

Mighty Adam

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Forward

Osamu Tezuka's "Mighty Atom" manga is known and beloved in Japan and throughout the world. Outside of Japan Atom is known as Astro Boy, or sometimes just Astro. He has appeared in three different anime series and a motion picture. His many fans can't get enough of him from the available manga and anime's and some have created their own works and posted them on the Internet. I didn't want to create a new Astro Boy story set in the world that Tezuka created. I did often imagine though what it might be like if an android like Astro was created today. Writing such a story would leave Tezuka's Astro Boy as fiction and the manga, anime, and even Tezuka himself would become a background for it. History would simply catch up with Tezuka's sixty year old fiction, just as the events of Apollo 11 had caught up with Jules Verne's. This is what I set out to do. I would also tear down the fourth wall and put some of Tezuka's characters (or parodies of them) into my creation.

Imagine if it were actually possible to build an android robot that looked and behaved like a flesh and blood person. What would be required to actually achieve an android like Atom? Imagine building a robot the size of a nine year old child that had Atom's strength and abilities. Where would it be built? What technology would be required? Why would someone create something like this? Tezuka's story line of Atom being created as a replacement for a lost son was still a possible thread, but it needed more background. I already had such a background in mind for a series of science fiction stories involving a high tech top secret laboratory modeled after the likes of Area-51. I imagined characters and a setting inspired by Clive Cussler's NUMA organization in his Dirk Pitt stories. I put my secret organization on dry land instead of Cussler's ocean based NUMA. The lead character that I created would be a cross between Dirk Pitt and Indiana Jones with a bit of MacGyver thrown in. I set the story in NYC and hid my secret laboratory under the Museum of Natural History. That part fit in well for the archaeologist background of my new character. My original story arc was to involve finding an ancient civilization and lost technology. This idea was inspired by the cartoon "the mysterious cities of gold". I still haven't yet fleshed out my original tale, but the setting seemed perfect to use as a birthplace for the boy robot.

So I created a new character that would become Atom's father. Dr. Albert Tenamann would be a physicist, medical scientist, and expert in the field of robotics. Dr. Tenamann was named for Tezuka's Dr. Tenma, as well as the very real person of Albert Einstein. I created a unique background for my good doctor. He was born in Japan to Americans serving in the US occupation forces after the end of WWII. This allowed me to put Osamu Tezuka into the story, he would cross paths with Albert's parents as well as Albert's several times. During his childhood Albert would grow up with Tezuka's manga and anime. Adam would be named after his grand father. I didn't like the idea in Tezuka's story that Dr. Tenma's son had to die to inspire the creation of Atom. There had to be another way. I found one, though it involved the near death of Adam in a horrible accident. I then had Tezuka's Dr. Blackjack cross the fourth wall to treat Adam after his brush with death.

Along the way I had to invent some technology that would make Atom possible. Things like the He3 fusion electric power cell and the ion-plasma electric ram jet engine are actually theoretically possible though the technology to build them does not quite yet exist. The strange new metal alloy I invented might someday exist, or not. Rumors of such stuff coming out of Area-51 are not any stranger than some of the new aircraft that have been tested there. Megawatt CO2 lasers exist, such air-to-air and air-to-ground laser systems have been tested by the military. The A10 Warthog aircraft is very real. The mind recording technology idea came out of the movie "Brainstorm". I can't see why it wouldn't someday be possible.

Prologue: Hidden Agenda

After 9/11 the US military found itself in a position of not having enough personnel. The draft system had been abandoned in favor of a volunteer system. This had worked well for many years, but America now needed a larger defense force. Technology seemed to be able to provide a solution. Autonomous fighting machines, starting with drone aircraft could relieve having to send men to the battle front. The first drone aircraft were remote controlled with a smart autopilot to keep them in the air and get them to their targets. Reconnaissance aircraft could complete their missions completely under their own A.I., but once weapons were added to the drones they had to be remote controlled by a human via a radio link. The final decision to use any on board weapon would not be made by a computer, it had to be done via human remote control. The issue here was that a fully “self aware” artificial intelligence operating at a human level was still quite science fiction. The Army was looking into drone tanks, and the Navy drone ships. However the real secret project was what had been nicknamed “G.I. Robot”. The idea was for an android soldier that could either be remote controlled as a sort of avatar, or could function on its own. This android would be humanoid in form, about six feet tall and would look human with generic features. By creating a human looking robotic soldier rather than one that looked like a robot the android would blend in with human soldiers in a combat unit. The humanoid form would allow the robot to use existing weapons systems and to operate combat vehicles and aircraft. G.I. Robot would take the dangerous combat assignments as an expendable soldier “taking the point position”. The problem of a nearly self aware A.I. still had to be solved, and the problem of making a humanoid android body that could be mistaken for a real person was close at hand.

In a small office room deep inside the Pentagon a bunch of brass in uniform were in attendance at a close door meeting. General Hayes was leading the discussion going on in the room. “Our G.I. Robot program is once again under development. We've now enlisted the services of the civilian think tank which was formerly under the control of the CIA”, he continued. “The current head of this organization did quite a bit of undercover work for the 'corporation' under the cover of various research projects for the American Museum of Natural History. The think tank is still located under the museum, as it has been since the 1920's”, General Hayes continued. “We were lucky to get the services of Dr. Tenamann, who was formerly employed by the Area-51 folks. Now if you look in the information packages you've received you'll find complete dossiers on the personal we are dealing with”.....

Dr. Adam Tenamann

Dr. Charles D. Tenamann II was one of Boston's most respected physicians, yet he would often hear himself referred to as “the Medicine Man” behind his back. It didn't bother him, he knew it referred to his ancestry. His father, Charley Darkhorse, was one half Sioux as his great grandparents on his father's side had been massacred by them and his grandmother taken as their own. Years later, his father was brought back east by the US Cavalry during the end of the Indian wars with the Lakota. His father had been reunited with family back in Boston where he settled down and married. Charley Darkhorse had taken his wife's surname and kept his own as a little used middle name to erase the Souix identity for the sake of his future children. The couple had also given their first son Adam the same middle name. Charles' father had become a craftsman and earned a decent living, but it was money from his mothers side of the family that paid for his education and upbringing. His father couldn't quite escape his Sioux background, but his wife's position in society covered it up well enough. Charles went to the best schools in the city, and was exposed to to the culture that it offered. He learned to play the piano and the violin, to ride horseback, and was well read. It pleased his mother greatly that he entered medical school and scored near the top of his class. His father didn't quite know how to relate to his son. Not that he didn't love him, but he felt that he didn't belong in the same world. The class difference was just too deep. Charles didn't notice this as he always treated his father with respect, even though they didn't always have much in common.

Charley Darkhorse passed away while Charles was in medical school, and his aunt came to live with his mother. After graduating at the top of his class, Charles entered a successful medical practice, and became associated with the top hospitals in the city. In February of the year 1914 Dr. Charles D. Tenamann was married to Anne Madison, the 'girl next door' that he had had a crush on during his entire childhood. By the summer of 1915 the couple had been expecting their first child 'any day now'. The Doctor would rush home whenever Anne called his office with the slightest discomfort. He raced his Packard though the streets between the medical office and his house to get to his wife in time, just in case THIS was the blessed moment. The day finally did come in September, all 8 lbs, 4 oz worth of Adam Tenamann saw the world for the first time. It would become quite clear the Adam was quite the intellect. He was interested in everything, but particularly the sciences. One of the boy's treasures was a copy of Alfred P. Morgan's “The Boy Electrician”, and he tried to build every project in the book. Telegraph and telephone wires were strung between the Tenamann's house and Adam's best friend's house a quarter of a mile away. There were burn marks in the carpet of the boy's room from spilled battery acid. A small crater in the backyard was the result of a chemistry experiment gone wild. Dr. Tenamann put up with his son's interests as he saw a future engineer in the making. He saw the name Tenamann might one someday day take it's place next to Edison, Tesla, or Einstein.

Adam was always quite well behaved for his age and would accompany his parents in most social gatherings. In October 1922 the boy was just eight years old, but he was allowed to attend the theater with his parents. The Tenamann's were in NYC for the opening of R.U.R with Spencer Tracy in one of the leading roles. The idea of human like machines was intriguing to the boy and he drew 'robots' in his sketch books for several weeks afterwards. Radio was the new fad in the mid 1920's and Dr. Tenamann purchased his first receiver in 1926. The Atwater Kent radio set took up a large part of the longest wall in the Tenamann's living room. Adam was caught several times dissecting the receiver and reassembling it. Normally catching a child 'destroying' such an expensive piece of equipment would have been cause for a reprimand, but after the boy put the radio set back together it was noticed that it worked a lot better! Charles Tenamann soon gave the radio to his son and purchased a later model,

which the boy eventually got into as well with the the same results. It wasn't long before a massive antenna fanned out over the Tenamann estate and the sounds of radio squeals modulated by Morse code resounded from a room in the far wing of the house. Adam had been given use of the unused corner of the house for his 'radio shack' after passing the first class Amateur Radio license test at the federal building in downtown Boston. There was soon another racket of a sound coming from the whine of a high speed motor. This apparatus had a perforated disc spinning at high speeds. A large glow-tube connected to the radio set illuminated through the disk, which when spun at just the right speed displayed moving pictures. Adam had built one of the first television receiving sets to receive some experimental transmissions he had heard of over the amateur radio 'grapevine'. By the time Adam had entered high school, it was apparent that his future would lie with the physical sciences. He subscribed to The Scientific American magazine, and several other technical magazines. Dr. Tenamann found some of the boy's reading material above his head and was amazed that his son could understand the material. Adam would go to the main library in downtown Boston to read scientific papers by Albert Einstein, Ernest Rutherford, and Niels Bohr. Since it was clear to him that his son would require the best higher education possible, Dr. Tenamann decided to have him apply for admission at the Massachusetts Institute of Technology in Cambridge. Even though Adam was only just starting his junior year in high school Adam thought the boys grades and intellect were at college level right then and there. Apparently M.I.T.'s board of admissions thought the same and Adam would actually leave high school at the completion of his junior year to start his education at M.I.T. Adam would finish his undergraduate and graduate work at M.I.T. , studying the various branches of the physical sciences, particularly nuclear physics. He wrote several thesis papers on the subject of nuclear chain reaction physics, and derived some equations showing the possibility of nuclear fusion of heavy water. College life agreed with Adam, he made many friends that were his equals in intelligence with shared interests. He found time between his studies for some sporting activities, he enjoyed rowing on the Charles river, ice skating, and tennis. He did pick up one vice, in 1938 he ran into the first issue of the 'Superman' comic at a news stand and was hooked. For the next ten years he had an active subscription to the comic magazine and he kept every one. By 1941, Charles had his Doctorate in physics and was looking for a research position. He stayed on at M.I.T. for a few months as an assistant professor. During this time he bumped into a Colonel Groves who was interviewing members of the physics department for some secret government project.

After the bombing of Pearl Harbor, he felt he should enlist in the armed forces. He applied at the army recruiter, but they didn't quite know where to put someone with his background. He ended up with the army air corps as his amateur radio skills were in demand there. Adam was transferred back and forth between several air stations where he received different training. One day he was on a transport plane with several other servicemen en route to what might be his last station before being sent overseas. His aircraft was diverted to pickup some officer that needed transport. Adam slept through most of the flight and was not aware of the change in flight plan so he was surprised when the Colonel addressed him, "Haven't we met before?" It was the same Colonel Groves who he had been introduced to in his final days in Cambridge. "Yes sir, you were looking through the MIT physics department I believe." "Isn't that your specialty?" the Colonel asked. "Actually yes it is sir", Adam replied. "Then what the hell are you doing being a grunt in the air corps?", the Colonel roared. "I need someone to babysit a bunch of eggheads, and who better to do it than another egghead in a uniform? Interested?" Adam thought a moment before replying, "Well Colonel, I joined the army after we were attacked by the Japanese. I thought it was something I had to do. I don't want to sit the war out not making a difference. But I suppose you could just make it an order". Groves scratched his chin and answered, "Son, if the project I've been put in charge of succeeds, your working with me WILL make a BIG difference in the outcome of this war." "Well then sir, I guess then you don't have to make it an order,

I'll just volunteer.”, Adam answered without any hesitation. “OK then, when we deplane, I'll have your transfer orders made up. You're back in the army proper now”.

A few days later Adam found himself in the New Mexico desert at a place he later learned was named Los Alamos. His assignment not only involved being transferred from the air corps into the army, but a promotion which jumped him quite a few ranks all the way up to second Lieutenant. The Colonel was adamant about the promotion. He couldn't have someone in charge of such an important assignment and not give him the the authority of rank that went with it. “You are going to be my eyes and ears. It's my responsibility to keep a bunch of scientists focused on their task, but I don't have the knowledge to judge what progress they are making. That's where you come in. You will work along side them without interfering with their work and keep me informed.” Adam worked with the Manhattan project from 1942 though 1945, mostly at Los Alamos, though he did some inspection work for Colonel (later General) Groves at both Richland and Oak Ridge. After the bombing of Hiroshima and Nagasaki, Adam wanted to be part of the team that would study the effects of the bombs. Japan surrendered quickly after the attacks and post war plans were being drawn up by the military. Now a captain in rank, Adam was rotated to serve as part of the occupation forces. He had served his time and would soon be up for discharge back to civilian life if that would be his choice. What he didn't know when he arrived in Japan, was how the country and its' people would influence him, and that he would stay there for nearly twenty years.

The Baxters lived in a small house just blocks from the 'Little Tokyo’ area of Los Angeles. June Baxter rubbed elbows with her Asian counterparts in the market as the family was found of the ethnic food available in Little Tokyo. Seven year old Elizabeth had made friends with the Japanese children that attended the public school with her. Her parents wouldn't consider another school to segregate her from the Asian children. 'Beth would walk the few blocks with her mom in tow to visit her classmates after school, and her Japanese classmates would return the favor to play at her house. Elizabeth could speak and read Japanese as a second language by the time she was eight years old. One windy day her Asian classmates were busy making kites out of old Japanese newspapers, bits of wood and scraps of cloth. She insisted on learning how to build and fly her own kite, and soon hers was flying higher than the rest. Playing doctor and nurse was another one of her favorite pass times and June sewed a Nurse's uniform for her daughter to look the part. 'Beth would practice bandaging her pet cat, who seemed to put up with the attention, most of the time. When her little brother was sick she would 'take his temperature', and get his medicine be it just make-believe pills.

By the time Elizabeth was in High School the drums of war had begun to beat in the far Pacific and Europe. Tension and resentment between 'Little Tokyo’ and the surrounding neighborhoods had started, and some of the Japanese businesses had been defaced. The Baxters didn't desert their Asian friends, and offered whatever help they could. Seeing that it wouldn't be long before America got involved in the war Elizabeth decided to enter medical school after High School. She wanted to become a nurse, or go on and get her medical doctorate. After the attack at Perl Harbor the government ordered the residents of Little Tokyo rounded up and sent to a determent camp. The Baxters joined in on a protest letter writing campaign against the determent. Elizabeth argued that German American citizens were not being rounded up, so it was wrong to do so to the Japanese Americans. While Germany hadn't directly attacked America, they had attacked our British allies. She then decided to enlist in the armed forces as a nurse. Beth wasn't assigned over seas, but was assigned duty rotating between various military hospitals stateside. When the Navy discovered her mastery of the Japanese language she was assigned to hospital duty at a Navy P.O.W. camp for captured Japanese

soldiers. She didn't like interrogating the prisoners, but it did keep her Japanese from getting rusty.

With the Japan's surrender after the dropping of the two atomic bombs there was a call for medical volunteers as part of the occupation forces. Elizabeth was one of the first to be sent over to Japan as part of a medical corp. Her first assignment was at Hiroshima, a few weeks latter she was assigned to a hospital set up near Osaka. 'Beth treated a constant stream of civilians, most of them hadn't had decent medical treatment for several years. Shortages of food and medicine that had slowly gotten worse as the war waged on, still plagued Japan. The United States was bringing in supplies as part of the occupation and rebuilding effort. Elizabeth felt for the people she treated, and also wondered what had become of her childhood friends from Little Tokyo. As the occupation continued the role of the U.S. Forces changed. Most of the emergencies were over and the day to day work was in trying to bring a normal life back to the defeated country. Elizabeth now worked at a clinic treating whoever walked in. As one of the few Americans that could speak Japanese she did more translating for the other medical personal than actual healing. By now most of the problems were those of the usual diseases, or conditions that if they had been treated earlier would not be as serious now. During the war Japan's citizens had suffered from shortages of everything, particularly food and medical supplies. Many of her doctors had been drafted into the war effort leaving the populace unprovided for in that regard. There was a lot of catching up to do. The food shortages were easing thanks to the supplies being flown in from America. Farmers were ready to bring in the next years rice harvest, and the fishermen were back plying their trade. Elizabeth could see the end in sight, but felt no desire to return home, not yet anyway.

