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LOCALITY

by Jeremy VanSeader

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PART I

1986: Chernobyl, Ukraine

CHAPTER ONE

Potential Energy

Aleksander Berezin sat alone on the wooden park bench, green paint already cracked and peeling, awaiting another waste of time with dwindling patience. It wasn't as if he had more pressing matters to attend to. No interesting pastime to look forward to, no pleasant distraction to put a smile on his face. Such things were a part of the past, beyond him. He didn't expect to meet those old friends again. No, it was the waiting that annoyed him, it was the talking that would lead to nothing, it was forcing himself to profess concern when none existed.

The park was a fair size for a city as small as this one. There was one footpath that wound through a tasteful sprinkling of trees, none of which had started to put out new springtime buds yet. It took almost five minutes to walk across the park, an act that Alek was familiar with. He walked along the park path whenever he needed to escape the inane charade of dealing

with people. Today, he was alone at far side of the park, which suited him just as well.

Alek stood up slowly, jaw set in expectation of the discomfort that comes with moving his left leg. He was well into his fifty-eighth year, a fact given away by the grey fringe in his hair, and had collected his fair share of health problems. The leg was a reminder of a time his car decided to roll over on the highway. It was fine, though. He endured it.

The sun was still a few hours above the horizon, casting long shadows behind him. The ground still had some soggy patches from the recently melted snow. It was late April, and everyone had their hopes up that it was the last they would see of winter. Alek squelched through the muddy grass uncaring, and flipped the collar of his overcoat up against the wind. The park was located on a raised piece of land that overlooked a large lake. It was a man-made lake and had no name, simply The Lake, or officially Coolant Discharge Reservoir 38-2. It was built about seventeen years ago along with the city. Beyond the lake was the thin, muddy ribbon of water that made up Pripyat River, from which the city got its name.

The metal of the railing was cold against Aleksander's hands, helping fight off the exhaustion he was feeling. This week his team had pulled the night shift which he had already completed today. Alek currently held the prestigious rank of Captain Aleksander Berezin of the Soviet Armed Forces, Strategic

Missile Division. He, and his squad of four men, had been posted to Pripjat military base for the last three years, and Alek presumed that he would hold this post until he died - most likely of old age. It was fine.

At the end of his rotation, he had held out some small hope that he could have retired to his bed. Should have done so hours ago. Instead, he had been forced to stay up to come meet with Boris Kovalenko, Plant Director for V.I. Lenin Power Plant. The power plant itself loomed a few minutes walk away to Aleksander's right, its four large reactor stacks standing proud against the clear sky. A steadfast bastion providing proof of the greatness of Soviet ingenuity. Alek sighed inwardly.

Looking over the railing, down at the lake below him, water swirled and churned around a series of three spillway vents, each about a meter across. The lake was not very deep here, and a number of concrete chute blocks jutted out of the frothing stream like giant teeth. He stared at the water for a time, watching the hotter outflow water interact with the cool lake water, creating small whirlpools and long trails of froth. It relaxed him and the playful dance unfolding below helped take his mind off of some unwanted thoughts.

"Go ahead and jump, huh?" a rough voice called from behind him, perhaps hitting a closer to the mark than either man realized.

Aleksander turned, favouring his right leg. So here we go,

he thought. Alek gathered himself and painted a smile on his face. Well, hopefully it will pass for a smile.

Boris Kovalenko stopped walking when he reached the edge of the path, not wanting to trod through the soft muddy grass. He had the last remains of a cigarette in one hand, one of the unfiltered kind that were cheaper to get but tougher on the throat. Seeing that he had Aleksander's attention, Boris tossed the butt on the ground and stepped on it.

"Such a long face, and here at the start of a wonderful spring", he said, gesturing broadly at the barren trees, drab concrete buildings, and empty flowerbeds.

Alek slowly made his way back to the bench and sat down without ceremony. "I have been waiting for you for so long, it tries one's patience," he replied, sterner than he meant to, "Why are we out here anyhow?"

"My office isn't the best place to meet right now," Boris explained as he lowered himself down at the other end of the bench. "We are trying to manage things ourselves, without interferences, you know?" Boris flashed a toothy grin at this last comment.

Alek had a hunch that he knew what the other man was getting at, but wanted to get Boris to state out in the open with no misunderstandings. He decided to get through this as directly as he could.

"Ok, let me begin with the topic I tried to bring up on the

phone earlier," Alek said with a touch of annoyance. This entire meeting should have been a matter of a quick phone call to sort out the civilian shenanigans at the power plant. Instead, Alek had let Boris talk him into coming out to the park after shift rotation. He couldn't get Boris to budge on the matter.

"This is a very busy week for us," Alek began, making sure that Boris understood that 'us' did not include him or his people at the plant, "and any kind of deviations from normal operations during the week is going to only cause problems for everyone. We..."

Boris chuckled amicably and clapped Alek on the shoulder, cutting him off, "Yes, yes, you don't need to be so serious about it. Come on, Captain", Boris said this last word with mock seriousness, "The news of General Maksimov's arrival is all over the city. This is exactly why we need to do these extra tests - to show him. You don't know what this means for us. It's fine, what do you care, huh?" Boris stood up and started arranging his overcoat around him eager to get back. There was an eagerness to get back about the plant director. The man's excitement about something was apparent just under the fake smile he shone at Alek, in the quick way he tried to end the talk.

Alek stayed seated. He could feel himself becoming irritated and tried to stomp it down. Not at the other man's insistence at screwing up the military's plans, but at the jab at his rank. It seems that his past would never leave him alone

and everyone in this damned city would make sure of that.

"Alright, no seriousness, just friends talking right?" Alek tried on a grin. Boris nodded back at him happily but distracted, more intent on locating which pocket currently held his pack of cigarettes. Clearly the other man was already imagining himself back at the plant preparing his tests. "You are right, what do I care? I'm sure that you have involved Bukosky and he has agreed with it. What about Pletrev? What did he say?"

Vladimir Bukosky was the science manager at the plant. Vladimir was one of the most knowledgeable people there that knew the inner workings of the how the plant operated, back to front. Usually, any change to normal operations at the power plant had to be approved by him to avoid anyone causing an accident. The only person who might know more than Vladimir was Vanko Pletrev, the chief designer. Vanko was kept on at the plant to consult on matters to do with the facility itself, the building and infrastructure that ran the reactions. Alek knew all this, since all military personnel had to have full understanding of the civilian workforce. The opposite was not true. Alek also knew that Boris had not conferred with either man.

Boris quickly sat back down and grabbed Alek's arm hard with a firm grip. "Now you listen, Berezin", Boris hissed, all pretence at camaraderie was gone. "Neither of them know, and do

you know why? They would steal the glory for themselves! They would tell the General that it was their great plan to fix the power grid problems. No! It will be Boris that gets the glory!

"Do you know how many times a solution to this problem has been tried? Three time! Three failures. But this one will not fail. I know it will work this time. I figured it out!"

Alek had expected as much. The power grid problem was a concern, but only a minor one. In the event of the national power grid going down, the reactor's water pump would stop pumping cold water into the reactor. The plant had backup generators that would take up to a minute to restart the main water pump. This would leave a minute where the reaction could get dangerously hot. Overall, it was a rare event, but with the current conflict in Afghanistan and other tensions with the Americans, any attack that might impact the Soviet power grid scared the Generals, and the powers that be wanted every hole plugged.

"We have our own tests to run too," Alek argued, "Tests that actually matter more than you begging for a treat like some mongrel. Now, my team is going to be on station at the time you have scheduled this so called 'maintenance window'. I do not need you putting the power plant through shutdown drills and dicking with turbine outputs all while we are trying to carry out the General's agenda. How do you even plan to carry out your clandestine tests without Bukosky finding out?"

Boris had loosened his grip on Alek's arm and had resumed the search for the cigarette pack. He shook his head at the last question and smiled the way one does when he is about to impart some great wisdom. The man was so capricious, Alek could feel his mood growing darker.

"Why do you think the test is set for after midnight, huh?" Boris explained with a wink, "We solve our problem, with proof, and none the wiser until we make the presentation to the General."

"You will be simulating a grid failure, then?" Alek pressed.

"Yes."

"And during this period of no power, the plant is required to run at low power output, is it not?"

"Well, yes. Until the turbines get the pump up to speed," Boris had finally freed his cigarettes from his inside coat pocket and lit one. The smoke blew towards Alek, making him wish the man had better taste in tobacco. "But only for a moment. The new procedure will have almost no down time"

Alek decided to lay all his cards on the table, to make the plant director understand his situation, as much as Boris was allowed to know.

"Listen to me, now," Alek started, "We need the base at full power. If the grid is down, we must rely directly on the plant. If the plant is running at low power, it may cause

problems for us. What if the safeguards activate when the reactors get too hot? You could have done this weeks ago, not now.

"If things go bad for us they will go very bad for you and worse for all the others." Alek turned his gaze toward the city lights where almost 30,000 wives, children, merchants and others not directly working for the base or the plant lived. "Maybe you better eat well tonight, who knows what types of rations will be available next week."

"You really are a grumpy one," Boris said, "Look, nothing will go wrong. Nothing I have planned endangers the reactor cores, it is just the diesel engines. You will still have full use of the reactor output."

"Not if it is in low power mode," Alek countered.

"Only for the briefest of moments. What do you guys do to need so much power?" When no reply seemed forthcoming, Boris clapped Alek on the back, "It will work this time,"

Boris stood up to leave again and turned to point a finger at Aleksander. "It doesn't matter anyhow. If you tell Pletrev or Bukosky, it will still happen. They would run the tests themselves, you know it. This is my chance and it is happening. Why don't you do your job and let me be."

The plant director didn't wait for any reply and strode away back down the path in the direction he had come, the direction of the power plant.

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Aleksander watched Boris Kovalenko head back along the path and disappear into the long shadows of the oak trees lining the edge of the park. He had actually held onto some small hope that he could appeal to Boris somehow, to convince him to stop fiddling with the plant during the General's visit. The experiments with the turbines could be done next week, Alek was sure, the results mailed in to Moscow, however Boris had his eyes firmly on the promise of acclaim and advancement. A placement at the Pripyat facilities didn't hold the highest regard in either military or civilian service. Most people did their time there while keeping an eye out for something better. Alek simply wanted to keep his superiors off his back a little more, which was not very likely given the outcome of their clandestine meeting. It was bad enough that he had had to wait until Boris's own shift ended so they could meet, but the meeting had let Alek verify his suspicions that the plant manager was indeed planning to alter the power plant's operation during his shift.

[Be more descriptive?]

Unknown to the civilian power plant workers and to most of

the population of the city, the military base located at Pripyat housed three long range MIRV-type ballistic missiles, designated 15A18, each carrying multiple 700 kiloton nuclear warheads. It was one of the many defence bases of the Soviet Strategic Rocket Forces secreted throughout the Ukraine, in rural areas, safe from American detection. Many of the city's populace probably suspected the truth, but there was no official acknowledgement publicly. The power plant was seen as a perfect cover for the radiation signature of the missile silos, so once the base was ready, the reactor was built around it and then the city to house the workers and their families. Alek and his team were one of the many silo technical teams that manned one of the three control rooms in shifts.

Boris's plans meant that there was a real possibility of a power failure in the missile silos during the military demonstrations that were planned for the week. As well, civilian plant personnel would be active in parts of the plant that joined with the underground base, possibly getting in the way as they were apt to do. It was a complication that should have been entirely avoidable, but the presence of the general being in the city had the unforeseen effect of rallying the power plant staff to showing off their solution for the power grid problem. Such good Soviets.

Alek stood and took in another view of the lake before turning to leave. The far side of the lake was already starting

to darken. Beyond the river, past the east bank, the country side stretched to the horizon showing off vast forested regions and empty grasslands. There were no other signs of civilization to be seen beyond the city limits. Any roads that might exist was too small and well hidden to be visible from here.

Behind him, west of the park, was the city proper. It wasn't a large city by any standards, but it was big enough to have its own hospital and shopping malls, a movie theatre and graduate school. The small commercial and civic regions were surrounded by modern three- and five-story residences, including several buildings reserved for married couples. The streets were largely broad avenues, free from the close quarters of other soviet cities. They were quite well lit and tree lined that getting about the city on foot was rather pleasant.

His left leg wasn't complaining as much as he knew it could, which was a blessing. He walked along the footpath away from the power plant, the base, and the coming problems. The park was starting to fill up with couples, lost in each other's company, going for lake side strolls. A boy about six years old came bursting from between two trees followed closely by a white and brown sheep dog. He laughed and threw a ball he was carrying for the dog. The boy's father brought up the rear of the group, nodding at Alek as he followed after his two small charges. It was high time to leave before the sight of so many happy faces started to turn his mood ugly.

The park adjoined onto Builders Avenue, which Alek turned onto and headed towards the residential complex that housed his apartment. The route would take him in the direction of the city centre where a stage and fencing were being hastily constructed in front of city hall, in preparation of the General's visit. The sidewalks were beginning to fill up and Alek forced a few early evening revellers to step out of his way as he refused to move aside for them.

The neighbourhoods he was walking through was quickly changing from parks and broad avenues to low rise buildings and store fronts packed shoulder to shoulder along the streets. He approached an elementary school on his right consisting of a squat two story concrete structure next to a small paved playground with a chain link fence around it. Alek had forgotten that the school was on this route home and would have liked to have taken another way.

Several dozen school children, from all grades apparently, were out in the playground arranging themselves in orderly lines. A few taller figures standing apart from the kids were busy waving their arms at the children. The teachers, no doubt, putting the students through their paces, practicing some sort of presentation that they would perform for the arriving dignitaries. The happy din of carefree young children reached his ears as he grew closer. It was a sound he was not completely adverse to, and despite his desire to get home, he found himself

stopping to watch the proceedings.

The students were still wearing their smart looking dark blue uniforms, white dress shirts and red ties for the boys, knee length dresses for the girls. It was almost the same exact uniform his little Sasha wore to school when he was little. Alek could easily imagine his son being one of the proud children going through their steps that would be so important tomorrow during the presentations. He scanned the faces of some of the smaller boys, looking to see if any bore even a passing resemblance to Sasha. None did, but it didn't stop Alek from thinking about his son even more.

Sasha used to be the first one to wake up in the family sized apartment they were assigned to. He would awake full of happy exuberance, bounding into the bed he shared with Sonja, eager to see his parents each morning and start breakfast. Alek could still feel the little hand curling around his index finger as Sasha tried to lead him to see a spider he found, or to play a game that he invented. Could still remember the way Sasha laughed as he ignored his father's calls and ran ahead of Alek on their walks to school each morning. Alek would good-naturedly jog along behind, letting his son win every time.

Of course the apartment was long gone now, reassigned to a family that needed it more. Those times he fondly remembered of the three of them enjoying each day as it came were also long gone. Sasha was gone. That was before the drinking started.

Alek tried to banish these dusty thoughts but they were determined to stick around. He forced himself to look away and keep walking, head down to examine the cracks in the sidewalk as he passed over them. It was no good to dwell on things that he couldn't change anymore. It was best to leave such happy thoughts to a time when happiness bloomed and didn't wither and die, the way it had afterwards.

It wasn't far to the apartment now, just three more blocks to get past and he could get some rest. Alek didn't make it that far though. Between him and his bed stood the Builder's Beerhouse. The tavern occupied the bottom floor of a three story building and had a sign hanging out front over the sidewalk showing a hammer and a beer. Alek was still lost in thought when his feet turned him in towards the tavern entrance and he pushed open the heavy wooden door. He had had a lot of practise with this door over the last few months.

Inside the Builder's, the air smelled of beer, sweat and maybe a hint of someone's lunch that had come back up. The lights were dim but Alek could still make out some of the regulars at their usual spots. There was the old guy that mumbled all night seated at the end of the bar. The three husky men, probably construction workers, aptly enough, that liked the table back in the corner were there. Alek didn't know any of their names, he couldn't care less, and none of them paid him any attention when he took a stool along the bar, away from the

old man.

Tonight, there was also a man standing by himself in the shadows near the door, holding an untouched pint glass in his hand. A couple kids from the professional school where at a table along the wall, near shelf with the radio, hollering and laughing about some triviality. And oddest of all, a woman also stood at the bar accepting a glass from the barkeeper. She appeared to be alone and sipped her drink quietly while looking over some papers. The radio was pumping out some upbeat song that Alek didn't recognize. Disco music was the new fad among the kids this year.

Alek caught the barkeeper's eye and waved him over. The barkeeper was a middle-aged balding man who didn't mind having a drink himself, from the size of his gut. Alek waved the man to come in closer and leaned forward, something the barkeeper's protruding waistline prevented him from imitating.

"I need something today, Yuri," Alek said, "What have you got?"

Yuri placed his hands facing up on the top of the bar. "Hey, I have nothing today, maybe tomorrow, you know?" he replied apologetically.

"Don't give me that," Alek said, "Just give me anything, whatever you got, I don't care."

"I'm out, my friend," Yuri straightened up and absently picked up a nearby cloth, "Times are tough, harder to get things

lately. How about beer today? Vodka?"

Alek sighed, "No, I just... ," he started, seemed to change his mind, then said "No."

The barkeeper shrugged and went to busy himself wiping out a glass left on the bar.

Alek looked around annoyed at Yuri, and then felt annoyed at himself. What was he doing here? The best thing would be to just go home to bed and get what sleep he could. Still he stayed in the bar. He could feel the familiar craving nagging at him and wouldn't let him be until it was sated.

His gaze fell across the figure standing in the shadows by the door. Alek could feel their eyes meet and looked away. Something about the man bothered him but he couldn't place the feeling yet. On the radio, some song by Kino started playing causing the grad students to begin singing and banging the table.

"Aleksander Berezin," the woman at the bar beside Alek said, "Is that you? Are you still smoking that awful hashish?"

Alek stared at the woman in surprise. This was someone that knew him, and his habits, but who could be here at the ass end of worthless postings? She turned to look at him and right away he knew.

"Miri, what are you doing here?" he said.

Miri turned back to her drink. God, she was still gorgeous. Her round face still had a youthful glow about it, and her deep

set eyes hadn't lost their power to draw men in to their sultry gaze. She had her brown hair long, reaching just passed her shoulders, and appeared to be as thin and lithe as ever.

"Are you following me?" Alek asked.

She laughed with honest surprise. "Follow you, Alek," Miri replied, "No," She paused and looked at him, seemed to consider what to say. "I got a job here. Secretary at the power plant. Meeting you here is just a happy coincidence,"

"Thought maybe Sonja sent you," Alek said quietly.

"No, she didn't," Miri said. She turned herself fully on the bar stool to sit facing him. Alek was bothered to see a look of pity in her eyes. No, maybe he was only seeing things. "She is done with you, Alek. After everything? No,"

Alek stared at down at his hands on top of the bar's dark surface, unsure how to proceed. He no longer wore the silver wedding ring that once lived on his left hand ring finger, but it had left an impression on his skin that remained. He hated for Miri to see him here like this, hated the way so many memories of his wife swam to the surface when he saw her. Did she still talk to Sonja? Letters perhaps? Did they still get together on birthdays, maybe? They had been friends longer than he knew Sonja. He cleared his throat and prepared to ask the questions that he would hate himself for later.

Miri took in a breath and exhaled loudly before preempting him, her tone suddenly adversarial. "Why are you still smoking

hashish? Did you learn nothing from the car accident? What would Sonja think? It was nearly the death of you both, and can still be the death of you," The last word was said with emphasis.

"I live with that crash every day, Miri," Alek said, hand unconsciously moving to massage his left knee. "Things are... hard for me,"

Alek hadn't meant to talk so openly to Miri, but something about seeing an old friend of his wife's, someone who knew them from Before, had made him want to rekindle the last spark of a connection to Sonja, however fleeting.

Miri laughed at him. "Hard for you?" she asked incredulously. "Do you know what Sonja had to endure since walking out of your home that night? What kind of life she can make now? But you don't care, its all about Alek still. Maybe I should tell you she has to sell herself for money. Would you care?

"She can't even get a proper divorce and start a new life - it is too expensive. I don't know how she can endure it. First Sasha's death, then you and your drugs, trying to kill her,"

"I didn't... " Alek tried to protest feebly.

"She is better without you there to ruin everything, not that there was anything left to ruin. You were horrible for her, Alek. Horrible"

Miri stood up and placed down some money on the bar, underneath the glass.

"I never wanted to see you again. Neither does she." Miri made this final pronouncement and walked towards the front door of the tavern. Alek didn't watch her leave. Screw her. Why did she have to be here now, of all places. He didn't need this, the constant reminder of things he worked to forget. In her reaction to him, he saw himself as clear as if she had held up a mirror, and he didn't like it. He tried his best just to get through each worthless day and onto the next. And now she was here to taunt him. Bitch.

"Yuri! Vodka," Alek called to the barkeeper who had disappeared somewhere in the back.

The sound of metal scraping on wood immediately to his right brought Alek out of his dark downward spiral. His head snapped around to see who it was now that had come to bother him. His face had become quite stern, lips compressed in bottled anger as his thoughts started to feedback on themselves. It was the stranger from the door who sat on the barstool looking relaxed and at ease. The man wore a dark blue woollen overcoat, common among the people of Pripjat, but when Alek caught a glimpse of his pants, the fabric seemed to be something finer than wool. Could it be silk? Alek couldn't be sure, how could he be? The stranger placed his still full glass on the bar with a thump, exposing his left wrist from the confines of the coat sleeve. Alek was given a brief glimpse of a large silver wristwatch, bigger than any watch he had seen before with a

peculiar face. It seemed to glow softly in the dim light of the bar, but his view of it was too fleeting to be sure.

The man had short sandy hair over a square face that sported a short pointed nose. Dark glasses prevented Alek from seeing his eyes, maybe that was what threw him off before. Nevertheless, Alek could feel those eyes skewering him from behind the tinted circular lenses. The man's gaze was intense and strong.

"Forget her, mine friend," the stranger said with oddly accented speech, "I could hear it all, ya? Fuck ze bitch," The man's comments echoed Alek's own thoughts. Alek didn't acknowledge him.

Yuri had finally reappeared from the back of the bar and had a bottle of vodka and an empty glass pinched between two fingers. It was some of the crap Hrenovuha stuff, Alek saw, but it would do. The barkeeper started to pour into the glass, but Alek took the whole bottle from his hand. Before Yuri could get out of reach, the stranger grabbed chubby man's wrist, eliciting a questioning glance from the barkeeper. The stranger said nothing but nodded towards the left side of the bar behind Yuri, and released his wrist. Yuri frowned at this silent directive but complied anyways, stepping backwards to fetch a small wooden box from under the bar.

"Mine friend, I think I have somezing better for you den zat," the man said softly. Spinning the box around so that the

hinge was on the far side, the man opened the lid. Inside lay six rolled cigarettes, no doubt the hashish that Yuri claimed to not have. "My own supply, better zan what this buffoon serves, ya? He holds it for me." The man again seemed to know what Alek was thinking.

