

The Thief Of Maxelon

by [skin2279](#)

THE SECURITY GUARD was insistent. "Place your hand on the scanner, please."

Aria sighed. "We've tried this ten times already. I told you, these are prostheses, not flesh and blood. It's just not going to work."

"Maxelon company policy requires all visitors and staff to authenticate via the palmprint scanner. No exceptions."

"What's wrong?"

Aria and her boss looked up at a smartly-dressed middle-aged woman who appeared. Don gave a sigh of relief. "Oh, thank heavens you're here, Alison. This guard keeps insisting Aria use the palmprint scanner, even though it won't work with her."

"My hands and feet are artificial," explained Aria. "I was born without flesh-and-blood ones. I've had fuel-cell-powered prostheses like these since I was ten years old."

The woman came closer and touched Aria's hand. She looked impressed. "I must say, they look just like real ones." She turned to glare at the guard. "You have a scan for Mr Kayberling, at least? Issue the young lady—what's your name?—Ms Avonova—with an interim transponder pass. That's allowed under regulation 23(c) of the company handbook, as I recall."

The guard looked glum for a brief moment, before saluting. "Yes, Ma'am."

As they entered the secure part of the lobby, a portly man in a double-breasted suit appeared. "Well, look what the cat dragged in," he said.

"Hello, Alfred."

"Hello, Don."

"This is my assistant, Aria Avonova. Aria, this is Alfred Whitmore of the Bulwark Corporation."

"The foremost security company in the world."

"Well, the biggest, at any rate. They handle the physical security, of course. Those, um, palmprint scanners at all the doors. Alfred is still sore that we at Sentry got the network contract, instead of him."

"Well, let us go work out the cost of that mistake to the Maxelon Corporation—now that the losers are here."



"It WAS STOLEN FROM here."

Besides the Bulwark man, there were no less than three Maxelon executives present: Bill Blaxner, head of Security, Bob Blankner, head of Information Technology Services, and the boss man himself, Blake Banlon, cofounder of Maxelon. It was Blaxner who was explaining what had happened.

Aria looked around the room, and at the computer that Blaxner was pointing at. "Aren't the police going to be involved?" she asked.

As one, all the Maxelon and Bulwark men gave her pitying looks.

"I wouldn't trust those bumbling Government clowns to find the answer if it bit them on the arse!" snorted Banlon.

"So this is going to remain a private investigation?" asked Don. "Fine." He gave Aria a reassuring look.

"Your company, as the one that provides the network security, along with guarantees about that security, is naturally the party we hold responsible," Blaxner added.

"Who was in the room around the time?"

"Only a small number of people usually go in, and that day was typical. Naturally you will be able to interview them all."

"And at the actual time of the theft?"

"Our records clearly show nobody was in the room at the time. Therefore, the data had to have been exfiltrated over the network. Which is supposed"—the sneer in his voice was palpable—"to have been protected by your company's service."

"How do you know any data was copied?"

"The storage arrays are in a locked vault behind this room," explained Blankner. "All data transfer attempts are logged, along with the identification of the encryption keys used. There was a bulk transfer of about one terabyte of data at 7:36pm last night."

"What kind of data?"

"Clinical research results, going back about five years. I'd say that's going to add up to a hefty bill for your people."

"Our compensation policy is based on the value of the data," interjected Don. "Value being usually based on patents, as mentioned in our contract. Was any of this actually patentable?"

The three Maxelon executives looked uneasily at each other. “Umm, not as such,” replied Banlon. “But it would—”

“Was it particularly confidential data? Leakage of which might be damaging to the company?”

“Well, perhaps—”

“Because if it has no patentable value,” interrupted Don, “and no confidentiality value either, then it’s hard to see what damage has actually been done to Maxelon. In which case, the value of the payout will have to be reduced accordingly.”

“But there’s a principle at stake here!” exclaimed Whitmore. “You got the contract over Bulwark because you claimed to offer better security controls than we did! Surely that reputation is now in tatters!”

“That remains to be decided,” replied Don. “Let’s get on with the investigation, shall we?”



THE NEXT ONE to be interviewed was another cleaner. Records showed she was the last one in prior to the theft. She was interrupted in the middle of doing the toilets, and still had overalls and mitts on as she came in.

“What is your name?” asked Aria.

“Marina Da Silva, ma’am.”

“You were cleaning in the data strongroom on the day of the theft?”

“Yes, ma’am.”

“Did you see anybody else in the room when you were there?”

“No, ma’am.”

“Anybody nearby, coming or going, as you were going in or out?”

“No, ma’am. There’s normally just us cleaners at that time of the evening. I was alone in that area.”

“This isn’t really leading anywhere,” interjected Don. “OK, you can go.”

“That’s the third cleaner. Do you really think one of them did it?” asked Aria.

“I’ll admit I can’t quite see how,” admitted Don. “But isn’t it always the case in the mystery novels, that the menial staff that can move around freely because nobody notices them coming and going, are the ones that pulled off the heist? Butler? Cleaner? Building maintenance? Security guard?” He gave a cheeky grin.

