

The small skimmer was cruising a few meters above the waves of the Atlantic heading to its destination. At times you could almost see it touching the tips of the waves as they would rise from the sea surface. Its eight-meter wingspan, in the vastness of the ocean, made it look like a minute insect heading into the unknown. With no land on the horizon, it fought to avoid each monster wave until the next one, in a never-ending onslaught. You'd think it would get exhausted soon enough and let go for the hungry waves to swallow it to its doom. What would be the point of continuing to push ahead if the inevitable was in sight anyway? In the contrast of the small with the vastness of the huge, the skimmer was flying in a perfectly straight line occasionally swinging ever so slightly and almost unnoticeably by its passengers. Taking advantage of the cushion of air that squished between its wings and the sea surface, known as ground effect, the skimmer was able to break its trailing turbulence over the sea and achieve efficiencies beyond those of its contemporaries that were flying at high altitudes. Unfortunately for this category of planes this closeness to the sea and the potential threat to passer-by ships forced its classification as a ship rather than an airplane. Despite this degrading classification for hydroplanes, skimmers could also fly at high altitudes. What was smooth as a breeze near the turbulent ocean surface would turn into a sludgy flight and struggle at higher altitudes.

While skimmers were relatively popular in island regions for commercial purposes, they were rather rare in the Atlantic except for island complexes like the Caribbean and the Azores. This particular plane, though, had no commercial purpose as it was carrying the markings of Interpol - the world's largest international police force with most of the world's countries as its members. Its presence in these waters would normally suggest a narcotics or other policing operation if it wasn't for the direction the plane was heading in. It had just left the coast of Brazil, at the hump the South American continent makes in its North-West, and was heading straight toward the middle of the Atlantic. Some years ago, there was nothing there to justify its flight path, but nowadays a man-made city-island was emerging, as if Plato's Atlantis was rising from its cataclysmic doom. The only difference is that this new Atlantis would not stop rising until it was clear off from any atmospheric traces and into the void of space. That would be the tip of the city in the form of the space elevator that humanity was eventually building. When complete, the elevator would connect Atlantis, its floating city-base on the surface of the ocean, with Apollo, its rotating space station far beyond the Earth's atmosphere.

This modern technological marvel had to face a challenge unknown in its brief history. The mortifying death-by-hanging of one of its inhabitants was not something its designers had anticipated or prepared for until maybe later when the city was complete and could accommodate all the psychosis humans can display. For now, the task of investigating the incident fell to the two Interpol agents in the skimmer's passenger seats.

There was something odd about these two agents as they didn't seem to belong together. For one thing, the age difference was evident - a middle-aged well-built white man in his trunks and hula shirt like he came out of a vacation resort, and a good-looking and fit young Latina in the operational outfit of Interpol. If it wasn't for her uniform, one could very well assume she was his daughter. A suspicious mind could even think she was the young prize (either in money or intellect)

of the wealthy older man. Neither the daughter nor girlfriend roles though would explain their formal posture and conduct.

Jonathan Spikes, or Jon as his friends called him, was just picked up by the skimmer team half an hour before from the seaside home of his friend and long-time buddy Neil Meyer. He was vacationing there for a few days before continuing on to the second part of his vacation at his son's place in Atlantis. He and Jon had a long history together, first as cadets and then as teammates in the Sims force a decade before. The Sims army unit was a descendant of the antiquated seal teams of the past that evolved in modern times to an elite force of about 400 well-trained breed of commandos carrying the latest weapons and tech support the world had ever seen. They would infuse themselves in regular simulated and real missions to become highly experienced in a short period of time. Technology advancements had afforded the army the latest in simulated environments to the point that the trainees couldn't tell the difference between real and virtual missions, neither would they be informed of what type of mission they were in. They could sometimes deduce the type of mission they were in from the casualties they experienced at the end, especially when one of them was killed or wounded or when the simulations were extreme, like fighting zombies or aliens. If someone remained dead or wounded after a mission that was a fail-safe way of knowing the mission was real. Alternatively, if the zombie apocalypse they faced was not there at the end of the mission, chances were they'd been in a virtual mission.

While Neil was a good and what some would consider typical Sim, Jon was considered a career officer with a family tradition in the army and connections that boosted his prospects for reaching the highest levels of the Sims unit and even the entire army. His father was an officer in the army before him, and some of his father's closest friends and mentees were in key positions in the force and willing to support his son's ascent to the top. Jon changed his mind for a career in the army after a mission he was leading was sabotaged, resulting in the death of most of his team members. The losses themselves were not as defining in his decision to leave as much it was the loss of trust in the system he was serving. It was the first time in Sims history that an insider sabotaged a mission, and that shook Jon's world and the few who survived the mission. From a team of 10, only 3 survived. One of them was Neil and the other was Jane Gilmore who later became his lifelong companion and wife.