Alek continued to ignore the stranger, pouring himself a drink from the vodka bottle. The small wooden box and its contents drew his gaze though. The odd man sitting beside him smiled and nudged the box closer.

"Indulge me, then" the man said, taking one of the cigarettes for himself and materializing a lighter with a flourish. He lit the end and left it dangling at the edge of his lip while holding out one for Alek. Alek took the man up on his offer. What the hell, his initial need that drove him in here hadn't diminished any with running into Miri. If anything it had grown.

"What happened to your son? I can see za damage it has caused. Your pain tried to hide behind uncaring, but it is still there, ya?" the man went on, not leaving Alek alone. Perhaps he thought he was entitled to some level of discourse in exchange for the hash. Alek took a drag on the cigarette, letting the smoke linger inside before releasing it.

"I too had a son once. Mine boy was eight years old, so happy, so carefree. We loved him," the strange said, refusing to give up on Alek. "He was hit by a train while walking home from

school. My wife saw it. She was heading out to meet him halfway so zey could walk home togezer. She was never za same. None of us were."

The stranger took off his glasses and folded them carefully into his coat pocket. He had greying blue eyes that had some urgency about them. "I see myself in you. I see your anguish and recognize it for mine own."

"My son was twenty," Alek said after a pause. "We don't know what happened. He was away at the time." Alek looked up at the man before continuing, "Afghanistan."

The stranger sighed, "Ah... dat is ugly business, za war." He took a thoughtful pull on his cigarette, "You shouldn't blame yourself, zou, you couldn't be zere. It happened, yes. A tragedy happened and you are stuck now, feeling sorry for yourself, ya?" The man shook his head slightly.

Alek didn't know what the man's deal was or why he felt the need to be so talkative. This odd man with a funny accent thought he knew Alek, thought he understood what Alek had gone through, clearly, by some shared experience. Alek felt the need to show that he was not so easily read.

"I do not spend my time feeling sorry for myself. Maybe you did, I feel nothing anymore," Alek said. He put the man's cigarette down on the edge of the bar favouring the vodka to the hashish. He drank what was in his glass and refilled it.

"But you did feel something, when it happened?"

"Yes"

"Self pity? Sorrow? Did you need a shoulder to weep on? Someone to wipe your cheeks?" the man queried, steeling an unseen glance at Alek as if to see what effect his words were having.

"I was angry, ok? Of course I was angry," Alek spat out, "Fucking Afganistan. Fucking war. Fucking Americans."

The stranger smiled this outburst but again Alek missed seeing this reaction, he was focusing his gaze on the bottle.

"Anger, yes," the man said approvingly, "You raged at za machine dat ate your son. At za ones dat took him from you,"

"It was so pointless," Alek went on, "and for what? Nothing. American influence spreads everywhere, it is their nature to fight and destroy. The Soviet republic can not stand up to them. Sasha died standing up to them, we were told everyone must help to stop them. But they lied, we can't stand up to them. I hate them."

This last simple statement brought a sparkle to the strangers eyes. He poured Alek more alcohol which was accepted and downed readily.

"The Americans deserve your hate. Zey are a scourge certainly, zey can not stand to see the Soviet empire prosper and gladly kill its sons to prevent it. But what of our own leaders, surely zey are not blameless?"

"No one likes this war," Alek agreed, "There is no reason

for it. Still we are told to send our sons out to die. They lie, they never stop lying". Alek's hash had kept burning during the discussion and was mostly turned into a long ashen snake. Alek didn't mind, tonight seemed to call for vodka after all. He took another drink straight from the bottle.

"We can't do anything, better to give up. Everything is pointless. We are nothing, cogs in a machine that doesn't care that the gears are stripping"

"You are wrong, mine friend," the stranger said, leaning in closer, "Zere is always something we can do. One man can have power. One man in the right place can make a decision that could set everything straight. Punish ze Americans, send a message of displeasure to our leaders. One man. Listen..."

[Add more]

[Add kids in bar being boisterous, they are soldiers, loud and visibly angry at the govt also.]

[Kids provide hints at the prank coming next]

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It was getting close to midnight when Alek finally exited the Builder's Beerhouse and started making his way home. He felt very lightheaded from the vodka, and took a few cautious steps in the direction of his apartment complex. It was a good thing he had the next shift off, otherwise he would almost be time to start heading in to the base, and he was in no condition for

that. Alek stopped and peered down the street, blinking a couple times in an attempt to clear his head for a moment. Alek reconsidered his direction, turned around and started off again in the opposite direction. He hoped it was the right way. The alcohol seemed to have numbed his aching knee into an uneasy truce.

Alek continued a slow steady pace along the sidewalk. Ahead of him, the store fronts and three story apartments started to give way to tree lines strips of grass as the street expanded into an avenue. There was no one else to be seen in this part of the city, but the sound of distant traffic remained. Alek walked blindly, step after step, babying his bad leg and looking forward to getting home to his bed. It wasn't until he got to the city centre again with its partially built stage and scaffolding that he looked around and realized he had gone the wrong way after all.

The hour was much too late for workers to still be constructing the stage but Alek saw movement there, nonetheless. A figure dressed in black was placing a ladder against the left side of the scaffolding. It wasn't long enough to suit his needs, apparently, because the figure began efforts extend the ladder with much shaking and loud rattling.

"Hurry up, man," a nervous voice called from the side of the half built stage. Alek looked closer in the shadows there and saw two other black clad figures, one straddling a large bag

of some sort. The man wrestling with the ladder ended the struggle with rattle from the ladder and finally seemed happy with its placement. Alek soon realized that the ladder wasn't the only source of the loud noises.

Turning around, slowly so as not to upset his spinning head, Alek saw a convoy of five or six military trucks making their way down the avenue towards the base. They were all the same model of truck, having cargo areas covered in canvas held up by a series of iron bars, like automotive rib cages. As they grew closer, it was clearer that the convoy was five trucks long. The second and fifth trucks had a pair of soldiers hanging off the backs, standing on the rear bumper.

The loud engine noises did Alek's head no favours as the convey approached the city square. The sidewalk Alek as on ran along one side of the public space that housed the stage. It was prudently lined with short bushes and a park bench, which he shuffled over to in order to take a moments rest. Once seated, he bent over and placed his head between his hands. It helped a little.

"It's upside down, idiot!" the same nervous voice called out. Alek lifted his head enough to watch whatever activity was happening at the stage. The dark figure with the ladder had climbed it to the top of the left scaffolding and was attaching a banner to it. The banner had been rolled lengthwise, but had become partially unfurled when the person had taken the one

corner up the ladder. At the instruction of his accomplice, the figure flipped the banner over, further unrolling it. By the light of the street lamps, Alek could read "Eat shit and die, General Maksimov!". [Zhri govno I zdohni] He laughed in spite of himself. Some junior ranked soldiers were clearly not a fan of the General or his policies and were making their voice known though a classic schoolboy's prank.

The person on the ladder climbed down, jumping off of the last few rungs in haste. For a moment, he was bathed in lamp light and Alek recognized the loud mouthed boys that were in the bar earlier. While the ladder-man, as Alek thought of him, sprinted over to the other side of the stage to prepare to string up the rest of the banner, another prankster emerged and started up the ladder with a bag in tow.

On the street, the first of the green convoy trucks had passed by Alek and was along side the stage. The two youths were committed to their prank now and didn't seem to take any precautions against the convoy soldiers seeing them, other than keeping their dark hoods drawn. The figure with the bag was pulling something out of his bag and attaching it to the rigging where the banner was hung. Alek could hear the familiar sound of duct tape being employed but couldn't see well enough to tell was the object being attached was.

An annoyed voice suddenly spoke up behind Alek, "Damn it, gramps, move it. What the hell," It was a third prankster

crouched in the bushes at the side of the bench. The annoyed kid behind him gave a Alek a shove, knocking him off the bench and onto his hands and knees. It took a moment for the world to stop swaying side to side, and for Alek to regain his senses. From his new vantage point down on the ground, a length of wire was clearly visible trailing away through the grass towards the stage and the second prankster taping up the small objects. Looking back at his shover, Alek saw the wire was attached to a small control box that the kid was trying to hide in the long grass underneath the bench. The control box was one Alek had seen many times before during his service. It was a small detonator box used to set off explosives, or in this case, Alek was sure, fireworks. Where did these three manager to steal fireworks from? There shouldn't even have been any on the base. Perhaps is was simply blasting caps they were rigging, a loud bang to coincide with the unfurling of their protest banner.

The kid had come around the side of the bench to kneel down and peer at his handiwork. He was clearly unsatisfied with it and pulled the box out from its hiding spot in the grass and placed it directly under the bench where the lights didn't reach. More pleased this latest hiding spot, the boy then pulled out the box again and flipped a switch on it, causing a red light to illuminate. The kid nodded to himself this.

Alek watched this all take place over the span of a couple seconds. Placing one hand on his good knee, Alek slowly began to

prop himself up. It was time enough to head home. The short break hadn't really helped as much as Alek had hoped. On the street, the third convoy truck was thundering past the square.

Alek had almost regained his footing when his bad knee gave out on him. He fell over with a cry and landed on top of the prankster holding the control box.

"Oh shit, gramps." The kid whispered urgently, "oh shit, what did you do?" The kid jumped to his feet looking back at the stage frantically. He glanced at the passing convoy, seemed to reach a decision and sprinted away from the stage and his partners in pranking.

Alek again tried to regain his feet, and succeeded this time. From the direction of the stage, a loud whooshing noise started up followed by an ear splitting whistling sound and a cry of pain. The prankster with the bag had jumped down to the ground cradling his left hand with his right. Behind him, a bright blue flower burst was exploding against one of the store front windows with a concussive blast that shattered the glass. The blue flash lit up the prankster's panicked face.

The small object, which had revealed itself now to be fireworks, had worked one end of the tape loose and swung in a shallow arc below the scaffolding. Alek watched, unable to look away, as another bright flash emerged from the end of the firework and shot a charge towards the fourth passing convoy truck. The charge punched through the canvas canopy of the truck

with ease. A brilliant blue flash lit up the canvas covering. A few stray sections of the flower burst erupted from the open back of the truck as small blue fireballs. The canvas covering quickly caught fire and began to billow black smoke. The acrid smell of burning wood and cloth filled the air.

The two soldiers on the back of the last truck jumped down and ran as fast as they could to take cover away from the open expanses of the city centre square. The drivers of the fourth and fifth trucks took a bit longer but they quickly stopped their vehicles and also emerged from the cabs, immediately sprinting after their fellows. Shouts and confused demands to know what happened reached Alek from the far side of the square.

The first three trucks in the convoy didn't stick around to see what had happened, or perhaps they were not even aware.

The two remaining pranksters were no where to be seen.

The sight of the fleeing soldiers and smell of smoke snapped Alek back to full attention. He spun around and began running, alternating between steps and hops, back the way he had come along the side walk. His left knee was fully awake now and screaming in protest. Alek propped himself up against the store front windows as he ran, trying not to fall over.

He had made it down one block when the explosion happened. The sound of it was so loud and startling that Alek lost his grip on the wall he was pushing against as he ran, and fell to his hands and knees once again. The sound of tinkling glass

followed, signifying more store front windows that had fallen victim to the prank. Alek felt the heat from the explosion on his neck, his shadow cast by the raging fire danced crazily in front of him.

Up and down the street, lights were coming on and people pulled back curtains to see what calamitous event had woken them up. In the distance the wail of the fire trucks could be heard. Alek kept moving, not stopping until he was back in his bed.

[Note for editing: This prank can change, but something like it is critical for the finale, creating a disturbance and providing cover for people to masquerade as cleanup workers as cleanup is going on]

CHAPTER TWO

Exothermics

The following day, Alek awoke with a slight headache, the lingering effects of the previous night still refusing to go away. His alarm was set to wake him for the start of his duty shift, which began at midnight, but today he had woken himself up before the alarm rang. The first thing he had to do when he reported in, was to meet with Major Sergei Volkov, the base's commanding officer, to discuss how his meeting with power plant manager went. If there was any conceivable way to avoid talking with the Major after Alek had completely failed to convince Boris of delaying or cancelling the tests at the plant, he would have taken it. Most people tended to walk softly around Major Volkov on a good day. When the Major became upset about something, his displeasure tended to explode unexpectedly on anyone nearby. The trick was to avoid the shrapnel.

The route to the base from Alek's apartment block took him

down the same main avenue from the previous night, past the stage at the city centre. Today, all roads leading to the centre square were blocked off by military barricades a radius of one block from the damaged stage and stores. Alek could see one guard manning the barrier ahead of him. A hastily erected tripod with a floodlight mounted on top shone a soft yellow glow across the street and around the guard station. The guard leaned on the end of the wooden sawhorse that was set up to block traffic and pedestrians alike. He was currently engaged in chatting up a couple women that were walking quickly past. At this late hour, there were no cars to draw the guard's attention. The women were probably the only other people he had seen in a while.

Alek turned right planning to take an adjoining street in order to take an alternate route around the damaged area. He had no desire to pass fake pleasantries with the guard. He would need all of his energy to get through this next shift. It was bound to try his patience to the limit, with the military brass looking over his shoulder and judging every move his team makes. He would have to be sure to keep up the dutiful Soviet act as best he could for the next twelve hours. It would be draining.

The city square to Alek's left was lit up by six of seven additional flood lights similar to the ones positioned at each barrier. The two trucks that got caught up in the fire had been removed sometime in the day, but a large black scorch mark still existed burned into the pavement in front of the stage, which

had emerged relatively unscathed. The air still held a lingering odour of smoke. A few of the damaged store fronts had put up some plywood where glass windows once existed but most window frames were still empty, staring out at the street like empty eye sockets. The store owners probably spent most of the past day moving whatever stock they had into a back storage room.

A lot of the evening spent at the Builder's Beerhouse were fuzzy to Alek but the events that unfolded here at the square were burned into his memory clearly. He remembered falling onto the youngster near the bench, triggering the misfire of the fireworks. One man had definitely made a difference that night, just like the stranger had said. Oh yes, he also remembered meeting the stranger at the bar. Well, it wasn't a meeting so much as the stranger had forced himself into Alek's company. They had ended up talking most of the evening, as long as the stranger had a supply of hash and was paying for the vodka. Alek hadn't gotten the man's name. Hadn't even asked anything about the man himself, most of the conversation was about Alek. The man had done his best to pull him out of the inward spiral he had been in ever since that one year when everything ended. The year Sasha was taken from them, killed. By the Americans, probably. By the Soviet government, certainly. The year Sonja left him and he found himself alone with no one to help him except the drugs and the alcohol.

As Alek drew closer to the main entrance gate of the

military base, the amount of people on the streets increased. A lot of the shifts changed at midnight. Many of the personnel coming from the base were smiling or laughing at some shared joke. Groups of relieved soldiers headed towards to bars to celebrate the end of another duty cycle. Other base staff could be seen headed home towards the residential quarters or headed to a restaurant that held late hours. Their faces markedly different from those that were headed towards to base, just about to begin another eight or twelve hour shift doing the important work of protecting the Soviet republic from the threat of the United States.

Alek walked with a determined pace towards the high command building, avoiding all eye contact with his fellow servicemen and women. Normally, high command was unoccupied for the midnight shifts, but since the General's arrival and late scheduling of the tests, all the brass were present. In the parking lot adjacent to the building, Alek spied a shiny GAZ M1 parked in a VIP spot, no doubt the General's. Its black finish and sleek look made it look majestic in the shadows in the parking lot. The thing had to be an antique. That the General was able to keep such a machine at top condition said a lot for his status.

Alek climbed the few steps that lead to thick wooden doors at the building's entrance and went inside. The light were all on in the building, illuminating the white tiled hallway Alek

found himself now in. On each side of the hall were three doors with inset windows that opened into offices for various officials at the base. The floor and windows were all spotless, tirelessly cleaned for the General's visit by some unlucky privates.

The last door on the right belonged to Major Volkov. Alek approached the door and opened it, stepping inside.

Major Volkov's office, like all the others, consisted of a small reception area and another inner office. The reception area of this particular office contained a desk at which the Major's secretary sat, and two hard backed steel chairs. The walls were adorned with the required photos of the president Gorbachev, Vladimir Lenin and some other figures that Alek didn't immediately recognize.

From behind the door leading to Volkov's inner chamber came the muffled sound of people talking.

"You have to wait," the secretary said to Alek. She was new and Alek didn't recognize her. She stifled a yawn with the back of one hand. The midnight shift was still unfamiliar territory for her, Alek figured.

"Fine," Alek said and closed the door behind him. He sat on one of the utilitarian chairs provided and waited.

"Idiots!" the Major's bellow easily penetrated the plaster walls and filled the waiting room. "It took all day to find one man with a burned hand who checked in to medical?! That should

take two minutes!"

Alek could make out no reply from whoever was reporting to the Major, who continued his beratement.

"The investigation should have started much sooner. The cleanup still has to be arranged. A replacement convoy to be rescheduled. Why do I have to tell you these things? Where did the explosives come from?"

A low voiced reply answered this last question. Alek couldn't make it out but it wasn't to the Major's liking.

"Find out!" he ordered. "Check the ammo supplies, check if it was home made, you morons." Given the fantastic blue flower burst Alek saw, he was pretty sure it wasn't homemade, or something found on the base. Apparently they had no one that had witnessed the explosion so they thought it was a more crude bomb. Alek had no intention of speak up about it.

"Forget it!" the Major went on, "I will get someone else to find out. I want you two dogs to personally report to the supply dump and start providing additional security details. Well, go!"

The door opened rapidly and two soldiers hastily exited the room. They looked in their mid twenties and one wore the emblem of a lieutenant. They glanced quickly at Alek, expressionless, and fled the office. Major Volkov stood in the doorway leading to his inner office, staring at the retreating backs of his subordinates, the very embodiment of displeasure. After a few moments, Volkov looked around the waiting room, taking in the

unwilling audience that it held, and focused on Alek.

"Ugh, Berezin," Major Volkov said with distaste, "Fine, alright come on." He turned and strode back into his chamber without waiting for a response from Alek, who had no choice but to follow him into the room.

The room itself was smaller than the reception area and contained a sturdy wooden desk and chair. There were no other chairs to be found in the room. The Major didn't like to coddle his men, it seemed. The walls were covered in wood panelling which added some small measure of comfort to the room. Some tall floor lamps were located in the corners of the room casting a warm light over everything. During the day, the room would be lit through a large pane glass window located behind the desk. Tonight, Alek could only see his reflection in the window and wondered why the Major didn't get some curtains to block out curious onlookers.

"So you met with that paper pusher, Boris," the Major had a way of making questions sound like a statement of fact, "And I trust everything is sorted out now. The complications are taken care of?"

Alek knew what the Major's game was and was already weary of it. "Unfortunately not, sir. They still plan to carry out an experimental test involving the turbines, using them to provide power for the pumps until the diesel engines can take over the load. This will require a simulated power grid failure in order

to fully carry out the tests. They are quite insistent, sir. They plan to present the findings to the General before he departs the base at the end of the week. He is expected to commend them all for solving the power problem that has gone for so long with no solution.

"Plant Manager Kovalenko has stated that were he to postpone the tests, the science manager or other would take up the challenge and do them anyhow. The prospect of impressing the General is too much for them to ignore."

Throughout Alek's delivery, the Major's face grew more and more displeased. When the report was finished, he stood up, exploding out of his chair and slammed his hands down on the desk with a bang. The chair scraped back and would have fallen over of it didn't hit the window sill behind the desk.

"Saints in heaven, can no one on this base do their job properly?!" he demanded, "Is it too much to ask that you men display some small degree of competence?" The Major straightened and righted his chair. He turned and appeared to be contemplating his reflection in the window as he continued, "The General doesn't care in the least about power plant efficiencies. He is here for one thing - to get this shithole of a base operational and to get the hell out of here. He is not interested in any trivialities from the civilian sector. Hell, the power plant is nothing but a smoke screen anyhow. Who cares how it performs. Now we will have the possibility of overheating

if those idiots mess it up. Pointless. Stupid!"

The Major turned around walked to the front of the desk, forcing Alek to take a few steps back. Alek attempted to evade the man's gaze but failed.

"Truly, I am not surprised that you could not talk any sense into those idiots." The Major said, "I am disappointed, but not surprised. I thought you might welcome such a task. It is a chance for you to do something useful, maybe turn things around for yourself, yes? But what can I expect from one such as you."

Major Volkov leaned forward and poked one meaty finger into Alek's chest, warming up to his subject.

"You have no ambition, no fire." He said, continuing to berate Alek, "Why are you even here still? What do you care about?"

The Major's face took on a look of expectancy, his eye's invited Alek to challenge him, to offer some type of defence for himself. Alek had played this cat and mouse game so many times before, he knew there was no winning move with people like the Major. It was best to weather the storm and retreat once the man had gotten his fill of insulting.

When no answer seemed forthcoming, the Major pressed on, "I read your file when you were sent here to burden us with your presence. Your CO said that you shut down after your kid died, couldn't take it." The Major peered into Alek's eyes, hunting

for a reaction. "He disciplined you repeatedly for drunkenness, dereliction of duty. Finally, when you crashed a vehicle, destroyed military property, he had enough. You don't care do you? You almost killed your wife in the crash, the file says, but you don't care, not a bit. Not even when they demoted you."

The Major again invited Alek to offer some retort Alek did not rise to the bait. He turned his back on Alek and went back to take his chair. "You are a worthless soldier, Berezin. Sent to a worthless posting so you could sit around being worthless. I wish I could get rid of you, but since I can't I am getting myself out of here. Once this base is functional and the General is pleased, he will leave, and I with him. I don't like unambitious layabouts, Berezin."

Major Volkov seemed to run out of steam and Alek began to take his leave in order to get to his duty station, but the Major had more items on his agenda. Volkov was a true bureaucrat that does nothing himself and loves to hear himself speak. Alek thought he might be able to get through this without sitting through yet another rehashing of the same agenda points for the upcoming tests. No such luck today.

"About the tests today, Berezin," the Major began. The change of topic had brought fresh excitement to the Major's eyes and his demeanour improved slightly. He quite enjoyed tell people what they already knew. Alek struggled to keep a look of galling annoyance off of his face. "These complications leaves

the base potentially underpowered and the play itself will be vulnerable to overload. You must watch the power levels coming out of the plant." The Major slammed his hand down on the desk again but got no reaction from Alek. Alek increased his effort to present a calm exterior. "Watch them, damn it, and report any changes to me. You can't do anything about overheating.

"The tests will start at 1am, when most of the city is oblivious to base activity. The General is already on site, doing his rounds and looking in on things."

"Sir, I think we don't..." Alek attempted to curtail going over the test details for a fourth time, or was it fifth.

"Shut up and listen, this is important. I don't need you fucking it up. Even if you don't care about anything, maybe you can think of the rest of us." The Major was working himself up again, "Now the General is already on site, doing his rounds. Your team will be demonstrating silo operations, loading/unloading and firing.