Captain Adam Tenamann spend several weeks touring war ravaged Japan. He saw the ruins of Hiroshima and Nagasaki, bomb damaged Tokyo and the surrounding countryside. The science research for the atomic energy commission took less than two months. Rather than return home he opted to stay on as part of the occupation forces. His job now was to assist in the rehabilitation of the country. Food was scarce in most of Japan and hunger was common, the result of the country putting all of it's economic output into trying to win the war. He felt compassion for the Japanese, from what he could see these were mostly good people that had been lead into conflict with the world by a military controlled government, now in exile. During the these first few weeks he had picked up a little of the language and could speak a few phrases in Japanese. He was also able to make out some of what people said to him if they spoke slowly and didn't use any 'large' words. Adam found himself stationed near Takarazuka, a suburb of Osaka. There were many U.S. servicemen stationed in the area, some serving as policemen to keep order. The occupation was still in full force, and the United State's plans for a rebuilding of Japan were starting to take hold. Late one afternoon, Adam was driving his Jeep through Takarazuka when he saw a group of marines picking a fight with a young Japanese man. Their victim was still in his teens, thin and wearing thick glasses. The captain stopped his Jeep short, jumped out, and yelled at the group, "leave this man alone and get out of here, or I'll send you all to the stockade!" He pulled his service revolver from its' holster to back up his demand. One of the marines was about to throw a punch back, but thought the better of it seeing the firearm and the Captain's bars on Adam's uniform. The drunken jar heads ran off leaving Adam to attend to the young man on the ground. He found the youth's glasses, still in one piece, in the weeds and put them back on his face. The Japanese man picked up his beret and placed it back on his head. He was still looking for something else that had been dropped. Adam noticed a sketch pad on the ground not far away and picked it up He thumbed though the tablet.. There were many pages filled with drawings of insects, as well as various cartoon characters. The young man was an artist. Adam struggled a bit with his Japanese, but was able to ask "is this yours?" "Thank you" the youth said in broken English and gave a small bow gesture toward Adam. Adam motioned toward his Jeep and asked, "can I drive you home?" The teen accepted his offer and it took about an hour for Adam to find the house, between his

not being familiar with the neighborhood, and that language barrier in getting the directions. It was almost dark when the young artist left the Jeep and walked the final distance home. He turned and bowed a 'thank you' once more. Adam drove off in the Jeep and headed back to his barracks.

His job now was more as a business man than that of a soldier. He was good at organization and helped keep the relief effort running smoothly. This involved touring the country to inspect the efforts and report back about where things were botched up. Not exactly the kind of work a scientist turned officer would pick, but he was willing to do what was needed. Americans were not always respected by the civilian population, sometimes the resentment of a defeated people rose to the surface. On the other hand many of them were grateful for the help being poured into the country. Still the Americans had to find their own relaxation away from their work where they could. The USO brought shows into the country to entertain the occupation forces. Adam was going to a USO show setup near Osaka. In route he had to drop a package off at an Army civilian clinic. There he literally bumped into an attractive nurse who was trying to explain to an old Japanese man how often to take his medicine. The nurse finally finished with that and then accepted the package from him to put in stock. "You speak the language like a native", Adam complemented her. "Thank you", she replied, "I grew up next to Little Tokyo in L.A., and had many good Japanese American friends as a child". "When do you get off duty?", Adam asked. "I'm about though for the day right now, that is unless an emergency walks in before I can leave". She then added, "were you going to offer me a ride back to my barracks?" "Actually I was heading for the USO show, would you like to accompany me?" he quavered. "That's an interesting introduction?" she replied. "I guess forgot my manors", Adam said. "Well it's Captain Adam Tenamann at your service, madam", he added, giving a slight bow. "I'm glad to meet you Adam. I'm Elizabeth Baxter and I guess I will take your offer. You know I've never seen Bob Hope perform live on stage." she replied back. "My Jeep is packed outside, I hope you don't mind the rough ride", he said. "I've been riding in nothing but Jeeps and Douce-and-a-halves since I got here. Army first class all the way", she laughed. They both enjoyed the show and were surprised to find that they were both being housed on the same base camp. Elizabeth's barracks were on the other side of the base camp from where Adam was housed. The next day Adam drove his Jeep around to the Nurse's barracks and waited for Elizabeth to emerge. "Need a ride to the clinic Mame?" he asked. "Sure", she smiled, "beats waiting for the Army bus into town". It soon became clear their meeting had been fate. They both shared a common bond that was a love for the country that had been their enemy and its' people. They both had a deeply seated guilt for what their own country had done to the Japanese, the internment of the US Japanese immigrants, and the destruction of the countryside. Adam felt that he had played a hand in this regard with his involvement with the Manhattan project. Elizabeth felt she hadn't done enough to stop the internment of her neighbors in Little Tokyo. Their relationship grew from being friends to lovers, not only with each other, but with the country they were working to rebuild. In December 1949 Elizabeth and Adam were married. The ceremony was conducted on a US warship anchored in Osaka harbor.

Toward the end of 1950 the agreement between Japan and the countries that had fought the war on the side of the allies had agreed on a peace treaty which would end the occupation. Both Adam and Elizabeth's commitments with the Army were up and they were free to return home as civilians. However, Elizabeth had accepted a job with the US embassy office in Tokyo. Her fluency with the Japanese language and the many friends she had made among the populace made her sought after by the embassy staff. Adam would find later find employment with the Japanese office of an American importer. They found an apartment in the Tokyo in the embassy district. For the next decade plus a few years they would live as American Ex-Patriots in an adopted country.

During her stay in Japan working with the embassy Elizabeth would still find herself having to offer

emergency treatment to civilians as the country still had a shortage of doctors. One day while Adam and Elizabeth were taking a day off near the sea shore a call went out for a doctor to treat a boy who had been grievous injured. During the war Japan had placed mines on beach fronts along the pacific coast where they feared a possible allied invasion might land as they had on D-day at Normandy. After the war had ended the US Army had tried to clear out the mine fields, but unexploded ordnance were still being discovered along some of the country's beaches. On this day a mother and child were playing along the shore when one of the old mines detonated. The mother was killed almost outright, the boy nearly so. Elizabeth preformed what first aid she could so the boy would make it to hospital where he required many surgeries to repair his wounds. In the end the child survived, but he would have many scars from the skin grafts and surgeries that put him back together.

Dr. Albert Tenamann

Charles and Anne met their new daughter-in-law in May of 1950. They arrived on a chartered flight arranged by the US embassy service. Adam and Elizabeth had prepared the spare room in their apartment for Adam's parents stay, but were unprepared for the amount of luggage that they had brought along. "We've brought a lot of your stuff from Boston, son", his father remarked. "I figured you weren't going to come back to get it, and might want some of your old things". One steamer trunk contained some now ancient amateur radio gear. Another had books and papers from his office at MIT. But the 'prize' was the carefully packed and preserved collection of DC comics. "While you were hiding somewheres with all those scientists working on the A-bomb I kept up your subscriptions for those Superman comics. I saved the whole collection and brought it for you, maybe you'll have a son someday who might like to have them". Adam eyed the piles of magazines stacked in the trunk. "Guess I'll have to get another bookcase" he laughed.

The Tenamanns settled in to their new home and started to absorb the culture of their adopted country. Elizabeth was more at ease with live in Japan as she had lived among Japanese immigrants in America as a child and Japanese was a second language for her at an early age. One day the couple was walking the streets of Tokyo and they passed a newsstand. Besides the usual newspapers, there were racks of manga magazines. "What are these?" Adam asked his wife. "Those are manga, Japanese comic magazines", she answered. Adam picked one up and thumbed through the pages out of curiosity. Each book had several stories by different authors, each with their own style. He thought he recognized the artwork in one of the stories. Thinking back he remembered the young artist he had rescued from the gang of drunk marines and the man's book of sketches. Yes, this was the same artist. "I think I've meet the person that drew this story", Adam told Elizabeth briefly mentioning the incident that late afternoon when he was on MP patrol. She read the artist's name, "Tezuka Osamu", she said. "We should invite him to dinner one night", she laughed. "Sure why not", Adam joked. Elizabeth asked the staff at the embassy for assistance in contacting Tezuka, and to her surprise he responded to her letter. One afternoon the future god of manga found himself in Tokyo on businesses with his publisher and later that evening accepted Elizabeth's dinner invitation. The three of them met at a small restaurant recommended to her by a member of the embassy staff. Tezuka retold the story of the afternoon when Adam had delivered him from the marines, but from his point of view which was a bit more dramatic than the way Adam had told it. Elizabeth asked him about the kind of stories he wrote. Tezuka told them he was trying to think of some ideas for science fiction manga and Adam remembered the old play he had seen as a child. "Have you ever heard of the play RUR", he asked Osamu? "Yes, I've read it", Tezuka said. "I saw it as a child" Adam remarked, "and then had dreams about robots". "Yes, robots would make a good subject for a science fiction story", the young manga artist thought. "I might try writing such a story".

Albert Tenamann was born in February of 1951. The embassy had a small medical facility for the staff, and Elizabeth's childbirth took place there. Not that it mattered, Albert was legally a US citizen having been born to two US citizens, though the embassy grounds was considered US soil. Having been born in Japan he was also a Japanese citizen, a fact which would become important later in his life. Elizabeth hired a nanny to watch Albert at home while she worked in the embassy. She had interviewed many local woman before hiring an older widow. This woman's husband had recently died from wounds inflicted during the war. She had a two year old son, and brought him along with her while watching Albert during the day. This arrangement turned out quite beneficial for Albert in learning the language of his guest country. When Albert was old enough to start school Elizabeth

insisted on having him attend the local school in Tokyo with the locals rather than attend school in the embassy. Albert already had made friends among the children in Tokyo with his mother's help. Adam was working as an importer's agent. He often met with representatives of the Japanese firms whose products were to be exported to the US. Albert was a bright student. He learned English and U.S. history studying with a teacher at the embassy, and learned to read and write in Japanese attending school in Tokyo with the local children. He was quickly accepted by the Japanese children as a friend. Adam tried to share his interests with his son. The boy played with his old Amateur Radio apparatus (as toys since the gear was never powered up for him). He read though all of his father's comic book collection after Adam told him they had been saved for him. One day the boy asked his father "can I trade some of those comic books with my friends in school?". "What do you expect to get in trade?" Adam asked. "I can trade the American comics for Japanese manga comics" the boy replied. "I might even be able to trade two or three of theirs for one of mine", he added. "Well if you can horse trade like that, go ahead!" his father laughed. Gradually the Superman comics on the bookshelf would be replaced by a collection of manga books. One day Adam looked through his son's collection to see what the boy had got in exchange for the Man of Steel. Some of the manga books were quite a few years old, but still in good shape. The first one he saw as titled 'Shintak Rajima' which he could translate to 'New Treasure Island'. Another older one was 'Lost World'. There was also a small set of books having a magna series called 'Tetsuwan Atom'. All of these appeared to be drawn by the same artist. There were a few books with works by other authors, but his son appeared to favor the work of this Tezuka Osamu. Adam smiled to himself. It seemed that the artist he had met years ago was now successful in his work. He started reading some of the Tetsuwan Atom stories. They were about a robot boy with superhuman powers that had been created by a scientist to replace his only son who was killed in a traffic accident. The father soon found that his creation fell short of his hopes and abandoned him. His creation was rescued by another scientist and became a hero. "I guess I inspired him that night we had dinner", Adam chuckled to himself.

The years passed and the Tenamanns had been living in Japan for over a decade. Albert was a bright boy who seemed interested in everything, particularly the physical sciences and medicine. It was hard to tell which parents footsteps he would follow in. He was fluently bilingual in both Japanese and English and had picked up bits and pieces of several other languages as a result of hanging around the embassy with his mother. The family had made a few vacation trips back to Boston for family visits, but other than that Albert had no first hand knowledge of the United States. With his thirteenth birthday approaching in 1964 the family decided to spend the summer back in America. The New York World's Fair seemed to be the perfect excuse for the extended vacation. Albert wasn't sure what to pack with him for the long trip. Even by air the trip would be an ordeal, the first leg was from Japan to Hawaii, then a change of plane to Los Angeles, and again to New York with a few hours layover between each. "We'll need to try and catch some sleep during the flight son", his father advised him. "Can I bring some of my maga magazines with me to read on the plane?", Albert quavered already having selected a few to stuff into his jacket pockets. "Sure but bring some of your school work along too", his father teased. "Now Now Adam", his mother scolding his father, "our son is doing very well in his studies, he can afford to take some down time". "It will be over three month's of down time", Adam reminded his wife, "he'll be missing out on the end of the school year for this trip". There were quite a few Japanese people on all three legs of the flight, Adam was sure that the same people that had gotten on the plane with them when they left Japan were one the last leg to New York. For certain he had seen the same gentlemen with a Beret sitting two rows ahead of them on two of the flights. Well the World's Fair was intended to be a big draw internationally. He also knew from first hand knowledge via his export contacts that a few of the major Japanese firms exporting to the US had received invitations to the fair for their top executives. The same was true for a several of the Japanese

TV network and studios. America was ripe for new products from Japan, including television. Case in point was Mushi productions which had already sold their first Anime program series to an American TV network.

Albert thought the World's Fair was like downtown Tokyo. It certainly was as crowded, there were long lines at every attraction. Adam tried to keep an eye on his wife and son while following the map of the fair grounds. The Unisphere was visible from almost every point in the fair grounds and served as reference to finding one's way around. Right now he was concentrating on locating the route to get to the General Electric exhibit. The attraction here was Walt Disney's robotic figures in the Carousel of Progress. "Ah, that looks like the GE pavilion up ahead", Adam exclaimed. "Yes dear, your sense of direction is still working", Elizabeth remarked. As they approached the pavilion they could see the long line of people queued up. There was a sign at the end of the line stating the wait time was about 90 minutes. A fair employee was trying to control a crowd of foreign guests, and was failing to make himself understood. Adam recognized the group of fair visitors as the same Japanese contingent he had seen on the plane. Albert was staring at one member of the group. He pulled a manga magazine from his jacket pocket that had been in there since the plane trip. Albert glanced at a photo in the magazine and back again to the crowd. The fair employee was still trying to explain something to the group. "What's the problem here" Adam queried. "The Japanese visitors are guests of Walt Disney, and we've arranged for them to get in the exhibit via a back entrance. They don't understand and insist on waiting in line with everyone else" he sighed. "I wish I had a translator here who spoke Japanese". Meanwhile Albert tugged away from his father's grip "That's Tezuka Osamu!" he yelled pointing at a man in a tweed jacket with glasses wearing a beret hat. Albert ran up to the group and singled out the manga artist. He bowed slightly in the Japanese greeting custom and asked "Mr Tezuka, can I have your autograph?", speaking in Japanese. He handed him his manga magazine turned to the page with the photograph and a pen. "Here you are", Tezuka signed the page in both English and Japanese and drew a little doodle as well. "Your son speaks Japanese?" the fair employee gasped. "Actually all three of us do", Elizabeth remarked. "Thank GOD!, PLEASE help me would you? Join the group and help me communicate with them! You'll get in to meet Mr. Disney as well", the fair guide promised. "I guess that's an offer we can't refuse", Adam answered. Albert was already explaining to the Japanese guests what was up and the enlarged group trooped off to 'meet the wizard'. Tezuka approached Adam and said "It seems our paths have crossed again". "Maybe we should meet for dinner later", Elizabeth suggested. Adam and Albert struck up a conversation with Tezuka, who seemed glad to get apart from the same group that he had been touring with for days. Albert enjoyed the moment, happy to have meet his favorite manga author. He couldn't in his wildest dreams have imagined just how the work of 'the god of manga' would influence his life years later.

The Tenamanns spent the rest of the day at the fair, though the excitement and walking tired them all out, especially Albert. The boy complained of a headache after the fireworks display that evening. The next morning he woke with a sore throat, but after a good breakfast and some hot coca he felt well enough for the family to return to the fair. By lunch time however Albert was sneezing and blowing a runny nose so it was decided to return to the hotel so he could rest. Elizabeth brought back some over the counter cold medicine from a drugstore down the block from the hotel. Albert lay in bed watching TV. After flipping through the channels he found some cartoons running on channel 11. "You know Mom", Albert said, "It seems strange watching TV in English!". An other program started on the top of the hour with a familiar sounding theme song. "Hey that's Tetsuwan Atom!" Albert cried out with a froggy voice. "No, it's in English, and a little different", he added as the theme music and opening titles faded away. "Don't you remember overhearing the story that Tezuka was telling about selling his TV show to NBC", Adam asked his son. "Oh yeah, that's right. It became Astro Boy for America", Albert replied.

The Tenamanns returned to Japan but they realized that Albert should attend High School in America to prepare him for college. He would be 13 in February of 1964 and should be enrolled for the start of the school year in September of that year. The Tenamanns found a house not far from Adam's parents in Boston, and the family soon left Japan behind. The next few years flew by. Albert finished High School at the top of his class and entered MIT's Engineering school as a legacy. His undergraduate degree was a dual major in Engineer and Physics. He also enrolled in Harvard's Medical School but decided that medicine wasn't his career path. He prepared several papers on the structure of the human brain and advanced several theories on neural networks and computers and predicted being able to duplicate human thought patterns in computers. He also wrote several papers on the design of prosthetics. Albert's major interests were in robotics and for his Masters and Doctorate degrees in Engineering and Physics he proposed several ideas in computer automation via robotic equipment, using military hardware as examples. This attracted several government agencies into recruiting him, but Albert would end up as a highly paid contractor with the highest security clearance possible. The fact that his father had helped supervise the research on the atomic bomb was also a plus.

During his stay at MIT, Albert met an interesting person named Simon Green. Simon could be best described as a cross between Indiana Jones and Robert Oppenheimer. He was never without his felt fedora hat and an ivory pipe (which he rarely smoked). Simon was a younger class man taking courses at both MIT and Harvard, not being quite sure just what he wanted to major in. He was an adventure seeker and an intellectual as well as athletic. Simon spent many hours in a racing shell on the Charles river when he wasn't busy with his class work. Albert wasn't the jock type, but he was no recluse either. He gravitated toward the debating society and the chess team. It was on the chess that he had first crossed paths with Simon Green. Simon was the only opponent worthy of Albert, the two of them could be locked in silent combat for hours. Adam and Elizabeth proudly attended their son's graduation. Albert stood on the stage quite some time while award after award was bestowed upon him. He also was called upon to speak for the graduating class. Albert applied for several engineering positions across the country but the one that he finally accepted was obtained via a contact through a professor he had met at both MIT and Harvard. For the next several years Albert worked at the famous 'skunk works' at area 51 perfecting various weapons and propulsion systems for miniaturized aircraft that were the forerunners of the drone aircraft developed later on. The years passed and Albert was proud of the work he had done in physics for the government. He did however want to do work in the medical field to develop high tech prosthetic devices and or robotics. In 1985 he received word of his father's failing health and rushed back to Boston to be by his mother's side.