It was Neil who invited Jon and Jane, double Js as he used to call them, to spend some time relaxing at his beach house outside Natal at the North-Eastern tip of Brazil. The hump of the South American continent was the closest point of access by sea to Atlantis and the location where many "Atlanteans" would escape to when they needed a short break from the island. Neil was on a worldwide vacation tour after their last mission and happened to meet Alanza, his Brazilian wife, when he tagged along on an archeological expedition to some newly discovered Mayan ruins in the rainforest. She was one of the archeologists on the team and apparently unable to resist his tomb raider charm as he would tell everyone when he'd describe their first encounter. She was also an excellent cook, as per Neil's criteria of a great woman, so the two got married and a decade later they opened their dream beach taverna on the Brazilian coast. It was there Neil ventured in his dream of discovering the limits of his taste buds and the tension his larynx and stomach could sustain. It was both home and taverna for them, and to make sure it was clear to everyone that

when they came to their taverna they were also coming to their home, they called it "For Friends Only".

Neil didn't have many real friends, so he was thrilled when Jon called and told him that he and Jane were planning to visit their son Steve in Atlantis for his 10,000th birthday. These weird types of birthdays that came in counts of thousands was one of the fads modern culture had adopted, initially in the tropics and later all over the globe. With no observable seasons for those living near the equator and with day and night of equal duration year-round, it made more sense to improvise a more meaningful birthday calendar. Significant growth stages were also celebrated, like the 1,000th days for childhood, 5,000th days for the teen years, 10,000th days for adulthood, 20,000th for maturity and so on until the lucky few hit the 50,000th day of robohood, or Jurassic age as it was often called. The latter was meant to signify the years into extinction as a human and rebirth as a robot due to the excessive replacement of body parts with mechanical ones required to sustain life at those ages. These were extreme cases as very few would last or want to live that long due to the limitations of the human brain. While some would consider changing part of their decaying body with robotic parts, the only part no one wanted or allowed to have replaced was their brain simply because they wouldn't be who they were anymore. If that were to happen, in the eyes of the law it would be considered murder as the brain was the only part that could still signify someone as being of the human species and with the legal protection entitled to them. This restriction on how far one could go with changing the body while maintaining their brain eventually set an upper limit to how long one could or wanted to live. There was only so much that a brain could remember and want to experience before reaching saturation to the point of confusion.

The 10,000th birthday was somehow the least celebrated as it would find most people busy and oftentimes in uncertain situations at the beginning of their careers and in anticipation of a family life. Jon's son, Steve, was the exception to this rule as his career was already way ahead of his generation, having finished his college online when he was 16 and gone through all the ranks of research in his field.

Steve's 10,000th birthday was meant to bring the whole family together in Atlantis for a relaxing time on the artificial shores of the island and for a tour of the facilities and construction sites. For Jon and Jane this was also an opportunity to visit Neil after a long time. Steve used to visit Uncle Neil, as he used to call him, frequently when escaping to the shore during his breaks, but Jon had never been there before and neither had Jane. They were both working for Interpol as Special Leads (SLs for short, as they were addressed) and their work schedule, while allowing them a lot of free time between cases, was not in any way structured enough to allow for a vacation plan they could reliably commit to. Their position as Special Leads meant that they each had their own dedicated team of agents with all the resources they needed to operate anywhere across the globe. When on a case the whole team would work together 24/7 and until the case was over. Then they would each disappear to their separate personal lives until the next case. Not much socializing was expected, although not prohibited, to avoid attachment that would prevent hard decisions when dangerous situations arose. Jon and Jane were familiar with compartmentalization of the personal and professional aspects of their lives from their days as Sims and working as Special Leads became like second nature to them.

Jon was an excellent strategist and quite effective in approaching and resolving critical situations, making him the leader and strategy planner of missions. Jane on the other hand was one of the best snipers and solo performers, assassins as they were humorously called by other Sims. She was Jon's second wife and stepmother to his son as his first wife died in an accident when Steve was little. She and Steve became very close, and while she never aimed at replacing his mother, Steve took to her fast and was calling her mom after the first months of living together. Something about the burn marks on the right side of her face from the last mission with his father that she didn't completely fix made him admire her and feel safe in her presence. Having someone around him who could obviously handle and be comfortable with her wounds made him feel he could be fine with his own emotional wounds of growing without a mother.

Jane's reasons for keeping her scars were different. She was a proud woman and would see it as weakness or even failure if she couldn't handle what life threw at her. She would consider changes to her appearance only when she felt she had nothing to prove. This attitude was infused in young Steve and gave him the strength to outgrow his depression, find meaning in life and be confident of the choices he would make. Jane had to finally fix the burns to avoid standing out when dealing with cases, especially when working undercover, but by then no one who knew her even noticed them anymore.