"What about the maintenance scheduled for today, did it happen as planned?" Alek heard himself ask before he could restrain himself. He was interested in how the maintenance crew got on, though. With the Major so wound up, one of the few things that could make Alek look bad would be if the maintenance had caused some kind of delay, and he had had his fill of Volkov for the week already.

"No it didn't happen as planned! Idiot!" Volkov shouted at

Alek, spittle spraying in front of him as the words burst forth. "The entire installation had to be cancelled after the god damned warheads exploded all over the town square! Didn't you hear? Didn't you see. Are you truly this dense, Berezin?"

Alek winced. Yes, he had asked for this. He should have kept his mouth shut since the answer to his question would have presented itself soon anyhow. It was a mistake and now he had to bear the brunt of the consequence.

The Major continued to holler, "When I find out the fools that set that transport truck on fire, they will beg me to send them to the pit mines instead of what I have planned. They will never see the light of day again. To destroy nuclear warhead so recklessly. What were they thinking? Is it a protest? Some anti-military protest? The cleanup will take days. Special crews need to come in to sweep for radioactive debris. The entire center square is closed and all the festivities for the General had to be cancelled."

The Major levelled a stern gaze at Alek before adding "Nothing else can go wrong, do you hear me? Nothing else. Now get out."

Alek dutifully left the inner office, closing the door behind him. The secretary had her head buried in some papers and took no notice. The clock on the wall above her desk said that he still had thirty minutes to get his team organized before the start of the nights testing. The silo control room that he was

assigned to was about a ten minute walk from the administrative buildings to the power plant, with the control room located on a sub level under the reactor building, so he wasn't that pressed for time. The needless rehashing of the night's events with Volkov had wasted about a half hour. Alek would skip making a trip past the commissary to grab a bite on the way, maybe after the tests.

He supposed he should be happy that the Major had cut short his rebuking of Alek's past so short. He was not so forgiving in the past, but one can only repeat the same insults so many times. Alek used to get angry at his harsh treatment here on the base but no longer. A lot of the Major's criticisms were right, which stung the most. When Sasha died, everything had stopped for Alek, true. He wasn't able to find a way to carry on with life's trivialities. What did it matter? Nothing would bring Sasha back, nothing would fix his relationship with Sonja. Sasha is still dead whether he cares or not. It was leaders like this Volkov that send kids to die, ambitious men only caring for better perks and postings killing the Republic's sons.

If only he could make people like Volkov see the consequences of their decisions, the broken families, shortened lives, the extinguishing of hopes and dreams for nothing. If Sasha could return if only for a few minutes, what would he say? What impressions could he give to change war-hardened hearts? How could he be vindicated?

The Soviet elites would never stop fighting to fend off the American boogiemens they saw in every shadow. The Americans seem quite content to continue instigating and kicking the Soviet hornet's nest. Damn them, damn both of them! War never ends, we attack them, they attack us, pointless. It is always tit for tat and in the end nothing changes - just death. There is nothing one man could do.

Then a thought from the previous night swims up unbidden. It tells him that this isn't true. Couldn't one man change things? One man can have power. One man in the right place. Isn't that the message from the stranger? If only he could find his right place.

#

The Pripjat Facility was located mostly under ground, next to and partially underneath the power plant itself. The installation consisted of a single launching silo camouflaged as an air vent for the diesel turbines. Next to the silo, also completely unseen from the surface, was the inventory chamber that held the missiles. The current base's complement was three 8K67 type missiles that could be moved in and out of the launch tube by means of a movable platform. Each missile was capable of striking anywhere on the planet with ten 700 kiloton warheads, though due to current logistical problems explained by the

Major, each each missile currently held three warheads. Due to the single silo configuration of the site, the base was at the top of a short list of bases to get the new multiple warhead armaments. The base also had a direct electrical feed from the power plant, as well as a connection to the national power grid. The many hydraulic systems involved in moving around the heavy machinery as well as the other launch systems - launch clamps, fuel pumps, cryogenic fuel storage, among others - demanded a lot of power.

Administrative buildings for the base's commanding officers were located above ground tucked up beside the various outbuildings for the power plant. From the lower level of the main building, a long tunnel stretched a few hundred meters to a series of stairs which took staff to the control and observation rooms that lined the sides of the silo. It was this tunnel that Alek walked along as he headed towards the control room. The tunnel itself was fairly crowded today with technicians hurrying between the silo and maintenance areas and other staff rushing to handle some matter related to the General's visit. Alek kept his gaze down to avoid smalltalk as he walked resolutely towards his destination, forcing a couple others to side step or get hit. If they had any cross words for him, Alek took no notice.

The control room itself was a compact room about 10 foot square with computer panels lining the three walls that faced the door. To the left of the door was the launch system control

panel consisting mainly of banks of buttons and small glass panels that lit up. Here an operator could manage the loading and uploading of missile from inventory, the silo launch portal that normally sealed the opening at the top, the clamps that held the missile in place as well as the launch activation system itself. Fuel inventory and pump control was also located here.

On the wall opposite launch control was missile telemetry. It had a large green monochrome display that tracked the flight parameters of any missiles in flight, altitude, orientation, thrust vectors and the like. Instruments to monitor the power plant status were also located here.

The far wall held the targeting computer, with its small green display and standard 53 key keyboard, and the circular black radar displays showing any incoming objects in flight up to 500km away. Its green line swept around the black face currently showing no contacts.

Next to the door was a single chair for the control room supervisor. Each of the three stations had its own chair, all occupied by three young privates who glance over at Alek as he entered, faces positively shining with barely restrained excitement. As supervisor, only Alek had the key to unlock the firing control panel and only he could give the order to launch.

Dymtrus Rodzianko manned launch control, Ivan Sokolski was at telemetry and Osip Tverskaya located at targeting. Alek had

worked with these men for the last couple months. They were capable enough technicians, but outside of the base Alek had no contact with them or any other servicemen.

"Just don't make us look bad, Dymtrus. You are lucky, I don't get to do anything today," Ivan was saying.

All three men had their chairs spun around to face each other. A grin broke out on Dymtrus's face at his friend's comments, perhaps in anticipation of the exciting button pushing to come.

"Not to worry, guys, I am an expert!" he replied

"Great, an expert button pusher," chided the other man, Osip, "A trained monkey can press buttons."

"I'm glad we are underground," Dymtrus said, "With your targeting skills, we will probably hit the town above us! Hasn't it been destroyed enough for one day?"

Alek let the men chatter on for a few minutes while he sat down and organized his thoughts for the upcoming exercise. They had moved on from trading barbs to speculating about the explosion and damage to the square. With a deep breath, he began, "We are not firing anything today, Rodzianko. Make sure of it."

The three privates cued into Alek's curt demeanour and turned their chairs around to face their stations.

"Yes sir," Dymtrus said.

Alek cast his gaze around the room targeting each man as he

continued, "Today we are being put through three practise drills: loading, targeting and launch. Reaction time for target entry as well as accuracy will be logged so get it right. For the launch test, make sure clamps are on and test mode is engaged. Engine systems will be active for performance testing and thrust levels will be observed to make sure the new warheads are having the expected effect on the rockets."

His little speech was similar to the Major's speech he had just came from, in that these men probably already knew everything he was saying. Well, it was better to be sure, definitely. If the men were as annoyed at him as he had felt at the Major, then so be it.

"Also, the power plant personnel are also performing unrelated maintenance at this time. Keep an eye on the plant output levels and watch for any sudden drops that might indicate an imminent loss of power. What is the current status?"

"Power plant outputting 70% of normal levels, sir" Ivan quickly announced.

Seventy percent was still good, but their tests must already be underway for the levels to be that low. As long as it stayed high enough to keep the base powered. No doubt the base was currently off the grid now, so there was no backup power if they needed it. It was out of Alek's hands, at any rate. Better to focus on the things that he was responsible for.

There was not much for them to do until the call came in to

start the test, which should be happen momentarily according to the clock on the wall. There was not enough room in the control room for the General and his staff, since the four man team had just enough room to man their stations. The VIPs and the Major were located in an observation gallery that, unlike the control room, had large bay windows open onto the silo and the missile itself.

After this shift was done maybe he would head back to the Beerhouse. That hash he had the previous night had renewed the old desires for the drug. It had been a while since he had had good hash. Even though he had barely had the one offered to him, that he could remember, it still lured him back for more. Maybe that odd stranger would be where. No, of course not. The end of shift would put him in the bar around lunch time - much too early for decent folk to be at a bar, but you never knew. And if not at one bar, maybe he would be at another. The man had some very interesting ideas from what Alek could remember. He never figured that he could change the world but that night, talking to the stranger, it had sounded so plausible, so possible. If one couldn't change the world to be how it was, maybe one would have to settle for making it better some how.

The sound of a braying siren pulled Alek out of his daydreaming suddenly. A red shielded light mounted above the door lit up and began to spin inside its casing. The three junior soldiers were sitting straight up on the edges of their

seats, expectantly smiling at Alek and each other, their eager fingers twitched above buttons and keys at their stations.

Over an intercom set into the launch control desk, the Major's voice demanded, "Begin deployment exercise." On the wall beneath the clock a digital screen lit up and began to count up from 0:00.

At the launch control station, Dymtrus took a moment to look over his control board. With a sure hand, he pressed one button marked 'Силос двери' that was set apart from a row of six buttons near the top of the console. The button lit up yellow and a loud mechanical noise filled the control room. Above them, unseen, the giant circular blast shield painted to look like an air vent started to roll aside from the top of the silo to reveal the great void beneath. Three seconds had passed.

Dymtrus next considered a dial located on his right side labelled 'Ракетные выбор' and rotated it to 'A'. The mechanical grating sound from the silo door continued. Below the dial Dymtrus next flicked a toggle switch labelled 'конвейер'. A pair of lights above the switch, one green and one dim, changed states to dim and yellow, respectively. After a few seconds, the yellow light turned green. Dymtrus engaged one last button next to the dial and flicked the switch back. Twenty seconds had passed.

The grinning private then turned around his chair and leaned back placing his hands over his head. Behind him, the two

lights again changed state, returning to yellow and dim. The mechanical sound of the silo door that filled the room finally ceased and the 'Силос двери' button that was yellow turned green.

"No one could be faster," Dymtrus boasted. "They can not complain about that."

Alek made no comment one way or another. The exercise was child's play and entirely dependant on the speed of the machinery moving around in the silo. A more important concern was the power plant's status. None of the three privates had bothered to look at the gauges showing plant output. Alek did so and saw that the power had dropped to 50%. Still ok for now.

He watched the last remaining yellow lit button somberly, imagining the massive missile currently being moved into place in the silo from the inventory room. Imagines the massive destructive potential it holds inside its simple cylindrical appearance. How many other missiles just like this one were secreted away in similar places all throughout the United States pointed at the Soviet Republic right now? How many were pointed at him? It would never end.

The light eventually turned green. One minute forty two seconds had passed.

On the power plant gauge, the output from the plant was now hovering at 40% and fluctuating. This was the lowest acceptable level of output at the plant. Alek wondered what was going on

over there. They must be lowering the reaction levels in preparation of the cutover to the turbines.

Ivan looked at his shiftmates with anticipation and said, "The real test is next! I have never done this for real before, I mean really here in the actual launching facility. What target should we set?"

"Set it for Moscow, what a thing that would be! Haha" Dymtrus said with a laugh.

"Don't even joke about that, not when the General is monitoring us!", Osip scolded, then his eyes shone with the arrival of an idea, "Set it for New York, that is what the General wants to see."

Ivan nodded in agreement with his mates, then checked with Alek. "It's up to you sir, what target do we set?"

Alek didn't care what they did and said as much. Was his Sasha ever like these young men? So excited with the prospect of war. So ready to fight, even such a removed type of fighting as this button pushing was. Or maybe because of it. Did his son's eyes shine with the anticipation of combat and death? Or was he horrified by it, just wanting to come home? It didn't matter, Sasha was dead. He died fighting for his country, for a government that sent him there to be in harms way.

The Major's voice returned, coming from the intercom, "Begin firing exercise".

This time it was Osip that snapped to attention. Above him

the digital readout flicked back to 0:00 and started counting up. His hands jerked hesitantly over his keyboard before tapping out 'Нью-Йорк' on his input console. On the screen above the keys 'Нью-Йорк широта 40.47 долгота 73.58'. Osip selected it using the keyboard and moved his left hand to three readouts that read 'А: Нет Выходной' 'В: Нет Выходной' 'С: Нет Выходной'. He tapped a button next to the first readout which changed to 'А: Нью-Йорк'.

While Osip continued to work over his station, Alek got up and fished his launch key from his pocket. He still had to unlock the firing console to allow the test to proceed. Alek had to lean over Dymtrus's shoulder to reach the keyhole and unlock the system. With the key in place he pressed a nearby button to put the firing console into test mode, ensuring no launch even without the clamps.

Dymtrus was focused on watching Osip enter the target coordinates and not watching his own station. Alek gave him a backhanded slap on the back of his head.

"Pay attention over here." Alek barked, "Make sure the clamps are on"

Dymtrus spun around embarrassed. He quickly shot a finger out to press a dimmed button labelled 'зажим', turning it green.

"Sorry sir, yes. They like to slip sometimes, sir"

"Target ready," Osip called out from his place behind Alek.

As if on cue, the power to the control room cut out and

everything went dark except for the spinning red light on the wall. The four men stared at each other in surprise, at a loss for what to do next. Before anything needed to be decided, however, the power turned back on, returning all the consoles to life with their green and yellow lights. The power was out for maybe a second.

"Shit" Alek muttered and quickly flung himself to each of the three consoles, pushing past the junior soldiers. Everything still seemed ok. Targeting computers still had a lock on for missile A which was still ready in the silo, clamps on. The timer on the wall still had the time visible ticking up. Twenty three seconds. The power glitch hadn't affected anything, not even the clamps that apparently liked to slip.

"We failed!" Osip was wailing, "We failed the test, what the hell was that?"

"FIRE!" Alek orders. It was the final step of the test. He had been just about to do it when the power cut out.

Eager to do his job to impress the General, Dymtrus reached for the red plunger button for missile A and slammed his hand down on it.

Alek watched Dymtrus's arm move through the air. The boy was staring intently at the button, all focus going towards pressing it. The other two were shouting something at Dymtrus as well. Staring at the firing button. It was the centre of their universe at the moment, just as Sasha had once been for him.

Sasha, who had ended up crushed between two uncaring governments, whose death could not be undone. No one could change it.

But one man in the right place could make a change. Wasn't that right? Couldn't that be right?

And, after what seemed like ages, as Dymtrus pressed the firing button, unseen by anyone else, Alek clicked off the clamps.

Outside in the darkness of a brisk Soviet night, a loud roar erupted in a small company town that most considered a shit posting. The roar was not common, but also not unexpected. The brilliant trail of fire that followed, rising out of the ground, was quite unexpected. The light dazzled those awake to see it. It woke up those that were sleeping. The column of smoke that it left behind couldn't be seen in the dark, but it could be smelt. Slowly the light rose high into the sky and began to disappear from sight of the townspeople below. The light travelled out beyond the horizon. The light would sail over the arctic to dance with the Borealis. In his mind's eye, Alek watched light come down out of the sky, lower and lower. And then, there would be light.

[Editing note: what about the console being in test mode? The reboot from the power dip reset the console back to normal

mode. Explain this later via the girlfriend - we don't mention it here because Alek didn't notice or think about it.]

PART II

1995: Toronto, Canada

CHAPTER THREE

Chapter

Arrangement

Twists:

- the device itself - first, during TLB
- future people - second, during TLA
- B is from future - third, during TLA
- B is not dead? - fourth during TLC

I Prologue

II Timeline B - A&G jump. Take a break to show:

III Timeline A - end of this coincides with start of B,
already shown

IV Recap end of Timeline B from B POV then:

Timeline C

V Timeline D

P2 - main objective is to get the device working and jump to P4

Who is opponants, what is their objective

This part shows a glimpse of the bad guys, B dies to reveal it.

Presumably, the bad guys are trying to save their timeline

- normally, the T was a russian scientist, why is he in canada?

- if no one has tech, FF guys can invade easier in that TL

- the bad guys did some big hit on him that failed but forced him to come here?

- russian facility was destroyed so he had to find other work, came to university

- he never persued the research tht was interrupted

- bad guys finally found him again and try again, B stops them

Step to get device working?

- identifying its potential, T will know its familliar

- powering it, low power, super limited effects, spacial only

- gaining access to more power (reactor)

- b takes it one time to goto P4, comes back with a better

fixed powered device

- new device has time dilation effects

Conflict

The badguys base in 1995 uses some spacial effects

They get captured and taken in there during when B is gone

Thus they dont have the device to give them, they know nothing

B returns injured and tracked them down to help escape

During the escape, B dies but he reveals the enemies to be crazy alien dudes

They escape and take new device to T

They discover time effects and see B's coords

Use time effects to dodge around the badguys

Eventually jump to coords

P3 - main objetive is to catch up to the USSR in research and introduce the bad guys, kick off P2

P4 - main objective is to fight the badguys and explore the super powers of the device more

P5 - save the world

TIMELINE B - son interferes

- A is urbexing, sees T get mugged? and watches someone save him (its B) (B loses device also)

- checking it out after the fact, A finds a device (from bad guys, maybe one guys is dead)

- two boys at school

- A examines a wierd device

- A takes it to school to show B, B loves it (thinks its his)

- T takes it

- B is super upset (needs it to get home)

- B gets A to help break into school and get it from T office

- They break in, T comes back they get caught

- T is super paranoid of late, and has a gun

- ?

- when they get T on their side, he can help examine device

- Add in B's girlfriend

- B shows up one day with a broken wrist (return point for B from TL C)

- ?

- B dies

- ?

- A eventually figures out stuff and jumps to future with

- this becomes TIMELINE C

P2

Chapter layout

1

A is out urbexing somewhere, maybe he gets guards or cops mad at him, and they chase him. He is in a subway tunnel?

Screw it, he is a photographer. Urbex to find good shots.

While losing them, he sees someone getting mugged?
Attacked? By 2 men

He wonders how to help and starts to get down when another person appears to save the person.

Person kicks one onto the tracks where they break their neck.

The other runs away, the saviour helps person up and they both run away.

A emerges from the tunnel before a train comes. Passes the body, he checks it out and finds a device.

The train comes and he gets out, the body is destroyed.
Station emergency happens due to body.

#

B is an engineer student

At school meets his buddy B going to physics class.

Talks about crazy night and shows some shots. Has a new digital camera, B is not impressed.

B spies the device. B gets excited

campus police come pick A up.

He is known to police as a common pickup for trespassing - why

Prof goes into the hall with the police to see what is up.

Police ask him to empty his pockets and take the item

They recieved a complaint of stolen items at the subway (from mugger that ran)

He goes with police and leaves B

2

At the police station, they ask him questions about his night

He admits to trespassing (again) for photos. But nothing about the death/mugging

Asked about the saviour, doesnt know.

When the police are done, he is taken to the dean, T is there too

They are upset at his problems and decide to confiscate his camera equip, which belongs to the school.

They take all the gear including teh device that he claimed was camera gear. He protests, no good.

The gear is locked up in the deans office in science

building.

#

At the hanger later after school A tells B what happened

B is totally pissed, more pissed than should be.

He tells A to go get the item. He will go alone if he has to.

B appeals that they shouldnt take it, its not camera gear

A finally agrees after B says he is going to do it anyhow

#

B has taken his GF along, introduce her here. She is important for getting into offices.

The GF is super interested in the red zone, trying to save up to get in there.

She learned all kinds of criminal skills to help out in there, says urbex is a great skill to have

How did B meet her?

Not really a GF but she likes him and he wont notice

He lives at her house, crashes there after he showed up one time answering ad, he has money

They break into the deans office, to retrieve the device. Its not there. Where is it?

At the newspaper office? They plan to go there to check it out.

On the way is Ts office. B wants to get in there since we're here anyhow.

B is looking through papers and stuff, he finds something and mutters about how its too late.

She has written the theories already - published?

A spies the box of camera gear. He excitedly says here it is! Wtf.

T shows up to the office with a binder in hand.

Wearing coat A recognizes from the subway. Tries to talk about it.

T is all freaked out and has a gun. Is very paranoid and makes them leave. B doesnt want T to see him clearly. He wants to get away.

A tries to get his stuff but cant. T plans to expel them. Makes them leave

3

A doesnt care, B cares a lot (LG alignment)

After school A decides to talk to T

T doesnt want to hear it, she is appalled by their actions. What about you! Taking my stuff.

They keep argueing back and forth.

B cuts in and starts talking about the theory, tips his hand.

Says his dad was working on the same thing. He knows she did some work there too

Says that his dad made a prototype to test the theories

out

B is trying to remember what he heard, growing up with the theory from his dads work, he doesnt really know it.

B lets T look at him and recognizes him.

T is shocked about Brian knowing the science and saving her

A accuses B of being the guy that fought in the subway, you didnt tell me? What is going on

A convinces T to meet them later for coffee somewhere to talk more.

#

At coffee shop B and T talk about science

A tried to keep up and asks questions to clarify things a bit

T is super interested in the prototype ask about it.

B says actually A has it in his pocket.

The device is uncharged and they need to charge it with neutrinos. The UofT slowpoke reactor is good for this and they have to break in again.

This requires the GF of course. She loves to help and catch

Bs eye

Can we get them on this path without Brian tipping anything?

If brian know everything about the device it makes for no story

- how about brian was sent back with no device. This is an alien device that he is not familiar with.

Brian knows about the neutrinos but not how to get them, get them in there.

T recogines the access port as similar to ports in use, but a bit different?

B keeps saying it is his device when its not to not giveaway that bad guys have the devices.

They call him out on how he doesnt know much about it and he says what, do you know your music player works? Err cd player?

When they get into the reactor they are trying to fuel it up, somehow. Maybe it just absorbs neutrinos?

Does the reactor have a neutrino source?

These reactors are mainly for neutron imaging and exposure - irradiation studies.

They decide to just irradiate it and hope for the best. But its neutrons, we need neutrinos.

It will be enough, we have no choice. They have to leave it in there for as long as possible.

While in there, the bad guys pop in and find them, they are after B.

How can they fight off guys with devices? Maybe dont have devices and are picked up? The lost their only one?

They try to run away but cant go far since they have to return to get the device.

A is caught and they yell at him in russian about where is the device, there is Brian. A gets beat up

Brian appears to lure them away from A. He tries to climb out of reach but cant do it well enough

Brian has to get hurt here so that they have to figure stuff out without him.

The GF can come in and save them somehow.

Another idea - brian gets taken and the yleave with him. They actually pop away but we dont see that. A and GF cant find where they went.

Get the device and go to GF place

At the place they figure it out?

Make T die some how.