Adam Tenamann had suffered been in failing health for a few years, but Elizabeth had kept the news from her son until his Dad had become terminally ill. Dr. Adam Tenamann passed away a few weeks after Albert had returned to Boston. Elizabeth Tenamann never felt that she had put roots down in Boston, and she had no family left in L.A. She had been in contact with her former neighbors in Tokyo, some of whom had returned to Japan after being released from the internment camps after the war. She decided to move back to Japan and live out her remaining years in the company of her former neighbors and friends, some of whom she had known as a child. Albert decided to accompany his mother long enough to see her get settled. Disney had opened their theme park near Tokyo and Albert applied for an engineering job at the park to work on their animatronics. The devices were like a form of robotics and Albert improved them by making them more life like. There were some brief rumors about a possible joint venture between Mushi productions and Disney which had Albert produce some animatronics of Tezuka's characters including a Tetsuwan Atom that could fly across the stage supported by wires. The venture didn't happen and the characters were never seen by the public at the park.

While working for Disney Albert met the woman who would become his wife. Mi Yanagisawa was the daughter of a Japanese civilian who had married an American serviceman during the US occupation (she had kept her mother's name). She worked at the Tokyo Disney park as a tour guide and they met the day Albert had his job interview. Their courtship was brief but heated, and they were married within a few months. Albert intended all along to return to the U.S. and Mi agreed to emigrate. Within a year after returning to New York the couple had a son who they decided to name after Albert's father Adam. Adam turned out to be a bright boy, just as interested in technology and science as his father. He was also fascinated by the culture of his parents homeland and learned Japanese as a second language.

Upon returning to the United States Albert had renewed contact with Simon Green. He hadn't seen the man since his days at MIT. Simon had a job offer for Albert that was exactly what Dr. Tenamann was looking for. Simon was now heading up a 'think tank' partly funded by the government to look develop new technologies in various fields including medical, aeronautics, and military specific applications. His group also was developing advanced computer technology to support analysis of intel gathered by the CIA.

Simon Green

Simon Green couldn't quite figure out what he wanted to do with his life. As a boy he read "Field and Stream" along with the "National Geographic". He played little league baseball and was on both his High Schools baseball and football teams. He joined his father on hunting and fishing trips but also enjoyed more cerebral sports such as chess. He had a thick New England accent, though his family had moved out of the back bay shortly after he was born for a life in the suburbs to the west of what would one day be I-495. Simon was accepted by both MIT and Harvard and couldn't choose between the two of them, so he ended up taking classes at both. In the end both schools would issue him their diplomas, each one accepting some credits earned at the other. With majors and minors in such subjects as Archeology, Computer Science and Physics, Simon was a general purpose egghead. He didn't neglect his sporting background though, spend many hours in a racing shell on the Charles river when he wasn't busy with his class work. Shortly after graduating from two colleges at the same time, Simon found himself on an archaeological expedition for the American Museum of Natural History. He found the work fascinating and soon found himself working as the co-director of the museum in charge of research. One day he was approached by the CIA with a request for his help. They wanted to use the museum's research activities as a cover for their undercover work in certain hot spots around the world. Simon agreed to help and soon found himself deep in the cloak and dagger businesses. Through the CIA operatives he found out about the museum's deep dark secret.

In the 1920's during the construction of the Eight Avenue line of the Independent subway system a secret labyrinth of facilities were constructed under the museum. A group of wealthy industrialists and inventors which included Hiram Percy Maxim, Thomas Edison, and Irving Green sought to keep the US ahead of the nations in Europe in an arms race that they saw happening. The first two names in this group are well known, but Mr. Green has been forgotten by history. Mr. Green was one of Edison's many workmen whose skills in model making and draftsmanship were behind the great inventor's success. Irving invested his earnings well, (perhaps TOO well, he was in fact guilty of insider trading before it was widely enforced as a crime). Irving Green was also Simon's grandfather. The museum site was a perfect spot for the secret organization, and the museum's activities collecting specimens from around the world the perfect cover for espionage. In the days before the second world war it was from this think tank that came the analysis of German weapons development that would inspire the start of the Manhattan Project. It was here that the attack on Perl Harbor was detected months in advance of the actual date. The President's decision to have the navy look the other way on that fateful day is still classified as is his reason for the decision. We can make some good guesses as to this, America needed to enter the war, and this time the Germans didn't provide the spark as they did in the Great War of 1917. As the cold war ended the mission of the think tank changed. The prediction was that America was at risk of loosing the race for technology. Now the mission was one of technological espionage and skunk works research projects. Networks of computers replaced networks of spies, though field agents still were required when hard evidence had to be procured. The staff now included geeks from all fields: Computer experts, Physicists, Engineers, Medical Doctors and Rocket Scientists. The facility was in need of a new director, and Simon found himself being recruited for that very job. His position in the museum was a perfect cover. Simon would recruit others to fill key spots of expertise in computers, physics and robotics

Robert Levinson

Robert Levinson was a short, fat kid with pimples. He was good at math, a wiz at chess, and loved building and flying model rockets. He spend most of his money on chemistry sets and Estes model rockets. He stuffed an Enerjet "F" engine into one of his smaller models and launched it a Brooklyn's Marine Park. The launch pad fell over in a gust of wind just as the rocket engine ignited. The rocket flew just feet above the ground at nearly Mach 1 before bouncing off the park bathroom building. Bob also bought no less than three Estes Cineroc motion picture cameras. Two of them ended up in the bay just south of Avenue U. Bob's wealthy grandparents spoiled him rotten. He was their only grand child and they wanted him to be happy. Robert never wanted for any new toy or the latest gadget fad. He spent his grandparent's money on an early Apple II computer system, with all the bells and whistles Bob was self taught in the art of computer hacking. He found the Apple deficient in many ways and hacked the hardware to improve it. It didn't take look to figure out what he wanted to do in life. His grades in High School were near the top of the class, his SAT scores off the charts. Bob was admitted to MIT, a hackers paradise. Here he met Simon Green and Albert Tenamann. The three didn't really spend much time together, except where their class schedules crossed. They did learn about each other by reputation. Bob hacked into the computer systems at Area-51 and nearly found himself in very hot water. Instead he ended up working at the secret air force base for a few years following in Albert's footsteps.. After leaving the 'skunk-works' Bob was contacted by Simon Green who was looking for an uber geek to head the computer lab at the museum complex. Robert Levinson accepted the position at once. He designed most of the computer equipment that was installed in a massive upgrade which was started as soon as he was hired.

Under the Museum

Nine year old Adam Tenamann fearlessly road his bicycle through the 79th street transverse crossing Central Park from the east.. Being a warm spring day Adam was dressed in a white tee shirt and short black pants held up with a bright green belt. He wore a pair of red high top sneakers with long red baseball hose stockings. His hair was cut short with the exception of two tufts of hair held at bay with some gel sticking out under his NY Mets cap. School had let out at 3 PM and he was heading over to meet his father at his office in the research complex under the Museum of Natural History. He had left P.S. 290 on East 82nd street and had gone south on Second Avenue weaving through the traffic toward 79th Street and then turned west to cross the park. Finally reaching his destination, he dismounted at the street and carried the bicycle up the stairs past the statue of Teddy Roosevelt on his horse. Adam waved at the museum guards and wheeled the bicycle through the hallways toward a freight elevator. He punched the down button for the doors to open. The elevator arrived and Adam wheeled the bicycle into the elevator. He pressed the button for the third sub-basement and rode the car down. The elevator stopped and Adam exited. He went down a dimly lit hallway and stopped at a door. There was a keypad next to the entrance and Adam entered his own special key code: 8-3-8-7-8-9-2-6-2-8-6-6. After the last digit was pressed on the telephone like keypad the door opened inward, then closed behind him with a loud snap. Another elevator entrance was at the end of a small hallway and Adam entered that and pressed the down button. He looked up and smiled for the hidden camera he knew was there. He knew that the button he pressed had read his fingerprint and the security system had verified his identification. The elevator quickly reached the next level and Adam exited still pushing his bicycle. He entered a brightly lit room, at the far end of which was a window, behind the window was a receptionist. "Hi Amy!" Adam smiled. "Hello young man" she answered back and pressed a button to open a door next to the window.. Adam left his bicycle in the front room and walked through the door. Adam knew the way through the complex corridors to reach the computer lab. There was a long twisting hallway with large steel doors and many dead ends from the receptionist area to the heart of the complex. The passageway might remind someone of the entrance to "Control HQ" on the old "Get Smart" TV show.

Robert had set up a terminal for Adam's private use. The terminal had a large color display, and the usual keyboard and mouse, but also a microphone, a 5.1 stereo speaker system, and a web camera. Albert spoke to the terminal "Hello Issac, can you help me with my homework?". Issac was a computer generated image of Issac Newton that communicated with the aid of some very high tech A.I. Issac was a wonderfully interactive, human friendly computer interface. You could ask him any question in simple English and Issac would respond with a answer. Of course if you asked a dumb question, or tried to be "funny" Issac would get you right back. That was Bob's personality injected into the program. Albert opened a textbook and looseleaf binder and started to work on his math homework. Issac watched his progress though the web-cam and would provide hints on the screen if Adam took too long on any problem.

On the other end of the complex Simon Green and Albert Tenamann sat in front of a computer monitor. They were involved in a video conference with the Pentagon. The image of General Hayes on the screen did not have a happy look on his face. "I have some bad news to report to you", the general started, "and I'm going to have to take some of the blame for this". "OK, you've got our attention", Simon replied. "It seems we've had a mole in my department, and the cat is out of the bag on some of the research projects I've been in charge of, including Albert's robot research", Hayes began. "We do know where the info was leaked to, and that part really worries me", he added. "Would the people involved be known to me?" Simon asked? "I think so, you dug up the existence of these characters shortly after 9/11. First there is the one that goes by the codename 'Polecat'. He's a talented thief who's

been selling information that has been tracked back to al-Qaeda. The other character is known as 'Propane Torch' because he hides his crimes with arson. We have good reason to think that Albert may be in some danger”, the general finished. “Time to increase security guys”, he added. “I think the security here is good enough”, Simon responded. “Both Albert and Adam should be safe while here, though I'd be worried about Adam being targeted along his route to and from school in order to get at Albert”, he thought. Albert stared at the general's image deep in thought. “Adam's school year is almost over”, he said. “Once school lets out we can keep watch of him here and I should be able to complete the project before school starts again after the summer” “Maybe”, the general injected, “but we can't take chances. I'm going to have some under cover men from the secret service tail your son, just in case”, he decided. “And you too”, he added. “Maybe we should use some electronic tracking surveillance”, Simon suggested. “Good idea”, the general agreed. “See to it that Albert and the boy are tagged”, he said. Simon closed the connection and sighed. Albert looked at his watch and said, “Adam should be in the computer lab. I'm going to say hello to my son”. After the connection with the Pentagon was closed Simon turned to Albert and told him “Before you leave tonight, see that you tag Adam and yourself with those nano trackers”. “OK, I'll get Robert to take care of it”, Albert moaned.

Adam closed his looseleaf binder and was about to ask Issac to run the Angry Birds game when Albert walked into the lab. “Hi son, how was school today?” he inquired. “Not bad”, Adam answered. “I aced the science test”, he beamed. “No doubt, with Issac's help studying”, Albert injected. “Yeah, Issac did help me with my studies yesterday”, the boy said. Robert Levinson leaned against the computer terminal and smiled. “Hi Adam”, he winked. Albert cast a serious look at Robert. “Bob, I need you to prepare two of your nano tracking tags for Adam and myself”, he said. “It seems that General Hayes found a leak in his department and put us at risk”. “Hmm!”, Bob growled. “I've warned General Disaster that he was running a sloppy system”. “It might not have been a hack job you know”, Albert explained. “This seems to be a simple case of cloak and dagger”. Robert walked to the back of the lab and opened a storage locker. He removed a small case and walked back with it. Opening up the case he removed an air powered injection gun and loaded it from a container extracted from the case. “Whose going to be first?” Robert asked. “I'll be first to show Adam that it's painless”, Albert said. Adam watched as Robert held the gun to Albert's arm and pressed the trigger. It made a small gasping from the escaping air. “Doesn't hurt a bit”, Albert grinned at his son. “I've just injected a nano sized electronic cyber tracker under the skin in your dad's arm”, Bob explained. “If he should be kidnapped, I can find him anywhere. The device will lock itself onto any computer network that it finds nearby. Sort of a self hacking WiFi access point on steroids. It will also report back if you get injured”, he explained. Adam held out his left arm and Bob pressed the gun nozzle against his arm just above the elbow and injected the tracker just below the skin. “Felt cold, then nothing”, Adam smiled. “Told you”, his father slapped him on the back. “Why do we need this”, Adam asked? “I guess I should show you”, his father realized. “You have a right to know, follow me”.

Albert let them out of the computer lab. They entered a corridor that Adam had never been in and into a large freight elevator. Albert put his face up to the control panel and stared into a lens. “Retina scan ID”, Albert explained. The elevator dropped quickly to a lower level. The group emerged from the lift to find themselves in a large open area with many work spaces. “Welcome to my 'Batcave' “, Albert laughed., “let me give you the grand tour”. At the first station was a huge electrical panel with large meters and heavy cables. In the middle of it all was a small device connected via two large conductors to the panel. “This small contraption is a fusion power cell”, Albert boasted. “It uses a Helium-3 isotope to directly convert the nuclear forces between the atoms into electrical power. When fully powered up it will generate as much as 75 Megawatts of power”. They walked to another test station. This was a test stand for small jet engines. Attached to the rig was what looked like a pair of model jet engines due to their small size. “This is an Ion-Plasma electric jet engine”, Albert explained. “It was

designed to be powered by the fusion power cell you just saw. It was originally intended for use in drone aircraft, particularly a tiny version of the A-10 Warthog. Though tiny it produces enough thrust to push a fully loaded 747 into the sky! ” “WOW!”, Adam whistled. “Just how much horsepower is that?” “There is roughly 750 watts per electrical horsepower”, Robert answered. “So the conversion is easy, that power cell could generate 100,000 horsepower.

“Those items are but playthings from my past efforts that have been abandoned at the whims of our government's military”, Albert explained. “We are now coming up to the area of the lab that houses my current research”. Scattered about on tables and shelves were what looked like the dissected remains of various cadavers, but were actually android arms, legs, and torsos. Standing silently against a wall was a complete robot, it's lifeless eyes staring forward at infinity. The six foot tall android was dressed in olive drab GI fatigues. “This is my latest project”, Albert pointed to the android. “It it intended to replace human soldiers sent to the front. It has to be about the same size and weight of a typical GI so it can make use of military vehicles and other equipment. It has several times the strength of a man, enhanced senses, and agility. I'm still working on the A.I. Right now we are a little limited in what we can do for on board computer power for a completely self aware system.” The robot's features looked quite human, and while you might be fooled at a distance, close up it could be seen as an artificial being. “I want to improve its appearance”, Albert added. “A requirement is that human soldiers will feel comfortable working alongside a robot, maybe even taking orders from one. It HAS to look reasonably human, and not like a machine.” He turned on light to better illuminate the subject. “Note that it's covered with a life like 'skin' that looks real. That skin is a special fabric that actually has touch sensors in it that are as sensitive as in real skin”, he bragged. “As for the A.I., Robert has developed a neural network interpreter program than simulates the wiring of the human brain. I've perfected a way to download a person's brain program so it can be run on that interpreter. It's almost like making a partial copy of your mind and putting it into a computer.” “We are limited in just how much of a person's mind function we can emulate given the available computing power that we have”, Bob added. “We're close enough with that for what the military wants, but soon we could do better”.

Albert walked over to a computer terminal and activated a control program. He entered some command and the robot came to life. It walked past Adam, Robert and Simon and stopped at workstation a few feet away. The robot's movements were smooth, it moved more like a man than a machine. The robot's facial features looked friendly and showed off the artistry Albert had perfected working at Japan-Disney years ago. “Come back here”, Albert spoke aloud. The android waltzed about on it's heels and returned to where it had started, then went stiff as Albert commanded it to shut down from the computer terminal. Simon gave Adam a serious look. “Your father is close to perfecting a humanoid robot with enhanced abilities that can almost be mistaken for a real person. If integrated into the armed forces beside human soldiers it would change the face of warfare and give our country an advantage. The forces of terror want this for their own advantage, and we know know they pose a threat to your father's research, and even his life. Adam, they could try to get at your father through you, so we must take extra care to prevent that”. “That's why we have these tracking devices under our skin”, Adam guessed? “Yes, Adam, I'm sorry it has to come to this.”, Simon answered. “Let's go back to a part of the computer lab you've never seen. I'll show something else just as amazing”, Albert said.

The group returned via the elevator back to the upper level of the underground complex and the computer lab. Bob Levinson led them past Issac's terminal and beyond his own workstation area to the back room of the lab. They entered via a large steel door opened by an electronic lock activated by a retina scan, this time of Bobs eye. “This is the mainframe room”, Bob explained. “Actually there is a network of mainframes, all of my own custom design. This computer complex just might represent the

most computer power on the planet”, he boasted. He then led the group to the very back of the room and pointed to a monitor display. Mounted above the monitor was a dual television camera that could swivel about to adjust its point of view. The lenses were motorized for focus and zoom, all three axes controlled by the computer. On the screen was an image of a human face rendered in HD. It looked like a caricature of Albert Tenamann's face. “Say hello Max”, Albert said. Max looked at the visitors, as his face in the monitor turned so did the camera 'eyes'. “Hello Dr. Tenamann”, Max said in a voice that sounded like Albert's voice after running it through a Moog box. “I call this program 'Max', since his creation reminds me of the character out of the old 'Max Headroom' TV show”, Albert explained. “Max was created the same way, my brain 'program' was scanned, read out as computer data and copied to a very large hard drive on Bob's mainframe. My brain program is now 'running' on the neural network interpreter program in the mainframe. Max's screen image is its own creation since that's what I envisioned in my own mind. Max isn't perfect, when I made this copy of my mind the process couldn't capture deep enough to really capture my personality.”, Albert added.