When Jon and Jane decided to join Interpol, they made a pact that they would never work together again for their sake and that of their teams'. Being in the same organization but in different teams allowed them an understanding of what they were going through without attachments and transference of their professional issues. Unfortunately, this type of arrangement would sometimes get in the way of their planned vacations. Often when one of them was free the other would be working on a case. This was the situation now as Jane had to attend to an emergency in South-East Asia before she could join Jon. He ended up visiting Neil alone, hoping that Jane would make it in time for Steve's birthday in Atlantis.

Without Jane to initiate activities, Jon was comfortable just relaxing and catching up with his friend. Neil had planned expeditions and sightseeing but Jon politely told him that his dream was to really plant himself on a lounge chair on the beach and just breathe. They were sitting at the beach having breakfast that morning when an emergency call came from Interpol. An active case was evolving in Atlantis and Jon was the closest available SL who happened to answer the call. He didn't have to answer as he was on his break, but his alert level was raised when he saw the call header indicating the University of Atlantis as the location of the case. His son was there and that couldn't have been ignored regardless of the minute chances of Steve being involved. What was even more alarming, though, was that Atlantis was also the newly established headquarters of Interpol and one would expect there would be someone there capable of dealing with a case.

It didn't take long though for him to figure out the reasons behind Interpol's reluctance to assign someone from the city. If a crime happens at your house anyone could be a suspect, so you wouldn't want them conducting the investigation in case they were related to the crime. The same was true for any other active teams in the city. They needed someone who was not part of the system at the time of the incident. This wouldn't have been an issue normally since the case involved someone from the University of Atlantis with no relationship to Interpol, but even by proximity one could be

assumed to be biased. Atlantis was even more of a special case due to its multitude of stakeholders in this early stage of its development where political sensitivities ran high. Something that wouldn't be an issue in other settings could be an international crisis due to the many players involved with both national and economic interests. The immediate stakeholders were the most powerful governments and corporations in the world. They all wanted the project to succeed so allied for its completion, but they were also competitors in the global scene, so they would be at each other's throats if their market and influence shares were at risk. Atlantis was like a forced cohabitation of different packs of wolves in a limited space. The alliances were necessary to avoid potential sabotage and unnecessary rivalry, so they all agreed they would compete on planet Earth and in space but not in-between.

Jon would avoid cases with such strong political ties when he could as it would limit his freedom of movement and force him to play the politics, which he always thought was a waste of his time, but the fact that his son was in the same location as an active crime scene forced him to respond fast and accept the assignment. He was planning anyway to visit the new Interpol headquarters as he had never seen them before and to explore the potential of someday working there to be close to his son. Unfortunately, the rest of his team did what they were expected to do during their breaks and disabled their trackers, so for this mission he would have to rely on agents he didn't know. It really came as a surprise to him that headquarters confirmed his assignment despite the absence of his team as this was against standard practice. This led him to suspect they were probably desperate to get someone as soon as possible and he just happened to be the only SL close enough to take over immediately.

It took only an hour after the initial call for the skimmer to land in the water in front of Neil's taverna. It was there that Jon met his fellow investigator, Izabel Braga. The 35-year-old Brazilian brunette with her slim and well-exercised body looked like she could very well be a fashion model promoting the Sacramento-colored Interpol suits rather than an actual Interpol agent. The skimmer had just picked her up from Natal where she was visiting her parents after the completion of her year-long Interpol orientation training in Atlantis. Her records listed her as single with no previous marriages and with no partner as next of kin that would suggest a steady relationship. Izabel studied Digital Sociology in college but soon realized the physical world was more her style than the virtual and decided to join the Brazilian police when she graduated. After 10 years as a detective and with an excellent track record, she became eligible to apply for Interpol. She passed all tests with high scores and was accepted to the Interpol academy in Atlantis a year ago. After her graduation a few weeks earlier, she was granted localized jurisdiction as a liaison with the Brazilian police and was in the process of being assigned to a team when she received the call to join the case.

Jon was looking at her background and field experience in his headcom display when he recalled the moment they met. Neil's jaw hit the sand when she came out of the skimmer to introduce herself to Jon. He couldn't help whispering "you lucky bastard" to Jon, who replied "now don't get me in trouble you fool and don't embarrass me. I'm sure she is a lousy cook." Neil retorted "yeah, but cooking is my thing, not yours." Jon smiled and with a smirk on his face went to meet Izabel.