If B is gone how do they get him back, we need B around to be sympathetic

Alternate line

Teacher doesnt die - goes on to eventually make the firm to research the science herself ahead of the russians so usa has the device in the future leading to the alien takeover

A&B need to be already chums working on something but what.

#

SCENE AARON

Aaron Murphy is sitting on top of the upper level of the big neon sign at Yonge and Bloor streets in Toronto. Its his favourite spot to take photos of the night life along Yonge street, Toronto's busiest avenue. Arguably the best place to be outside of LA. Aaron loves to just look at the city and admire the ebb and flow of the people in it. It is beautiful like a living thing. He is setting up taking some quick photos and checking a camera he left up here taking long exposures. He gets paid for some of the photos that get used by the university papers. A lot of the gear is owned by the university but he treats it as his own.

The long exposure is done and he takes apart to bring back down. He still uses the schools dark room to develop pictures on

film. The new digital camera are pretty convenient but will never take as good a picture as film. The image quality just isn't there. He starts climbing down with a bag slung over his shoulder. The climbing is easy here with so many scaffoldings and ladder, not even a real challenge.

When he drops down the last section of ladder onto the pavement near the sidewalk, a nearby police officer hears it and sees him. Hey you! The cop yells and runs over. Damn it, of all the luck. He was always being picked up for trespassing while getting his pictures but it is always worth it. Some of the pics just cant be gotten except from those great vantage points. Tonight he cant afford to get picked up again so soon.

He runs across the street against the light into the Eaton centre. Its closed but he hopes to blend into the crowd. The police is still after him and there are not many people around. He hurries down the flights of stairs and into the subway, jumping the turnstyle in his rush. There is no one there currently and the station attendant isnt paid enough to care about some fare dodgers.

Taking the steps two at a time he runs out onto the train platform. He is at the north end of the station right by the tunnel. He quickly jumps down onto the train tracks and hides in the little access walkway on the side of the tunnel. He lays down on the stairs leading up to the platform and watches for the police. He's explored a lot of the subway tunnels before for

some urban decay type shots. They are not that dangerous if you know the nooks and crannies.

The cop never does show up and after a while he decides to get up and head back to the dorms. On the platform now, there is only a woman and one other guy. The guy is wearing a dark hoodie that he cant see much detail on. The woman has a beige coat with a fur collar and a lightweight purple scarf. He doesnt want anyone to see him come out of the tunnel. Watching the two people, to wait for a moment, he sees that that guy is following the woman and seems to be tracking her. She doesnt seem to notice. He decides to get his camera out and get pics, this might be interesting. He uses the camera to get a closer look at the guy but still cant see anything about him.

While watching the man he hears the woman cry out. He pulls his eye back and looks at the platform. Two other men wearing long coats are there now and one is grabbing the woman's arm. They are pretty far from the entrance, how did they get that far without any sound or him noticing? He looks back at the scene through the camera. The first guy is running now and jumps on the second long coat guy. They go down and the first man pulls the woman to the side with him. When they get up, the long coat guy grabs the first guy in a bear hug from behind but the first guy breaks free by striking backwards with his head and then flexing his arm out to the sides. The long coat guy is forced to take a step back and the first guy spins around quick kicking

him down onto the tracks. He lands on his back on the track and there is a crack.

The other long coat guy lets go and run out of the station. First guy doesnt pursue him, he helps the woman up. He helps get her out and up the stairs. When they are gone, Aaron comes out and runs along the tracks to examine the guy that fell down there. His neck seems broken. Laying beside him on the cement between the tracks is something that looks like one of those digital cameras. He picks it up. Its the right size and seems to have a screen on the back but no lens. Not sure what it is, he pockets it. A train is coming now so he jumps out and run out of the station.

Behind him he can hear the train brakes screaming as the train conductor sees the person on the tracks. He doesnt think it will stop in time. An alarm bell starts up on the platform level behind him.

Change - maybe he guys are attacking Brian not Maria. He was stalking her because he needs to make she she never publishes the paper

The guys attacking her are the future guys stopping him. They need the US agreeing to let them in

SCENE AARON

The next morning Aaron is going to physics class. He is studying a range of courses but doesn't know what he wants to do though he likes the sciences. He has got his digital camera only with him and the strange new digital camera he found. He cuts through the engineering building to get to the science building (Sanford Flemming?). He is 2nd year and this is still early in the new school year. All the first year engineering students are still drunk on being away from home and on their own. The halls are still filled with people singing the engineering song from frosh week.

On the way he sees Brian walking ahead of him, also going to physics class. They only just met a few weeks ago in class. He seems pretty friendly and smart. He runs to catch up.

Brian man, what's going on? He greets his new friend.

Brian stops and turns around, Oh hey Aaron, what's happening? He seems really tired and run down.

There was this fight last night at Dundas station, I got a bunch of pics on my new camera. It was pretty intense. Check it out. Aaron gets the digital camera from his bag. It wasn't the best images but it was still fun to show off the latest tech.

I don't care, man. Come on, that camera is crap anyhow. Brian said with barely a glance at the offered pictures on screen. They reached the building and went inside.

Alright, Aaron said a bit disappointed. He goes to put his camera back in the bag and takes out the mystery device. How

about this then eh? He holds the thing out so Brian can get a look at it.

Brian stops walking and stares at the thing in aaron's hand with barely hidden greed. He tries to grab the thing but Aaron pulls back. Where did you get this? Brian demands. I mean, thats really cool, what is it?

At the fight I told you about, Aaron explained, one of the dudes dropped it on the tracks. Its like a camera, see the screen here, but there is no lens. I havn't got it to work yet. The keep waling in to class as they are talking. Brian cant stop looking at it. Describe the lecture hall and the people in it. Everyone is talking and getting their papers out etc.

Let me see it, I'm good with this stuff. Brian offers.

Haha no way man, finders keepers. Aaron chides. After class, he adds, seeing the physics prof enter the room and start to organize for the class. It is a woman, Dr M Falwell. [description]

Fine Brian says, after class but don't take off. Its really cool. Brian gets his notebook out for class.

Before class can begin, a campus police officer comes in the class and approaches the professor. They confer for a minute before Ms Falwell turned on her mic. "Will Aaron Murphy come up to the front please?' she announces.

Shit now what, Aaron said getting up, Catch you later man. He heads down to the front.

He introduces himself to the prof and the officer there.
The campus police officer does all the talking.

Aaron Murphy? He ask to verify Aaron's identity

Yes, whats this about?

Come with us out in the hall please. The office gestures
towards to hall where Aaron can see a city police officer
waiting outside. No one in the class is paying much attention to
him though Brian has moved up to a closer spot.

You can't tell me what this is about? Aaron pressed

Out in the hall, please.

Aaron agrees to go and the officer takes up a place behind
him to make sure he doesn't change his mind. In the hall the
city officer grabs his arm and pulls him to the side of the
hallway where a row of study tables stand in a line. He stop
Aaron at the first table.

Aaron Murphy, please place your bag on the table.

Aaron does while asking Officer, what is this about?

The officer takes the bag and opens it. Were you in the
vicinity of Dundas station last night? The officer glances at
aaron and doesnt wait for a reply. Yes you were. You were
spotted entering the station around 1:30 am.

What? Aaron is a bit worried now and nervous, How do you
know that? You cant prove anything from a faulty eye witness
account?

The officer continues to rummage through the bag. Come on,

Mr Murphy. How many times have you been picked up for trespass? No? Dont remember? Fourteen. The beat officers know you pretty well by sight. There was a mugging last night at the subway station and we have a report that goods were stolen.

The officer takes Aaron's camera and the strange device from the bag. Can you explain how you got these items?

Those are school property, aaron attempts to explain, the paper loans me cameras to take photos for them. Ask them. He tries to not stare at the new device for very long and that the officer wont take a closer look at it.

The officer placed the items back in the bag and zips it up. I think you should come with us for some questioning, Mr Murphy. The campus officer leads the way and the three of them head to the campus police office.

#

Miscellaneous scenes that might be good

Aaron walked the length of the living room back and forth with quick steps, pacing repeatedly in front of the couch that Brian and Grace were sitting on. His head was still spinning and he couldn't focus on anything but the recent events he had just witnessed. The last look on Prof. Falwell's face would haunt him

forever. And what happened after... no it wasn't possible. It was madness. Maybe he was dreaming it all.

Why had he come back here, to Grace's house? He had to get back to the dorm. There was classes tomorrow. He had to just get back into the normal swing of his life and things would just go back to normal. He had to get out of here.

"Aaron, buddy, calm down," Brian said softly, "You have to stop and take a breath"

"A breath? Calm down?" Aaron asked incredulously, "They killed her! Killed. Her. What the hell was that? What was that?!"

"Come on, man, sit down here." Brian said, "You are making me crazy" He patted the empty cushion on the brown couch.

Aaron shook his head and didn't cease his frenetic pacing. "No, I'm out of here. No, no way" He said. The best thing was to go and leave the nights events behind. He wanted no part of it. Where was his coat?

"Aaron, don't. You can crash here tonight," Grace offered. "I got tons of space. Take whatever room you want" She got up and walked in front of him forcing him to stop pacing or run her down. He stopped and looked up into her face. Her eyes were alive with fear and worry, but he could see concern in there too. For him? No of course not.

She reached out and placed her hands on his two shoulders. "It's ok, Aaron. Calm down, lets talk it out. Come and sit" She

led him to the couch and sat his down. Brian got up and moved to a nearby chair that faced the couch. He took a deep breath finally, and found the he could calm down. If Grace wanted him too.

"Professor Falwell is dead," Aaron began again, calmer, "and you, look at you!" He pointed at Brian, "You don't even care. You aren't the least bit ruffled by it."

Brian looked hurt, "I'm ruffled," He said, "Sure, but its done. We can't change it now. It is horrible but you know what, it wasn't us. We made it. We need to figure this shit out. What's going on."

Aaron couldn't believe what he was hearing. Clearly Brian hadn't been paying attention to recent events. "You self centered bastard. It was because of us. She is dead because of us." Aaron yelled at Brian who kept making that face that said 'I can be patient, just let him get it off his chest' He looked at Grace She at least have the decency to still look at him with concern.

"We didn't kill her, man. We couldn't know what would happen there, who those guys were. You can't take the blame for circumstances that are out of your control. You are feeling guilty over fate, Aaron. Fate just happens, you can't control it."

Grace stood up and reached out a hand towards Aaron, "Come on, I'll show you where you can crash. Sleep it off"

Aaron got up and allowed himself to be led upstairs to one of the extra bedrooms. The room Grace put him in was bare except for a futon on the floor and a pile of mismatched covers and blankets. The room was carpeted in a thick pile dark purple rug that felt nice on his feet. The walls were decorated with a couple landscapes that looked like they came from a yard sale for five bucks a piece.

"I'm not much for furniture, but it's soft and comfy." She said as he sat down on the futon. "See you in the morning"

Grace retreated back downstairs, her footsteps loud on the steps as she went back to the living room where Brian was waiting. Aaron laid back not bothering to even take his shoes off and listened to the sound of their murmuring voices, wondering how he could ever sleep after what he saw. Within two minutes he was fast asleep.

When Aaron woke up the next day, or was it later that day, he had no idea what time it was, though the sun coming in the window said that it was day time. He got up and went downstairs feeling tired and in need of a shower and new clothes. He found Brian and Grace in the kitchen where Grace was busy making a pile of toast on the kitchen table.

"There he is!" Brian said with unnecessary cheerfulness, "Have some toast, man"

Grace placed a cup of coffee in front of an empty seat at

the table. "All I know how to cook is toast and, sometimes, I can boil water. So I hope you don't want anything fancy" She said with a grin.

"What time is it?" Aaron asked groggily. He took a seat at the table with Brian but did not take any toast.

"10:00 in the AM" Brian replied, "Feel better?"

Aaron shrugged, "I guess. Look, I gotta go, shower and stuff"

"Shower here," Brian said, "We got a lot to do."

"A lot to do? Like what? And I got no clothes here or anything. You are acting like I'm moving in"

Brian beamed, "That's a great idea, man. Ok here's the thing," he leaned his chair back so he could reach back to the kitchen counter behind him. His hand closed on a flat black shape and moved it to the table. It was the thing, the device Aaron had first found.

Brian continued, "You are the only one that can figure this thing out, now. You got the smarts for it, I know. I can remember some of the stuff my dad said from a few years ago, but you can figure this out. You understand the sciences."

A few hours later, Aaron was once again sitting at Grace's kitchen table across from Brian. He had taken some time to get some items from his dorm and finally have that shower he was dying for. He still couldn't shake the horrible feeling that

came whenever he thought back to last night at the reactor and what happened there. In the end, he found that being here with Brian and the device was better than sitting in the dorm alone letting the misery wash over him. Classes were cancelled anyhow. Obviously. Plus Grace as here. There was something about her that draw his eye whenever he let his mind wander.

The device sat on the table in front of them. Between him and Brian, they had managed to take the thing apart the best that they could. It was still in one piece and functional. They weren't quite comfortable taking it apart into separate pieces in case it didn't go back together.

"You know," Aaron said, "there really isn't a lot of science to figure out. It's all computer components. The main puzzle is in figuring out how the OS works." He looked over the circuit board in front of him like a jeweller looking over a priceless diamond.

"A lot of these parts look like solid state, enclosed boxes that we can't get into without a cutting torch or something"

Brian quickly reached out to cover the device with his hands, "No cutting torches, man, jesus!"

"No, I'm kidding" Brian said distractedly. "Plus my russian is super rusty. I stopped taking it as soon as the compulsory classes were done in grade ten and never looked back."

Grace spoke up from her spot, perched on the end of the kitchen counter, "I can do the russian, probably. I studied it a

lot while trying to research the Red Zone. All the documents and information is all russian. Declassified stuff though, garbage"

"Ok Grace, great. That helps", Brian said, quick to curtail any talk of the Red Zone. He was probably too familiar with how much she loved to talk about it.

Aaron made a decision, and voiced it, "Ok, well, lets just start with the menu items, now that it powers up. Any idea how long it will stay powered? I don't want to have to go back to the reactor ever."

"No idea," Brian said. Aaron wasn't too sure though. If Brian's dad did contribute something to the research of this thing, he may know more than he let on. "Grace come try to read the then"

Grace hopped down to the floor gently and placed her hands on the table top, leaning forward to read the screen.

"This screen says разрыв, which is like a break, I think. Second is площадь which means area or... space, I guess. Last is мигать - blink."

Aaron considered these options. Break, space and blink. What did it mean? He poked the third option on the screen, "This one seems like the safest one. I don't know about break and space, but blinking sounds pretty safe to me." When he lifted his finger from the screen, the display changed to an image of a man inside a circle along with some other pictures. "Oh cool, its a touchscreen"

Aaron looked at Brian to see if the other boy could offer some insight. "Don't look at me, man. I don't recognize this thing at all."

"Ok time to break some eggs. Here goes" Aaron said and pressed a green button on the screen. Nothing seemed to happen. "Hmm, nothing"

Brian seemed to be surprised by the result. "Nothing? " He said, "Let me see that." He dragged the device closer to his side of the table and pressed the green button a couple of times.

"Guys...?" Grace called out from back on top of the counter. While the other two were focused on the device's screen, she had a better view of everything else. "I don;t know how to tell you this, but I think the clock is slow."

Brian looked up at the clock, "Hmm, I don't feel tardy."

"Really?" Aaron said, looking at Brian. He didn't feel much in the mood for Brian's humour.

"Sorry," Brian said, "What do you mean, Grace?"

Grace pointed at the clock, "Well look, its ticking pretty slow" She made a grimace and lowered her arm, rubbing her wrist.

"It is slow," Aaron agreed. "Is it always slow?"

"No way," Grace said, "I use that clock to get to class on time"

"Well..." Aaron had an idea, and pressed the green button again, keeping an eye on the clock. Immediately, it resumed its

normal ticking pace, marking the seconds like always. He pressed the button again and it slowed.

"You know," Grace spoke up, "Every time you press that button, I get a real bad feeling, and something in my wrist is killing me right now."

Aaron looked at Brian, who was still staring at the clock.

"Brian, do you want to go over again what exactly your father was researching?"

#

Miscellaneous scenes that might be good

Aaron stood in front of the squat brownstone building watching the comings and goings of the men and women that frequent it. It was three stories tall with nice large windows. He could already see paths up the side in his mind's eye. It came easily to him, a pipe bolted to one wall led to a wide windowsill, which allowed access to a particularly wide seam between brickworks between the second and third floors. Somewhere inside, he presumed, Brian was being held. He couldn't be sure, but this building was the center of all the strange men's activities.

Beside him Grace fidgeted. "Come on, we have to get in there. They might be hurting him!" She pleaded. Her face was a picture of concern and worry for Brian. It broke his heart to

see. Trying to bust into buildings to free captives was something out of action movies, and he had no interest in it. But when Grace aimed her bright green eyes at him silently begging for his help, he knew he had to do it. Anything to earn her gratitude, and from there... who knows.

"We need to get up to the roof first. Can you climb?" He asked.

"I guess so," she didn't sound very sure, "I can follow you"

He surveyed the route again, pipe, ledge, crack. There was the street between them and the building, followed by the sidewalk and a few business men and women coming and going at the front door. "You will have to stick very close to me. We are going to run across to the side of the building, near that pipe"

"Ok" she whimpered, sounding unsure of what was to come.

"I mean close to me, super close. If you don't stay close enough, you will die." He didn't want to sugar coat it. The device was still very much a wild card in this regard, and besides it wasn't a lie though it was perhaps an exaggeration. If it got her to rub up beside him for a bit, it was a happy circumstance. He reached out and grabbed her around the waist, feeling the softness of her skin under the shirt, and pulled her closer. A very happy circumstance.

He held up the device in his hand and thumbed on the screen. It came to life right away displaying the expected three

rows of russian text. He hoped he remembered the translations well enough. If not, who knew what would happen.

"Do you know what to do," Grace asked looking down at the device as one looks at a hornet that has just landed on one's arm.

"Sure" he said.

He tapped on the third line of text and the screen changed to display an image of a man inside a circle with a pair of slider controls beside it. A large green button took up the lower part of the screen. He slid the second slider all the way to the left and pressed the button. Immediately, Aaron felt a sense of vertigo that almost made him throw up. The machine didn't explode. It didn't beep or hum or show any real change, but something happened. He glanced over at Grace who looked as if she also was feeling something.

"We're going to walk now. Just like a three legged race when you were a kid. Starting with left, ready?"

Grace nodded, still looking at little green.

Around them the world was at a standstill. Cars on the street appeared to be parked, but Aaron knew better. They were stuck, slowed down. People walking along the sidewalk stood ridged with one foot in the air. A newspaper blowing in the wind had frozen mid-tumble in the air and hung over the street in front of them. It looked so unreal. Aaron wondered if he could grab the newspaper, would it move or be firmly fixed in its

location?

"Its so wierd" Grace whispered softly, hugging him closer.
"How big is the edge of the bubble?"

"I don't know" Aaron said truthfully.

They started across the street, left foot, right foot, left foot, right foot. They made a good team and didn't make any missteps. Slowly, they got closer to the newspaper. Aaron steered them towards it out of curiosity. He reached his hand out, but not too far out. The edge of the bubble could be anywhere and he didn't want to find out what happened to an arm when it crossed the boundary.

"Hold on," he said as they got close to it. It was within reach now. He stretched out a finger and touched the paper suspended in midair. As soon as he did, it flew towards him and wrapped itself around his face, pushed by a sudden gust of wind that hadn't been there before. Grace giggled beside him, and he quickly brushed it aside, laughing himself. The paper continued to be pushed by the last traces of the mysterious wind before becoming frozen again, stuck in the air defying all logic.

"This is freaking me out, Aaron" Grace said beside him.

"OK, come on" he replied, resuming their shuffle across the street. Left foot, right foot.

Crossing the street, they stepped up onto the sidewalk and walked around the people frozen mid stride. Aaron was extra careful to not get too close to any of them. He wasn't sure who

were agents of this mysterious group and who were regular people, but either way, he didn't want to draw anyone into thier bubble or kill anyone inadvertently.

"How long can we stay like this?" Grace wondered aloud.

Aaron shrugged, "As long as this thing has power, I guess, I don't know."

The pipe was about five meters ahead of them, running down the side of the building from the roof. That side of the building was adjacent to a driveway that lead to an underground parking. Aaron and Grace helped each other progress along the driveway to where to pipe was.

"How are we going to climb up the pipe and stay close? This isn't working, Aaron"

Aaron considered this, "We have no choice but to turn off the machine. Lets hope that no one look over this way."

"One of us can stay in the bubble while the other one climbs," Grace suggested, "That way we both won't get pinched."

Aaron shook his head. "Look around, no one is moving at a visible speed. They must be moving, just really slow - too slow to see. Which ever one of us is in the bubble might have to wait months before the other one makes it to the top. Though..." Aaron trailed off, thinking about a different arrangement of Grace's idea. It would require trust that he hadn't been willing to give anyone yet, but he knew for Grace, he would trust.

"I'll give you the machine and you use it to climb up the

pipe. When you get to the ledge there, turn it off and toss it to me. The alternative is just hoping that no one sees us."

Grace looked like she didn't like that idea at all but agreed nonetheless. "Ok, that works. " She said, "And thank you." She didn't say what for, but she didn't he to. Aaron smiled back at her and got ready to turn off the dilation field.

"Ready? You know what to do?" he asked.

"Ya," Grace said.

Aaron brought the device's scree to life and punched the green button at the bottom of the display. Again that dizzying sense of vertigo washed over him, forcing him to reach out and brace himself against the wall. Grace had dropped to her knees and had her eyes shut. Aaron forced his head clear, there was no time to waste. They were completely in the open here ready to fall victim to anyone that turned into the carpark.

He thrust the device into Grace's hands as she regained her footing. "Here, go", he urged and took a few quick steps farther down the ramp towards teh entrance to the carpark. He watched as Grace considered the device's screen then pressed the button. It couldn't have been more than a second before he heard her urgent "PSST Aaron" coming from above him.

She was perched on the ledge at the top of the first floor windows, just as he had pointed out to her. She had taken her light fall coat off and had it wrapped around the pipe that ran vertical next to her. The sleeves of the coat were knotted up

and held in the tight grip of her left hand. Under the coat she was wearing a black Nirvana t-shirt, of all things. The device was held in her right hand which swung loose, ready to toss the machine at him.

Aaron put his hands together to show her that he was ready to catch. She let the device fall and he caught it easily.

"Be careful," she called down under her breath, "Turning off the machine up on this ledge is a bit precarious,"

He nodded, not wanting to make any noise that attracted unwanted attention to either of them. Flipping the device over, he found the green button and pressed it. The nausea hit him again but he was ready for it, and the effects were not as pronounced as before. Maybe you got used to it. The world around him froze again, but he didn't have time to sight see. Any second he wasted was another second that Grace could be spotted perched up on the ledge.