“I developed the mind scan out of some medical research with the hope of a cure for Alzheimer's disease”, Albert continued. “Now I'm using it as a short cut to develop an A.I. system for robotics. The military only needs to copy the problem solving logic portion of the human brain for the military androids. I've now extended the process much further to be able to copy memories, personality, and even self awareness all of which go beyond the military requirements”. Bob added “The computer requirements for the military version are reasonable, and can almost be handled with today's processors. To actually clone a person's mind all the way still needs something an order of magnitude more”. “If you can make a perfect copy of a person's mind, isn't that like copying his soul?”, Adam asked. “I mean the copy wouldn't know it was a copy, and it could replace the original. Almost like the way the transporters work on Star Trek by destroying the original and recreating it elsewhere”, he added. “My what a deep thinker my son is”, Albert reflected. “But my scanner leaves the original quite intact and only makes a copy, no matter how good that copy is”. “How many people have had their brains scanned so far”, Simon inquired. “I've had quite a few volunteers, mostly provided by the General”, Albert answered. “Any bad side effects?”, Simon questioned. “If by that do you mean is it dangerous?”, Albert responded, “Not at all. The procedure is a bit more taxing than having an MRI scan in that you need to lie down in a closed confined machine, which is actually based on MRI technology. In addition you get to have lots of EKG electrodes tapped all over your anatomy, and it takes a few hours. But other than that, totally painless and no side effects. In any case the research is being done in a hospital setting so we are prepared for any emergencies. The lab is located at Bellevue Hospital in an unused area of a side wing so few of the hospital staff are aware of it.” Always thinking of new ideas Simon asked, “can it perform in reverse to put thoughts or ideas into someone's head?” “The Alzheimer's project was leading toward that, and in theory it's possible, but not with the current hardware and software”, Albert answered. “Though I see where you're going with that, and I wouldn't want my research being perverted into a brainwashing machine”. “I agree, but that's exactly what our terrorist 'friends' might have been thinking”, Simon projected.

Adam had the look of someone deep in thought.. Suddenly his eyes lit up, “Can you make a scan of me?” he asked. “You could put a copy of my mind in a robot my size so I can have a friend who thinks like me, that would be great”, he demanded, adding “And if you made it a robot like Atom, that would really be great!”. “Atom?”, asked Simon. “Guess you had a deprived childhood”, Robert said. “Astro boy was one of my favorite cartoons in the early 60's growing up. Albert was privileged, he got to see the original growing up in Japan where the character was known as 'Mighty Atom' and Adam was lucky in that his father had saved his old Manga magazines for him to read.” “I didn't watch much TV as a child”, Simon sighed. “I was a different kind of nerd I guess”.

“One more thing while we're in the computer area”, Simon asked. “Bob, can you bring up the CIA search you did based on the intel reports the General provided?” I'd like to have us know who we're up against here”. “Easy”, Bob said. He walked over to another terminal and brought up Issac's interface. Issac now appeared on the large screen in Max's place. “Issac”, Bob asked, “please show us the mug shots of those al-Qaeda thugs”. “Here they are boss”, Issac offered. Four pictures appeared on the large screen, a frontal view and a profile one of the two plug-uglies. “The one on the top is known as 'Polecat’. He's mostly a thief, but has blood on his hands. He is suspected in the kidnapping of several experts on nuclear weapons. The other character is known as “Propane Torch”. He's the more violent one, and while he's murdered by many means, Arson is his favorite, hence the nickname”, Issac informed them.

Father and Son

Albert and Adam Tenamann walked side by side through the office area of the complex. Albert's office was next to Simon Green's, and was possibly the largest one in the complex. Albert rarely used any more of the room than the area around his desk, the rest of the office was part library, and part shrine. Along the right side of the room from floor to ceiling were shelves lined with all sorts of books. While Albert had the use of the mainframes huge on line store of research materials, not to mention the internet indexed by powerful search engines, he kept these hard copies of classic text books and encyclopedias. The back of the office might have been on the other side of the world. There were shelves and display cases filled with artifacts from various eras of Japan's history. Pottery, iron ware, and various art objects from the land of his boyhood had been carefully displayed. Adam walked over to the corner where the old Manga magazines and books were shelved and scanned the collection.. Originally printed on cheap paper, they had been rebound and the paper treated to preserve the old comics. This was Albert's gift to his son, and himself. Hanging on the wall next to the Manga collection was a large poster of a 'blue print' for Tezuka's Tetsuwan Atom character. The poster was hand drawn by Tezuka himself. Years ago shortly after the famous Manga artist's death, Tezuka's son had sent the poster to Albert explaining in a letter written in Japanese enclosed with the poster that the artwork was found shortly after his father's death. He was sending it to Albert in thanks for Adam Tenamann the first's rescue of his father from the hands of drunk US marines during the American occupation of Japan. Albert cleaned up his desk and called to his son, "Time to go home, Adam". Adam re-shelved one of the Manga magazines he had been thumbing through. He then collected his school books, stuffing them into his backpack and they exited past Amy's now empty office. Adam put his backpack on over his shoulders and wheeled the bicycle out into the hallway. They took the elevators up to the lobby of the museum. It was a short walk to the Tenamann's house, a classic bit of old New York real estate. The three story walk up was a few blocks north and west of the museum just to the east of Broadway. Along the way they stopped at a deli to get some 'take out' for their dinner.

They entered the house at the lower level and Adam left his bicycle in the mud room. He ran up the two flights of stairs to his bedroom and threw his backpack on the floor. Looking out his window Adam could see Central Park just a block away. He had an antique brass 100mm refractor telescope mounted on a tripod aimed out the window. He looked through the telescope at the street below. Halfway down the block a late model silver gray Mercury sat. He could see two men dressed in suits wearing dark glasses sitting in the front seat, one of them with a pair of large binoculars hanging from a strap around his neck. The other man held a Nikon SLR camera with a large zoom lens. Albert entered the room "What are you looking at?" he asked seeing the telescope aimed toward the street. "Take a look for yourself", Adam replied. Albert brought his eye to the telescope. "Must be the secret service agents that the General assigned to watch us. Must say they are not trying to hide at all". He lifted the telescope slightly aiming the old Alvin Clark objective further down the block. He saw an old rusty van was parked at the corner. Albert replaced the telescope eyepiece with one of a higher power and refocused it. He could now see a man in the van who was looking around through a small pair of binoculars. When the man lowered the binoculars Albert could see his face. It was the face of the man identified as the 'Polecat' on Robert's computer. Albert send a text message on his blackberry to General Hayes' secure email server. Within minutes the door opened on the Mercury and one of the SS men started walking back to the van..Before he could get there the van pulled out of the parking spot and left. "Score one for the good guys", Albert chuckled.

Father and son sat down to eat their dinner. Afterwards they watched something on TV and then Albert saw to it that Adam got to bed. Albert looked in on his son before going to bed himself. He had been

raising the boy by himself after Mi's death when Adam was only five years old. There had been a particularly bad outbreak of the flu that year and Albert's wife was sick for weeks. Her bout with the flu led to phenomena and one night she slipped away. The staff at the museum complex became like "Uncles and Aunts" to Adam and Issac a sort of cybernetic brother. The boy had very recently saw his ninth birthday, for which Albert had given him the twenty five speed alpine geared bicycle he had custom built for the boy. On nice days Adam now rode the bicycle to school instead of being picked up by the school bus. The boy loved the freedom, and not having to endure the teasing by his classmates on the bus. Adam was small for his age, at just four feet tall and sixty seven pounds he was the runt of his class. He was a safe cyclist always wearing a helmet and keeping an eagle eye out for traffic.. Albert felt safe in letting the boy ride the bicycle through the city streets.

The next morning Albert came into Adam's room to gently wake him for school as he always did. Adam showered and dressed himself after first checking on his computer for the day's weather forecast. The outside temperature was already in the low 70's . He put on a clean pair of short pants and a NY Mets Jersey tucked under his shorts. Then a fresh pair of red baseball socks to match his high top red Keds. He combed his hair after rubbing in some jell to keep two long patches of hair under control, they were just combed to stick out solidly after the jell set up. Finally he put a vivid green belt though the loops on his shorts to keep them from falling down. Father and son had breakfast together during which they made plans for the weekend. Maybe fishing or racing R/C boats in the park, they decided. They went out the front door together, Albert walking along side Adam who was pushing his bicycle. When then they reached 81st Street and Central Park West, Albert handed Adam his back pack and helped the boy strap in on. They both had noticed that they had been followed by the two men in suits and dark glasses. The dirty old van was nowhere in sight. "Looks like our security team is on the job today", Albert said. "Have a good day at school son, I'll see you later this afternoon". "See you later Dad", Adam said as he mounted his bicycle and headed east on 81st Street to cross the park on his way to P.S.290 on East 82nd Street and Second Avenue. When Albert entered the museum complex Simon had good news for him, "I've heard from Dr. Burakku in Japan", he said. "He's accepted my offer to work for us and will fly out here at once. He'll be at Bellevue on Monday". "That's great news!", Albert said. Dr. Burakku was a famous surgeon in Japan, who had had great success in the most difficult cases. While not a specialist in brain surgery, he had much experience in such operations, and was considered a great diagnostician and medical scientist. The hospital would be able to make use of his services while he was not working with Albert on the brain scanner equipment. Albert had met Dr. Burakku while he was staying with his mother in Tokyo shortly after his father's death. He had been embarrassed by his reaction when they first meet, the Dr. had been disfigured as a child and still had scars on his face from the surgery and skin grafts. "Are you and Adam going to the park tomorrow so Adam can try out his new R/C boat I got him for his birthday?", Simon asked before Albert left his office. "Yes we are. Say!, why don't you join us and bring your R/C model of 'Old Ironsides?'" Albert answered. "I just might meet you there", Simon said. "It's been a while since I've sailed her, and I've added some new tricks to the old girl".

Saturday dawned a nice sunny day. Adam woke to the sound of a pigeon cooing on the windowsill. He dressed quickly and got the new model R/C speed boat out of the closet. The batteries had been charging overnight, and he now inserted them into the boat. The R/C transmitter too had been plugged into the charger, he now disconnected it from the wall-wart. He then placed both into a large canvas shopping bag to carry to the park. After breakfast Albert and Adam left the house and started walking eastward to the park. They walked south down West Drive to where it met the lake at about 77th street. Simon Green was already there prepping his ship. His scale model of 'Old Ironsides' was a perfect miniature version of the famous Early American warship USS Constitution The real vessel had seen

service in the war of 1812, and is now the worlds oldest commissioned warship afloat. "I've added some new items to her", Simon showed Adam. Standing at the ship's wheel was a figure of Popeye the sailor. "There's also a small radio controlled carbide cannon on the poop deck", he pointed out. "The ship even has a small electric motor so I can get her back to shore if the wind dies out", he added. "Better than having to wade out to get her", Adam chuckled. They put both ships in the water. Adam raced his back and forth across the lake while Simon controlled the sails to catch a breeze and the ship majestically plowed the waters of the lake. Adam carelessly cut his speedboat too close to the frigate and she turned sharply toward the shallows driven by Adam's wake. Her rudder fouled in some duck grass and Simon couldn't free her. "Rats!, look what you've done!" he scolded the boy laughing. "Let's go free her", Adam offered. He gave his remote control transmitter to his father and ran ahead with Simon following. Albert stayed behind toying with the speedboat. Adam reached the shallow end of the lake. The wooden model was about ten feet off shore in foot deep water filled with weeds. Adam took off his sneakers and socks, stuffing the red hose into his Keds. He handed the sneakers to Simon and waded into the lake to free the tall ship from the duck grass. "Be careful Adam!", Simon yelled, "You don't know where the bottom drops out into deeper water". Adam had already freed the Constitution and she floated back into deeper water. He stepped out of the lake and Simon handed him his sneakers back. Adam knotted the shoelaces together put them over his head so the shoes laid against his chest. He started walking back barefoot. Simon suddenly handed Adam his R/C transmitter and started running toward Albert. He yelled back to the boy, "looks like your father has some trouble!".

A grungy looking man came up behind Albert. He wore dark sunglasses and his head was covered by a fedora hat one or two sizes to large. "Nice day to spend with your son Dr Tenamann", he gurgled. Albert turned quickly to face the intruder. "We need to talk Dr. Tenamann", he said. "What do you want?", Albert demanded. "You're working on something that you need to share with the weaker countries of the world, Doctor. American has been strong arming too long in places where it should never had stuck it's nose.", he lectured. "You know, it would be too bad if your son ended up as an unfortunate pawn in this game of chess. I'd rather keep him out of it, so why don't you play ball and let us pay you for your services to us. You know in the long run, history might thank you for it. Arming both sides equally has kept the world safe from a nuclear catastrophe, you know the MAD principle?", the seedy looking individual explained. "Get away from me!", Albert yelled. "I will not deal with a bunch of terrorists". He quickly scanned the horizon looking for the SS men, but didn't see them. Neither did he, nor his assailant see the left hook that landed square on the terrorist's jaw. That guided muscle belonged to Simon Green. The intruder's hat and glasses flew off and he fell over backwards revealing the face of the Polecat. Polecat quickly got to his feet holding a large knife he had pulled out from under his jacket. Just before he could lunge at Simon the sound a gunshot sound echoed from a short distance away. Simon was prepared to land another blow but Polecat took off yelling back, "I'll have some unfinished business with you and your son Doctor!" Albert and Simon looked around for the gunman who had fired the shot that had scared off Polecat when Adam walked up carrying Old Ironsides. The boy had a smirk on his face, and smoke was wafting from the ship's poop deck. "The Carbide Cannon!", Simon laughed. "That was quick thinking Adam!" "You seem to have arrived at an opportune moment Mr. Green", Albert said with relief. "Where did he come from, and where are your body guards", Simon wondered. He pulled out his Blackberry and send a message to the General. "Wow!, some punch you gave that thug", Adam cried. "Well, I boxed welter weight at Harvard", Simon said. "I almost made the U.S. Olympic boxing team, you know. If Polecat had stuck around, I would have been happy to go a few rounds with him", he added. "Hmmm, I wonder if he brought the 'Torch' with him", Albert worried. "Probably not this time, but we'll have to be more careful with you. I'm going to make the General post some agents at Adam's school", he thought. "And I'm going to insist they shadow both of you full time until we can get this under control".

Prototype

Albert spent Monday at Bellevue Hospital getting started with Dr. Burakku. As the hospital was on the lower east end of midtown he took the subway instead of walking. He first stopped at the Museum underground to get some paperwork, then took the 8th Avenue local downtown to Times Square where he walked through the long underground passage leading to the Times Square shuttle. The shuttle dropped him at Grand Central Station where he picked up the Lexington Avenue local going downtown. He got off at 23rd street. It was then a refreshing walk east to 1st Avenue and the Hospital. Dr. Burakku was every bit the genius that Albert remembered. When his mother had fainted at the airport on their arrival in Tokyo they were lucky to have literally bumped into him. The Dr. had been running to catch a flight in the opposite direction when Elizabeth fell down in a faint in front of him. Albert thought that the long flight and dehydration had been the problem, but Dr. Burakku took one look in her eyes and realized she had just suffered a mild stroke. They ended up at his clinic (he ended up missing his flight), and Elizabeth Tenamann had emergency life saving surgery.

Two young army volunteers took turns lying down in the brain scanner's magnetic pickup chamber having their brain waves and EEG signals recorded. The two doctors studied the readouts and adjusted the equipment. Robert Levinson remotely analyzed the data, with some help from Issac. Dr. Burakku took a liking to Issac. "Your artificial assistant is smarter than many of the Doctors at Tokyo General", he laughed. By the end of the day the four of them had rewritten many of the subroutines in the scanner's embedded computer, as well as in Robert's back end processor. When the mainframe ran the resulting images the results were astonishing. "I think we've broken the Turing Barrier", Robert laughed. "Turing Barrier?", Dr. Burakku asked. "That's when you have a computer interface so advanced that you can't tell the difference between it, and talking to another human being", he explained. "Ah yes, you are referring to the famous British computer scientist", Dr. Burakku remarked.

Albert was about to leave for the day when Bob's voice came out over the computer terminal. "I've got some good news for you when you get back here Albert", he said. "Can you tell me over the link, or must it be in person?", Albert asked. "I've just got some real great news from my friends over at the IBM think tank", Robert started. "Seems that they have a present for us, the first prototype copies of the quantum processor chips. I have their first version now, and should have the improved second revision in a few weeks." he said. "Have you tried running the software on it yet?", Albert asked. "You know me!", Bob laughed. "I'm debugging the first pass right now!". "Oh, Simon has some more good news for you, but you'll have to see him when you get in, he won't let me in on the details", Bob added. "I'm sure you know the details anyway Bob", Albert laughed. "Yeah, you might say that Issac had his ear to the grapevine as usual", Bob smirked.