"We should check over the software for the access systems," said Aria. "Theirs as well as ours."

"Out of the question," immediately responded Whitmore. "You're not going to get your larcenous fingers on any of our valuable Intellectual Property."

Don mulled this over for a moment. "We'll show you ours if you show us yours," he finally said. "Fair swap, don't you think?"

Whitmore was incredulous. "Really? You'll let us look at your software?"

Don shrugged. "Sure. Why not?"

Whitmore's eyes narrowed. "OK. But visual access only, in our own facilities—no taking copies away from there!"

"Same here. It's a deal."

Later, outside the room, Aria asked her boss: "Whitmore seems to think he'll be learning some deep secrets about our software. Does he know that most of our security stuff is based on standard Open Source software, widely used all over the Internet?"

"Well, if he doesn't yet, he soon will," replied Don. "On the other hand, given the calibre of the skills that his people have exhibited so far, maybe they won't notice even then."



"I'VE BEEN STUDYING Bulwark's palmprint-identification code," said Aria. "I've made some interesting discoveries." She brought up a diagram on the projection screen. "It turns out there are not one, but *two* separate identification algorithms being run on the palm image. One is used to control the unlocking of the door, while the other is used to record who is entering or exiting."

She paused for a moment, surveying the faces in the room, noticing the range of expressions from mild interest at best, to skepticism and outright boredom at worst.

"Nothing strange about that, is there?" replied Whitmore. "Bulwark offers a wide range of security services and products, from the sale of the scanners themselves to the provision of vetting and logging services, the precise selection being tailored to customers' individual needs. We have a number of different departments involved, each dealing with a different aspect of the whole product architecture. Naturally they are each responsible for different parts of the necessary software."

I wonder why they can't figure out how to share common pieces of software for common functions, instead of each inventing their own, thought Aria. Aloud, she said, "I see. Well, I have found a way to fool the system, so that the door is opened *without the entry or exit being recorded.*"

That provoked a bit more interest. The bored ones looked a little less bored, at least.

"I have here a sample palmprint scanner unit, hooked up to my laptop where you can see a readout of the identification signals it generates. I've had to disable the blood-circulation and deep-tissue detection systems, so that it will work with my prosthetic hands. By the way, notice anything about my hands?" She held them up for inspection, and spread her fingers. "No?" She wiggled them some more.

"Six fingers?" commented Don, after a moment.

"That's right. I'm wearing my alternate hands today. I had them made about five years ago. I was keen on rock-climbing at the time, and I thought the extra fingers would give me a better grip. That worked quite nicely. And I would wear my regular hands on my legs, in place of my feet, so I had four hands instead of two. That worked amazingly well, too. But that's another story. Now," she paused, "how do you think somebody with six fingers is going to use these palmprint readers?"

To demonstrate, she placed her palm on the scanner unit, the first five fingers in the allotted spaces, the sixth one hanging over the side.

"That's the obvious way."

Then she changed her position, scrunching up her hand a little, so the index finger was up in the air, the thumb still managing—just barely—to remain place, and the other fingers moved up one.

"That's the other way."

She pointed at the screen readout.

"Now, how do you think the identification system is going to cope with these? Supposing the reference palm print was taken with the hand held in the first way, with only the first five fingers recorded, and the sixth finger out of the scan."

With the reader activated, she returned her hand to the first position on the scanner, and pointed to the two green lights on the screen.

"As you can see, both the identification systems are agreed on who I am."

Next, she moved her hand to the second position. This time, one light turned red as the other remained green.

"This green light"—she pointed to the screen—"goes to the door control. The red light is for the access logging system. I told you there were two separate identification algorithms running off the palmprint data. Seems like one of them will match four out of five of the right fingers in the wrong positions, while the other one won't." She gave a triumphant look around the room. "So now the door is open, and I could go in—or come out—and the system has no record of my entry—or exit."

There was a loud snort from the back of the room. “This is preposterous!” exclaimed Whitmore. “First of all, you’ve already admitted that you’ve had to disable some of the security checks on our device to get your ridiculous ‘hack’ to work. Secondly, where are you going to find this—this hypothetical polydactylic perpetrator of yours? The world is not exactly full of people with six-fingered hands, you know.”

“I know, but—”

“I’ve heard enough.” Whitmore got up from his chair. “Your attempt to pass the blame onto our company is not going to work. I suggest you simply pay the agreed penalty to Maxelon, and say no more about it.”

“Now hold on,” began Don.

“No,” Whitmore cut him off. “There will be no ‘holding on’. Bulwark is the foremost security company in the world, with connections to many important customers around the world. If you try to impugn the reputation of our company by publishing any of these ... purely hypothetical, far-fetched, fantastical claims of yours, we will bury you in lawsuits so deep, you will be spending the rest of your life digging yourself out! Remember, this country has laws against the spreading of fake news calculated to damage a company’s business!”

“But we can prove our claims in court!” Aria exclaimed. She turned to Don. “Can’t we?”