Actually, that wasn't true, was it? He had all the time in the... well, in the battery pack, presumably. Maybe it was a good idea to do some snooping around before barging in on some half brained rescue scheme that he wasn't too thrilled about. Aaron took a moment to look around him. Everyone was frozen like before, cars were stationary again, people locked in awkward half steps, even a few leaves from the trees lining the sidewalk were held in place mid-drop.

Aaron cautiously stepped out around the side of the

building and stood on the sidewalk in plain sight. It was a lot easier to get around when you were on your own. He strode up to the main entrance of the office building, gaining more confidence as he went. Nothing could touch him in the bubble. No one could possibly see him or hurt him. He was as close to invincible as one could get, it felt like.

A group of people were currently congregated at the front door so he was forced to hang back to prevent the bubble edge from intersecting with them. His bold plan to scope out the first floor of the building seemed to be over before it had even begun just like that. But how big was the bubble actually? It seemed like an important thing to know - his life may well depend on it.

Aaron reached into his pants pocket, took out a dime and threw it towards the cars in the street. The dime flew through the air and then hung frozen after travelling about half a meter. He was smart not to try to fully extend his arm earlier. The space Grace had had to stay in had been tighter than either of them realized. He took a step forward and the dime fell from its place in the air and froze again a few centimetres off of the ground. He didn't dare risk trying to pluck it out of the air with his fingers. Instead he took another step closer so it unfroze and fell next to his shoe and retrieved it.

There might be something yet that he could learn at the front door. He approached the crowd of people near the door

stopping well before the half meter allowance of the bubble. The entrance area had a pair of glass double doors in the center of the wall, with three glass panes on either side. Aaron edged his way along the left side glass panes getting as close to the door as he dared. When he get close enough, he shielded his face with his hands and peered into the lobby.

Inside he could see a bank of two elevators against the far wall and a reception desk along the right side. It may have been a security desk, looking closer. It certainly looked like a security officer standing behind it. A tenant board was mounted on the wall beside the elevators. In the near corner opposite the security desk, a closed caption camera overlooked the whole lobby, its red light blinking steadily. Everyone inside was as frozen as the people outside. Overall, it was a very sparse lobby that told Aaron nothing about the building's occupants or why they would be holding Brian.

He turned he head back to the pipe and Grace, still waiting for him on the ledge, when something caught his eye in the lobby. He pressed his face against the glass again and took another look. Everything was still the same, as it should be - except... was the camera looking at him? It was hard to tell if it had moved or not, but there was no way it could move. It should be frozen too, with its red light blinking.

"Damn," Aaron muttered and took two more steps to the left. The camera easily rotated to follow him.

"DAMN!" He growled and sprinted back to the pipe around the corner.

He grabbed hold of the pipe and scrambled up it faster than he ever had scaled a wall before. There was no telling what that camera was hooked up to or who it had alerted. The camera wasn't frozen! Damn it! How was that possible when it was his device that had made the bubble?

At the midway point up the pipe, Aaron reached the ledge that Grace was crouched on. In his eagerness to not waste time, he had activated the machine too quick. Grace hadn't had a chance to move out of the way and now she still occupied the edge of the ledge that Aaron needed to step onto. Her coat was still wrapped around the pipe held by one hand, her bare arm outstretched in front of him. It really was creepy to see someone locked into one moment of time. It was almost like an invasion of privacy of sorts. He noticed that he elbow had a nasty scrape on it that was still fresh. She must have gotten it on the climb up the pipe. How much time had she taken to climb the pipe? It really was a strange thing, to move about when no one else could.

He had to turn off the device so that the two of them could continue along the ledge. He wasn't looking forward to trying to hang on to the pipe on the side of the wall when the dizziness hit, but maybe he could brush it off. It did seem to be getting easier. Well there was no use waiting. He pressed the button and

gritted his teeth in anticipation. It was definitely getting easier to take.

"Oh my god, Aaron, sorry!" Grace said excitedly and scooted over on the ledge. Aaron swung himself up and crouched there beside her.

"That was fast! One second you were there and then you were right here! Amazing to see from outside the bubble" she marvelled. "Was that how it looked for you when I used it?"

"Ya," Aaron said, cutting her off curtly, "We have to keep climbing, I think someone saw me"

"Some one saw you?" Grace said, her voice rising up in pitch, "What the hell do you mean? Who saw you?"

"I don't know," Aaron said, "I'm not sure. I went to look in the front window when everyone was frozen and there was a camera in there. It wasn't frozen, Grace. It saw me."

Grace stared at him for a few long moment, mouth open while she processed the information, "What does that mean?" she finally asked.

"It means keep going," Aaron said and shimmied his way over to the edge of the window, "Before anyone thinks to look up!"

Grace got to her feet and came over to stand next to Aaron. The window was about five feet high and was surrounded by a good thick ledge on all sides. He interlaced his fingers and made a cup for her to step in.

"I'll boost you," he said, "Its the same drill, get up

there and wait on the ledge. You know the drill." The adrenaline that came from being seen and possibly in danger from unknown adversaries was working its magic, giving him the extra energy needed to easily lift Grace up. He almost didn't notice the shape of her leg in that his hands supported, the curve of her buttocks as she clambered up to the third floor sill.

When she had safely secured herself on the window ledge, she called down, "Want me to pull you up?"

Aaron replied, "No, its ok." Pressing the soles of his feet against the edges of the window's recessed frame and working his fingers into some cracks in the old mortar between bricks, Aaron pulled himself up to the third floor window. He grabbed the ledge above him and drew on all the strength that came from his many night of urban explorations. First he pulled himself up into a chinup position, then swinging a leg over on top of the ledge, levered the rest of himself up.

"So far so good," Aaron said, grinning at Grace. He took a moment to catch his breath.

"What do we do once we get up to the roof, assuming there is a door in up there?" Grace asked him.

"I have no idea," Aaron replied, "I'm helping you, remember?"

"Great," She said, accompanying it with an eye roll, "Boost me again"

They did a repeat performance of their scramble to that got

them to the third floor ledge and found themselves on the roof,
apparently, safe and sound.

PART III

2013 - 2038: Washington, USA

CHAPTER FOUR

Observations

TIMELINE A - original

- what is the conflict here? Need to spice it up, though
its backstory - govt espionage?

- american scientist in toronto comes up with theory
- scientist gets killed by russia
- russian scientists use theory to give russia new tech
- usa firm tries to recreate the theory and fight back,
they are govt contractor needing funding

They never succeed in replicating the tech. They have
constant battle for electrical power that causes blackouts
during tests. They have no particle accelerator like russia does
(they use europe's)

- USA eventually carries out a heist to steal a device
from russia

want to shut down firm since they got it, firm says only they are qualified to reverse eng it, reluctant agree

- russia steps up counter espionage now, mai nresearcher and his familly are under attakc and are super protected

- breakthrough - rift opened, meet future guys. they want place to settle, future earth is dead. can provide power

(they had run away green house, they have dyson sphere but lack of resources means it is close to the sun, earth has low amount of sunlight

meant to help earth cool and power it,

they decide to fuck it and wait for contact, they dont initialte contact since that would be met with hostility.

reft open is a known event to them but they dont want to change the timeline, no choice now.)

- they blackmail scientist by threatening to kill the son they nabbed form the near future when securuty is lower

- man agrees

- he plans to send his son back in time to save him and gives him a mission - save the prof - think that the son wont be here to be nabbed now.

1995

theory

1998

There have been 30 years of efforts by russia

What took so long

2004

failures

2013

completed the LHC - its important

2020

Working prototype for spacial effects

2027

Refined spacial item, prototype time item

1 2028

A presentation is being shown to govt investors. The presenters are the CEO of the firm and lead scientist. The CEO is the father of B.

Investors are all representing govt divisions they hope to get funding from, defense, cia, army, etc

Presentation shows the history of the science:

- american scientist develops a theory in 1994
- death of scientist by russia in 1995. Thought to be an assassination.
- development of tech by russia through 2004 - rough guesses about what they were doing. Suspect they are working on similar thing thats why the hit.
- evidence of investment in LHC and focus on LHC building, completed in 2013. Some speculation about why they are intested

in this, LHC is about particle interactions, just like the theory, high energy interactions.

- espionage reports on development up to 2020 when spacial effects are witnessed. Russia has rooms that no one can enter with a device because the spacial difference rips you apart. Device is needed to bubble yourself then merge bubbles. The current devices are truck sized and cumbersome, require massive power drains

- report on last year, better handheld devices for spacial and this... evidence of a temporal device. Russian spies are seen using it to stop time for a second or two - speed up their frame to be faster. The only evidence is result of a special targettedsuicide mission whose only goal was to get this picture.

- present case for investing in firm to reverse engineer it. The lead scientist has unique insight into the theory to put it together.

Lets present this info backwards leading from clues today back to the killed scientist. They are first to get this far.

Execs talking about it after wards, if they dont get investing, they will keep trying on their own using 2ndary income

What is that? Something useful by B and kinda evil

They do get the funding but they are expected to give super results, they wanted a lot of money.

2 cut to 2030

Repeated failures, blackouts

3 cut to 2032

Heist and gaining the item

4 cut to 2033

Researching the item under higher threats

Blackouts persist

Introduce a security guard as a main character that helps protect B and the family

B can remeet this guy for the first time when he comes back and everything is different.

At one point B has to go with him to his privates places to be safe. This is how he find that guy later.

5 today 2038

The rift opens, meet the ff guys

Send son back

#

Note to Reader:

Part Three of this story is meant to illustrate where Brian

came from and what his backstory is. You should have already met Brian in Part Two, but chances are Part Two is not written yet. So sorry.

Excerpts from Sebastian Tillmann's Journal

July 2028

Had the big presentation today for the US government. It was pretty unnerving to have all those serious faces disassembling everything I say and don't say. I was glad to have Harold with me to save me from doing all the talking. I don't know how much those bigwigs could follow the physics but at least it got the eyes off of me for a bit.

All the big names here present there, which was a good sign: DoD, CIA, A few generals from the Army and Air Force. There were a few tough looking guys that never really said much, just that there were from some interested contractor. Pretty shady, but as long as they have money, that's all that matters. I know that the US hasn't been a big player on the global field in over 30 years, but losing the cold war to Russia certainly hasn't shortened their pockets any.

I'm going to attach some of my notes, research and rough drafts to this entry for posterity. Who knows, maybe one day I can look back and see where it all started! Should hear back

from someone in the next couple quarters I believe. If we don't or no one bought our story we will have to scrap by using the funding from our railgun division to keep Harold in the green for this new project.

Rough draft

Greetings and good day Mr. Whitstone, Mr Linehan, General Avery and other people that want to give us money. We at Tillcorp would like to present to you something that we have pieced together using some of your own files that you have graciously allowed us access to. It is something that you may have some knowledge about but I believe you will be surprised by the complete picture and the opportunities that are now available to us. In the end, we are seeking funding from any interested parties to help us get new facilities off the ground to to develop new technologies that will rival some of the Soviet Blink technology we have seen in the last few years.

Let me take you through a reverse timeline, starting with recent events and working our way backwards as we show you how it all fits together. As you know, some of the top secret reports that came as a result of activities abroad in 2020 contained extremely disturbing entries involving impregnable Soviet facilities. Literally impregnable. Agents in the field

reported watch entire convoys of trucks drive into small warehouse style buildings. The thought at the time was that the Soviets had large underground complexes which these buildings were the entrance to. Attempts to view these complexes with ground penetrating radar failed, and attempts to enter them physically cost the lives of many field agents. One particularly curious report was that one man watched his partner "get stretched into ribbons like red toffee" when he got too close to one facility, yet trucks could be seen coming and going with ease.

We believe that these buildings in fact exist inside a different frame of reference. A frame where the quantum rules are altered such that space is far more compact there than here. I will return to this hypothesis in a moment.

Only last year, the Chinese Prime Minister was assassinated in a brilliant, impossible sequence of events that baffled the intelligence community. Prime Minister Wu was, in fact, on board his private jet travelling at supersonic speeds over the pacific when he was struck by sniper fire and killed. This fact defies all logic, certainly until we apply our hypothesis to the facts. If space can be compressed somehow, we must assume that time can as well. Space and time are well known to grade school children to be one and the same, due to special relativity. If a sniper was able to compress time, he could watch the world around him in slow motion, or even at a stand still. A sniper paratrooper

could in theory, make this impossible shot using such technology.

This is corroborated by the many reports of Soviet agents operating in foreign countries without fear of capture. Since 2026, not a single Soviet spy has been apprehended, all are superhumanly elusive. The only hard data on this front was this shaky photo beamed to the Defnet during a suicide mission into the Ukraine.

That is all recent history that you know better than I. Lets go back farther to 2013, and the completion of the Large Hadron Collider. This construction was heralded as a huge undertaking and a giant success in mankind's quest to understand the universe. It took unprecedented funding to achieve this feat and, if you look at the handouts in front of you, over 60% of the funding can be traced back through shell companies and offshore holdings to the Soviet Republic. Indeed, as the only remaining super power, who else could have provided so much funding?

And why would the Soviets be so interested in the worlds biggest particle accelerator and collider? We were told that the LHC would break particles down into their constituent particles in order to learn what they were made of. That it was equivalent to a chaotic explosion at the quantum level, unpredictable, unplanned, and decays so fast, unharnessable. But what if it

could be predicted, planned and harnessed? That might be worth \$10 billion to have a machine that could plan and predict particle interactions - if there was a use for such a thing. Lets keep going.

The LHC was in the works from as far back as 1998, but solid efforts to build it started in 2004. Something else happened around that time as well. Dr Maria Falwell, Doctor of Physics at MIT died in a car crash in 1997 in a certain Paris tunnel while on vacation. An unfortunate accident, some would think but not everyone. The Pont de l'Alma tunnel is often used as an assassination location by the SR when they want to send a message. At the time, the message was heard, but not understood and the message was soon forgotten and buried. We can not guess what the Soviets were doing between 1997 and 2004, but you can be assured that it was related to the LHC and to the curious report of late.

Dr Falwell had, since 1995 in fact, been working on a preposterous theory that particle interactions were not dependant on time or space. Quite the contrary, she posited that particle interactions, the right particle interactions, could be made to create time and space. It was entirely theoretical brain candy, completely ignored at the time as poppycock, but someone was listening. That message was not lost on the Soviets, who took her theories into the practical world.

Gentlemen, Tillcorp has followed the breadcrumbs, we have seen the Soviet's footprints in the sand that no one else has seen and we are uniquely fit to follow them. Dr Harold Park here was instrumental in understanding the physics involved here and, with your help, we can reproduce the technology of the Soviets and surpass it. Dr Park will now explain more.

Various papers and newspaper clipping are attached:

Tillcorp Defense Logistics brochure

The Magfist R3: Reliable Performance, Proven Results

In 2020, working with the US Army, TillCorp Logistics ushered in a new era of weapon by introducing the R1 Magfist Railgun. Since then, three generations of railgun technology have been developed, resulting in the R3.

Since appearing in 2022, Magfist railguns are now deployed on the Army's Decker class tanks, and Naval New York class assault ships.

The R3 Magfist fires a 0.5 pound steel slug at speeds of Mach 12. With new breakthroughs in capacitance technology, the R3 utilizes 8.74 MJ (megajoule) of energy to fire up to distances of 250 miles, with a 0.0005 radian deviation.

Having been used successfully in over 30 conflicts, the Magfist has achieved a record of reliability unmatched by other high energy weapons.

Military debrief on the events of operation Keyhole

Declaration of Colonel John P. Sherman

I, Colonel John P Sherman, pursuant to 92 U.S.C. 1743, hearby declare as follows:

(sections that are highlighted:)

19. On the evening of Aug 23, that same year, Agent Jones and I approached target building designated B4-1 from the south. Agent Jones and I stayed hidden for three(3) hours making notes on the arrival and departure of trucks into the structure. At 0423 a series of four(4) semi trackor trailer trucks approached the structure. Agent Jones made a note that those trucks could not possibly fit inside B4-1 and wanted to get a closer look, using a window as a vantage point. I advised against such action as it was outside mission parameters. Agent Jones broke cover at 0431 and approached the window at a run. Approximately 30 meters from the structure Agent Jones seemed to explode though no weapon discharge was heard. As I watched the event occuring to

Agent Jones, I saw his remains get stretched into ribbons like red toffee towards B4-1. I then abandoned my position and concluded the operation.

20. This declaration is based on my own personal knowledge and information made available to me in the course of my official duties.

Newspaper clip on death of President Wu

2027-年11月11日 星期一

【明報專訊】國家主席胡世强乘搭之私人噴氣機飛過太平洋時不幸遇上空難，即時身亡。

Article follows.

Photograph

Attached is a printout of a high-def motion-corrected photo showing a man in a dark suit holding a tablet sized device with a blurry green screen. The man appears to be standing inside the lower half of a mostly transparent sphere which has the appearance of a soap bubble.

Newspaper report on Dr Falwell's death

Six-car crash, fire in tunnel

Published: 31 May 1997 at 10.24

PARIS - Three vehicles caught fire in a six-vehicle accident that blocked a tunnel at Pont de l'Alma early Saturday morning, killing two people, injuring three and causing a massive traffic jam. The flames spread from a truck to a pickup at the accident scene in the tunnel early Saturday morning. Photo taken by Samantha Sorin. The police and rescue centres reported they were called to the accident around 4.30am. confirmed dead are Dr Maria Falwell of the United States, and Pierre Bessey of Paris.

Journal publication

Super-symmetry and the Unification of Fundamental Interactions as applied to Quantum Gravity

Presented by Dr Maria Falwell et al, MIT, Science, May 1995

Synopsis: Particle interaction can be more accurately predicted with an error rate of $\pm 0.05\%$ using consequences of applied geometry presented herein. When unified with quantum gravity, the model holds only in the absence of locality and unitarity, eliminating these concepts as being fundamental

constituents of nature.

November 2028

Just heard back from the Department of Defence and they agreed to four years of funding at the rates we set forth! Apparently they had been figuring out the same chain of events that we discovered, so that wasn't new to them. Maybe our level of research and deductive reasoning dazzled them! Truthfully, I think it must have been Harold's excellent knowledge of the theories in question that sold it. I know I can't follow him when he starts going on about symmetry this and antigraviton that.

So it looks like we will have to open a new facility for this new line of research. Ideally, we can find some space available in Seattle, where the rail gun research is done, so I don't have to keep flying across the country so much. I think I'll let Harold name this project, he is the closest to it. So much to do now: new offices, hire personnel, equipment to purchase and install... it will probably be a good year before we are ready to really dig into the new work. Damn it, that only leave three years to prove to the military brass that we deserve more money. Well, if what Harold says is true, this new tech should result in us essentially printing money. I mean,

manipulating space and even time is something from science fiction, but its the only thing that explains what the Reds are doing. I said it myself at the presentation and I barely believed it.

The reds sure have a huge head start on us, having their own collider and who knows what kind of power supply will be required. Have to check with Harold on that. Christ, they have working devices in the field now! Its still bordering on unbelievable sometimes. We better be up to the task.

December 2028

Merry Christmas! We managed to get about 50 acres outside Seattle for the new division, well its Kirkland but close enough. We also have a name for it - its the Amplidyne Particle Research division. Meh, I think we need to work on that a bit. Put out a bunch of ads for office staff and some high energy, quantum scientist types. The theoretical folks. I just hope we can get a few guys that aren't straight out of grad school.

There's a lot of weight on Harold to interview them. God knows I can't. This project would really be nothing without him. Gotta remember to get him a decent bonus this year. Still, I'm not doing nothing - have to still talk to Seattle City Light to get a proper electric feed brought in. I don't know what type of business was in here before us, must have been a warehouse

judging from the pathetic power supply that was run in here.

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Excerpts from Sebastian Tillmann's Journal

March 2030

I didn't want my first big update of the new year to start on a sour note, but I have put this off too long. It's as if by writing about our progress, specifically lack of progress, to this journal it somehow becomes more real. But, I have been told that there are no true failures, it is only more information that we didn't have before. That may be true but it doesn't appease the directors, or the US Army.

So, APL is fully up and running - that is Amplidyne Particle Labs. I like the apple moniker, it somehow makes the prospect of distorting space and time friendlier, more cuddly. I am told that it's not even unique - that there was some other

company called Apple back in the 80s? They made some sort of old 8 bit computers or something. Anyhow, didn't get much attention from the market so I'm not too worried that they might rise from the grave to make a claim on the name. As painful as it is to admit, there has never been a successful computer company from anywhere but the SR.

Harold's team currently consists of six science guys doing the main figuring out. They also have set up a second team to do more of the practical grunt work and report writing. I get all the briefs on their progress but I don't get involved personally. This thing is as much Harold's as mine, maybe more so! Don't let him read this.

The theories that we are starting with are all quantum field theories that predict the interaction of particles. The main breakthrough that Maria was killed for was that there is a single simplified method that can replace all the various field equations, which is a much better predictor (100% accurate actually, for known interactions). Harold is extending this predictiveness to examine particle interactions that are not known, meaning no one has seen the interactions happen - though they must happen naturally. This must be the key to unlocking the red's tech but so far all probing hasn't gotten us anywhere. There are so many possible particle interactions, we only just begun to examine some of them. The thing that keeps us going is that we already know the answer, just not how to get there.

Maria herself hinted at the possibility that some interactions could happen without a need for time or space for the interaction to happen in. The observed effects of the red's tech also suggests that. We just need to keep looking.

Once we do find an theoretical interaction that doesn't need time or space, I have no idea how we would set up that kind of test environment!

Isolating a candidate interaction isn't everything, of course. We still then need to make this interaction happen in laboratory. This is what the LHC is being used for, clandestinely. There is also obtaining the particles involved in the interaction in the first place. It seems like we have a long uphill climb still ahead of us. One idea is that we can use a nuclear reactor to get a steady stream of some exotic particles. I'm not the biggest fan of installing one here anyhow, no matter how small, purely on a long shot, but at least it some step forward.

The reactor is might also be a good spot to create interactions since we don't actually have our own accelerator, assuming that fission with neutrons is a candidate interaction. We can fire in streams of the more common particles in there anyhow, as a first step. In theory, we could get streams of the more exotic particles if we use Maria's theory to predict the creation of the particles we need from more common particle

interactions. I don't see this scenario being possible in a reactor though. Overall, don't think really a smart idea to try to rely on runaway interactions to maybe hopefully do what we want. I'll have to figure out something else as soon as I can and get Harold on board. Maybe if I can even get Lee on my side we can turn Harold together.

The rumour mill has long held that there is a particle accelerator in Texas build back before the LHC, but no official proof exists anywhere. Not in the United States archives, and certainly not from Texas itself. If only Texas had stayed on as a part of the US following the 1986 events, it might make gaining access to it a lot easier.

On other fronts, production of the new MagFist is on track for shipment by third quarter. The railgun business pretty much runs itself now since are well out of the development phase, and brings in a pretty good chunk of change for helping out with Amplidyne. Sometimes I wish we could take on the SR as a client, that's where the big money is but we don't want to rock any boats. Maybe a shell company though - haha! I'd really like to see us starting to reduce the size of the weapon though. It's going to be important if we ever want to market these things to anything smaller than a battleship or specialized heavy tank.

