

“I was invited but I’m thinking about taking a pass as I’ll feel like the odd man out.”

“I know the feeling; so why don’t you take me?”

Ed looked at her with a bemused expression on his face surprised that she would be interested considering the difference in their ages.

“That is unless you’d be embarrassed to be seen with me,” she said with a grin.

“No that’s not the case at all I...”

“Good, you can pick me up at three. And don’t forget your swim trunks; it’s supposed to be warm on Saturday.”

“Jen, are you sure this is a good idea?”

“Commander, you need to unwind and relax a little, it will do you good.”

“Well, if we’re going to go out socially, I think maybe you should call me Ed,” he said quietly.

“All right, Ed,” she said pausing for a second.

“Well I have to get to the control room. Colonel Blake gets cranky when I’m late to relieve him.”

“Jennifer?”

“Yes?”

Ed realized he could get lost in her emerald green eyes and he savored her look for a moment. “Thanks for the coffee,” he finally said.

“You’re welcome Ed,” she said smiling pleasantly at him.

That Saturday was warm for a fall day, perfect weather for a pool party. Ed found that he was not only enjoying himself, but he also enjoyed Jen’s company. Although she was twelve years his junior she acted much older. In fact it was hard for him to keep his eyes off of her as she had chosen a green bikini that matched her

eyes. She would catch his gaze every now and then and give him a beautiful smile knowing he was watching her. *My God she is beautiful*, he thought.

Keith Ford turned out to be a skilled backyard chef as the food was excellent. Ed who was quite at home in the kitchen had listened with interest as Matt and Keith discussed methods of preparing steaks on the grill. From the sounds of it Matt was quite at home in the kitchen himself.

“Are we having a good time?” asked Jen as she strolled up next to him.

“Oh hi, yes I am. Keith really knows how to throw a party,” he said as he watched his communications chief in the pool with his wife and two kids. He had never seen this side of the man and Ed realized that there was a lot he didn’t know about the people who worked for him. They were distracted by a commotion on the other side of the pool.

“Uh oh Ed, Matt’s going to take Ginny for an unplanned swim.”

“He wouldn’t?” he asked in disbelief.

Matt was carrying his wife to the deep end while she protested loudly, “Matt if you do this, I will make you take me to the opera, Matt...”

The splash swallowed the rest of her protest as he jumped in while holding her.

“Boy I guess he is brave,” said Ed.

Jen was stifling the giggles as she watched the two of them carrying on splashing each other.

“I’ll gladly take you to the opera honey,” Matt said laughing as he pulled Ginny close for a long kiss.

“He’s probably the only person in the world who could get away with that,” said Jen. **“The girl can’t help it.”** She loves him.” She paused for a moment then said, “Are you going to take me for a swim Ed?”

“You mean like they did?”

“No, well not here anyway, I was thinking of something a little more private, do you have any ideas?”

“I do have access to a private swimming pool and I think I could be persuaded.” Ed paused for a moment. “This could get complicated you know.”

“I knew it would cause an uproar, but I’m used to that kind of thing.”

Ed wanted to kiss her right then and there, but he restrained himself, and he could see her doing the same, but later on would be a different matter indeed.

Epilogue:

Monday morning was organized insanity at SHADO HQ, caused by the scheduling conflicts

that prevail anytime people are moved around. Ed had worked late last week to shuffle staff around, filling the voids caused by the casualties earlier in the week. He ended up taking the two repair techs from the New York tracking station, much to Colonel Johns' dismay. But Ed needed trained people on Moonbase and the Earth side installations would have to make due until replacements could be trained. He turned his attention to Paul Foster.

“So Paul, how bad is it?”

“Both telemetry installations were completely destroyed. There was nothing to salvage, but the good news is we can jury rig a station at Both the New York and Sydney tracking stations.”

“Well that's something. Paul I'm going to have you handle the Sydney portion along with Joe Kelly. Virginia and Matt will take care of New York. Do you think Jane would mind going to Sydney for a few months?”

“No, I think she’d rather enjoy it. By the way, it was good to see you at the gathering on Saturday.”

“Well Jen wanted to go, but she didn’t want to go by herself.”

“I see; she’s a beautiful woman Ed.”

“Remember what I told you once Paul, **things aren’t always what they seem.**”

“Ed, we’ve been friends for a while now, I saw the way the two of you looked at each other, don’t try to deny it.”