Late in the afternoon Albert was back in his office. Adam had already arrived from school and having finished his homework was lying on the floor in the back of Albert's office reading an old Manga book. Simon walked in pulled up a chair next to him and said, "I've received some interesting news Albert. It seems one of our industrial spies in China has come up with the details of an interesting alloy that they've been working on. The Chinese stole the formula from the Russians before the Soviet Union fell, and the Russians had got the first details of it from the Germans they captured at the end of WWII. Of course it wasn't perfected until very recently. We think that our agent may have been able to switch some details around with the help of a computer virus, so we just might have this breakthrough to our selves", he gloated. "What kind of an alloy are you talking about?", Albert's curiosity was in overdrive. "It's a remarkable combination of Tungsten, Aluminum and Titanium", he started. "It has a higher melting point, greater strength, and lighter weight than any structural metal alloy yet devised. The Chinese achieved this by adding a combination of rare earth metals and a bit of modern alchemy", he explained. "What our scientists have added to the magic is a way of changing the alloy's crystalline

structure to allow machining it, then back again to achieve maximum strength. The problem the Chinese had was that they couldn't build anything with it, it was too tough to drill and not malleable at all. Our process allows us to get around that”, he explained. “Can we get some of this stuff to use for the robot project?” Albert asked. “Eventually we will”, Simon told him. “The automated foundry – machine shop in New Jersey will be able to handle the new material as soon as the last of the kinks are worked out. There is still a bit of research and development that must be completed. Then they will need to perform some required retooling and software upgrades. The 'skunk works' at Area 51 have priority, but I've managed to get you enough access for a couple of prototype runs”, Simon said. “In the meantime the metallurgical data from their first trial runs are available to you on our network.” “I'll examine the data and determine how suitable the material will be for my uses”, Albert replied. Albert was so excited about the news that he forgot about Adam who had fallen asleep on the floor with his face buried in an episode of 'Black Jack'. He found the links to the metallurgical data Simon had provided and started the process of calculating the results of using it in the robot framework. The material looked fantastic, and Albert realized that he would eventually be able to make a soldier-bot with superhuman abilities. However he still had to finish the first prototype for an upcoming demonstration. He glanced at his watch and realized that he'd have to wait for tomorrow. It was time to get his son home, they were already late for dinner. He gently picked Adam up and placed him in a chair. He picked the magazine up off the floor and put it back in the shelf with a slip of paper bookmarking the page where Adam had left it open to. Adam yawned and got out of the chair and put on his backpack. Albert guided the sleepy boy to the door and they left the complex for home.

The next day Albert got back to work on the first prototype android soldier they were finally going to demonstrate ready. He got on the computer and started finishing up the blueprint changes for its' metal parts. The design would then be electronically transferred to the automated facility in N.J. that had a combined foundry and machine shop. It could produce any kind of metal assemblies Albert might need for any project. The plant was run under a secret budget under the CIA's bookkeeping as it had been originally built to supply the needs of the Area 51 'Skunk works'. It currently was at the service of various government funded research groups including NASA, and Simon Green's research think tank. The facility could produce various alloys of metal, including many top secret new formulas. The new high strength, low weight wonder metal that the Area 51 geeks had perfected from the stolen Chinese formula would soon be added to their inventory. Meanwhile, Albert had specified a 'Standard' aircraft grade of high strength metal alloy that might have been used on the likes of the SR-71 blackbird. Bob entered the office holding a small electronic assembly. “Here is the completed computer unit”, he offered. “It contains the first version of the Quantum processor core chip to handle the A.I. neural unit, and an upgraded sixteen core ARM-15 embedded I/O processor to handle the autonomic nervous system emulation. This version of the Quantum processor can handle most of the A.I. levels of the neural network interpreter except for the self aware and original thought levels of the human brain. The next version of the processor will be so much advanced over this one that we will be able to do it all, total cloning of a person.”, he finished. “Great work Bob”, Albert slapped him on the back. “This unit should be good enough to demonstrate to the General, in fact his requirements probably don't need the advanced unit”. “I know that, but I have a feeling we ARE going to find a use for the advanced version. Building a complete clone of a person's mind and putting it in a robot body would be a form of immortality”, Robert waxed philosophically. “I don't know if we have the right to go there”, Albert said, “Though it now seems that I'm inches away from actually doing it, Dr. Burakku and I think we've worked through the last of the barriers on my end, and your latest software seems up to the task”.

Late in the day Simon reviewed the work with Albert. “It looks like you will be assembling the prototype android soldier by the end of the week”, he exclaimed. “General Hayes will be happy. By the way, I've been informed that the SS agent protection for you and Adam has been doubled. They've

been shadowing your every movement, except of course when you're in this complex. I don't think that we'll be seeing anymore of Polecat or Propane Torch", he added. "I sure hope so", Albert sighed. "Adam has been having some bad dreams about them, you know". "Well it looks like this project will be over by the time school is over for the summer", Simon said. "In a few more weeks you and your son can enjoy some vacation together. I'm going to arrange a secure get away for the two of you". By the end of the week Albert had nearly completed the prototype. Bob had finished flashing the firmware onto the processors and all that remained was the final neural download from a processed brain scan. A 'donor' had yet to be assigned, but it was assumed that the General would have someone in mind. All of the robot's artificial skin covering was in place except for some final work on the hands and face. The date for the demonstration had not yet been picked, but Albert expected that could happen in at most two weeks time.

On the other side of the Hudson river from NYC, in a dingy Hoboken apartment house the two terrorist spies who had so far managed to be kept at bay by the SS were not giving up. They knew from their mole contact in the pentagon that their time was limited and that they had to act soon, but they also knew they couldn't afford any mistakes. "We have to act soon", Polecat said. "Dr. Tenamann must be about finished with the prototype since the General's staff is preparing for a demonstration within a week or two". "Trying to grab the good Dr. is futile", Propane Torch explained. "he's too well guarded during his short commute from his house to the museum complex and at home. Both he and his son travel together on that route when the weather isn't threatening, and the boy is tailed by bodyguards while he rides his bicycle to school. Snatching him from the school is too risky as well." "If it's raining the boy will take the bus, we could hijack the school bus before it gets to his house", Polecat offered. "That idea has some merit, but we can't wait for a rainy day, and the weather forecast for at least a week isn't promising", the Torch replied. "No, the best plan is to grab his son when he leaves school. That will involve separating him from his body guards. I think I have an idea on how to do that", Propane Torch offered. Torch was toying with a short piece of rope attached to wooden disks at each end. "Does that Garrote cord you're holding have anything to do with your plan?", croaked Polecat. "I like quiet ways of putting my adversaries out of business", he laughed. "I think this toy will come in handy". "We'll need to strike within a few days I think", Polecat decided. "I'll get us some extra help", Torch suggested. "My cousin in a good wheel man, he'll drive while you grab the kid and I take care of the Feds".

A week from the coming Friday would be Adam's final day of school for the year. Dr. Tenamann put the final touches on the prototype android soldier and they decided it would be ready for inspection by General Hayes and his staff on Monday. For the rest of the week, Albert and Simon went through the checklist for the demo. Robert loaded the final software onto the Robots on board computers and ran diagnostics on the android. Everything appeared to be ready. Over in N.J. Polecat and Torch had decided that the coming Friday would be the day they would kidnap Adam and exchange him for the prototype robot soldier or the plans to it. Adam was looking forward to his last week in school. That coming Friday afternoon there was to be a party in his class in celebration of the end of the school year, and an awards ceremony for those with good grades.

The Chase

Friday had been a good day at school for Adam. He had been awarded a certificate for an “A” average in his schoolwork. He had enjoyed a party with his schoolmates, and for once no one teased him for being so short, perhaps because the whole class was in good spirits over the end of the school year. The final bell rang and Adam ran to retrieve his bicycle from where it locked up in the hall. He strapped on his helmet and headed out the door. The street was crowded with students who had left ahead of him, some waiting to board buses. Adam walked his bicycle to the corner preparing to start off down Second Avenue toward 79th street. A stranger wearing a Fedora and dark glasses grabbed his arm and sneered “You’re coming with me kid, it’s an emergency”. Albert looked up into Polecat’s face and tried to pull free, but the man’s grip was too strong. An SS agent came up behind Polecat and stuck the blue metal barrel of a Glock semiautomatic pistol in his ear. “Let go of the kid and put your hands over your head”, he ordered, then added, “Slowly!”. Polecat let go of Adam with one hand and drew his other hand from his jacket pocket. The SS agent reached into that pocket and withdrew a small Saturday night special. He put the firearm in his own pocket and then proceeded to handcuff Polecat’s arms behind his head. “Take off Kid”, he barked. “Adam hit the street peddling his bicycle as hard as he could. While the “G” man was occupied cuffing Polecat the Torch had come out from where he had been hiding. He quickly pulled his Garrote cord around the agent’s neck and pulled it tight. The agent fought back reaching behind him trying to gouge out Torch’s eyes, but the Garrote was pulled tighter and he felt himself blacking out from the pain and strangulation. The secret serviceman fell to the ground just as the dirty van pulled up. Torch fished the agent’s keyring from his pocket and the two men jumped into the van as it pulled away from the curb. He identified the key to the handcuffs and released his partner. “What about the other Fed”, Polecat asked. “He was number one for my Garrote”, Torch smirked.

Adam started to head in the direction of the museum through the Central Park 79th street transverse, but out of the corner of his eye he saw the dirty old van in hot pursuit. Adam changed his route and headed north on the east drive thinking he’d try and lose them in the park. He broke east riding through the grass around Turtle Pond and then north. He went through the great lawns over the softball fields and finally reached the 86th street transverse. He then headed west out of the park toward Broadway. On Manhattan’s upper west side Broadway is a divided two-way street with the tracks of the Seventh Avenue subway running down the middle. He hoped he had lost his tail but, as he left the park the van suddenly reappeared behind him. Adam quickly made a decision and turned north on Broadway thinking he could lose his tail in Harlem. The van was still tailing him, but Adam had increased his distance. Adam’s bicycle crossed 110th Street as he entered the Manhattan Valley. Here the ground level drops off to the lowest point on the island. Ahead in the distance he could see the street dipping sharply downhill. Traffic was not too heavy and Adam shifted gears and peddled hard to pick up speed. In the distance at 122nd Street the Seventh Avenue - Broadway local left the subway tunnel and ran elevated to reach the 125th street station high above the street. The tracks never run uphill though, from the subway deep underground at 110th street all the way to 125th they are actually at zero grade with the ground dropping out beneath them, emerging from the tunnel onto the El structure so the trains don’t have to fight the grade. Broadway dove downhill with a slope like San Francisco’s Lombard Street. Adam’s bicycle picked up speed, with a boost from gravity he reached over 60 mph. The van was still behind him, accelerating, but it wasn’t as nimble as Adam. The sound of horns wailed in the van’s path as it’s driver cut off slower traffic to keep up with Adam. Adam raced past 122nd Street as the El structure rose beside his path. A southbound local rattled on the tracks above his head as it reentered the tunnel. As he crossed La Salle Street, Adam saw a bus ahead on Tiemann Place approaching Broadway. He arrived at the intersection ahead of the bus and cut sharply

in front of it. By this time the van had narrowed the gap. Its driver tried to follow Adam and at the last moment realized he wouldn't make it and steered to veer around the back of the bus. The turn was too tight and he was going too fast. The van T-boned the middle of the bus and came to a stop. Shaken, but not badly injured the Van's occupants continued their pursuit on foot.

Adam barely regained control of his bicycle after swerving around the bus. He then made the mistake of looking behind him to see his adversaries still trailing him. Too late, he looked ahead of him. His front tire hit a pothole jolting the path of his bicycle. The bicycle's rear tire bounced sharply upward. Adam was thrown off over the handle bars in the direction of a parked glazier's truck loaded with several large sheets of picture window glass. Tumbling head over heels Adam struck the broadside of the truck spread-eagle. The glass panels exploded into a cloud of shards. The impact rocked the truck on its suspension and Adam rebounded from it and ricocheted off an upright beam that supported the El. The force of the impact cracked his helmet in half. He finally came to a stop face down in the street. Seeing Adam's plight the terrorists ran away toward the subway station ahead at 125th Street. In the street there was a sea of broken glass with Adam in the middle of it lying unconscious in a slowly growing pool of his own blood. Miles away a red screen flashed on a computer terminal. The nano tracker buried under the skin of Adam's left arm had reacted to the high G-force of the accident. It found a nearby open wifi connection and hacked its way onto the internet to send a message to Robert Levinson's computer. The nano tracker reported Adam's current location, and his vital signs. Issac received the message and searched for the nearest ambulance to Adam's location. The computer daemon then sent orders to the vehicle's crew to pick Adam up and transport him to the emergency ward at Bellevue relaying them his vital signs and blood type. Issac then send a message to the hospital emergency ward and Dr. Burakku's Blackberry to expect his arrival. Finally, the daemon hacked into the city's traffic computer system to control all the signals in the ambulance's path so it would have a clear route. All the traffic signals on the entrance ramps to the southbound FDR drive behind and ahead of 125th street down to 23rd street were blocked red to reduce traffic in the ambulance's path. Help was on the way.

Dr. Tenamann and Robert Levinson spent most of Friday finalizing and testing the android soldier's software. They put the polishing touches on the demonstration scripts and then backed up everything onto the server farm. Albert spent the rest of the afternoon looking at the metallurgical data for the 'T.A.T.' super alloy he would soon have access to. "Fascinating stuff", he told Bob. "Besides the rigid structural form of the material, the alloy can also exist as an elastic material that when rolled thin enough can stretch and bend much like human skin. In this form it is impervious to being torn or punctured, and is only slightly electrically conductive. It's too bad I didn't have this stuff to make our prototype body out of. With enough horsepower it would have been able to punch its way into a bank vault!" "Well, there will probably be a follow up model", Simon said walking over. Albert looked at his watch and saw that it was almost four o'clock. "I wonder what's keeping Adam", he said. "He's usually here by now, school let out almost an hour ago". Suddenly Issac's image appeared on the computer terminal. "Hey boss, you here?", his electronic voice rang out through the computers speakers. "Found us!", Robert said looking into the web-cam. "I've just dispatched an ambulance to take Adam to the emergency ward at Bellevue", he informed. "His implanted nano tracker's medical sensors started screaming at me indicating that he had just been in a serious accident. He should be in triage just about now according to the GPS in the ambulance". "WHAT!", Simon and Albert replied in chorus. "We'll take my Corvette", Simon ordered. "Issac, track Simon's car via his On-Star and hack the traffic signals along the route", Bob barked. "I'll be in my lab when if you need me", he added.

The ambulance had crossed 125th street and entered the FDR drive southbound. Thanks to Issac's

influence on the traffic signals it made good time, arriving at 23rd Street in minutes. It drove past the VA hospital toward Bellevue across the street. A team of doctors lead by Dr. Burakku was already waiting. Adam was wheeled in on a gurney bed, with I.V. bags already attached to replace lost blood plasma. Simon's red sports car managed 120 mph along parts of the FDR drive. Not only did Issac clear the traffic lights, he managed to arrange for a police escort. Adam was already in an O.R. by the time Simon had double parked the 'vette throwing the keys at an intern to properly park it. They quickly found an admitting nurse who could locate where Adam had been taken, Albert insisted on seeing his son, but the nurse told him it was quite impossible as he was already in surgery. Simon pulled the nurse aside and whispered in her ear. She then walked up to Albert and said "If you'd like I can get you both into the O.R.'s balcony overlook". "Thank you", Albert said meekly. Simon declined the offer and found a waiting area while Albert was led into the observation balcony above the operating room floor.

Albert stood at the window of the balcony overlooking the operating table. Dr. Burakku was working on Adam assisted only by a few nurses who supplied him with fresh instruments, suctioned away excess blood, or mopped the sweat from his forehead. One other surgeon sat a few feet from Albert watching the operation. Dr. Tenamann had a medical degree, though his knowledge had mostly been used to develop prostheses devices and medical electronics. He had scrubbed in to observe operations first hand during his medical education, and had even assisted in a few simple procedures. He had seen many operations performed by some top notch surgeons, but never had he seen the likes of this one. Dr. Burakku's skill and speed with the scalpel was unprecedented. By the time Albert had arrived he had opened the boys chest and had repaired a small tear in his aorta caused by an impaled shard of glass. Many of Adam's vital organs had been damaged by the impact. Dr. Burakku had to remove his spleen and part of his liver, with proper diet one can live without the former and the latter organ is one of the few in the human body that can regenerate itself. One kidney was badly damaged and had to be removed, the other was repairable. The boy could survive with just one good one. Both of his lungs were partly collapsed. Dr. Burakku drained them of fluid and was able to re inflate them. He had several fractured ribs which had been set together by stainless steel surgical wire. Adam had severe trauma to his skull and a drainage tube had been inserted to relieve pressure on his brain. Finally the doctor turned to Adams limbs. Both legs had compound fractures and one arm had suffered a simple one. He reached for the intercom microphone and looking up at the balcony asked, "Dr. Grey, would you mind scrubbing in to assist me by closing the boy's chest cavity while I repair his fractures?". The man sitting next to Albert walked up to the intercom and pressed the talk button, "I'll be right down Dr. Burakku", he replied. He left through the back door and reappeared downstairs in a few minutes. Dr. Grey bound the boys ribcage back together with surgical wire and started to suture his chest closed while Dr. Burakku set the boys fractured legs and sutured the wounds. He then applied temporary casts to both legs and the arm. Dr. Grey had not quite finished with his sutures by the time Dr. Burakku was finished. Adam was wheeled out of the O.R. and was moved to recovery in the laboratory section where Albert's brain analyzer machine was located. Dr. Burakku put the boy's bed next to the machine and hooked him up to the usual hospital monitoring equipment. Albert and Simon followed. "Why did you bring him here?" Albert questioned. "Your son is in very critical condition. I've already had to insert a drainage tube at the base of his skull to relive pressure on his brain. I want to carefully monitor his condition just in case I need to perform emergency brain surgery, he's still in danger of slipping into a coma. Your equipment is actually more suited to the task than anything the hospital has", he explained. "Also, I think it would be a very good idea to get a capture of Adam's brain image, just in case", he added. "The test subjects we worked on last week fell asleep during the procedure. The machine actually got a higher definition capture of a sleeping subject. While your son is under sedation would be a good time to try this", he added. Simon nodded. "I've already got Bob standing by at the other end.", "I guess so", Albert sighed and he started to initialize his equipment for a run. He

carefully placed the superconducting pickup coil pillow under Adams head and applied the EEG electrode stickers to the boy's shaved scalp. They moved the bed over to the machine so Adam's head was inside the magnetic pickup chamber. Albert used the mouse to click the start icon on the computer screen to initiate the process.