Brian is going to be finishing up grade 8 in a month or so

and he's already bugging me about helping out at the labs this summer. The kid loves gadgets like nothing else. I don't know if either place is a good place for a 12 year old to be goofing around in. Maybe when he is older. I'll have to put him off this idea for a bit and help him find another summer activity. Better yet, maybe I can send him to stay with Grace for a few weeks in June. He hasn't got to see his mother a lot during the school year. Its only fair, I suppose - to Brian, I mean.

May 2030

So much has happened in such a short time. I'm only recently able to calm down enough to update this journal. The containment facility has been completely shut down - well whats left of it - has to be, obviously. Tillcorp as a whole has to under go a full investigation and there is international committees that need to evaluate us now. Its a nightmare. Talk about tipping your hand. Let me start at the beginning.

It was a big surprise to me, but it turns out that you can buy a nuclear reactor off the shelf, ready to go. I know this might not shock many people since its 2030 after all, but I was shocked. Anyhow, we got a research reactor dropped off in late march and built a containment facility around it. These research reactors are pretty small compared to the big reactors that I see at power plants. They don't really create a lot of

electricity; their main job is to spit out a stream of neutrons. Harold is fairly sure that neutrons are required for the interactions that we are after. Not sure about anything really, but its what we are starting with. We rigged up an array of feeders to supply other particles to test with. The usual suspects: electrons, protons, hydrogen nucleus. Even photons and gamma rays and the like though I doubt those will result in anything. Problem is that even with small linear accelerators, the energies involved are not what we need it to be. So we spent a while throwing stuff together in the reactor core and watching nothing interesting happen.

After a couple weeks of this Lee, on the practical team, had an idea to take a closer look at neutron predictions in the Maria theories (as we call it) to see if we can get a stream of more interesting particles. Turns out there was a configuration of two neutrons and a proton that resulted in some type of quark. I don't know which. It involved some nuclear reactor jury rigging to get two streams going at the right angles, but by arranging as precise as possible, we got quarks being generated about 10% of the time. Harold said its pointless since they would decay pretty quick and we had no third neutron stream to aim at it. We did have an electron stream that wasn't used so we pointed that at it. Well guess what - nothing happened. We let this configuration run for a week or so with no interesting readings detected on any sensor. Eventually we scheduled a

shutdown of the streams to happen at the end of the day and went home.

Later that night, I found out on the local news stream that Facility N (the reactor building) was the source of a fair sized explosion. The local fire department was already on scene to put it out, but they had unknowingly been exposed to the uranium debris that was around the site. We lost Dale and Shawn from the practical team who were monitoring the shutdown that night. There is nothing left there to salvage. I'm not much for expressing myself on paper like this, but I had never been so devastated, angry and excited all at the same time. Harold as well. Those few days were just insane with the media, the police, government nuclear oversight people, plus the funerals to arrange - on top of which we had no time to figure out what happened.

Its been a few weeks now so we can be more objective. Perhaps we're just numb to it. In any case, the thought is that we hit upon one of the desired reactions, we don't know which, and the containment chamber succeeded in doing its job. The reaction that was happening continued throughout those six or so days that it was running, but due to the time or space dilation the reaction was stable. Well stable enough in our frame of reference. If space was dilated, the reaction would have had more space to react in that the chamber normally provided. When we shut down the reactor, the reaction suddenly had much less

space, experiencing a sudden compression similar to how a nuclear bomb is triggered.

If time was dilated, that's a tougher one. The thought there is that the reaction was in a runaway state but was exploding in slow motion due to the dilation. Again, the shutdown would have returned the explosion to normal speeds. The amount of energy needed for time dilation, theoretically, is beyond enormous though. It is very doubtful that that little reactor would have been able to pull it off.

The final tally of this catastrophic mess is that we need a new reactor, new particle sources, hell even a new building. That area is a no go zone until its cleaned up. Some of the staff are referring to it as our own red zone. One interesting report that came to me suggested a new method to carry out our tests. Not sure who authored it - one of the recent grad students that I was loathe to hire, I think. It involves making use of our railgun technology to cobble together a particle accelerator. If we can ramp up the scale and get the fields to follow a curve, it might be possible. We have never attempted to fire the guns in anything but a straight line, but we won't be shooting chunks of steel either. It's a promising avenue anyhow. I'm sure the next entry here will have more to say on this.

I'm really glad Brian was convinced not to come here this summer. We really aren't that prepared for the things that we are playing with and got a hard lesson in that. Also the entire

world is now aware that we are doing something interesting. I'm sure the astute minds in the SR have already started figuring it out. That's gonna be bad news.

Sept 2030

Its been a few months since we started to move over to building our own mini particle accelerator in house here. With Facility N still well and truely out of commission, we have been scrounging for more real estate to build on. Finally settled on moving the labs and offices to an proper office building that was available over on the east side. That way we can clear out all 30 acres here and use it all for the accelerator.

We had to use the full production capacity of the factory to create enough railgun parts to create a big enough ring. It wasn't very hard to get a circular railgun in place, the machinery is all the same, just the track had to be curved, which was fine anyhow because the weaponized tracks were entirely unsuitable. We needed a track that was fully closed anyhow to contain the particles. These things also come ready made. We got ourselves to the front of the line for delivery by throwing some green at it. In the end, the only downside was that all of our customers waiting for new R3s will have to wait a but longer. Since most of those customers are the US military anyhow, its a wash. Remember that part where we can print our

own money when this works? I have to keep remembering that part!

Another part of the installation was the industrial microwave oven. That thing is pretty scary actually, but its needed to create some plasma. The accelerator containment ring needs to be filled with the stuff for it to work. I'm told its completely safe as long as you run it with the door open.

Now we get to the power problem. A you can guess, we need a lot of it. The regular R3 railgun uses 3 million amps in total for a few microseconds. It sounds like a lot, but the power housing that the gun comes with can do that well enough. These things work on mobile tanks after all. Now the problem is that the accelerator runs for longer than a few milliseconds, plus it is much longer that the standard R3. We need to sustain millions of amps for maybe minutes, over a length 50x the length that we usually deal with. City Power was already aware of our special needs when we first approached them when hooking this site up, but they really didn't like the sound of what I was asking for this time - and I even downplayed the numbers for them. Well, they did finally agree as long as we promised to bankroll a bunch of wind and solar farms for them to help pick up the load. I readily agreed. Don't know when those things are being built, they aren't built currently, but they went away pretty happy and we don't have to pay for anything until they start construction. I get the feeling that they don't really believe us when we say we need to be able to draw that much power. I'm not sure I do!

The power company guys should be here in a few weeks to drop a lot of equipment for us, transformers and relays and the like.

This will be the biggest build we've ever tackled. I can't wait to see what we can do with it.

- - -

First full system power on test today! The full apparatus can be run by only a couple guys since it's largely automated, so Harold and his top researcher Paul were on hand to do the honours. Lee has been away for a few weeks on vacation. None of us really want to be taking vacations since it means being away from the action, but he really needed it. The practical guys have a much harder job than Harold's team if you ask me.

Anyhow, the three of us were on hand to power up the system. We ran it at 1/10th power just to exercise the magnets and send a few pulses around. We haven't got the plasma in there yet either. It went pretty well - no explosions or meltdown to speak of.

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Today was the day for our first full power particle introduction into the system. If you live in or around the

Washington and California area, I probably don't need to tell you that today is Sept 14. The test started fine with the system ramping up from 10% at 2% integrals. The containment ring was doing its humming and vibrating thing. Obviously, no one is allowed anywhere near the thing while its on, but you don't have to be close to it to hear the hum. You can feel it too. Its quite unsettling.

The plasma generation has been fully put through its paces and works great. It doesn't need near the same power supply as the ring, so its not a concern there. It takes about ten minutes to fully fill or evacuate the ring. Again, no one is allowed anywhere near this thing when this is going on, especially the evacuating phase.

We had the system up to 74% power and started to open the neutrino door when the first power drops started popping up. The system immediately started shutting down. Uncontrolled supermagnets pulling at each other asymmetrically is a really bad thing that we try hard to avoid here. That type of event tends to twist and fold up large hollow metal rings. Not to fear though, the system performed a safe shutdown and nothing was the worse for wear. Harold and Paul had started to dig into the logs to see if we had some component screwed up somehow that didn't present itself as a problem at low power when we got the phone call. That was when we learnt that we had caused a blackout throughout most of California and Washington - well I would say

it was more of a brown out up until some of the transformer stations melted, then it was a blackout. But that's not really our fault if the power grid equipment isn't able to handle the loads that it purports to handle.

The most troubling part of this whole event is how the reds will read it. We already put ourselves on their radar with that whole explosion fiasco that the vids wouldn't stop spinning. A power draw of such magnitude to blackout two states is also bound to attract some unwanted international interest. Some of our government advisors keep pressing for a security force to be present here on site. I suppose that it might be a good idea after all. I mean, they did kill Dr Falwell to stop anyone following up on their developments. Perhaps we have been lucky these last two years.

Well, I'm entering this entry on my port while it still has batteries so I have to cut it short. I'm sure we'll be buying a new transformer station in the near future.

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Power is back on thanks to some creative rerouting by the power company. We are definitely buying a transformer station, that was the deal we worked out with the city. I wonder if you can possibly imagine how royally pissed off they were. That was not a fun meeting. Of course, the true reason for the blackout

could never be made public so they cooked up some story about how a guy pressed the wrong button or something. They made up a guy so that they could fire him, the whole song and dance. In the real world, however, the mayor wanted to shut down APL entirely saying that it was too dangerous and reckless an enterprise to have in his city. Super pissed. Must be an election year or something. The only thing that saved us was a quiet visit from some senior directors of the CIA. I'm not sure what they said, but the mayor's jets were thoroughly cooled after that. We still got stuck with the bill for the power station though. They didn't really say anything to me but we have a review scheduled in a December to look forward to.

I think, in future, we should abandon the gradual ramp up by 2% steps and just slam the thing wide open. After all, thats how the railguns work so we know that the tech can take it. Being extra cautious and taking it slow probably taxed the grid for far longer that was required. We did have to promise the city that this event wouldn't happen again and that we'd be taking steps to scale down our experiment's power usage. I think this change outlined here should take care of that issue nicely.

Lee is back in the office again after taking his first vacation here at APL. He seems really excited to dive back into the science, having missed a lot of the recent developments. I hope his energy and enthusiasm rubs off on his team - I can't afford to have everyone take a vacation at this critical time!

Dec 2030

God damned government bureaucrats! They don't have any idea what we are trying to do here or how hard it is to really create something new! All they know about is schedules and ROIs.

Met with the usual suspects yesterday in DC about our progress and funding reassessment. It was nearly all the same crowd as before so we didn't have to rehash much back story. Whitstone took the lead this time and really grilled us about the whole blackout thing. I admit that we were somewhat misleading to the city of Seattle but they weren't going to allow us to proceed. I had to do something to keep the project in motion. Surely it isn't in their best interests to give up at such a minor obstacle as that. They wanted detailed information about why we needed all that power when the LHC doesn't use nearly that much. After explaining about the railgun accelerator, Whitstone and General Avery really tried to tear us a new one. Given the time frame, resources and funding we have, I don't feel the least bit apologetic for anything we've done and told them as much. Results are what matters in this venture. Anything else is just wasting time. They were fairly happy to learn that we had moved on from nuclear reactors though, so there is one silver lining.

When we were done presenting all our findings and theories

so far, (I don't know what the point of those hours were, really - none of them had any science advisors in the room with them) they started in with the schedules and ROIs. If they didn't see significant 'viable' results from us soon they wanted to give the contract over to DarkStone. Fucking DarkStone are always riding our coattails for a decade trying to weasel their way onto our market share. Who cares if they have the best SSTO jetcrafts - they don't really stand up against a MagFist punch do they!

So apparently we need to get some kind of working device demonstrated by yesterday or they are pulling the plug on the cash flow. Weapon systems brings in a lot of revenue, but I don't know if we can carry on researching on our own. Plus they have the political carte blanche to throw around such as during the blackout incident.

The good news is that they have pulled a miracle out of their ass and arranged a treaty between the US and Texas that lets us get access to that sweet particle accelerator. They really don't want us continuing to cobble together one on our own. Hopefully it does what we need. I hate to be off site using other people's gear but it may be worth it this time. I wish we could pack up their accelerator and bring it back to APL with us.

Oh also we are being strongly advised to take on a security detail both on site and to be with personnel whenever we are out

on the road. They actually made it a part of the revised contract, but they are paying for it so I'm fine with that. As long as they follow direction from Harold and I, that is. I don't want to be prisoner trapped in my own company labs.

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Excerpts from Sebastian Tillmann's Journal

May 2032

Well, I'm about ready to pull the plug on the Texas contract, even though we are apparently the ones that everyone is doing a favour for. I don't feel very grateful about it. We only get access to the thing once a month or so on a weekend. The rest of the time is spent grinding through the theory on paper, since we aren't legally allowed to run our own equipment like before. This has left the practical team with not a lot to do and a lot of cut hours. I'm trying to arrange for them to be comfortable enough to keep them around. Trying to hire a whole new team later would be hard, but I don't want to have such a large expense on the books paying for people that are idle.

We managed to keep Lee busy by having him take over some IT work securing all the computers and the network. I didn't know he had a CompSci background, which was handy. All the investors

were pretty worried about espionage and other threats after we kind of tipped our hand during that blackout. It's been over a year and nothing though. They expect some kind of Russian Army to come storm the facility? I doubt it. Nevertheless, Mike Cooper heads up a security team that has set up shop on site. They come highly recommended from the CIA who knows a thing or two about the reputation of various paramilitary for hire types.

Anyhow, Texas. The accelerator there is a nice piece of machinery as far as accelerators go. It is guaranteed not to explode or destroy the power grid or create black holes and all that. But being what it is, its really under powered. Harold pretty much pulls his hair out the entire time we are down there.

The science so far lets us accurately predict the result of anything the thing can throw together, months and months spend refining the theories were good for something, but nothing really hints at this property of not needing space or time to interact in. Any type of interaction that we need to move towards can't be done since we need higher power. Either that or we are really missing something.

I plan to restart talks about using our own equipment here since that was the only time something interesting has ever happened. If Harold's team is right, the power draw required to get the time dilation effects hinted at in the theory is really huge. I don't know how we will manage it but it is going to have

to involve government help, so we better start repairing some bridges. Plus, its pretty obvious that the reds have done it! How!?

Talking about people that have figured something out, our old pals DarkStone are up to something. Rumour has it they have contracted a Japanese firm to build them their own accelerator over in Asia - same firm that we used to source magnets from for the railguns which is how we managed to find out this tidbit of info. Well, we already know that its going to be pretty unrewarding for them, with the type of interactions possible in an accelerator. We have also gotten word that they are focusing on neutrino interactions. Our own one result was involving quarks, not sure what they have got with neutrinos. Going to have to keep our ear to the ground on this.

June 2032

God damn it! The government pulled the plug on us - all the investors are gone and we are dead in the water on the Aplidyne front. They called me, well Whitstone did, just now to give me the news. He said we had yet to give any kind of results and all of our research indicated that there was no promise of results any time soon. That isn't an uncommon call to receive and something that any CEO can handle and spin, which I immediately launched into, but there was no moving him. They were insistent

on ending the project. After some more one sided negotiations, he eventually broke and told me why. What he said after that was the bombshell. Apparently, in gratitude for our effort and other such BS - not wanting any hard feelings I suppose - he told me that they had a Russian device. The actual physical device, they had it! In their labs, in hand! Fed up with waiting for us, there was recently a good opportunity to acquire one so they took it, literally! He didn't go into details about that.

I had so many questions - did it work? Was it functional? What was the power source? Did they open it yet? Turns out, they couldn't tell if it worked since it wouldn't turn on. They also didn't dare try to open it. It is apparent to me that they have no idea how to deal with the device. No one on the planet, well aside from Russians, no one in the west has been working with this science as much as us, or at all. They don't have any team that can figure this out, no other contractor. We are uniquely qualified to take on research of the device. I told Whitstone as much and he didn't disagree. I'm flying out there in a few days to press our case. I hope to God we beat DarkStone to this. I have to assume they will find out about the device, they have been pretty good lately about tracking our activities.

Note: remind Lee to audit all our systems and procedures just in case.

- - -

I GOT IT! I GOT IT! HAHA! It's sitting on my desk here as I write this update. I won't bother rehashing the meeting. I had no prepared speech or anything but I stated our case just as I planned in the earlier update. They agreed - I mean how could they not, we are their best shot at this - and gave me a private CIA flight back that night. It was complete with a handcuffed suitcase deal and everything. They wouldn't open it or let me see it until we got inside our labs here and even then not until Mike and his team had fully secured the building. Looks like those guys will have real work to do now - babysitting the device. The CIA was pretty firm on having the thing under heavy guard all the time and a secure lockup to keep it in when not being used. It's still their property, we are just borrowing it.

The device itself is not much bigger than a typical port, but a lot thicker - about an inch - all black plastic, with a screen on top, and it's heavy. Deceptively heavy. Around the sides there are a few round connectors that I don't recognize. There are no protrusions anywhere or obvious access points. There is also no obvious power button or way to turn it on. It's sitting here dead as a doornail right now.

I'm gonna poke around with it a bit more tonight then turn it over to Harold in the morning. A couple of Mike's guys are just outside my office waiting to escort it back to the secure storage we have prepared.

We're also going to fire up the railgun accelerator tomorrow, screw it. If the government doesn't like it then too bad. If they want this thing figured out, we need to use everything at our disposal. The Texas trips are also done since we can't transport the device out of our facility here. Doesn't matter since Texas was useless anyhow.

July 2032

It didn't take long until we got our first burglary attempt. I was in the offices adjacent to the labs when the alarm was triggered. Not sure if the thieves triggered it or if security hit the button themselves. When the alarm is sounded, the lab gets locked down with heavy blast doors. If the device is in use for testing, it is not always feasible to rush the thing to the secure storage so the first precaution is to secure the area that it is in.

Anyhow, in this instance, there was no real worry. Whoever was committing the break in got spooked by the alarms and took off before security could catch them. We probably have some good footage of them for the authorities but I'm just glad it amounted to nothing. Probably an initial test of our defences by DarkStone or the reds. Who knows.

In fact as soon as the doors came down, I wasn't thinking of the device. My first thought was of Brian. It's hard to

believe he is seventeen now but I don't want to think of him going up against some thugs. I tried to get him on messenger but he was out somewhere and not answering. Good thing too, because the house was also hit and with no one there, the place got a good ransacking. Once security is alerted it takes a couple minutes for a team to check the house but even so, the thieves had time to trash the place. They didn't find anything interesting of course.

Mike offered to send a couple guys to help straighten up. Maybe I'll get Brian to take charge of that to give him something to do.

- - -

A happier update now. We've made progress on the device. By attacking the edges of the screen on top, we managed to work the screen off and taken the first step to disassembling the device. From what we can see so far, there are lot of commonly recognizable parts that you'd expect to see in a modern computer of this size. The interesting thing is that there is a few black box components in there that are very baffling. They are all different sized steel boxes that don't seem to have a way to open. The reds sure have stepped up their ability to make stuff that can not be opened. Nothing inside the device is labelled or has part numbers aside from the consumer electronic stuff.

The computer board itself has no clear power supply. In fact, the power leads from the board connect to one of the metal boxes. It is the biggest such box which is mounted along one side of the device. One of the odd connectors on the casing leads into this box. Some of the guys on Harold's team figured that it doesn't look like a data port of any kind, so it must be for something besides an electric signal. The fabricators over in the railgun facility have created a bunch of different adaptors that will plug in to these connectors. There was a lot of trying everything we could think of that followed, which resulted in a big breakthrough when we fed some our particle sources into there. By connecting a neutrino source to the device via the power supply connector, the device finally powered up and booted the OS! The metal box that must be a power supply is clearly dependant on a supply of neutrinos and just needed a refuelling.

Once the thing was powered up it was obvious it was a consumer portable running three year old okna - pretty straightforward to pull apart the datadrive and examine what was on it. Lee's team spent a while decompiling the device drivers and cleanroom-ing some new versions which gave us our next big knowledge boost. The device manipulates the quantum foam. Well, now we know its not foam exactly, but consists of particles we are terming the unitron. No wonder we never got a reproducible effect from our experiments. Anything we did trigger was

completely by chance.

Things are looking really good now and it shouldn't be long until the device is operational.

Oct 2032

The device works! We did it! This morning Harold succeeded in creating an actual space dilation using the Russian software on board the device. It is a really amazing achievement, except for the loss of one tech, Paul. We will, of course, make sure Paul's family is completely taken care of financially. And, well, Gary lost his right arm but we are hopeful that he will decide to remain on the team.

Paul was the tech that triggered the device, as he was spearheading the translations and reverse engineering under Harold. When the field activated, a circular section of the lab around him and the device took on a strange visual affect, like a fisheye lens. Everyone started yelling at Paul asking what he did and that it was working, and Paul in his excitement I assume, ran towards to rest of us to share the news about his work. It was strange to see him running at us since the lab isn't that big, but it looked like he was running a good 200 meters or so. When he finally reached the edge of the area of effect and seemed like he was a couple meters away, he suddenly seemed to smash up against an invisible surface and get crushed.

I can only describe it as the kind of aftermath you see on the sidewalk from a suicide jumper. He just... got smushed, and then blood and bits sprayed on some of the people that he was running towards. Gary who was closest, instinctively reached out to try to help Paul and his arm started stretching out like spaghetti noodles. At this point Gary was screaming and everyone watching was screaming and blood was covering everything. Gary collapsed to the floor, stopping any further entry into the area of effect and saving his life. Harold had the presence of mind to turn off the device using the remote access we hooked up to it.

We're taking a few weeks off for clean up and to give everyone a chance to settle down. Need to make arrangements for Paul.

As a followup, this explains the report from a few years ago about Operation Keyhole as the effects witnessed were identical. We were fortunate so be able to observe the effects in both directions, whereas the report only had it in one direction. Note: scratch fortunate - find a better word.

The thinking so far is that, it is clearly safe to have a new frame of reference form around you, since Paul wasn't hurt at all by the initialization of the device, but crossing over frames of reference is fatal. In this case Paul was in a denser space attempting to enter the normal, less dense space. For the sake of illustration, imagine if 10 cm of space in Paul's frame is equal to 1cm in our frame. By crossing over the barrier, his

body was compressed into 1/10th the space which is not survivable. The opposite effect happened to Gary. We will need to construct some new protocols in the lab to avoid this in future.