“Did it show that much?”

“Yeah, it did.” Foster paused before continuing.

“Ed you helped me pull my head out of my ass when I was a young brash know it all; your wisdom and guidance helped me through a tough time in my life. I wouldn’t be where I am today if it wasn’t for you. So now I’m going to return the favor. Embrace the moment, when

love comes knocking at your door, don't turn it away, especially when it calls you by name.”

“When did you ever become so smart?”

“When I started listening to my commanding officer, and my friend,” said Paul.

Ed considered Paul's words and realized how lucky he was to have been blessed with the friends he had acquired over the years, *Alec, rest his soul, Virginia, Paul, Matt, and now Jen, who held the promise to be so much more.*

“Thanks Paul.” Ed paused, “well you had better get moving and give your wife the news. Call me when the two of you arrive.”

“I will, take care Ed.”

Foster shook hands with his boss and turned to leave as Jen walked in with two cups of coffee.

“Hey Jen, is that for me?” asked Paul teasingly.

“You wish, one of these is mine and the other is for **The Man.**”

“Oh I see where I rate, see ya’, Jen.”

“Bye, Paul.”

Jen set the cups down on Ed’s desk and reached down to close the door.

“Did you fill out the study request?” asked Ed quietly.

“I handed it in to Colonel Grey this morning. You?”

“It’s right here; I’m going to drop it off in a little while.”

“I’ve never had one of these done, how long does it take?”

“We’ll know by this afternoon, speaking of which, would you like to have dinner with me tonight?” he asked.

“I’d love to, assuming the tests are good.”

Ed took a sip of his coffee. “I don’t see any reason why they shouldn’t. By the way Jen, you have to tell me where you get this stuff.”

“I’ll tell, no, I’ll show you later.”

“Is that a promise?”

“Yeah, that’s a promise,” said Jen. “I’ve got to get on duty; will you let me know when you get the results?”

“I will.”

Ed watched her as she walked into the control room, still surprised at the chain of events that occurred Saturday evening; events that showed the promise of a very passionate relationship.

Matt was sitting on the front porch swing picking his guitar when his wife came out with two cups of coffee. She sat down next to him as he finished playing the song; their song.

“That was beautiful Matt,” she said as she kissed him on the cheek. She could see that he was in a contemplative mood. “Penny for your thoughts?”

“I’m just wondering if I made the right decision accepting a commission with SHADO. Hell Ed brought me in as a captain, how did I rate that?”

“He brought me in as a full colonel. You’re thinking standard military Matt. In SHADO a different set of rules apply.”

“I know Gin, but Ed is talking of me being promoted to major in three months, and posting me as XO to the New York tracking center. Six months after that, I’m supposed to run the place; as a lieutenant colonel no less. I’m not ready for this.”

“By the time Colonel Johns is transferred, you’ll be ready. Trust me Matt, you can handle it. Besides, you looked awful damn sexy in that dress uniform,” she said with a grin.

“That’s the other thing that bothered me Gin, why did I get singled out for decoration? There were others on the base were just as deserving.”

“Matt, everyone up there except you had been through formal training. What you did was incredibly resourceful, and you did it without the benefit of SHADO training. So stop beating yourself up.”

Matt looked up at the stars through the haze. It had been warm and humid that day and there wouldn't be many more until autumn took hold. He looked back at his beautiful wife with a mischievous grin on his face.

“Hey, are you in the mood for a midnight swim?”

“With or without,” she asked sharing his grin.

“Oh, definitely without.”

“That sounds so romantic, let's go.”

Virginia grabbed the coffee cups and Matt picked up his guitar and they walked into the house locking the front door behind them.

“Matt do you want me to put more coffee on for later?”

“Absolutely darlin’; everyone at SHADO drinks coffee.”

END

Phrases used for the challenge:

UFO Rocks Denise

“Yesterday is already a dream, and tomorrow is only a vision, but today, well lived, makes every yesterday a dream of happiness, and every tomorrow a vision of hope.” Matt

knee deep in ironing. Normandie

“What’s wrong with my attitude?”

Denise

The girl can’t help it. Dragon

things aren’t always what they seem.

Louise

everyone at SHADO drinks coffee. Matt

The Man Denise (unofficial) snigger