Don shook his head. “Not before they drive our company to bankruptcy, I’m afraid. They have the resources to tie us up in appeal after appeal. Basically, even if we win, we still lose.” He gave a reassuring look to an incredulous Aria. “Because the data was of limited monetary value, it won’t be such a big payout. Don’t worry. We’ll survive.” He turned back to Whitmore. “You did mention that you would say no more about it, did you not?”

“Hang on, I—”

“You said yourself, this country has laws against the spreading of ‘fake’ news calculated to damage a company’s business. If you want us to keep quiet about this, you’ll have to keep quiet about it too. So no trying to use this to damage our company’s reputation either, all right?”

Whitmore pouted, and said nothing for several seconds. “All right, Kayberling,” he finally responded. “Settle the penalties, and that’s the end of the matter.”



ARIA WALKED UP to the front door of the modest-looking house and rang the bell. The woman who opened the door took only a moment to recognize her. “Yes?” she said.

“I know how you did it,” said Aria.

“I don’t know what you mean.”

Aria held up her hands and wiggled her fingers, causing Marina's eyes to widen in surprise. Before the latter could react, Aria took one of Marina's hands and held it up. It was indeed perfectly-formed, right down to the extra finger. As was the other one.

A man appeared behind Marina at the door. "Marina? Who is this?"

Aria recognized him as one of the security guards that they had interviewed at Maxelon. "Manuel," she called.

"What do you want?" he asked.

"May I come in?" She held up her hands and showed her fingers again. The effect on him was one of astonishment. "You are one of those, too? Why that's—yes, please come in!" And he opened the door, ignoring Marina's pleading eyes on him.

Aria sat herself down in the comfortable living room, as Manuel served coffee.

"Another six-fingered girl, like my Marina here," he said with admiration. "You know how rare that is?"

"I have a confession to make," replied Aria. "My hands and feet are artificial—prostheses." She held her hands out. "See these thin little lines around my forearms?" She held her left wrist with her right hand. "All I have to do is activate the nerve to turn off the hypermagnetic attachment, and..." She lifted off her left hand, which came away completely from her arm, revealing her smooth forearm stump. She waved the hand and the stump around for a few seconds before reattaching her hand.

Manuel lost only a little of his look of admiration. "So you chose to have six?"

"I have two sets of hands, one with five fingers, one with six," replied Aria. "Today I am wearing the six."

"Feet as well? Marina here has six toes on each foot," asked Manuel, pointing to his girl-friend's bare feet.

"No, only one set of feet, with five toes each, I'm afraid," replied Aria.

"I love watching her do things with her hands," said Manuel.

"He keeps asking me what it's like to have six fingers. What can I tell him? I was born like this, I have nothing to compare," added Marina.

"I suppose I can answer that," replied Aria. "As far as I'm concerned, it's nothing, really. The first time I put these hands on, the best way I can describe it, it was really just a matter of apportioning brain sensations. I would try to move one finger, and two would move, that kind of thing. It was like an overlap of the mental image, with parts of five fingers spread over six. Once I got my brain adjusted to that, I was able to move each finger individually."

Manuel shook his head in wonder. "See, it's like you're talking some alien language. I can't even begin to imagine that."

Marina laughed. "I don't think I can imagine it either!" Then she sobered up. "You know about how the palmprint reader—"

"How you got in and out without it recording you? Yes."

"Are you going to report us?" Marina asked.

"I did explain my idea to a whole roomful of people," Aria replied. "Somebody else could think of you, and could put two and two together..."

Marina shook her head. "Nobody at Maxelon ever noticed anything unusual about me. That is, except for Manuel here." She took her partner's hand.

"You know, it's funny," agreed Manuel, "but people almost never notice anything unusual about her hands."

"So it's entirely up to me, isn't it?" Aria regarded the apprehensive couple for a moment. Then she shook her head. "I've been told in no uncertain terms to keep my mouth shut. I tried explaining to them how the theft was done, but it seems there are some gigantic corporate egos, and connections, involved. And my company, Sentry, is just a little fish in a big pond, without the legal big guns to defend itself in a fair fight. So it seems the whole issue is going to be quietly buried: my company takes the blame for the failure, we pay a token penalty to the customer, and everybody says no more about it."

"The data we took—"

"I know. Clinical results about the efficacy of various curative and preventative treatments for diseases. None of which are patentable. And the company makes a bigger profit from selling non-curative treatments that need to be taken for the lifetime of the patient, rather than ones that end the disease once and for all, or prevent it in the first place. So instead of publishing the information, Maxelon was going to simply sit on it."

"We felt that was unfair," explained Manuel. "The information deserved to be out there, so that other researchers can make use of it."

"How can you steal something if you haven't deprived the owner of it?" added Marina. "They still have their copy, we just made another one."

Aria gave a sardonic grin. "Technically, the law says otherwise," she replied. "But who am I to argue with the machinations of Big Business? If they aren't going to come after you, why should I?"

"Would you like some cake?" asked Manuel.

“Are you in a hurry to go?” added Marina. “You could stay for dinner.”

Aria slowly smiled. “I guess I can stay a while...”