In other news, our clear room team has been busy replicating the effects of the device with our own equipments. God knows we will never be able to replicate the hardware they are using. That is a mystery for another team to deal with some day. Since we have started to get a good understanding on the tech, we are confident that we can replicate the effects. The first step towards this was to restore a small source reactor and the rail accelerator to service. We know that neutrinos are important so we are solely focusing on neutrino interactions. Sufficiently energetic neutrino collisions should be volatile enough to disturb the foam somehow which is what we mean. I mean the unitron field. They are particularly nonreactive.

Sadly this avenue of testing will need to wait for another day because the end result was another city wide black out. We didn't even run the equipment for very long, just a short burst. This makes me even more baffled by what the device is using for power. It must be deriving power from the neutrinos but how? It takes no other 'fuel' source, for lack of a better term. I'm certain the government will bail us out with the city after we show our results. We are finally in a very good position for once. Well, except Paul. Damn. Note: Don't let any one read this

thing.

Brian has been showing some interest in the goings on around the lab. He really doesn't want to go away to university and won't entertain the idea whenever I brought it up before the summer. I know he wants to go into engineering but I supposed the lab is a lot more interesting to him right now. Currently he spends some days shadowing Harold and his group. I've also seen him hanging around with Mike, who is teaching him some self defence moves. I spoke with Mike on the side after finding out and told him to foster this interest. That kind of thing is always useful to know.

Lee has continued overseeing the computer infrastructure here in addition to getting the practical team back up to speed. He's also proposed a number of ideas for security around the device and the computer surveillance systems. Since he has the most experience with the sysadminery around here by now, I agreed to let him go ahead with some of the hardware plans he has.

Finally, in a hilarious stroke of fate, DarkStone's asian headquarters is gone. The reports we got said that the whole place is vanished one day - no explosion or fire or anything. It was just gone leaving a hole in the ground. That was the same place where they were installing an accelerator. I'm thinking they are playing with the same tech we are and got something

just a little bit wrong.

Dec 2032

Since we now know that neutrinos and unitrons are responsible for the effects of Maria's theories, we have been work backwards from the effect to discover the cause. Well, we found the last mystery finally. The time dilation effect is from a special type of interaction of two unitrons, not a unitron and a neutrons like we have been using so far.

The bad news is that the time dilation lifecycle is extremely short - like planck time short. If one wanted to maintain a dilation fields for any length of time, the power requirements to keep the interactions going are something astronomical. There is no way I can see ever having the power needed for this. On the other hand, reports of Russian agents blinking here and there are clearly from this effect - in a portable device too! How is this possible? There must be multiple solutions to these equations are we have found the unfeasible one so far. More research is needed.

CHAPTER FIVE

Friction

NOTE

All this time when dilation fields are active, make a note of the air pressure changes. Making a larger space will create a rush of air into the space, slamming doors etc. Popping bubbles that are compressed will push all that air out .

The first bit of drama has to be catching Lee being the bad guy stealing stuff. Mike needs to come to the rescue and take Brian away. Perhaps this whole part is all from Brian's point of view. We need to flesh him out more, though the reader already knows Brian from the first act.

But we need to be able to time travel. If time and space are actually real, then some combination of the two can trigger what we want. We already know the FF guys are met in a higher

dimension, passing through a dimension lets us pick a return time.

Learn of this fact from talking to the FF guys - they are from future so how are you here. Oh time has no meaning in this dimension.

#

Aug 2033

SCENE Sebastian POV

Sebastian reading the diary on his port. Describe the port so we finally learn what that is. Brian comes in to talk to him. Seb has been away to do contracts with Govt, needs some to update him. He left son in charge as a test. Mike is there too, he shadows Brian a lot now.

Seb reports on the contract, they will provide some basic spatial devices to the govt for a big payout. Still no change in power requirement or availability. They head out into the main lab to walk around, mention the many generators that are dilated in here and the railtrack.

Get update on time dilation. The time dilation is entirely figured out and ready to go only there is no where enough power. Speculate on the reds. Multiple power reactors? Can we dilate

enough reactors to make it work - no way. Talk about its limitation. The best you can do is to create so much time that the outside reference frame is close to a standstill. You cant go back in time.

They have so much extra income that their lab is pretty swank. There is an entire protected area for the lab that is spatially dilated. This requires a constant power source to keep the field running - they have a full sized nuclear generator running inside the field so that its not obvious from the outside. The rail accelerator is also inside the field. Maybe they are using ships engine generators so as to not require a big staff. Maybe they hired staff that are unaware of the time dilation due to the entrance portal. Its like an elevator that crosses frames so you aren't aware.

Lets have clocks on the wall that have inside and outside time.

Updates from Mike. No serious breaches. Talk about attempts to breach the spacial field but seeing messed up bodies as they tried to match the fields. They are altering field values to keep the dilation sync in flux so no one can easily get in. Its messing up the weather around the place but who cares.

Lee was the first to find one of the bodies. It was odd

what he was doing there. Says he was on a smoke break.

Walk around lab and find Harold. Get report from Harold. Harold loves to talk about the tech and cant help but give a recap of the tech so we can explain the next part: They are manipulating the foam - how is that done? The particle interaction was at the foam level which was why it was so elusive. They still need an accelerator to fire a neutrino at the foam particle, lasers or something are used to catch and suspend a foam particle. Idea: a high energy disruption wave is needed to perturb the foam and make it 'froth' - this is the rapid create/destroy of foam particles - unitrons. Once the foam is excited, before it dissipates, lasers lock on and catch a unitron and hold it for collision with a neutrino which created space or time.

Now, given all that, there is a fantastic new idea that might be possible. If we... Harold stops suddenly and says no not here. I will brief you later when it is a better time.

Lee comes running up very excited. Happy to see Seb, asks all about what happened and seems super eager. Mike asks what is Lee doing here? Isn't there stuff for him at at his stations? He heard about big news from Harold and wants to hear what it is.

Well we aren't discussing it here now, we have other concerns and first Seb wants to eat and rest. Tillmann takes a

hint of everyone's actions and wants to brush off Lee. He heads out to go home and eat. Brian says he'll meet Seb at home after he does some stuff here - he will take care of the days duties since seb just got back - checking in on the teams etc. Mike offers to walk Lee back through security.

As they leave Seb sees harold flash a hateful look at Lee's back

#

SCENE Lee POV

Replay the previous scene's part with lee from his POV. He is modeled after Newman from Jurassic Park.

Lee is in his office. Its fairly private with windows covered and buried in the back of a computer area. Lee is working on something - what? HE is trying to get into harolds files with out being seen. There is an email that says harold found a new thing but thats it. There must be research notes in his computer but lee cant get in. Its extra secure after the last time when an intrusion was detected. Lee had to manufacture that to cover up his sloppy work. He is pretty antsy and agitated about getting the secret.

The stranger is there - he just pops in. The stranger

always props up lee's ego saying that he is smarter than Harold. Reenforces that he is paid well and money matters most to Lee. Lee always argues what good is money I cant use! Just another way to measure how much better Lee is than Harold but can never show it.

Stranger wants to know about the new discovery. He hints that he knows what it is (he is from future) but he wants Lee to discover it. Lee doesn't know, is mad. Talk about how tonight is the night. Everything must happen now before the secret gets out. Do what you can, get what you can. You can do it.

Lee tries to placate them with field flux numbers. He has them stored on a chip but holds out for more money since he is a bit wavering. The Stranger laughs and thanks Lee for the new information. The stranger pulls out a duplicate chip that is slightly scorched. It is the chip from the future after the attacks. Lee is afraid of what will happen but afraid of being hurt. Maybe he doesnt believe they will really go all out attack on the place.

Stranger leaves after saying - get the information, maybe tonights events do not have to happen. Lee has to get the info and pass it on to the russians. On a monitor he sees that Seb is back. In a hurry he runs from the room and rushes to go bug Harold about it.

Lee comes running up pretending to be very excited - he is

actually afraid and a bit giddy. Say that he is happy to see Seb, asks all about what happened. He is eager to get everyone talking about all the events and maybe Harold will start talking about the info in his report to Seb.

Mike asks what is Lee doing here? Isn't there stuff for him at at his stations? Lee thinks that Mike might be on to him after the last face hack cover up. He also isn't sure Mike believed him about the smoke break thing. That was his first attempt to get a russian in the field but he failed to sync the frames right, created a body there. He says heard about big news from Harold and wants to hear what it is.

Well we aren't discussing it here now, we have other concerns and first Seb wants to eat and rest. This is crap, Lee thinks he is smart enough to see through their fake excuses. They are on to him, has to be. Damn it if they know, then he is finished here. If the russians don't get the info, every one is finished when they attack. Lee doesn't know what to do and is panicked.

Mike offers to walk Lee back through security. Lee walks out with Mike. Outside the lab Lee says I can find my own way. Mike says make sure that you do. Mike makes to intent to move and watches Lee. Lee walks to a corner and then rushes back to the office wondering what Mike is thinking. He has to get the russians hold off somehow. Near his office is turns and takes a side route to the outside, the whole building is dialated so he

passes through a gate that he sets up a monitoring glitch at.
(This is what he did in his office)

Outside, he heads to a remote location (by car?) to meet the russians. He is suprised the stranger isnt there. He demands to know where the kraut is. He cant stop the russians, only the stranger can. Talks to them, says he has no info. The russians are really eager to get at the dimension stuff because they don't have it - finally something new that Tillman has. They don't care about anything else and will burn the place down killing all to get at it. Lee doesn't like to hear about this part of the plan and has the usual change of heart.

He wants to warn everyone, if he can get ahead of the reds but he cant. He foolishly challenges the russians and tips his hand. THe russians simply knock him out and head to attack the complex. When he comes to, they are gone and the sound of sirens can be heard. Hopefully they havent got in yet. He hurries to the base but they are in the field. He enters and rushes around them to get to the man lab where he will set up a secondary field which he will change the field frequency so what he told them doesnt match even if this will mean people cant leave - they dont know they are altered more than expected.

He is doing this when Harold finds him and stops him - the change in frequency will stretch everything in here making the reactor blow. It isnt compensated. Harold has a little speech about his Lee is likable and promise. Why did he sell them out?

Lee cant answer. Harold hopes his actions now will be the answer. They have a better idea to bubble individuals and pop the bubbles shredding the occupants. They need the Russians to stand still long enough to bubble. They get a few at a time - its good. Harold hides with the machine while lee goes to get some. He leads them to a door and has them wait while he opens it with the promise that what they want is inside. While they are waiting, harold makes a field around them and kills them. The second time Lee tries this, he runs into a couple soldiers that are just having fun killing and burning. They dont fall for the lure. Lee yells loudly to get Harolds attention. Harold comes and kills them as they are beating up Lee.

Lee finds a final group with the russian leader there. He does the same ploy and it works but the russian leader steps aside and is missed by the bubble field. He sees Harold and aims a weapon at Harold (it is a time freeze device to take harold back with them). Lee Has no time to do anything - he think Harold will die with the secret and no one will know it. He calls out Harold and jumps on the leader pushing them both into the field and they both die.

#

Scene Brian POV

Brian is heading the one of the theory rooms where people are still puzzling over the power requirements for time dilation. Its the last puzzle. Someone should stop him somewhere and have a conversation because we need to kill some time to let Lee do his thing outside. Around one corner he hears russian being spoken and some gun shots. That is the direction he is going - towards the theory lab. He quickly ducks into a side room with a supply closet. Peeking out he sees the russian attackers.

They stop to split up into two groups of two or three. They quickly check the room that Brian is in and leave. The groups head off in both directions from Brian's hiding spot. Brian isnt sure what to do and is trying to figure out why russians are here, how they got in. He cautiously get out of the hiding spot and looks down the halls. No one is in sight. There is a smell of smoke coming from one direction so he goes the other way. This is the way he was coming from which goes deeper into the labs. He won't be able to get out as easily.

At the next next hallway intersection, he peeks around the corner again and again doesn't see anyone. The door to the main labs is ahead and closed. Then a hand reaches around Brian's head and grabs him, pulling him back. Brian is frozen, not knowing what to do when a voice says "Brian, shh. Its me, Mike"

The two exchange a greeting and Brian is relieved. Mike asks what have you seen? Brian thinks, he doesnt ask whats going

on? He doesn't react to the situation, he takes charge of his actions and acts. Brian admires that. Brian explains about the russians he saw and how they split up, there might be a fire towards the office/admin wing. Mike says they have to be after the tech and that means the main lab. They are going to scope it out and if necessary, defend it. Brian says no no way man, we don't even have weapons - do you have a gun? No Mike says. Don't sweat it he says, don't over think, just act.

They run down to the main labs and get in with access cards. They had to raise a blast door with Mike's credentials. No one is in here. There are upset carts and stuff around indicating that people left in a hurry. Mike takes Brian over to where the nuke reactors are. There are security boxes mounted on the sides on the thing with a special lock.

Make a note that the device is gone. Security team probably took it to the lockup.

Mike says have you been briefed on this box? Brian shakes his head. Ok, in here is our secret weapon. It is a miniaturized hand held railgun. They are in these boxes because they need to be attached to the reactors to charge. Good for two shots before they are drained.

Miniature rail guns? How? Brian asks.

There is a dilation field active inside powered by a small battery pile which is making the railgun fit in there. These things can punch through a tank if they have to. There is a

control for the force to use. Keep it on lowest setting, since we are only going after people, not tanks. Don't touch the red button, that turns off the dilation field.

A banging starts on on of the blast doors

What is this screen here? Brian asks. There is a screen reading '30', number of shots?

No, Mike says losing patience, pay attention, these are two shot only.

Right.. Sorry

More banging, sound of the access computer making refusal sounds.

That is a countdown until the batteries are drained. When that happens the field collapses. They have to be reattached to the reactor before it hits zero. Don't be near these things if you can't get back to a reactor.

OK ready go, Mike doesnt wait for a ready. Tosses a gun to Brian. Mike leaps over some pipes and crouches behind one of the reactors.

Brian catches it but treats it like it will explode anytime. He is wide eyes with fright about everything. Mike is motioning him to come over behind the pipes. One of the blast doors explodes inward in a cloud of smoke, they cant see what is there. Mike pops up and shoots his two shots into the cloud anyhow. With every shot, the battery counter drops 10 seconds. It is now counting down from 9. Brian is more worried about the

gun that if mike hit anyone. There is no sound from the cloud.

Come on, Mike says, nuclear reactors make for really bad cover.

Brian glances at his gun and it reads 26.

Bullets ping off of near by equipment. They can hear some russian yelling (Stop shooting you idiot)

Brian jumps over and the two of them run from the reactors to take shelter behind some lab benches along one wall. Mike makes it to the benches but Brian cant decide if he should look at the russians, or mike, his feet or his gun. His head is spinning and he falls.

Shit, Mike says and comes out from behind the bench, to the side.

He checks his gun and then tosses it like a grenade towards the door where russians are. It explodes like a grenade. Lots of equipment is pushed off of the benches and tables onto the floor. Two russians are down and not getting up. A few more are using the blasted door for cover and are taking shots at Mike.

Brian uses the distraction to hide behind other nearby lab benches. He has a side profile of the russians in front of him but they are behind the steel door. They are still shooting at Mike who has pulled out a small hand pistol and is keeping their heads down with shots. He wont last long there though, once he runs out of bullets they will come in.

Brian checks his gun - it reads 18 now. Only time for one

shot. He dials up the power and shoots through the steel doors. The shot takes out the shooter and blasts a new hole through the door punching outwards. He then thumbs the red button and lobs the gun the way he saw Mike do it. The gun hits the ground near the door and skitters across the floor. It explodes sending the last parts of the door flying out into the hall.

Shots from the russians stop and Mike comes out of hiding. Motions for Brian to come.

That was great work, boy. Mike says. You handled yourself well.

Brian doesn't believe him. He knows he was panicked the whole time and Mike was cool and calm even when his life was in Brian's hands.

Mike says, no one else seems nearby. Come on lets try to get you to the safe house.

#

Scene TILLMANN POV

Tillman is leaving the labs area thinking that Brian was doing a really good job, for his age. At least he was taking an interest and treating the responsibilities seriously. Keeping him involved here is probably a good thing, until he decides to go to school and learn engineering.

He swings by the cafeteria on his way to out to the car park and tries to get some food. There are a few employees here and the food service staff. A lot of people here are admins or sales staff etc. No tech people.

Lots of people nod to him or say hi. One sales guy is extra happy and tries to butter him up and be a pal, asks about the trip, and new sales leads etc? Tillmann brushes him off until later. Just so tired. Alright, guy says, dont keep me in the dark now!

Tillmann goes to the cafe line and asks for some soup and a ham sandwich, already prepared. Cashier doubles as the food person and they get the food while making chitchat about Brian. Says they saw him around looking sharp and really acting like a little Tillmann. He takes after you you know? They say. Seb is pleased and says that Brian's a good kid. Usual small talk. He pays and leaves. Make more small talk about not having to pay.

He sits and eats his food when the door to the cafe gets kicked open and a man storms in yelling in russian (everyone get down). A couple people stand up in suprise, others dont move. Some cower down on the floor. Two people run for the far door and they get shot in the back. A lot of people start screaming now and getting up. The russian is yelling more (get down) and shooting at the ceiling. Seb takes this time to flip his table over and hide behind it. The noise in the room covers the sound of the table flipping. From behind him there is more russian

talking, multiple people in the room now. (Is anyone here the guy? No I dont see him. Ok lets move on then). They talk while he is thinking what to do and judging the distance to the far door. Its not that far. Then the russians start shooting everyone. More people jump up and run around, towards the door and get shot. THE cashier is still hiding down behind the food counter. She eyes Tillman and he motions to her to keep quiet and points at the door. He starts making his way there as the shooting continues, people pleading. When he reaches the door there is a sound of a fire starting up, he smells smoke.

He is trying to get to Brian and dodge the russians. He doesn't have to wonder what is going on, it is obvious that the russians have finally moved against him for following up on their research. They must know that he has a captured device of theirs. He wonders where Brian is and what part of the base he would be in now. The device is pretty secure and the security forces know to rally to the device. He plans to find Brian and works his way over to the admin wing where the offices are. That might be his best bet. Brian would probably be focused on getting out. He has no reason to be going deeper in.

He also thinks that he is probably what the russians are after and they want to torture him to get the info. They know he is in charge and if they can't get Harold they cant get Harold they will get him. They are probably after both of them.

He spends a few moments crawling down halls and peeking

around corners. Every way seems to have a couple russians strolling around looking for people. The only safe way to go is back to the cafeteria. Maybe that place is clear and he can at least acquire a knife or something. He goes to see.

Back at the cafe, the area is clear except for bodies and the far side, near the main entrance, is still on fire. Tables are fuelling the fire. He breaks cover and goes to the food aisle thing, behind the counter. He doesn't make it all the way because the Stranger pops up in front of him looking amused.

Mr Tillmann, we are looking everywhere for you, he says.

What are you doing here, we have nothing of interest to you, we can't even replicate your device.

Oh Mr Tillmann, you underestimate yourself. Zere is somezing here of value to us and we vill find it.

Over my dead body, you will. Tillman sees the man is unarmed and decides to take a chance. He lunges at the man hoping to knock him down.

The man reveals a wristmounted device and activates it. He blinks to be behind Tillmann and grabs his arms. Tillman is overpowered easily and his hands are bound behind him.

Come now Mr Tillmann, this is pointless. Come with me now. Pushes Tillmann ahead of him out the door.

Tillman thinks about the device on his wrist. It has a working time dilation. This is the device that they need (to save Brian with later) to continue their research.

The two head in the direction of the lock down area. The sound of people running and fighting is in the halls.

I see you know our layout. You are very well informed. Tillmann talks to keep the man talking. Maybe he will say something useful.

You have no idea, Stranger says.

Fighting sounds continue. There is an explosion in the distance.

You guys sound like they are not having an easy time. Shouldn't we go check in on them?

Ze russians are on zere own now. I have a bigger fish to fry, yes?

Interesting, this stranger is just using the russians as a decoy. What is his game? If he isn't part of the russian team who is he? He seems to be putting himself above the russians, which doesn't make sense. Who would the russians ally with where they do not hold the upper hand? Tillmann's CEO mind is busy trying to figure out the underlying business relationships. It is what he does.

They get to the hallway that leads to the lock down area. It is bound to be guarded plus there is still the mantrap, no one can get in there. Tillmann is sure. The guards give him hope that the stranger can be stopped.

You must know the storage is guarded. They will shoot you as soon as we round the corner, if they havn't been alerted

already.

Yes, I know, Mr Tillmann. Go ahead and alert ze guards, zen, if it pleases you. I wont stop you. The stranger sounds pretty sure of himself. Tillmann takes the offer without a second thought. He breaks for the corner, running awkwardly with his hands still tied behind his back.

As Tillmann reaches the corner, he start yelling Security! Over here! Security! Alert!

Two guards are on duty on either side of the door ahead leading to the storage area. They already had guns drawn and upon seeing Tillman , they advance cautiously with guns level, ready to fire.

One speaks "Mr Tillmann what's going on?"

Shoot the guy behind me. Around the corner, Shoot him!

As Tillmann gives the order, his voice trails away. The stranger is now standing behind the two guards smiling. He holds a small pistol in his right hand. He points the gun at the left guard's head and pulls the trigger. The sound is deafening in the echoy hallway. The man's head disappears, replaced with a cloud of red mist. Before the body can hit the ground, the stranger turns to the second guard, who is still reacting to the sound. A second shot rings out and both guards fall to the ground, heads turned into a mass of blood and gore.

I do love ze old ways, the stranger says looking at the pistol in his hand. He puts it away. Now zen, will you open ze

door

Tillmann is shaken by what he has just seen but puts it out of mind. He has to deal with the situation as it changes. Not unlike a round of negotiations. He says, I can guarantee you that what you are looking for is not in there.

Mr Tillmann, let me be ze judge of zat. Open it. The Stranger is getting more curt and agitated.

Seb used voice command to open the door. It is a steel and glass door that opens sideways sliding into the wall. On the other side is a tiny 1 meter square room with another steel and glass door on the other side.

Enter, the stranger pushes Tillmann. Tillmann balks at the order.

This is the mantrap room, the other door only open when this door is closed. If the wrong identification is given or if it detect more than one person in there, neither door will open and we will be locked in.

The stranger considers for a moment. Not a problem, he says stepping into the room only long enough to pull a grenade from his inner coat pocket and place it on the ground beside the closed door. He steps out of the room quickly before Tillmann can issue any other voice commands. As he exits the room, the first door closes again. He walks swiftly back from the small room pushing Tillmann ahead of him. The grenade explodes in the room warping the near door outwards, breaking the glass. The far

door is completely shredded with the door halves bent into the far room, the steel frame turned into many jagged steel protrusions twisted and bent in.

Get in zere now, the stranger orders, clearly out of patience.

Tillmann gives the voice code again and the doors attempt to open, only the right one moves far enough to slip past. It ends up leaning on an angle awkwardly. The left door doesn't move at all, just the sound of grinding motors in the wall. He steps through the far door, careful to step over the sharp metal edges sticking out and avoid the other ones around the opening.