As the info about her was projected in front of him, Jon switched from her academic to combat skills. This was quite important for him and a leftover habit from his military training days. He needed to know exactly how she would perform in case things got rough. Apparently, Izabel was much more than a pretty face as she had been through some dangerous situations in her police career. In a single incident she had been shot in her belly and her thigh. She and her team were chasing gang members when they were ambushed and captured. The gang stripped them of their gear and had their new recruits target practice on them. She saw her teammates drop dead in front of her one after another before she got shot. They were about to give her a final shot in the head when backups arrived and saved her. What Jon found interesting was that when they asked her in the debriefing what she learned from that mission she answered, "never surrender again." She did follow that motto from then on and in a later case when she was trapped she fought against all odds and made it through with deep knife cuts in her right cheek, arms and back. The cheek wound looked quite horrifying in the debriefing video, but it was barely visible anymore.

Izabel had a fair share of kills in her career and she obviously knew very well how to handle blades and guns. She was wearing the bullet-proof Interpol field suit with the standard armor and high-tech computer and communications accessories - a laser pulse firearm and a sonic stand neutralizer on the outside of her forearms, blades on their inside, projectiles, explosives and tracking devices in her belt, and a forensic lab kit on her lower back and a full medical kit on her upper back. The lower body part of the suit was relatively light to allow for the free movement of her legs and only thruster packs on her shoes and the outside of her thighs. The suit itself was extremely thin at the joints to allow for natural movement of the limbs, but the exoskeleton was enhanced throughout the rest of the body to sustain knife and blade cuts at the blow strength of a typical assailant. The exoskeleton was built under the suit skin and would trace the length of the suit along the muscles enhancing the strength of the wearer in attacks while protecting the skeleton structure in the case of direct hits. The microtubules in its structure could sustain bullet shots and even deflect laser bursts of the most typical guns criminals used. Around the neck two exoskeleton extensions protruded upwards, following the curves of the head and wrapping behind the ears until they ended up as extensions on the sides of the eyes. The wiring inside them would connect the suit's onboard computer with the holographic micro-projectors at their tip. Any information the agent would request by forming the appropriate thought or messages from headquarters and other team members would be holographic, projected in the agent's retina with no one around being aware of it.

Micro-cameras and GPS gyroscopes were also embedded in the skin of the suit between the shoulders and the neck to record and share the 360-degree surroundings with the agent and any other team members if needed. The recordings would also stream directly to headquarters, eliminating the need for any formal reporting on the part of an agent or their team. These recordings were legally bounding for the agents and anyone around them without any court order or permissions of any sort as it was approved by law in all country members of Interpol.

Internally, the suit provided environmental control maintaining ideal temperature and humidity conditions regardless of the external environment and the activity of its host. The agent could be exercising in the hot tropics or resting on polar ice and the suit would make sure excess body heat was dissipated in the former situation while preserved in the latter. Cloaking functionality was also

installed as the new uniforms were produced with some of the material used for the Sims uniforms that Jon used in his previous job. Although Interpol's technology was not as advanced as the Sims', it would allow for enough blurring for its host to confuse an assailant about the positions of their legs and arms in hand-to-hand fights. The uniform would zip up all the way to the neck and even lock the hood that was attached to it if the agent chose to extend the cloaking functionality and environmental control to include the whole head. The only difference in the hood material with the rest of the suit was that it was see-through from the inside and with no extra exoskeleton support. There were suits with helmets instead of hoods that provided full protection of the head, but those were only reserved for the direct engagement teams (army units, as they used to call them) of Interpol when the strength of force was required in hostile environments. Those had no investigator equipment but were fully loaded and enhanced with weapons.

A common feature on all suits was the Interpol insignia that were clearly visible on the chest and back areas. This was a requirement for at least one member of each team that operated in the field to allow for immediate arrest and prosecution without any declaration of rights to offenders. The Interpol jurisdiction became stronger and more influential as the boundaries between nations became more commercial than military in nature. The responsibility of who would be fully suited and armored was the call of the Lead Investigator, but Jon had it as a rule to have everyone in his team wear them in the field unless someone was operating undercover.

Investigator agent suits would zip up in a second when put on and couple the agent's nervous system with the suit's command and control computer. The neural networks that were embedded in the suits were trained after a couple of times of using the suit to recognize the distinct neural patterns of their bearer and optimize the suit's functionality according to the individual agent. No one but their original host would be able to operate or even zip up the suit before the neural nets authentication process was complete. From that point on, everything on the suit would be activated as soon as the agent formed a thought of action.

Jon had no suit to wear when he was picked up, but he was expecting one to be waiting for him upon their arrival in Atlantis. Every agent's neural footprint from their suit was backed up in headquarters after each case and could be downloaded in any Interpol suit if an agent had to wear another agent's suit or needed a new one. When the neural link was complete, agents would be allowed to assume full control of the suit and direct communication with other members of their team and to access to Interpol databases and services. The latter was more urgent for Jon as he needed to know everything that was available on Izabel. Their lives would be interdependent for the duration of the case and the decisions he would make would need to be optimized for the support she could provide.