Coma

Adam had been under readout of Albert's brain scanner for about an hour and a half. His vital signs had remained strong enough that Dr. Burakku saw no reasons to stop the machine for any further treatment, but his eyes never left the monitors. Adam's sedation was wearing off and he briefly opened his eyes to notice his surroundings. He recognized the blurry image of his father and smiled painfully before drifting back into unconsciousness. Three hours later, the progress bars on the computer's GUI had reached over 99%. "It's all here", Bob said, his voice coming over the computer link from his laboratory on the upper east side. Albert turned off the capture as it had completed. He started to disconnect his son from the machine but Dr. Burakku waved his hand. "Leave him connected and the EEG monitoring readout on", he said. "I want to keep an eye on him for at least a few days. Can you program the system to issue an alarm if the readings drop to a critical level?" he asked. "I can do that", Albert said. He navigated through the setup menus and configured the alarm settings. "I'll leave Isaac interfaced to the machine so he can grab us through our Blackberrys if Adam's condition worsens", Bob suggested.

"Come with me Albert", Simon gestured. "Let's get you something to eat". "I'm not that hungry", Albert insisted. "Come on, it's after midnight and we've both been here since around 4:30. Your son has a long road ahead of him and we'll be notified if there are any changes in his condition, hopefully for the better", Simon said. They found the hospital cafeteria which though short staffed at this hour had some cold sandwiches, hot soup and coffee available full time. Simon settled on a chicken salad on rye with a cup of black coffee. He handed Albert a turkey club on whole wheat, Albert filled a mug with hot water and plopped a green tea tea-bag into it. Simon paid for both using a pocket full of small change, mostly dimes and nickels. Albert didn't try and guess why his associate kept his pockets full of coins all the time. They sat and ate silently. Finally when he had finished his sandwich Simon spoke, "I've already texted the General to tell him that the demonstration has been canceled", he said. "You're not going to be in any state of mind to be of any use, and I'm not going to try to take your place. Bob will probably want to keep debugging his already perfect software anyway. His kind of geek isn't happy till everything is 102% perfect anyway". "I'm going back to sit with Adam", Albert said. "No you're not", Simon replied. "Bob had Isaac check you into a hotel room a few block from here. It's not the Waldorf but it's clean and safe. You can be back here in the morning, Keep your phone on by your bedside, Isaac will wake you if anything changes that requires you back sooner".

Albert woke at 7:30 when the sun rose high enough to beam into his hotel window. He showered and shaved quickly and got dressed. Someone had gone to his house to raid the closet and he had found a clean set of clothes on his bed upon entering the hotel room early that morning. "Bless Bob and Amy" he thought. Passing through the hotel lobby he noticed an urn full of fresh brewed coffee and a small pile of thick paper cups. He poured himself a cup to go and walked out on to Third Avenue. It was just two avenue blocks to the Hospital from his small hotel and it took him less than ten minutes to walk the distance. He passed a waiting area as he entered the hospital heading for the laboratory area and served himself a fresh cup of black coffee in a clean paper cup. When he reached Adam's bedside he found Dr. Burakku half asleep on a cot a few feet from his son. The Doctor woke when Albert entered. "Have you been here all night?", Albert asked. "Yes, I didn't want to trust any of the nurses with keeping watch. I've been catnapping on and off all night." he added. Albert handed him the yet untouched cup of java, "Here, you can use this more than I can". "Adam's EEG readings have been slowly decreasing", Dr Burakku explained. "It's not critical yet, and they do bounce up and down, but the trend has been in a downward direction. If I don't start to see an improvement soon I may need to open his skull and do an exploratory procedure to find the cause. I'm going to schedule a CAT scan and an MRI for later today in any case", he added. "Has he regained consciousness at any time?" Dr.

Tenamann inquired? "Only once for a few seconds. He didn't speak, just briefly moaned and drifted away again", Burakku said. Several hours later Adam was disconnected from the instruments and wheeled over to another part of the hospital. He spent the next hour in both the CAT scan and MRI machines and was then returned to his room. Albert had followed him every step of the way. Dr. Burakku read the results himself. "I don't see anything obvious", he analyzed. "The CAT scan does suggest the possibility of a hematoma just under the top of his skull", he added. "If his vitals otherwise remain strong, I think I should operate soon to fix that." "I trust your judgment", Albert said.

Late that afternoon Albert again found himself in the O.R. balcony. Dr. Burakku had invited him to scrub in to watch from inside the O.R. but Albert declined. "It's not that I'm squeamish because it's my son", he explained, "I just don't want to destroy your concentration". "That wouldn't happen", Dr. Burakku said, "but I fully understand." Once again Albert marveled at the precession at which the doctor operated. He carefully opened the top of Adam's skull and probed with his instruments. He did find a small bleed and sutured a few small blood vessels. Adam was returned to his room with a fresh bandage wrapped around his head. "I hope I've found the problem", he told Albert. "There still could be some other damage deeper inside his brain, but I can't do much without the risk of further damage that could leave him much worse off." "So once again we wait", Albert sighed. Adam's condition seemed to improve for awhile. The EEG readings spiked upward and he again woke to a twilight condition where he seemed to recognize Albert and Simon. "Dad...", he tried to speak but only mouthed the words before drifting back to sleep again. "I'm going to put him on a feeding tube", Dr. Burakku decided. "It doesn't seem likely that your son is going to regain full consciousness any time soon and his IV only replaces lost fluids. I need to keep his strength up if he is to recover." "Again, I will accept your judgment on that", Albert agreed.

Albert returned to his hotel room for a few hours of sleep. Adam's condition seemed grim, but stable. He angrily banged his fist on the nightstand. Adam wouldn't be in this condition if it hadn't been for his project. He decided he knew what he had to do. He'd go back to the lab and destroy the prototype and delete all the data on his project from the computer system. Simon Green had gone back to his office. There were other projects that he had been neglecting other than Albert's. General Hayes hadn't been happy about the situation, but he knew there was nothing he could do about it, and he also knew that it was at least partly his fault. "General 'Disaster' will probably shoot off a couple of memos redoubling his efforts to find the leak in his department", Simon thought to himself. Issac's image walked onto Simon's computer screen. "I've just intercepted a system wide file delete request from Albert's computer.", the daemon told him. "I've let Albert think his actions have happened, but the backups on the mainframe are quite intact", it added. "Thanks Issac", Simon replied wondering to himself if he was going insane talking to a computer daemon like it was a real person. Albert wasn't in his office so Simon ran downstairs to the lower level laboratory where the prototype was located. Albert had already started attacking it with a screwdriver. "What do you think you are doing?", Simon asked. "This is what put Adam in the hospital!", Dr. Tenamann sobbed. "I'm going to take it apart and melt down the pieces." "You know I can't allow that", Simon said. "Go back to the hospital and sit by your son. You'll feel better about this project when he recovers". "That doesn't seem likely", Albert cried. "He's drifted back closer to a coma, his EEG readings are lower than ever. I'm losing him!" Simon was unaware of the latest development. He picked up the phone and ordered two security guards to enter the laboratory. "Albert, these gentlemen will escort you back to your office area. They will keep you under guard until you settle down and then you may either go home or back to Bellevue. I'm going to cancel your access to this facility until I think you're ready to return" he explained.

Albert sat in his office sobbing. He stared at his Japan museum in the back. Robert Levinson walked

in and motioned for the guards to wait outside the office so they could talk in private. Simon agreed and walked out with the guards leaving Albert and Bob together. Bob brought up Issac on Albert's computer. "Isaac, please activate the bug jamming protocol in this office", he asked. "Simon has already blocked that request", the daemon replied. "I can't obey you I'm sorry". "Issac", Bob spoke again, "Security protocol override, code NCC1701D Memory Alpha". "OK Bob, override accepted!", Issac replied. "I always leave myself a back door!", Bob bragged to himself. He walked over to Albert and sat next to the sobbing man. "Albert", Robert whispered. "I have a better idea. I've got the high end quantum processor all assembled and ready to go. Adam's brain dump has been processed and is perfect! Give me the word and I'll put him in the processor. We can swap them out and put him in the prototype." Albert's eyes lite up for a minute then faded. "No, that won't work. You can't put a boy into the body of a hulk. He wouldn't feel right. Besides, that prototype is primitive". Bob scratched his chin. "Well maybe you could do better with the new material, the foundry is now up and running. I'd have to convince Simon that your sanity is back to normal though so we can get you in here." "Either that, or you could hack my access rights back", Albert smiled. "Yeah there is that too", Bob laughed. Albert walked to the back of the office and stared at the poster artwork signed by the god of manga. He started to laugh maniacally as he moved his fingers over the cartoon blueprint. Bob looked at him and the poster and the irony dawned on him. "Dr. Tenma, I presume?", he asked. Albert turned and looked at Bob, "Why not? I now actually have all the required ingredients." he giggled. "You realize that you haven't lost your son yet. Dr. Burakku is still on the case. I believe Adam will pull through", Bob reassured him. "Well Adam said he wanted a robot playmate just like himself. He even suggested how I should build it. When he pulls through he'll have a twin brother", Albert replied. "Yeah, the project will act as therapy for you as well", Bob added.

"Are you sure you talked some sense into him?", Simon worried. "Yes we see eye to eye on this. Albert wants to start on the second phase right now. I dangled the new toys in his face and he made a quick recovery. You know it takes a geek to talk sense into one", Bob explained. "OK, I'll return Albert to active status around here", Simon said, "But if he snaps you're both in trouble!".

Albert's fingers made the mouse fly. He worked quickly putting together pages of blueprints while cross referencing some old plans he pulled up from the old skunk-works files he hidden away in the archives from his days at Area 51. Bob instructed Issac to hid Albert's work from Simon's access. He wasn't to sure what Simon would say if he looked too closely at the plans for the new four foot high prototype. Bob pulled up the plans on his own computer out of curiosity and was shocked. "What the hell is Albert thinking!", he thought. "OK the micro-tele-scopic night vision cameras and the super high sensitivity wide band microphones aren't too crazy, but THIS!", Running back to Albert's office he pulled out the first volume of the Black Horse reprints of the old mangas. "My god!", he slapped his forehead, "Now I remember!" Bob ran into the lower laboratory to find Albert sorting though an assemblage of old parts. He recognized the He3 75 megawatt fusion generator and the ion-plasma jet engines but another object seemed unknown to him. "What the hell is this!", he asked (but had already seen it on the plans). "You remember what those jet engines were for don't you?", Albert reminded him. "Yeah that mini A-10 Warthog drone, right?", Bob guessed. "Yes, and what else was supposed to be in there?", Albert teased him. "You tell me", Bob demanded. "That Robert, is a pair of micro-caliber sub-miniature Gatling guns that shoot depleted uranium armor piercing shells. Next to those you probably recognize the sub-miniature two megawatt CO2 laser assembly developed for the next generation fighter", he added. "I noticed all that", Bob huffed. "The laser is to be mounted in the android's right arm and shot through a window in the palm of it's hand. Those 'cannons' are to be found one on either side of it's hips. The plasma jets are, of course, located in the lower portions of each leg Aren't we taking this a bit too literally?", he questioned. "Don't worry Bob", Albert explained. "Adam's autonomic firmware will have the various weapons systems disabled. He won't be aware of their existence unless he finds himself under extreme duress. Sort of an electronic adrenaline reaction.

I just thought this was a good opportunity to test out some advanced systems for the military.” “More work for me”, Bob gave in. “I’ll fine tune the autonomic processor to handle everything”.

Child of Science

A week had passed. Albert alternated between the laboratory and the hospital. Adam's condition hadn't changed very much. He was in a semi-comatose state. His EEG readings had dropped to a very low reading. His eyes had only a marginal reaction to light slowly dilating in reaction to strong light. Dr. Burakku performed other tests including several CAT scans at different angles. He performed one more exploratory surgery and had found and corrected some more minor bleeding, but nothing changed. Still he felt sure that the boy's brain was trying to heal itself from within and he refused to terminate the life supportive efforts.

Albert continued working on his computer cad station turning out more detailed design documents for his mark II android designs in the form of a nine year old male child resembling his son. Weeks passed as he alternated his time between sitting besides Adam's hospital bed and working in the laboratory. As the time passed he spend more time in the lab then at the hospital. His son's condition remained stable, but bleak. Finally the day came when the foundry had delivered all the parts Albert had designed. Now came the task of assembly. There were miles of wiring, most of which was in the from of cable assemblies produced by the automated plant from Albert's electronic blueprints. The android's hands and face were carefully sculpted from the flexible super material. They looked almost human, down to the fingernails on the hands and the eyebrows on the face. Yet a very close examination would give away the fact that it was artificial by the imperfections in the pores and the hair follicles. The face itself was a bit cartoon like because of the size of the robot's eyes, they had to be a bit larger than life to fit the television cameras and lenses that would give Adam (or should that be 'Atom' Dr. Tenamann had started to wonder) vision that would rival Superman's. Finally the hairline and style that Albert had designed for his creation was just a bit 'plastic' like, even though composed of individual hair-like fibers. It reflected his son's pleasure in styling his own hair like his favorite manga character. They took extra security precautions while installing the top secret bits. Albert was rightly worried about using the Area 51 components and Bob had Issac monitor for any security screening of the laboratory from Simon's office. "What worries me", Albert said, "Is what is going to happen the first time we start up that He3 reactor. From what I remember from my Area 51 days, it took a hell of a lot of power to kick start, though once going it idled at mere watts. We might dim all the lights in Manhattan when we bring 'Atom' to life." Bob noticed that Albert had started to refer to his creation by the name of the Manga character rather than by his son's name. He hoped that meant that Albert hadn't written Adam off as dead in his mind. "We'll cross that bridge when we come to it, I guess", he suggested.

Across the Hudson Torch and Polecat had been laying low. It took them a while to find out about Albert Tenamann's son. Despite Simon's precautions the pentagon mole had finally found where Adam had been taken for treatment. "The kid isn't dead, he's recuperating over at Bellevue", Torch said. "So do we snatch him from the hospital?", Polecat asked. "I'm not sure that would be a good idea, yet", he thought. "I'm not sure about his condition, if he's very badly injured we'd be signing his death warrant if we snatched him, and we need him alive. "However," he added, "It might be easier now to put the grab on his old man now. I've got some contacts at Bellevue and I could disguise myself as a doctor." "Hmmm", Polecat rubbed his chin. "That idea has some merit."

After a few weeks of double checking everything, Albert was satisfied with his creation. Little remained to do but to activate the He3 power plant and bring his creation to life. He felt a bit guilty about the decreasing frequency of his visits to the hospital, but he had contacts there that would inform him the moment Adam's condition changed. Adam's vital signs other than brain activity continued to improve. Dr. Burakku was certain that the boy's body was working hard to repair itself and that his brain functions would return eventually. He just couldn't tell when. Albert and Bob decided they'd try to kick start the android that weekend. Bob had Issac hack into Con-Ed's computer system so he could

re-route power as needed to the laboratory by creating rotating blackouts though out the metropolitan area. They'd do it in the wee hours of the morning to keep damage at a minimal level. At two-thirty on a Sunday morning they started. Albert lifted Atom's right hand and touched his index finger to his chest and pressed. A blue dot appeared under the finger and spread forming a rectangle. Albert then pushed in and a panel opened in the android's torso. He opened it, reveling the robot's chest cavity. Here he could access various adjustments and electrical connections. He picked up the cylinder of highly compressed He3 fuel from the work bench and screwed it into the reactor inside the robot. Bob carried two heavy electrical cables to the operating table that Atom lay on and attached them to terminals inside the android's chest cavity. "Now stand back", Albert lectured. "Here comes some serious shit!" He walked back to the laboratory's main computer and accessed Issac. "OK Issac, lets rock and roll!". Power began to flow into the reactor inside the robot. A purple glow filled the laboratory as Issac pumped up the power level. Outside the city darkened. First streetlights faded out. Subway trains stopped under the river. Radio and TV stations went off the air. At all the city hospitals power faded except in the most vital areas as Issac carefully chose where he pulled the switches. The purple glow in Atom's chest was now a blinding glare rivaling the sun. A sixty hertz hum filled the laboratory. "We're at eighty percent power", Albert yelled over the noise. Issac continued to steal energy from the surrounding grid. LIRR trains stopped moving.. Laguardia and Kennedy airports went dark. The New York and Pennsylvania branches of Amtrak stopped in their tracks. "Ninty five percent", Albert yelled. The roar increased and it seemed a nuclear explosion was a real possibility. Over in New Jersey power transformers arched over. The turbines at Niagara Falls screamed in agony. The Indian Point nuclear plant scrambled. A Staten Island ferry-boat sank on the Hudson. "One hundred percent power!" Albert cried. There was a final burst of intense green light from inside Atom and everything quickly went dark and silent. All around the northeast power slowly returned to normal.

On the operating table the robot lay quiet. "The reactor is operational", Albert gasped in awe. "It's idling at a few watts of output now. Amazing!". Albert walked slowly and carefully toward the table. He reached inside the chest cavity and removed the heavy cables, and then closed the panel which sealed itself with a blue glow that faded away. Albert looked on Adam/Atom's face. The boy robot slowly opened it's eyes and lifted it's head. Adam/Atom tried to focus his vision but the world was a blur. He tried to hear what was going on around him but all he heard was a soft sixty hertz note. He drummed his fingers softly on the table and could feel its rough cloth covering. He touched thighs with his finger tips and could feel both his hand and his leg. Adam/Atom raised his hands and rubbed his eyes feeling the skin on his face. It felt normal, but somehow different. His vision slowly cleared and he saw a double image of his fathers face. He blinked a few times and the images converged into one. The hum in his ears was replaced by his fathers voice "Adam?", he could hear. Adam/Atom looked up again and his eyes focused on Dr. Tenamann's face. "Dad?" he slowly questioned. "Adam ..", Albert sobbed, tears filling his eyes. "Where am I?", Adam/Atom asked. "Long story", Albert answered. "Long story".