The lockdown room is little more than a large closet, about 5 or 6 feet square. There is a table against the back wall with a locking glass case on it. The russian device is inside. Beside it there is a computer terminal hooked into the company network. It is displaying the Tillcorp logo.

The stranger turns on Tillmann now pushing him hard into the wall backwards. Where is ze rift device? Give it to me.

Tillmann has no idea what he is talking about but play it as a bluff. I told you what you want isn't here, didnt I? If it isn't here it is because Dr Park has it and he is long gone by now.

The stranger laughs, No he isn't. Harold would never leave this place, it is the only place he knows, isnt zat right? He pushes Seb towards the blow in remnants of the door. Out. Walk.

Sebastian exist the room and waits in the little mantrap area. The stranger is following behind eager to get on with finding Harold and whatever the rift device is. As the stranger steps over the threshold of the ruined door Tillmann calls out Lockdown! Lockdown! A large blast door slams down from the cieling, hitting the stranger on the back of the neck, knocking him down onto the sharp spikes of metal of the ruined door. The stranger is still alive but coughing blood. His head and one arm are pinned in the man trap room, the rest in the storage area. The teeth of the ruined door firmly impaling his chest.

Who are you? What is this rift device? Tillmann demands, kneeling down beside the stranger. His glasses have come off and are laying on the floor. The stranger doesn't answer, his eyes roll back in his head, unable to talk with his lungs punctured. A pool of blood beneath him grows steadily larger.

Tillmann stands up, hands still tied and turns around. He crouches next to the strangers outstretched right arm and works the wrist device free. He sticks it in the only available place within reach of his hands, in his underwear. It is imperative that he get this new device out of here safely without being caught again. Stepping through the broken outer door, he leaves the lock up area behind him and continues to head to the admin wing, where he was initially headed. He hopes Brian is ok and is worried about him still. There is a side exit near the offices that he will try for and hopefully run into Brian on the way.

Seb hurries towards the admin wing not really trying to be stealthy but he doesnt run into anyone in the halls. The sounds of fighting seem to have stopped. Just as he gets to the branch that begins the main hall where the offices area, he runs in to Mike coming in the entrance from outside.

Sebastian, thank god, Mike calls.

Mike where is Brian? Seb's first concern is for Brian.

Mike pulls up in front of Sebastian and pulls a knife from his belt motioning for Seb to turn around. He's ok, I got him out to a safe house. He cuts Seb free. You want to tell me what happened to you?

Not right now. I have something that must be made safe. Have you seen where the russians are now?

No, I hant seen them. You can head outside there, pointing down the hall, but the safest spot might be to stick with me. I was about to go look for Dr Park. Havn't seen him at all.

Ok, that works for me. Lead the way, I'll follow.

The head off towards the main lab, the probably place for Harold to be. As they near the lab, they are buffetted by a gust of air from behind them. Ahead of them is a wet sound like a wet towel being dropped on the floor. In front of them in the distance down the hall, they see Lee and a russian soldier standing side by side. Behind the two of them is a shimmery spherical surface that Tillman recognizes as a dilation field. As the watch the russian pulls out a weapon and aims it down the

hall. Lee screams Harold! And tackles the russian before he can fire. They both fall onto the dilation field and their upper torsos compress into a red mass of tissue. After a moment, the mass falls to the floor with a wet plop sound. The shimmery effect of the field dissipates and a blast of air blows the smell of blood and smoke towards Mike and Seb. Harold is on the floor on his hands and knees with the device on the floor in front of him.

Harold, my god what is going on here? Sebastian runs up to Harold with Mike right beside him. Mike stops to examine the remains piled up on the floor.

We got them, Harold whispers, I think we got them all. Lee... helped.

I saw him... he jumped in to the field. Sebastian looked up a bit horrified, You were using the field as a weapon. It wasn't a question.

We had to, Harold replied, a bit spaced out. There were so many of them, we had to.

Mike spoke up, That was smart thinking Doc, brilliant. If we can fine tune what you were doing into something my men could carry around... Mike cut himself off, Guys, you have an incredible new weapon here, that will change everything. Name your price, you will get it.

Tillmann puts his foot down, No no, weapons. This kind of thing... no. To make warping space and time itself a weapon, no

its too much. The consequences are unpredictable.

Don't be a fool, Mike scorns, haven't you made your fortune selling railguns? Why do you think the governments want this tech researched?

Tillmann stares at Mike not answering, then changes to topic, ending that conversation.

They wanted the rift device. Do you know what they are talking about?

Rift device? Harold perks up, Well.. I might. But there is no... rift device. Not yet... It's what I wanted to tell you about earlier, before the attack.

Tillman helps Harold up and guides him back into the main lab. Come and tell me, and I also have something to show you.

CHAPTER SIX

Spooky Action

What is the deal with the far future guys?

They are initially waiting for us? Are they human looking or the advanced human looking?

The first meeting is to say hello and make us aware of them.

Note that all the meetings might come from different times 100s of years apart.

What is our reaction?

1 - this is awesome! So much potential so much knowledge!

They killed people, that sucks, we are wary of them

Don't report to govt, only internal - govt wants to know whats up - lie

2 - they came back, they demand something that we don't

like

Demand a permanent connection and space set aside for them, a climate controlled area they can stay in for now

Demand access to govt leaders and a voice in the UN

They offer unlimited power source, we love it and agree conditionally

3 - something is getting weird

They are managing their own complex and making deals with govts.

4 - we discover something to re-neg on everything, we don't like them

Discover that the humans are really lead by the alien guys - how did we discover this

5 - they kill brian as punishment and force obeying

6 - send brian back

Idea - this all takes place at one time, it is all negotiations etc that take place over a day

Why don't they just invade - this is what they do later

- in the later scene, it is the USA that has the tech

- USA readily agreed to the demands of the aliens and it went super bad for them

Why do they need us, they have better tech and knowledge than us

- they want to take over the past here which is a better place to live

What we discover that is bad without going over there?

- the aliens are in charge not humans
- earth is a destroyed husk
- maybe mike snuck over there and barely got back

Why do we not get government involved

- we get the feeling that the govt being involved would be worse. They'd be all over it and give in

Why is personally threatening Tillmann a good motivator?

- tillmann is able to pull the plug on the whole thing and cut the govt off.
- they kill brian to make him stop interfering.

A&G in this timeline realize they have to go to the sphere to learn more. Why do they think this?

What do they learn?

#

Oct 2033

The government guys are back to witness a great

demonstration of the dimensional effect. Harold begins by explaining what they are doing for the reader's benefit. They usually open new spatial frame in our three dimensions, but we should be able to open three dimensional frames into other dimensions. They are not sure what to expect but if is possible they need to explore this new tech. Mention of the Russians do not have this and that there was a great attack about it recently. Mention the loss of Dr Lee.

For the sake of more words, lets have the meeting take place outside the field and we need to escort the people through the entrance and into the field. They are all wowed by it and its a big dr who moment. Can we add some dr who puns?

More talking in the new area before the start of the test. They are making a frame inside a frame but it shouldn't matter. Harold explain and take the lead on the experiment. There is some new guy to take Lee's place but there is also a lot of grunt scientists around doing red shirt stuff.

For this experiment it created a hyper dimensional frame - how do we enter it? The hyper frame will not be compressing space, only shifting it into a different 3 dimensions. Since there is no dilation its save to cross over - ya whatever. Make it good like that. The view of the bubble is what? Well, light from us is hitting the surface then bending somehow into the new direction. It is unlikely that the light reflects back to us - what light is reflecting back to us? Any random light that is in

the space will exit towards us after a bend but we probably can understand the translation. It would probably be black with flashes of light like when your eyes are closed. Make some comments about how its not like stargate and other tropes. We would only see a flat circle (since the space is a sphere around the machine. Wires are still going in and the machine is not pulling on them. The sphere is in a dimension we cant see but it intersects with our place as a circle.

The first team with Tillman and Harold enter after probing the interior - is there a floor ? Air? We know air rushed in there and it stopped rushing in, so it is a bounded space. There was concerns that it would suck in all the air (of the planet?). There is a floor because the bounded space is still rooted around the machine. The machine was a pivot point that the area rotated around so the location that it was at remains intact.

They enter and see the cut out section of the room around the machine appears to be floating in nothingness - how do they know the way out? Follow the wire. It is much brighter circle in here because a lot of light is on the other side , though the translation makes it look crazy to us.

Everyone is pretty excited and there is a lot of high fives etc. They all exit and plan to do a new test - the rotation with dilation. There is some discussion about what if the machine stops when the people are in there. No one is sure. They propose

to do that test next at the cost of the machine if it goes wrong. Who will restart the machine? Will someone volunteer?

The second test starts and they set the rotate again with a large dilated space. Personal bubbles are made available to cross over to the space. The circle this time is a lot brighter with a strange light. Not sure what it means. People enter and see the room as it was before but dilated into a larger space as expected. There is light in there though. A strange light is coming from the distance much farther away than should be possible because the dilation wasn't that big. There is an adjoining floor or walkway touching the floor that belong to their experiment. It leads to another area that contains a table and chairs and the light sources - some flood lights. There is a raised archway door that is closed.

People approach the table and don't sit. Some are poking around door. There is much discussion about what is going on. Harold might try to explain it but he can only guess really. People might try to map the space - anyhow everyone is busy kind of freaking out when the door opens.

Lets say for this experiment there is only Tillman, Harold , Govt guy and a guard. There are only two chairs and raised throne or dais? Podium? There is probably a lit up symbol of the aliens culture also casting light.

An alien creature comes out of the door and negotiations begin. The creature is a super evolved human that comes from a runaway green house planet that shielded the sun with a dyson sphere. They would have evolved a lot of heat dissipation mechanism possible on the ears, like big giant heat radiating ears, and mostly hairless. They might need bigger more sensitive eyes due to the pollution/low light levels. Pollution levels means faster shallower breath? Or more tolerance for co2? This would mean the sphere interior isn't that nice to be in - normal people need oxygen or feel lightheaded. They would be fine in our air. He holds a device of some kind of bubbling - head gear? Not hand held.

The alien holds his hands up in a disarming greeting. He spins around so everyone can see. He is almost naked but wears some basic clothes, he is recognizably human with the above differences. The soldiers start yelling at him cop style to comply and demand who he is. The scientists calm them down and say that there is no reason to assume he speaks english. Lets all just be calm and rational, put the weapons down. They all then turn to address teh alien.

Oh but I do speak english, Dr Tillmann, Dr Park. I'm sorry I don't know the other gentlemen's names. It was lost to us.

The people are stunned and can't reply.

Oh come, friends. Let us sit. We have been waiting for you for so many rotations. There are things to discuss.

Tillmann sits because he is being friendly, as in negotiation mode of a CEO. Harold is less sure. The govt guy comments that there are not enough chairs. Alien says Unfortunately we only expected to interact with Tillman and Park. Additional persons were not expected.

Park site, the govt guys are stand back behind them.

Before we begin, you must have questions. I can see it in your faces. Ask the questions.

Harold is the first to regain his senses. Wants to know if they live here. Are they native to this area... what do you call this area. No, we are visitors here, passing through just like you are. As for this place, we call it the He pauses thinking of a proper translation... the byway.

Where are you from then?

We are from earth, of course. Are we so different, you and I? We are from earth that will be.

The future?

Precisely. The future. Yes.

And you know... us? Our names? In the future?

Yes - your experiments were well recorded and archived. We knew precisely when and where you would make your first jaunt into the bypass, and endeavoured to be here to meet you.

And your door.. Where does that door go to - if I were to step through it.

Oh you do not want to do that - the air on earth is quite

different than what you are used to here. It is so ... different. He sniffs and isn't sure if he likes it. It is a topic for later.

So it is the future - through that door? Were we to step through, we would be ... in the future? Harold is fixated on this. He cares for little else.'How.?'

It is the nature of the bypass. He speaks as if talking to a child. Surely you know this. (It is ludicrous not to, why else are they here? He doesn't get it)

Doctor, govt guy says, we have more important matters at hand. More important than access to the future? The future!

Govt starts to take over

Why are you here to meet us? Is the bypass your territory? Do you meet everyone this way?

Again he is puzzled at lack of knowledge. It is not ours it is a part of nature, though we have enjoyed rather exclusive access to it. You are the first that we have arranged a meeting with.

Talk about why have you not come to meet us before outside the bypass. They didn't want to scare everyone. How would you have reacted to meeting us - not well. We know your nature, we are the same, we are still human.

Need some discussion about how they are human but look very odd - how long would it take to evolve to this point? Was it steered evolution? Genetic tampering? Govt cuts off this line

again with more practical questions.

You haven't explained why you arranged a meeting. The govt demands to know motives and threat level.

If you insist on discussions of this nature, then the time for questions is over.

Tillmann is eager to negotiate but hasn't been doing anything, He jumps in here as a mediator.

No please, we do have questions of another nature. You have put much effort into meeting us, allow this to continue a bit longer. This is the start of humans seeming to kiss aliens ass, a slippery slope. Alien nods.

Tillmann want to know about their tech and how they got in here. Is it the same that we have? You know about us. This implies that it is the same. How does it work. Alien explains it is not the same but the same theories form the basis of the tech. It is implanted in their head? Whatever it is he give odd comments about it.

Tillmann gets to the power requirements. They punched through time, and human tech can not do that without crazy power. It is impossible to think of an implant with that power. The alien senses that more serious questions are still the focus of the humans and defers to later meetings. This is only a welcome and hello.

I am pleased to meet you. He implies that they wont meet again. The rest of the discussions will be with another. One

other item to attend to. Records clearly indicate that Tillmann and Park were the only attendees to this first encounter. Historical events must be preserved for the sake of all. Apologies. The creature uses his device to kill the govt man and the guard. The bodies get bubbled away and shrunk down to a pinpoint.

The other two jump up demanding what happened, they are freaked out. Alien doesn't reply. He leaves.

He has more to ask but has a lot to think about. They discuss what to report back, Tillmann is scared the govt will go nuts and militarize the project so he demands Harold to say nothing. He will handle it. They are arguing about if they should stay or go back when the door vanishes. Shortly after they are blinked to their own area and the alien are is gone. They leave.

Outside, they are doing an impromptu debrief and note taking. A bright coloured circle appears in their area unexpectedly. This is a bypass created by other people in the future several hundred rotations later - it is from a much later more desperate time. The first alien was from an exploratory group that was trying to establish the time of the first bypass by humans.

There is discussion about what is going on, the common thought is that it is the continued discussions. They enter - it

is different, less friendly environment with a different more military type of banner light. The attitude of these aliens is that they are going to take what they want from lessor children types and know that no one can stop them.

The first greeting with these other is harsh and shocking - some kind of restraint or force barrier holds them.

They speak.

You are the ones contacted prior during a bypass incursion. It wasn't a question.

Govt guys take issue with incursion.

Silence. Time is short. You have been apprised of the contract. It is time for the embarking.

They make it known that they are not so apprised. There is panic.

The alien considers then talks in a communicator. Contract not ratified please advise.

Another space appears and another door is there. It is also unfriendly. An alien comes out of it. They exchange a confusing exchange in english to sync up. It involves rotation times and other things. When this is done the first guy steps back, and the new guy comes forward.

He apologizes for the uncoordinated efforts on their end but time is short. He proceeds to lay out a plan that allows they to come through the bypass and settle a colony on the earth. They will be comfortable in the desert regions. He

explains this as if its a done thing. There are many provisions in this that makes humans bend over to appease the aliens who will come through to stay on earth.

This is crazy! Who do you think you are to expect us to kiss your ass?

The alien is amused. Mr Tillmann, we're here to chase the monkey off your back! This arrangement is mutually beneficial - every alien talks as if this has all been done before and agreed to. What is your biggest problem?

Before he can answer the flag light changes to a view of the sun, but it is darker - there is black spot on the sun. As the watch, the view zooms in and it is clear that the sun is partially surrounded by a network of manmade structures.

Is that a.. A.. Omg. Harold says...

We can provide all the power you require in exchange. Not just you directly - you , all of you - all of earth. We will share the sphere with you.

Harold is beyond shocked - a dyson sphere.

Govt is not so impressed and pushes back

Rest assured, if the contract is not ratified we will take less agreeable steps. The offer is not unreasonable.

Govt still doesn't like it - they cant agree to anything on behalf of the planet right now on their own, its crazy.

Time is short. Ratification failure. He speaks into a communicator again. Failure.

Talking back to the people, we advise you to reconsider. We still have means of being persuasive. For example.

Another alien enters the space pushing Brian ahead of him, hurt and on a leash.

Tillman is confused and freaking out. The new alien activates something on the leash and Brian falls over obviously dead from some electrical shock. It was visible around his head. Tillmann keeps freaking out - the aliens dismiss the people to make a decision. The force wall pushes them out and the circle closes.

Outside in the lab, Brian is still there eager for news about what happened. Everyone is confused except for Harold that explains that they must have grabbed a Brian from the future and killed him. Brian hears this and is scared wants to know whats going on. Tillman rushes him away and says he will explain everything.

Scene Brian POV

A while later.

Using the captured device from russians, Tillman wants to send Brian back to the past to save the doctor but mostly to keep him safe. Tells Brian how to use the device to come back. The thought is that if dr isnt killed, they will develop the

tech and not APL and so brian will be safe. Brian might argue about changing stuff but doesnt really understand it.

We probably need a big discussion here back and forth to explain stuff to brian. They need to prep him with money etc

Harold helps - everything is in secret. They pinpoint the device to 1995 and send him.

Note that the implication is that the russians are already in a deal with the aliens - that is how their tech has enough power.

REVISION TWO

The question and answer period with friendly alien lasts longer and he makes the offer of power. They give an item that receives power and can be tapped into by earth machines. They request space to live on earth and this is a more drawn out problem to be discussed.

The aliens claim to be future evolved humans but are not - in fact they came to investigate the dimming of the sun and found humans. They attacked and killed them all - why? Simple resources? They found the earth too stripped already but the bypass lets them get at the earth when it was still resource

rich. They also like to eat humans because why not.

They start by requesting space to make a beacon?

When Aaron goes to sphere later he discovers this - make sure the machines are not english but detect and auto config to english.

When Aaron meets brian again after brian dies, it is an over run 2033, brian can explain the difference and what is going on. He gets hurt and has to go back to play his part in the past. Aaron knows brian goes to die.

PART IV

1995: Toronto, Canada

2039: Washington, USA

Rotation 1f3a: Segment 21.9, Sphere

CHAPTER SEVEN

Chapter Title

TIMELINE C - son returns

- when B gets the device and can go home, he jumps to tell his father all about saving T
 - future isnt the same since it is an extension of TL B.
 - in this line no one has the tech yet and the future guys just invaded when it got dire
 - he runs around trying to find dad, maybe he finds A or G as old person? or T?
 - he find there is no firm, dad isnt researcher, cant do anything anymore here
 - has bad runins with bad guys
- POV change
- A&G meet B again. wtf moment (entry point for A)

- ?

- B is taken by some bad guys, wrist gets broke?, time
jumps back to TIMELINE A

- A&G carry on - they break into some main facility

- ?

- A&G jump to BG home in future

- dyson sphere, future tech, plot discovery

- A&G jump to 1986, TL D

PART V

1986: Chernobyl, Ukraine

CHAPTER EIGHT

Chapter Title

TIMELINE D - our world today

- A&G sabotage plant to stop nuke launch - why, how does
this fix it all?

- end

#

Popular Science - July 2013

Theoretical Physics dept.

Physicists discover new geometry at the heart of quantum

physics.

Physicists have discovered a jewel-like geometric object that dramatically simplifies calculations of particle interactions and challenges the notion that space and time are fundamental components of reality.

"This is completely new and very much simpler than anything that has been done before," said Tom Jones, a mathematical physicist at Oxford University who has been following the work.

The revelation that particle interactions, the most basic events in nature, may be consequences of geometry significantly advances a decades-long effort to reformulate quantum field theory, the body of laws describing elementary particles and their interactions. Interactions that were previously calculated with mathematical formulas thousands of terms long can now be described by computing the volume of the corresponding jewel-like "amplituhedron," which yields an equivalent one-term expression.

"The degree of efficiency is mind-boggling," said Jones "You can easily do, on paper, computations that were infeasible even with a computer before."

The new geometric version of quantum field theory could also facilitate the search for a theory of quantum gravity that would seamlessly connect the large- and small-scale pictures of the universe. Attempts thus far to incorporate gravity into the laws of physics at the quantum scale have run up against nonsensical infinities and deep paradoxes. The amplituhedron, or a similar geometric object, could help by removing two deeply rooted principles of physics: locality and unitarity.

Locality is the notion that particles can interact only from adjoining positions in space and time. And unitarity holds that the probabilities of all possible outcomes of a quantum mechanical interaction must add up to one. The concepts are the central pillars of quantum field theory in its original form, but in certain situations involving gravity, both break down, suggesting neither is a fundamental aspect of nature.

In keeping with this idea, the new geometric approach to particle interactions removes locality and unitarity from its starting assumptions. The amplituhedron is not built out of space-time and probabilities; these properties merely arise as consequences of the jewel's geometry. The usual picture of space and time, and particles moving around in them, is a construct.

The amplituhedron looks like an intricate, multifaceted

jewel in higher dimensions. Encoded in its volume are the most basic features of reality that can be calculated, "scattering amplitudes," which represent the likelihood that a certain set of particles will turn into certain other particles upon colliding. These numbers are what particle physicists calculate and test to high precision at particle accelerators like the Large Hadron Collider in Switzerland.

The physicists hoped that the amplitude of a scattering process would emerge purely and inevitably from geometry, but locality and unitarity were dictating which pieces of the positive Grassmannian to add together to get it. They wondered whether the amplitude was the answer to some particular mathematical question.

"They are very powerful calculational techniques, but they are also incredibly suggestive," Jones said. "They suggest that thinking in terms of space-time was not the right way of going about this."

Locality and unitarity are the central pillars of quantum field theory, but as the following thought experiments show, both break down in certain situations involving gravity. This suggests physics should be formulated without either principle.

Locality says that particles interact at points in space-time. But suppose you want to inspect space-time very closely. Probing smaller and smaller distance scales requires ever higher energies, but at a certain scale, called the Planck length, the picture gets blurry: So much energy must be concentrated into such a small region that the energy collapses the region into a black hole, making it impossible to inspect.

"We have indications that both ideas have got to go," Jones said. "They can't be fundamental features of the next description," such as a theory of quantum gravity.

Even without unitarity and locality, the amplituhedron formulation of quantum field theory does not yet incorporate gravity. But researchers are working on it. They say scattering processes that include gravity particles may be possible to describe with the amplituhedron.

Beyond making calculations easier or possibly leading the way to quantum gravity, the discovery of the amplituhedron could cause an even more profound shift, that is, giving up space and time as fundamental constituents of nature.

While more work is needed, many theoretical physicists are paying close attention to the new ideas.

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