Izabel had already done her background check on Jon as she had received his profile with her assignment, so she was fully prepared and mission-ready. She also went through a thorough virtual orientation of Jon's fighting skills and approach to investigations during the short flight to pick him up. Interpol would provide recordings of past missions to new members of a team to acquaint themselves with the behavior and style of the teams they would join so as to shorten their orientation period. The action scenes of the simulations could be experienced either from a first-shooter perspective as if one was reliving the scenes through the actor's eyes, or through a

panoramic bird's-eye view of the operations. This was standard protocol for integrating teams as it allowed each member to virtually view actual case footage and identify any complementary skills they would add to a team. Izabel was quite pleased and nervous at the same time to work with such an experienced lead like Jon in her first Interpol case as his track records were more than impressive. It was also the first time she met someone who served as a Sim and the aura that surrounded that elite group of operators was apparently there. She knew not to be fooled by his laid-back appearance and beach outfit.

Jon on the other hand didn't have any time to get acquainted with Izabel's profile before he boarded the skimmer or the information stream his Interpol suit would have provided through the headquarters database, so he had to rely on first impressions to form her profile. Because a suit was not available for him on the skimmer he relied on the headcom the crew gave him to connect with headquarters and go through Izabel's profile before even considering any information about the case. This was important for him so he could delegate work and assign her responsibilities based on her skills and expertise. He also had a brief exchange with her to complement what he was seeing.

"How is your suit's coupling?"

"Pretty good, Sir. I took it for combat training a few times and performed simulated cases, so it is responding as expected."

"Good. Have you been briefed on the case?"

"Just the preliminary victim background and status of the initialization phase."

"Can you work on the victim's network while I catch up with the case?"

"Sure, Sir. Do you want it as a tree or a mesh?"

"Let's start with a tree for now."

Developing a victim's profile was like a background check of their immediate contacts over the last 48 hours and expanding it slowly in time sometimes all the way to their childhood. The tree representation would be the traditional hierarchical ordering of the victim's contacts and any relevant evidence with them at the top node and branching downward to the first layer of people they contacted the last 24 hours. It would then move downwards to the previous 24 hours of their past, populating the tree branches with nodes for as long as needed. Each node of the tree would be a person, an object or activity they engaged with until their latest life story was represented in as much detail as the record traces they left behind could confirm. Video footage, audio recordings and text would accompany the branches of the tree as a testimony to the connections between its nodes.

This would be similar to what detectives would do in the distant past by pinning pictures of the victim and suspects on cardboards and drawing the lines connecting them to signify relationships. Nowadays this was done mostly automatically in 4D trees, allowing an agent to observe the victim's life tree in time, across locations and along properties they identified as important. One typical



property that was used and identified by the color of each node was the types of relationships each node was expressing, like blue for relatives, red for coworkers, green for money, etc. Sliding through time, nodes appear as the victim or suspects would come in contact with the tree nodes, revealing their historic traces.

An agent would be able to virtually fly through the virtual world the data were forming and add or delete connections according to their significance at each stage of the investigation. They could expand each node to reveal information about the entity it was representing and even run special algorithms to identify patterns based on similarities with past cases. There were also modes for automating the process by activating the tree's AI. This would allow either a virtual AI-based agent to analyze the case and point the direction of the investigation or to launch a virtual assistant ("psychic" as they used to call them) who would accompany the actual agents as they moved around the tree, providing feedback and making inferences about the potential of nodes and their relationship to the case.

The data trees could get complicated when someone started connecting nodes at the same level or different branches of the tree, so many agents would prefer to display them as a mesh. This would look like a spider's web, but with each node in 4-dimensions at the intersection of threads. There was no apparent beginning or end but a center node that usually represented the victim. Such depiction of the information about a case was considered good in eliminating bias in the way one would perceive nodes as each node could be the center or the trigger that could help unfold the case. Many times victims were casualties of criminal activity that centered around something not directly relating to them. The mesh representation was ideal for uncovering such possibilities, but it was something that many investigators would consider later in their investigation when more was revealed or when multiple players with overlapping interests would be interlinked around the victim.

Jon preferred looking at a case's data in tree mode because it could provide guidance and direction in the initial stages of an investigation. This case did not seem any different from others to justify another approach, so having Izabel build the case tree seemed like a good start. That would allow him to catch up with the incidence brief and join her in building the tree as soon as possible.