"What is the last think you remember, son?", Albert asked. "I remember I was being chased by those two terrorists in a dirty old van", Adam/Atom said. "I swerved around a bus and the front tire of my bicycle fell into a deep hole in the street. The last think I remember was flying through the air and this glass truck in front of me. Then everything went dark. I also vaguely remember waking up for a second and seeing your face. I was inside some strange piece of equipment, I think". The robot sat up and dangled his legs over the side of the table. He held his hands up to his face and examined his fingers carefully. He looked down at his body, and starred at his feet. While Albert had put great detail into the hands, the robot's legs and especially his feet were less detailed and didn't resemble human parts as much. He had intended all along that the robot would have some kind of footwear on. Though

shaped like a human foot Adam/Atom's feet didn't have distinctly separate toes they were sorta webbed with just the general outline of a foot. This was a necessary simplification to mimic the way humans perambulate. Adam/Atom also examined his 'private' area. His crotch was covered with a metallic pair of black short pants under which was, well nothing. Adam/Atom was neutered, sexless. Albert's face turned white. He hadn't thought of the natural reaction of the boy's self examination. Would Adam's brain go into a panic state? What should he do?

But Albert hadn't counted on the extreme processing power of the quantum CPU magnifying the boy's IQ and mental reasoning powers. Like a Vulcan scientist Adam/Atom logically put the available facts together and came up with his own answers. "You actually did it, didn't you Dad?", he said slowly. "You scanned my brain and made a copy. You put me into this robotic body. Wow!" But the facts led him further. "I guess the original me is dead, aren't I?", he almost sobbed looking up into Albert's eyes. "No, not at all", Albert reassured his creation. "You are still in intensive care, but in a coma like state. We are still hoping for your complete recovery." "Then I am my own brother", Adam/Atom said as a smile grew on his face, only to be replaced by a look of concentration. "Now this is awkward", he thought. "You can't really call me Adam, since I'm not and he is". Albert looked at him. "What should I call you son?", he asked. "Why not Atom?", the android asked. "You've already been doing so anyway, and the names sound similar. Kinda like twin names you know", he smiled. Robert handed Albert a shopping bag. "Here, I brought some of Adam's clothes from your house. They've been here for a few weeks, just in case". Albert handed them to Atom and shrugged. Atom tried on Adam's short trousers and T shirt, then the long red socks and high top sneakers. Everything fit perfectly except for the sneakers since Atom's feet were not shaped exactly like a nine year old boy's. Tears welled up in Albert's eyes and he hugged Atom. He picked up something from the workbench. "Here Atom, put these on", he said handing him a pair of red boots that were made by the automated factory along with all the other parts. The footwear was made from the elastic form of the alloy and was molded to fit the robot's feet. The soles of the boots had a panel flap that could open up to allow the operation of the jet engines in Atom's legs, but the robot was not aware of this yet. Atom removed the socks and pulled the boots over his feet and smiled. "These are perfect!", he beamed looking down on himself. "With these I look just like Astro boy."

"What the hell have you geeks been up to!", Simon stormed into the laboratory. "The tristate area was just turned inside-out by the craziest blackout in years and can you guess where there was a power spike of astronomical proportions? Right HERE!" He rubbed his eyes and starred in disbelief like he had just seen a ghost. "What's Adam doing here, he's still in a coma?" Simon walked over to the operating table. He grabbed Atom's arm and then he felt the boys torso and head. It didn't take Simon long to figure things out, though he still had a hard time believing it. "THIS is the mark two prototype?", he gasped. Simon's face was red in anger for a few more moments as it suddenly all came together for him. "The He3 power plant! That's why you blacked out a good part of three states!", he yelled. "You needed to power up the darn thing!" he said pointing at Atom. "What the hell did you need with that much power in a four foot boy android! You guys have gone way off the deep end here!" he stammered. "Are you finished yet?" Robert intervened trying to deflect Simon's rage. Going for broke he led Simon aside toward a computer console on the far side of the lab. "Keep your mouth shut and look at these schematics", he said in a low voice. "I don't want the boy to know this". Robert brought up the details of Atom's design one page at a time. Simon's jaw dropped almost hitting the floor. "He's a one man army!", he gasped in a whisper. "Albert went a little nuts putting everything but the kitchen sink into 'Atom'", Bob agreed. "The boy is a walking test bed of technology, but he doesn't know what he has in him. We rigged up his control firmware so he can only tap into his abilities under duress." "A very good idea!", Simon stressed. . Turning to face Albert he said "I hope General Hayes doesn't find out about this, though I can't figure how he won't giving the fact that the his foundry produced all these parts which he thought were going into a mark II soldier-bot. How are we

going to hide this thing!”. “That shouldn't be too hard, being that it looks a lot like Adam”, Albert said. “Well maybe.”, Simon hoped.

Atom slowly tried to get off the table and stood on his own feet. His first steps were awkward and unstable and he fell forward into Albert's arms. “Easy does it son”, Albert told him. “You have to get used to your body”. Albert picked Atom up and held him against his chest and Atom grabbed him around his shoulders. “I'm going to take Atom home with me” Albert said looking back at Simon and Robert. “What?!”, Simon started to object but Bob stood in his way. “Leave them alone Simon”, he said to Simon's face. “They need each other right now”. “I guess you really missed me”, Atom said softly to Albert. “But I'm not really your son, even though I want to be”. “This is very confusing for both of us”, Albert replied still carrying the robot over his shoulder. He carried his creation toward the elevator with Simon and Bob following. They reached the ground level of the complex and Atom said “It might be best if you let me try to walk the rest of the way dad”. “Yes, I think so”, Albert agreed. He helped Atom to his feet and held his hand while the boy took his first few steps. Atom gradually felt more stable on his feet and was able to walk on his own. Simon and Bob followed a few steps behind as Albert and Atom walked the few blocks to Dr. Tenamann's residence. The four of them entered the house, Simon and Bob remained downstairs while Albert and Atom went upstairs to Adam's room. Because he had Adam's memories Atom was familiar with his surroundings. He also felt like he shouldn't belong here as there was another Adam who did. Albert also felt strange bringing the robot home, it was like he was replacing his son who wasn't dead yet. Was he giving up on Adam? It was Atom who voiced the facts first, “Father”, Atom started. “I don't belong here. I know you created me to fill an emptiness in you, and I want to fill it. I feel like Adam because I have his memories. But I also know I'm not Adam. I guess I have to figure out just who and what I really am.”. Albert sighed. “You're right Atom”. He looked around the room. “I couldn't come home to an empty house with Adam lying in the hospital. I needed something to fill the void. Creating you helped keep me sane. If Adam doesn't recover you will be all that's left of him”. Albert starting sobbing again. “I hope Adam does recover”, Atom whispered in Albert's ear. Albert lay down on his son's bed and stared at the ceiling. Atom sat down next to him took Albert's hand in his. Albert sighed and closed his eyes to dream. Tears trickled down his cheeks. Downstairs Simon and Bob were sitting in the kitchen. “Think we should go up and make sure things are OK?” Simon questioned. “Give them some time”, Bob answered switching on the television. “This might take awhile, relax”.

An hour passed. Albert's blackberry started buzzing in his pocket. He awoke at once and sat up in the bed. There was a new text message waiting for him from Dr. Burakku at the hospital. Albert again started crying loudly. Hearing the sobs of their friend from downstairs Bob and Simon entered the room to find Albert again in tears. “Bad news Albert?”, Simon inquired fearfully. “No, good!, Albert sobbed. “Adam's EEG readings are off the chart! He's coming out of it!” Albert patted Atom on the shoulder. “Would you like to meet your brother, Atom?”. “Yes father, I would”, Atom replied handing his father a box of Kleenex he found on the nightstand. “Brother?” Simon momentarily had a puzzled look on his face and then recovered. “Oh why the hell not!. I'll call us a cab”. He opened his phone and sent a text to the government car service that the think tank used for secure transportation. They made the trip to Bellevue via the streets. Simon sat in front with the driver and Atom between his 'father' and Robert in the back seat.

Over in New Jersey Polecat and Torch had studied their options and hatched a crude plan. Torch called in some markers from people that owed him favors and had a small army staking out Albert's home and around Bellview. He'd be ready to grab Dr. Tenamann as soon as he knew his whereabouts.

Kidnapped

They walked through the hospital hallways toward Adam's room. Albert asked Atom to wait just inside the room out of Adam's view. "I want to prepare him before he meets you". "Good idea father", Atom agreed. Adam was sitting up in bed while Dr. Burakku spoon fed him some apple sauce. When Albert came to his son's side the Dr. handed him the bowl and spoon and Albert continued the feeding himself. "How are you feeling son?", he asked tearfully. "Very weak" the boy spoke in a low voice. "My head is clearing though I think my ears are ringing a little". "That will pass soon", Dr. Burakku told him. "You've just made a miraculous recovery, your strength will return slowly. The ringing in your ears is due to the drugs we've been giving you". After the boy had eaten all that he could hold down Albert continued to converse with him. "Do you remember anything?" he asked. "I think I remember being thrown off my bicycle while running away from those guys with the van", he said. Everything else is just a haze. Was I in your laboratory? I think I remember seeing you as if in a dream" "Sort of, son. If you feel up to it there is someone here to meet you. Do you remember what you said the day we toured the laboratory? ", he asked. "About what?", Adam asked. "When you saw the computer generated version of me?", Albert said. "Yeah, that was real cool!", Adam perked up. "You made a copy of your mind and put it in the computer and I thought it would be cool if you could do that with me.". "Well son while you were recovering from your accident we did put you in the machine to make a copy of your mind. I didn't want to lose you and thought I could save something of you that way. I know it sounds selfish now", Albert blushed. "Then you almost faded away for good and I got mad and wanted to destroy my work on the robot soldier because I thought it was indirectly responsible for you being put in danger". Albert was getting emotional and found it hard to continue. "Bob tried to redirect my energy to doing something constructive. We had a few breakthroughs and had the resources to do something much better with the robot research than we had ever thought possible. We made a robot about your size with your mind in its' computer. Would you like to meet your twin brother?" Adam looked a little dazed as his mind absorbed the story. "A robot that looks like me?", he asked. "Well, sorta. Remember what fictional robot you had in mind? ", Albert said. "Atom? ", the word came slowly out of Adam's mouth. "That is what you fantasized about?", Albert asked. "Having a robot that thinks like you?" "Cool!", Adam replied. "ATOM!", he yelled in a sore voice, "Are you there?" Atom walked over to the bed and smiled. "Hello brother!", he beamed. "Get well soon so we can be friends". Atom offered his hand and Adam took it. He leaned over and touched Atoms face, and felt his chest. "Amazing!" he laughed. "I've always wanted a brother. This is the happiest day of my life! Thank you Dad!"

"Let's leave the two of them alone for a while", Simon said. "I need to talk to both of you out of their earshot". Simon led Bob and Albert to a nearby empty room. "I'm starting to wonder if this is a good idea", he said. "Isn't that robot's brain an exact copy of your son's? Don't you think being with an exact copy of himself will be a bit, well confusing for him in his weakened state?" Dr. Burakku stuck his head into the door. "Actually, I think it will be good therapy for the boy", he interrupted. "The instant you started the boy's mind running on the computer it started it's own path of thought. The longer it runs the more it will diverge from Adam's." "Yes, that's true", Albert agreed. "Plus the computer it's running on has as much computing power as almost all of the machines on the planet combined", Bob added. "You guys have no idea what my friends at IBM gave me. The result is that Atom has an effective IQ that is so far off the charts it can't even be quantified." They walked back to Adam's room. Albert rubbed his forehead in thought. "Think you guys will be OK by yourselves for awhile? I'm going to go home and grab some of Adams things Maybe having some of your 'toys' will help you keep your spirits up." he told his sons. "Thanks Dad!", Adam said. "I'll be back soon son", Albert said. "OK dad", Adam replied. "Take your time I'll be fine". "I'll take good care of my brother", Atom added. "Well, it looks like my work here is almost at an end." Dr. Burakku said. "I'll

check in on Adam from time to time to monitor his progress, but if he regains his strength as quickly as his age suggests he will, you'll be taking him home before you know it. If you don't need me for your research Dr. Tenamann, I think I will be returning to Japan as soon as Adam fully recovers.." Turning to Simon he added, "I'll be sending you my bill for services rendered". "Should I get you a car Albert?", Simon asked. "No, I'm going to take the subway back home", Albert decided. "The ride will clear my head and help me feel normal again". Bob saw a concerned look on Simon's face. He set his own cellphone on silent and on the sly he put it into Albert's jacket pocket and buttoned it shut. Albert left the hospital and walked west toward Park Avenue and the Lexington Local. He was in such a euphoric state that he didn't notice the characters following him down the stairs. Albert inserted his MTA pass into the turnstile and walked toward the platform for the uptown local. Polecat jumped over the turnstile followed by Propane Torch while an MTA cop was busy looking the other way. A #6 train entered the station and the doors opened in front of him. Albert got on the train and sat down, the two terrorists boarded a car behind his. The R142A's accelerated quickly then slowed as the train entered the 28th street station. A man carrying a guitar started to perform for his captive audience and then passed his inverted hat around as the train pulled into the 33rd street station. He ran out and quickly entered the next car before the doors shut hoping he'd get more tips from the passengers in another car.

Polecat wasn't in the mood for a street beggar to serenade him. "Shut up the music!" he warned the ministerial but the man just walked a few feet and continued playing. Torch grabbed the man's guitar and swinging it like a Louisville slugger broke it across his back just as the train pulled into Grand Central Station. In the car ahead Albert got off and started up the stairs to reach the passageway toward the shuttle. The station PA system became active, "Please stand clear of the moving platform as trains enter and leave the station" it warned. Polecat and Torch got out of their car just as the doors started closing and followed Albert at a respectable distance.

Normally Albert took the 42nd street shuttle to transfer between the Eight Avenue and Lexington Avenue lines. The shuttle was the more traveled route and was 'non stop' between the two points. It also ran frequent service with rarely more than a few seconds between trains. For some reason, maybe his euphoria in high gear, Albert decided to take the road less traveled and veered toward the passageway to the #7 Flushing line. The Flushing line runs from Times Square east bound. It makes two more stops in Manhattan at 5th Avenue and Grand Central, and then crosses under the east river into Queens. The train runs express over an elevated structure, the next to last stop being at Willets Point where the old World's Fair grounds and the N.Y. Mets stadium are located. Albert boarded an eleven car train of R62A's followed by Polecat and Torch. Besides himself and the two thugs the car was empty. Albert stood up clutching a hangar strap near the center door as he figured it didn't pay to sit for such a short ride. As the train slowed for the 5th Avenue station Polecat came up behind him and covered his face with a chloroform soaked rag. Albert struggled to get free but quickly passed out from the fumes. The two terrorists dragged him from the train, one of his arms over each man's shoulders. They made like they were carrying a drunk off the train who had a bit too much to drink. They half dragged their victim through the passageway toward the 6th avenue line where they boarded an uptown "F" train. Albert was still groggy when he was led off the R46 at the Roosevelt Island stop. An antique VW bus was parked at the entrance to the station where they threw Albert into the back seat, bound his hands with rope, and put a sack over his head. The bus drove them a few blocks south to an abandoned building beneath the 59th Street bridge. Albert's head cleared and he saw that he was inside a windowless room lit by a small bulb in a socket hanging by its' wires from the ceiling. Polecat was sitting across from him keeping watch while Torch was on his cel-phone a few feet away. "Don't worry Dr. Tenamann, we're arranging for your transportation right now. You have some very good friends you've never met who want to talk with you", Polecat smiled though his yellow teeth.

Simon tried to reach Albert on his Blackberry several times but only got the answering machine service. "I'm worried", he said. "There are cell-phone repeaters in the subway he should have answered". "The IRT is noisy has hell", Bob reminded him. "I can never hear my phone ring in there, even on vibrate I don't notice it". "Yeah, but he should have made it home by now", Simon countered. Robert wasn't as worried yet, he knew Albert could be so spaced out at times that he would become detached from reality. Still Simon had a point. The two of them walked back to the laboratory section to use the computer so they could interface with Issac. "High boss", the daemon greeted Bob. "Issac, do a track on Dr. Tenamann please", he requested. "Sure thing, just a moment.". In a few seconds a google map page appeared on the screen with a blinking dot at Roosevelt Island near the 59th street bridge. "What the hell?", Robert wondered. "Issac pull up a med readout on Albert". "He's in good health, heartbeat normal but a bit elevated, breathing slightly rapid. Traces of sedative in his blood stream, looks like ether or chloroform", Issac reported. "Albert's in trouble!", Bob cried out. Looks like he's been abducted, his current location is Roosevelt Island". "Damn, they must have grabbed him on the subway", Simon said. "I should have insisted on getting him a ride".

"We're on the move Doc", Torch smiled. Albert was led to the base of the bridge tower and the three men took the elevator from the street up to the road level of the old bridge. A late model Lincoln Town Car pulled over to the walkway and the three got in. The Torch removed Albert's jacket and pulled a foil lined long sleeve sweatshirt over his head. He plopped the jacket on Albert's lap. "Just a bit of shielding Doc. Don't want the satellites to see you. I know all about your under the skin bugs. Or would you rather I cut it out of you", he laughed. He then searched Albert's pants pockets and found his Blackberry. He removed the back of the phone and removed the battery. Don't want anybody tracking you with this either", he said.