The victim was Puii Mookjai, a 29-year-old male who was working as faculty at the statistical anthropology department at the University of Atlantis. He was born in Laos and studied simulation and modeling with specialization in Intelligent Agents or IA as it was mostly known. His unscheduled absence from the virtual class he was due to teach that morning activated an inquiry about his whereabouts. When his assistants called his quarters, his quarter's virtual servant did not respond, neither did anyone else pick up the call. That automatically created an alarm for intervention at Interpol. Since Atlantis was not an independent state (yet, according to some enthusiasts of the project), it made sense to have an international police force like Interpol with jurisdiction across all nations to regulate and oversee the security of the city. A special unit of Interpol was created for that purpose in the organizational style of police forces in modern mega-cities but with extra security permissions on Atlanteans due to the sensitivity of the project. Every individual's quarters were AI controlled through a virtual personal assistant (PA for short) to ensure the environmental conditions and basic life support like light, water and heat was regulated to the inhabitant's preferences. The PA, or *butler* as it was unofficially called, could be named and customized to

communicate by any voice or hologram figure the tenants preferred. The only function the tenants could not control was their health status updates that the butler was recording as the system would automatically upload them to Interpol when abnormal readings of their vitals were recorded. This would ensure immediate responses to health emergencies that included an override of the PA by Interpol and full access to the quarter. A medical drone that was a standard accessory in every quarter would then be released from the ceiling of the quarter and address the needs of the inhabitant(s).

In Puii's case no medical emergency was reported, which meant that someone tampered with the PA of his quarters. Due to his technical background that could have been him, someone else with the necessary skills to hack into the system, or a system malfunction. The latter had never been observed in Atlantis, but it had been seen before around the world on rare occasions. The whole incident would have gone unnoticed for a longer time if it wasn't for the virtual class Puii was scheduled to teach that morning. Everything that would happen outside the physical space of the quarters of an Atlantean, including real or virtual, would be traced and analyzed by Interpol to ensure no project-critical or sensitive information was released and people were where they were supposed to be either for work or for leisure. The main concerns for the project were not outside threats but inside jobs that could intentionally or unintentionally damage the city's infrastructure and its citizens. External threats could easily be calculated from simulations and measures to counter them were already in place, but internal threats could be unpredictable, so it was deemed necessary for the city to operate under strict security rules at least until the project was complete and operational. There were many objections about that decision as even physiological changes were initially recorded, leading to some awkward situations especially when flirting and other forms of contact among the citizens would be misperceived as unnecessary physical activity. The police would arrive in full armor to stop a potential terrorist activity only to find two people kissing passionately in the moonlight. Eventually it was decided that it was an impractical and counterproductive measure for both the police and the citizens, so unless someone had a highly critical function that required complete monitoring, only the location of people would be tracked as well as violations of critical health parameters that could indicate someone was ill or suffering.

Interpol failed to gain control of Puii's PA remotely that morning, signaling a full-scale alert about him. An incident team was immediately sent to isolate his quarters and investigate. They got visual access to the inside of the quarters by manually overriding the door lock and activating a security micro-camera and signal detectors in the interior. The visual inspection of the interior and sensor readings confirmed Puii's death, setting off an automatic chain of events, one of which was to assign the case to a Lead from outside the city. Initial permissions and clearances were granted to both Jon and Izabel while full authority to Jon was pending completion of the initial brief he was getting through the headcom in the skimmer. It would be up to the Lead to assert and formalize his control of the investigation as soon as he felt ready and had access to all details and units involved in the case. Until that time the officer in charge of the incident team was considered the Lead for all purposes. Agent Chen Xiong was in charge of the ground incident team that day and the first to confirm Puii's death. His team isolated the victim's quarters and the surrounding area, and was standing by for further orders as per the incident protocol.

Jon did not know Chen or any of the city police force for that matter, but he was sure he followed protocol to the letter and as dictated by Interpol's procedures. He had just finished going through the brief and now turned his attention to the evidence tree Izabel was building. Given that Puii was working in the same institution as his son he was curious to see where exactly Steve would fall in the tree. As expected, Steve appeared with a link to Puii in the third level down from the tree root. A project named Helios that ended a year ago was connecting both as researchers. It was a classified project, so Jon would have to accept Lead authority before revealing more details about it. The fact that there was no direct connection between Puii and Steve in the near past was a relief to Jon as he would hate to have to also consider his son as a suspect. The good news was that he could now get some reliable intel on Puii from Steve and even recruit him as a member of his team. Having only Izabel on an investigation was a far cry from his standard team of 10 to 12 agents, so having someone he could trust and who knew the victim would be a great help in this case. He also cherished the idea of working with his son as there were very rare occasions they had done so in the past. Steve was a natural talent with anything relating to information technology and a world-renowned expert in data analytics and simulation, so he was bound to get the best in IT support anyone could, provided his son had the time and was willing to be part of the team.

Jon mentally clicked on the Authorize Lead sign in his virtual display and immediately every restricted indicator on the tree disappeared, except for the Helios project. Additional branches also appeared on the tree right above Puii's name in the form of a horizontal menu with all the organizational units that were part of or in relation to the investigation, like the incident team, Interpol headquarters, forensic labs, city map and anything that could possibly be of use to the case. Izabel saw all the changes a few seconds later and as soon as Jon granted her full access to all information by clicking on her tree node to the right of Puii's. All team members would normally have been listed there, but for this case Izabel was the only one present, at least for the moment. Jon's node was to the left of Puii's, indicating he was the Lead Investigator. His acceptance of the Lead authority along with his brief bio was signaled upwards to all the newly appeared entities informing them of their responsibility to report directly to him. Communication channels to any of the entities on the tree that could be accessed opened immediately and Jon received his first message from Chen.

"We are ready to deploy the sniffer, Sir."

"Proceed," acknowledged Jon.

The *sniffer* was a fully mobile forensic unit the size of a dog that would be deployed in incidence areas after any medical interventions to live victims were completed and before anyone else entered a crime scene. The units were equipped with odor detectors and chemical trace analyzers for identification of trace chemicals in the air and on the surfaces of objects and organisms. In this respect they would act like the police dogs that were used in the past for sniffing out substances, but with much more enhanced and precise sensors than their canine counterparts. In addition, sniffers could fly and hover in any place they needed to reach in a crime scene. They could even launch micro-robot *bees* and *butterflies* for air coverage, *spiders* and *snakes* on land, and *shrimps* and *octopuses* in water to get to difficult-to-reach places and retrieve specimens and image and audio for analysis by the main unit. Solids, liquids and air could then be scanned for DNA traces

and anything that might be of interest to the investigation, allowing for a complete 3D cross-section of the environment with all the trace evidence that included. A complete body scan of a victim could also be performed on site to reveal the cause of death and the general physiology of the victim at the time of the investigation.

Reminiscent of the old practice with police dogs and to avoid mixing sniffers when many of them were being used for expanded area coverage, agents would give them pet names. The one ready to work on Puii's room was Roby, a standard Interpol sniffer attached to Chen's team. Fully assembled it looked like the hovering rovers used in space explorations. It was a modular unit in that it could auto-assemble when each of its pieces sensed the others in their vicinity. This was practical for cases where they had to enter a secluded and closed space like Puii's quarters. The incidence team had to push each piece through an emergency opening they drilled on the lower part of Puii's door. Moments later the unit assembled itself in the interior and was ready to get to work.

Following Jon's command, Roby got activated and started analyzing the interior and broadcasting his findings. With the room's PA deactivated, Puii's quarters looked as if they were frozen at the time of his death. His quarters were a huge open room. It was mostly black with only a light fixture on the ceiling shedding a dim light. It was a spherical bowl with a realistic carving on its surface of the visible face of the moon. Crater grooves and mountains protruded from its surface, forming a realistic scaffold of the moon. From the floor it looked like it was glued on the celestial sphere, exactly as if you were seeing the real moon in open space at night. Only three quarters of the moon were shining, in synchrony with what the real moon looked like that night. No other lights were activated yet in the room, as they could potentially alter the environment and distort potential chemical traces relating to the incidence.

Roby activated its night vision and radio waves to create an initial scan of the space with as minimal disturbance as possible to its atmosphere. Outlines and shadows began forming on the screen, revealing a full-grown tree in the middle of the room with a body hanging from one of its branches. If Jon didn't know better, he could swear he was watching a scene from a 20<sup>th</sup> century black and white horror movie. Evil had a party that night, and Puii was its center piece.

Before moving closer, Roby deployed multiple robot bees that spaced themselves equally covering the length, breadth and height of the space. It also released robot snakes from its position across all corners of the ground floor. With the information the bots provided after they got in position, the image that was broadcasting began forming in three dimensions until it became a virtual space where avatars of the investigators could move. Isabel's and Chen's avatars appeared in Jon's view as they entered the virtual space, making it look even more surreal. All three of them looked like ghosts from a distant past coming to collect their reward and feed on Puii's soul.

With a clearer sense of the surroundings, Roby started rolling toward the victim. Nothing could have looked gorier and spookier at the same time as the centerpiece of the quarters started revealing itself. A full-grown tea tree was standing at five meters high with foliage spread all over the ceiling and down, reaching almost every side of the room. The dimmed ambient lighting of the moon fixture as it was coming through the foliage formed shadows of leaves and branches

intersecting each other on the tree trunk, lower walls and room objects. It was like the moon shined on a cursed landscape where werewolves and witches spread nothing but evil.