Issac came back to life, "He's on the move again. Change of altitude now, looks like the roadway level of the 59th street bridge", he reported. "Wait I've lost the signal!". Simon looked at Bob. "Well, they could have thrown an RF shield over him, they must suspect Albert has the tracking implant", he figured. Over in the other room Atom and Adam were re-living their shared lives and joking. Adam noticed that Simon and Bob had been gone from their room for a while and wondered what was up with them. "Can you go look to see if they are still in the hallway", Adam asked. "Maybe I can hear them", Atom wondered. He put his hands to his ears as if to direct more sound his way. His autonomic firmware responded by increasing the gain of his hearing. Atom strained to listen for the two men's voices and his ears set themselves to a thousand times gain. Atom picked up Robert's voice from down the hallway, "Looks like he's been abducted", he heard Bob say. Atom though better than telling Adam what he heard, instead he made something up. "Bob's calling me, I gotta go", he said. "OK Atom", Adam said. "I think I feel a bit sleepy anyway. I'll take a nap and see you later". "OK", Atom said, "I'll see you later bro". Atom ran towards Simon and Robert. "I know what happened," Atom said "Now what are we going to do?" "How did you ...", Simon started. "Guess he just discovered his upgraded hearing", Bob interrupted. "We'll head back to the museum complex to coordinate this", Simon answered. He called for a car to take them back. Atom was antsy and said "I'll meet you back there". "You're going to walk?", Simon asked. "No, run". Atom took off running down 23rd street. Simon watched Atom take off. My god! he thought to himself, the kid can run! Atom was in a hurry and started running faster. Unaware of what he was doing he reached over 30mph and didn't even feel his speed.

Rescue

Simon and Bob sat in the back seat of their government taxi. Their driver mounted his revolving beacon light on the roof of the car and ran across town with his sirens blazing. They crossed the island westbound on 34th street and headed uptown on 8th Avenue toward the museum complex. On the west side of the island, Felix Rodriguez had a cross town fare in his cab on 57th street heading east. The 70 year old hack driver wished he could have retired years ago, but his IRA savings had dried up when the stock market tanked. His heartburn flared up again and he popped some more Tums into his mouth. What he really need though was some nitroglycerin tablets. His chest pain increased and he started to blank out just as he reached eight avenue. Simon and Bob passed 56th street. Ahead all the lights were green as far north as Columbus circle beyond which 8th avenue merged with Central Park West. They entered 57th street just as Felix Rodriguez slumped unconscious against the steering wheel with his right foot pressed against the accelerator. His ancient Checker cab was built like a Sherman tank. It's two and a half tons slammed into the front corner of the Lincoln town car with a deafening crunch. All ten airbags inside the Lincoln exploded into action and then deflated almost as quickly. Bob tried to open his door on the left side of the car but the frame was buckled and it wouldn't budge. Simon's door on the right side was also stuck, but it popped open after being kicked twice. They were both a bit shaken up with ringing ears an a bit unsteady on their feet at first, but otherwise uninjured. Their driver wasn't so lucky. The impact had driven the firewall backwards into the passenger compartment and the driver was pinned against the steering wheel. The door frame was badly bent it would require the fire department's "jaws of life" to free the man. A heavy smell of leaking gasoline and smoke from under the hood made matters worse. Bob reached for his cell-phone and remembered he'd left it with Albert. Simon was already calling 911 for help but the switchboard was busy for some reason. Suddenly his mind recalled Atom's schematics, and he realized the robot could help. "Give me your phone Simon, quick!". Simon wasn't sure what Bob had in mind, but he handed him his phone. Bob dialed the laboratory modem number for his computer and Issac's computer generated voice answered. "Hello Simon", he said. "Issac this is Bob. Go search Albert's files for Atom's schematics and find his SIM card and get the phone number. Then contact him and transfer to this number", Bob requested.

Atom had been waiting outside the museum for a few minutes. Suddenly he heard a phone ringing but couldn't locate the source. A heads up display popped up in his field of vision and he saw a phone icon. He reached out his arm as if he could touch the phantom icon, and found that he actually could. He then heard Bob's voice in his head. "Atom we need your help. We're on 8th Avenue at 57th street. We've just been in an accident and our driver is trapped in the car." "On my way", he said mentally hanging up the phone. Bob handed the cell-phone back to Simon. "Atom has a GSM modem buried in his computer module", he explained. Atom ran faster than he had before covering a mile a minute. He saw the car wreck ahead with Bob and Simon standing in the street. The fire department was still nowhere to be seen. The smell of gasoline was stronger now and the smoke was really pouring out from under the Lincoln's hood. Atom saw that he had to get the door open to extract the driver. He tried pulling the door out of the car but it was solidly jammed with the frame mangled, it would have to be cut out. He stared at the car and his vision shifted to the infrared. The heat signature acted like an x-ray view and he could see the two hinges and the lock bolt. As if by instinct Atom extended his right arm and pointed his palm at the door. The heads up display came up again in his field of view with a cross hair that he aimed at the first hinge point by moving his arm. The He3 reactor in his chest powered up to generate the required megawatts of electrical energy and the CO2 laser in his forearm sent out an invisible focused coherent beam that surgically sliced through the door. Atom repeated the operation on the second hinge and the lock. He then pulled at the door and yanking it clear threw it across the street. He then used his laser to slice the steering column away and carefully pulled it clear

of the driver. He bent down and lifted the man out of the car and set him down in the street a safe distance from the smoldering wreck.. An ambulance had finally shown up and the driver was placed on a stretcher and loaded into the waiting vehicle. Simon stared and gasped in awe trying to take in what he had just seen. He looked at Bob and asked “just how much power does he have?” Bob whispered in Simon's ear, “that little robot can generate one hundred thousand horse power. Only he doesn't know it yet.”. They hailed a passing cab and continued uptown. Once inside the complex Bob ran to a computer. “Issac, get a fix on my cell-phone”. Robert looked confused. “In all the excitement I forgot. I packed my phone in Albert's jacket just in case”. “That was good thinking”, Simon said. Issac popped up a map The fix was heading east out to Long Island. “I'm guessing Republic Airport”, Issac said. “They're going to fly him out of the country?”, Simon feared. “Well I can't avoid it any more. I've got to contact General Hayes”. Simon used the blackberry to inform the General of the situation. “My Corvette is parked in the underground garage”, Simon offered. The three of them squeezed inside, Atom lying down behind the two seats. Bob used Simon's phone to keep in touch with Issac tracking Albert's position directing Simon as they speed eastward. Albert's location was converging on Republic Airport. Their problem was they didn't know what kind of vehicle he was in, and what plane the terrorists had obtained. They would find at at the last minute with little time to act.

The terrorists' car entered the airport and they pulled up to a hangar where an older model Lear Jet was waiting, it's APU running. “Hey Doc, we're going first class. Nothing but the best for you. “, Polecat smiled He shook hands with the pilot and escorted Albert into the aircraft at gunpoint. Albert's jacket was draped over his shoulders, he was still wearing the sweatshirt the terrorists had put on him. The aircraft spooled up it's engines and taxied toward the runway. Inside the jet Albert had been gagged with his hands bound with duck tape. Torch sat in the cockpit's right hand seat and Polecat was keeping Albert company in the back of the aircraft.

Simon drove the car through the airport gate and accelerated onto the perimeter road. As they entered the airport Atom crawled out of the back of the 'vette while stripping off his shirt and shorts, and sat in Bob's lap in the front seat. Issac did his best to pinpoint the location of the cell-phone, and between the GSM and GPS fixes he located Albert in an older Lear Jet now number two for departure. Simon called the tower and demanded they stop the jet from taking off, but it's pilot had guessed what was happening and shut off his radio. The aircraft taxied into position and prepared to take off. The runway came into view and they could see the jet taxiing toward the end it. Simon floored the accelerator and the car raced ahead. He turned onto one taxiway and then across the grassy divide between it and another trying to block the runway to prevent the jet from taking off. He was still too far away. The jet was already rolling. Atom cried “we're not going to catch them” and he jumped through the open window onto the tarmac and now wearing only his briefs, started running. Simon and Robert gasped in shock as Adam ran across the divide toward the aircraft. He covered the distance at least twice as fast as the car had been moving. “He must be running at over 100 miles an hour!”, Simon exclaimed. The aircraft was on it's takeoff roll with Atom running toward it. For a time it seemed that Atom would intercept the plane just before it could rotate. He was trying to get in position to grab on to the rear of the plane but the aircraft's front gear left the ground just as he reached it. Inches away from grabbing onto the rear surfaces the aircraft lifted up away from his fingers. Atom made a flying jump into the air after it, and it seemed for a second that he would reach it but the airplane was climbing faster than his leap. Something in the back of Atom's mind felt the desperation and refused to lose. He willed himself upward toward the receding aircraft and did not fall back to earth. The He3 fusion reactor in his chest powered up to meet the coming demand as the nozzles of the ion-plasma ram jet engines poked through the flaps in his boots. The jet engines thrust him upward. Instinctively Adam held his arms along his body angled out at a forty five degree angle like the wings of a fighter jet to provide lift. He was flying.

“Look!”, Simon pointed skyward at the airplane and Atom. “He's not falling, he's actually flying toward the airplane!”. Simon pulled out his cell-phone and hit the redial button. The phone GSM modem in Atom's computer answered the call. In the back of his head Adam heard Simon's voice “Atom do you hear me?”, Simon asked. “Loud and clear”, Atom replied. Atom had caught up to the aircraft and was now flying himself above it, just ahead of the planes horizontal stabilizer. He approached the aircraft from the rear and actually sat down on it holding on to the transponder antenna. “I've caught up to the plane, but what can I do now?”, he asked. “Do you see the caps to the fuel tanks on the wings?” Simon asked. “Yes” Atom replied. “See if you can remove them. The airflow over the wings will drain the tanks and the pilot will have to land when he runs out of gas”. “OK”, Atom answered. He hopped off the back of the airplane and powered himself over to the right wing and reached out to grab the gas cap. It was locked tight. Atom held out two fingers of his right hand and rammed them into the cap like a sledgehammer. The metal alloy of his fingers was stronger than the aluminum cap which he drilled into like butter and pulled out the lock. He then yanked the cap off of the wing exposing the filler tube to the relative wind. Jet-A fuel started siphoning out of the wing tank. Torch took that moment to look out the window and backwards and spotted Atom sabotaging the aircraft. He didn't quite believe what he saw and yelled out “Gremlins!”

Atom let go of the wing and transversed over to the other side of the aircraft and repeated the same procedure on the left wing tank. “OK Bob, the fuel is pouring out of her now!”, Atom reported. “I'm sitting on the back of the plane, I hope that pilot figures out what's happening soon”, he added. In the cockpit all hell broke loose. The pilot had seen Atom yank the cap off the left wing tank and saw that his gauges indicated the fuel level dropping like crazy. “At the rate the fuel is draining out, we're going to have to find a place to land in about fifteen minutes” the pilot indicated to Torch. Atom sat on top of the jet just behind the cockpit. The pilot hadn't changed course yet and Atom was getting antsy. He found a grab handle in an antenna just behind the windshield and held on tight. He fired the jet engines in his legs and began to push the aircraft into a one hundred eighty degree turn back to its point of origin. The pilot couldn't understand why the aircraft was disobeying his control inputs. He fought hard to stay in the air but Atom was pushing the nose of the aircraft down and it was losing altitude. They had returned back to Republic airport with the runway in sight. The pilot had given up and had lowered his landing gear. At that moment the last of the Jet's fuel ran out and it was in a glide to the runway. From the ground Simon saw that it wasn't going to make it. Atom jumped off the top of the jet and flew underneath it. Grabbing on to the aircraft through the front wheel well he powered it with his own jets toward the runway. Once over the threshold Atom flew clear and the pilot glided to a safe landing.

General Hayes had his men in position. The front of the aircraft was surrounded by MP's, SS agents, and the FBI. Seeing they were out-gunned Polecat and the pilot threw in the towel and came out with their hands up. Propane Torch looked out the window and saw one of the government cars parked on the edge of the runway just to the right and behind the aircraft. The automobile was left empty with its motor running. He lifted the floorboard hatch at the rear of the aircraft to make an escape through the cargo bay door which he opened from inside the plane. While the G-men were taking care of things at the front of the aircraft Torch made his escape from the cargo door at the rear. He got into the car and saw Atom and Albert now standing about a hundred yards ahead of him. He hit the accelerator with the idea of running them down in revenge. Atom heard the sound of the approaching auto from behind him but before he could turn around to look two cameras in the back of his head activated and a heads up display appeared in his field of view. Superimposed upon his forward vision was the semi-transparent image of the car approaching him from behind. “Holy Mackerel!” Atom thought to himself “I've got eyes in back of my head!”. His view of the auto was framed in the cross hairs of a gun sight. Atom's

subconscious mind activated the dual Gatling guns in his hips and their barrels extended behind him. Each of the two weapons fired a dozen rounds of armor piercing depleted uranium shells into the engine of the speeding car. Atom felt the recoil from the weapon in his posterior which only added to his astonishment “and I've got machine guns in my butt?!” The front of the auto exploded into a ball of flames and it veered out of control into a ditch on the side of the runway. Torch pulled a hand gun out of his pocket as he leaped out of the car and ran head first into Atom. The terrorist fired two shots nearly point blank at him but the bullets ricocheted harmlessly off his chest. Atom stared into Torch's eyes with a cold anger as he grabbed the gun away from him and folded it into a compact ball with his bare hands. Torch's eyes opened wide in awe and he was escorted away in handcuffs by the MP's.

Finis?

Adam was released from the hospital by the end of the week. His strength had returned and all he talked about was his new 'brother'. Atom and Adam shared the same bedroom. Robots don't need to sleep, but Atom would sit himself down in a chair after Adam had fallen asleep and go into a low power mode until morning. His eyes never closed as he kept a watch on his brother's slumber. Dr. Burakku closely monitored Adam's recuperation over the following weeks. Adam and Atom spent every available minute together getting to know each other. This might have sounded strange as they both shared memories and thoughts, but Atom was already becoming his own person distinct from his flesh and blood brother. Albert decided that he and Adam would return to Japan so his mother could live out her remaining years with her son and grandson, and he told his son of his plans. "Is Atom coming with us?", Adam asked. "I'm not sure", Albert replied. "It's up to him of course, and I think Simon has an offer for him to consider". "I'd really like him to come with us", Adam begged. "I know son", Albert replied, "but it might be a bit awkward if he did. I don't know how your grandma would react, and the sight of him in Japan would cause it's own problems".

Albert had transferred all his notes and blueprints on the robot soldier project to General Hayes' staff. He told the General that he was finished working on any skunk-works projects. "My aging mother is in her nineties", he said. "She's still in robust health, but there's not telling how much longer she'll live." "I expect I'll be returning eventually", he said. "mom isn't going to last forever".

Albert walked into Simon's office to say his goodbyes. Dr. Burakku was already in there to put things in order before he left for Japan. "You take care of Elizabeth", Simon told Albert. "Elizabeth?", Dr. Burakku asked. "Yes, my mother", Albert answered. "I'm heading back to Japan to be with her in her remaining years". Dr. Burakku tore up the check that Simon had just handed him. "I can't charge you for my services", he told Albert. "I owe your mother a greater debt than I can ever pay". "I don't understand", Simon said. "When I was a small child my mother and I were visiting the beach along Japan's southern shore.", the doctor began. "There were a number of unexploded mines buried in the sand left over from the war. My mother and I were nearly blown to bits. She didn't survive, but Elizabeth Tenamann's first aid saved my life." "You can thank my mother yourself doctor", Albert said. "Please be our guest when we return to Japan". Atom then walked into the office with Adam in tow. Robert Levinson stood in the doorway. "What is this a convention or something?", Simon joked. He turned to Atom and said, "What are your plans kid?" "I don't know", Atom said softly. "Part of me would like to go with my dad and brother to Japan, but I might freak out my grandmother. Also I think Adam really needs to be with Dad a lot more than I do.", he sighed. "You are wise beyond your years son", Simon said patting him on the head. "You know, I've taken a liking to you Atom. I'm probably a committed bachelor for life and would never have a son of my own, unless I adopt one. I'd like to adopt you Atom, at least for a while", he said. Atom looked up at Simon and smiled "I like you too Simon", he smiled and punched Simon playfully on the shoulder as if they had been friends forever. "OK, then", Simon recovered. "I started out here doing field work for the museum, some of which involved a bit of spying for Uncle Sam. Lately I've been stuck in this think tank pushing papers which isn't what I signed up for. Wanderlust you know. Well I want to be out there again. Archeology is in my bones. Anyway I'm tired of doing that alone. I'd like a companion. Would you be my companion Atom?" Atom looked at Albert who gave him the thumbs up. Adam smiled "Go for it bro!". "I guess so", Atom replied. Dr. Burakku stood behind Albert and Adam with his hands on their shoulders and smiled a broad grin.

A few weeks passed during which Albert and Adam had put their things in order and prepared for their

trip. The two boys made the most of the time enjoying each other's company while they could. They then made a final visit to the museum complex and Albert cleaned out his office and lab. He packed up all of the manga books, magazines and posters in the back of his office for Adam to take with him. He kept a few small pieces of artwork from his Japan shrine and offered the rest of the collection to the Museum of Natural History, and what they couldn't use was donated to the Brooklyn Museum. "There is a good stock of spare parts for Atom in my laboratory downstairs, and also extra tanks of He3 fuel. Atom has a socket for an extra tank next to the reactor in his chest, you should have him insert a hot spare if you two plan on going on any expeditions", he instructed Simon. "Also here is a repair manual for Atom", he said handing Simon a large looseleaf binder. "The contents of this are also on the computer network where you can find them. Robert can assist you if anything serious happens to Atom". Atom stood behind Simon and blushed a bit. "Well I guess that's it." Albert said. "Adam and I will be leaving tomorrow. Dr. Burakku is on the same flight. I think my mother will be meeting us at the airport in Japan". He shook hands good-bye with Simon and gave Atom a hug, and then Albert and Adam left the complex for the last time.

Atom stood at the window overlooking the tarmac as the airplane left the gate. His keen vision could see Adam's face pressed against a window looking back for him. Atom waved knowing that Adam probably didn't see him, but he was happy. The aircraft taxied to the runway, took off and headed west. Simon stood behind Atom with his hands on his shoulders. "Don't worry, you'll be seeing them again. We'll probably find ourselves in Japan eventually. There's history to be dug up all over the world."

Adam pulled the window shade down as night fell. The 747's engines lulled him to sleep and he leaned over to put his head on his father's lap. Albert played with Adam's hair and rubbed his son's head. They were heading back to the land where it had all began many years ago.....