Three main branches emanated from the tree trunk 1.5 meters from the floor, breaking down gradually into smaller and smaller pieces until they became leaves. A hammock was suspended between one of the branches and a ring on the wall across from it, serving apparently as Puii's bed. On the opposite side, one of the branches slowly bent and formed a horizontal section 3 meters from the ground that served as a mounting for what seemed to be a rope swing. That would be someone's guess if it wasn't for Puii's dead body suspended 1 meter below the tree branch with the rope wrapped around his neck.

Roby was closing in on the body when the floor became rough and bumpy. It paused for a moment to analyze the granular substance of the surface and soon recorded it as soil with constitution similar to what one would find in mountainous areas in northern Laos. It was a real tea tree in front of everyone, with visible roots spreading for up to 2 meters from the base of its trunk and going as deep as 1 meter. Natural soil was covering them up to that depth, sitting on a thick layer of a gelatinous mixture of nutrients the tree needed. Apparently, Puii had converted most of the storage area under his floor into a giant pot for hosting and supporting his personal room-size plantation.

It was typical to find greenhouses with even full-grown trees merged and spread throughout modern houses to make the environment look natural, but a tea tree of this size was unusual by any standards. Tea trees in modern plantations weren't grown past the size of bushes to maximize production and ease leaf collection, so there were very few naturally grown left in some remote and inaccessible areas of South-East Asia. It would take many centuries for a tea tree to reach the size of Puii's tree even with the accelerated growth modern forestry and horticulture would allow, so that particular tree must have been imported from places it grew naturally. Given Puii's origin, the area in Laos where he was born and raised would be the tea tree's most probable origin.

One of the roots of the tree was protruding high enough from the ground to force Roby to switch to hover mode after it completed the analysis of the soil and scanned the floor and storage below it. It was now in front of the hanging body a little below the feet, and launched a probe at the same height but on the other side from Puii. Both Roby and the probe started a slow synchronous ascent scanning the body between them in tomographic mode and providing a detailed cross-section of both its surface and interior. In this mode, potential internal and external traumas would be highlighted immediately along with any traces of DNA, fingerprints and anything else the body came in touch with in the hours before and after his death.

As soon as Roby and the probe passed Puii's head, they paused for a second before descending fast and stopping at the level of the heart. Roby extended an incision tool, or micro-scalpel as it was called, toward the chest while the probe gently touched Puii's back right across from it. The micro-scalpel was more than a surgical blade as it was fully equipped with multiple tubes for secreting chemicals and sucking liquids, tissues and bone fragments for analysis by the main unit. Roby proceeded with an incision the breadth of a cloth thread barely visible to the human eye, and pressed the scalpel all the way through the sternum across the heart and on to the other side until

it met the probe. A cross-section of the body was retrieved in the capillaries of the incision tool, initiating an analysis of the collected material. By the time the scalpel was retrieved the analysis was signaling, to everyone's surprise, sudden cardiac failure as the cause of the death instead of asphyxiation by hanging as the scene suggested.

Further analysis of Puii's medical records revealed he was suffering from Brugada syndrome, a rare genetic condition often inherited by males of South-East Asian descent. Under stressful circumstances it was reported as the cause of Sudden Unexplained Death Syndrome (SUDS) in young adults. While hanging would definitely classify as a stressful situation, the scenario where suicide by hanging triggered SUDS before onset of asphyxiation felt unlikely to Jon. The estimated time of death was 2:30 a.m. and the blood work and shock stress tests Roby performed on his bone samples seemed consistent with these early stages of body decay. Minor deviations in hormone concentrations were observed but they would require further analysis to evaluate their significance. The skin analysis and body scan revealed light bruising on his arms consistent with normal daily roughhousing as one interacts with others and the objects around them. The only fact that alarmed Jon was that they were in the same positions on both arms, in line with what he'd seen in the past when someone locks with someone else by holding both their arms. In this case they were not even noticeable and could only be revealed by the scan Roby performed, so normally one wouldn't have paid much attention to it. For Jon, though, everything was relevant until proven irrelevant.

Roby's data began showing up in the investigation tree behind and a little lower than Puii's central node as Izabel interfaced the tree with anything Roby was reporting. Jon signaled the skin analysis node to initiate further investigation, and Roby moved down in front of the left arm where the bruising was recorded. It started flashing the skin with different wavelengths and measuring the reflections to form a more detailed analysis. Although a central depression of the elasticity of the skin was evident overall, the bruising was now extending through most of Puii's arm. Moving to the right arm the analysis revealed the same condition for his right arm with small deviations in its geography from the left. Jon clicked on the alert option in Roby's results as they were positioned in the investigation tree to indicate that further work was required, beyond the details of Roby's analysis, from Interpol's main labs. For the time being, Jon ordered Roby to perform a detailed scan through every object in Puii's quarter and signal anything out of the ordinary. In the meantime, he was going to submit a request for access to the Helios project that did not get activated in the tree and learn about the main players in Puii's tree.