Chapter 1

"This is Cynthia Morrissey reporting from the scene of an extraordinary hostage rescue. Using the teleportal device first revealed on my newscast earlier this week, FBI agents liberated the five people being held by alleged Russian mobsters. The hostages were whisked away moments ago by federal agents..."

Phoenix News Channel 13, September 10

Day -24

I'm Samantha Pederson, an analyst for the government at the Technology Reconnaissance Agency, where I've worked since 2014. We analyze published discoveries, theories, inventions, and the like for possible threats to our national security. I was present for our first contact with another universe. I wish the rest had been that easy.

This whole mess started when my boss, Dr. Richard Frost, found out through a highly suspect internet post that Dr. Melissa Kim, Greg Masterson, and Troy Santori had possibly developed a functioning teleportal in the Phoenix, Arizona, area. Considering that teleportals would allow instantaneous transportation to any place, they would have a devastating effect on the transportation industry all the way down to oil refineries and everything that supported them. They would also do away with national borders.

Since both effects would be viewed with grave concern by the government, Dr. Frost called an emergency meeting of our section to decide how to determine if the post was valid and, if so, what to do about it. I must have opened my mouth one too many times because he assigned me to head up a team to learn about the development, but he might have chosen me because of my combined experience as an officer in Marine Corp intelligence and in the agency.

Right away I discovered my team and I were going to be tested to our limit. Our charter was threefold: to confirm the development of teleportal technology, prevent the device from falling into the wrong hands, and keep the developers out of trouble. Unfortunately they were already in trouble before we landed in Phoenix, and it got worse after we arrived.

We nicknamed Melissa—Dr. Kim—, Troy, and Greg the "Wormhole Trio" because they had used what they called wormhole technology to develop the teleportal. Our original plan had been for my team to stay in the background, but we were all green at surveillance operations. The Trio almost immediately found out we were watching them, and they literally headed for the hills—specifically, the Mogollon Rim. The upshot was that Troy, Greg, and Greg's family were taken hostage by Russian mobsters who had been hired to stop American development of the device and erase any trace of it. By working with other federal agents, state police, and Melissa, who had avoided being captured, we were able to free the hostages but not without hair raising complications, including the first use of teleportals with live subjects.

Once the dust settled, the Trio and Greg's family became guests of the US government at a safe house in western Colorado, so they could continue teleportal development in safety—and

so the government could keep an eye on them. Since I was one of the few people outside the Trio who had some idea of how teleportals functioned, my work partner, Jack Kirton, and I were called away from our duties in DC and assigned to work with the Trio at the safe house. I suspect it was Dr. Frost's way of keeping the NSA from bundling them up and taking them somewhere they'd never be heard from again. It didn't hurt my feelings any. During our surveillance of the Trio, I had met and fallen in love with Troy.

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Day -24, 1:30 PM

Less than an hour after Jack and I arrived at the safe house, I was alone with Troy in the room that had become the teleportal workshop.

"Wow, it's good to see you," he said. He put his arms around me and kissed me. Then he held me at arm's length and looked at me as if he still couldn't believe his eyes. He said, "When they drug us out here in the middle of nowhere, I was afraid I'd never see you again." He pulled me back to him. "I don't ever want to be without you again."

"Not a chance. You're stuck with me." I brushed a wisp of hair out of his eyes and kissed him again. "I'm not about to let you get away." I leaned my head into his chest.

A peal of laughter from the front deck broke the spell. We both looked toward the open door. Troy stepped back. "Let's continue this tonight ... after lights out. I really do have some work to do, and you can help."

Fifteen minutes later I was helping fine-tune the portals when he let out a war whoop that jarred me out of my chair. He ran to the open door and shouted to the team members, "Hey! You've got to come see this." He was so excited that he was literally dancing around in front of the computer he had been working on.

Melissa was the first one into the lab. As soon as she came through the door, she must have seen what had Troy so worked up. She stopped so suddenly that Greg's wife ran into her. With a look on her face I can only describe as shock, Melissa stared at Troy's monitor and whispered, "Oh, my God."

I followed her gaze. The call light was flashing, but the call-in readout didn't make any sense. The coordinates couldn't be real. If they were, someone—or something—from someplace other than Earth was calling in.

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Day -24, 2:00 PM

In minutes most of the occupants of the safe house had gathered in the room with us. Only the guards were missing. Greg's son, Kevin, glanced back and forth between Melissa and Troy. "What's all the excitement about?"

Melissa choked out, "Somebody is calling us."

As far as any of us knew, there were only four working teleportals, and they were in the room with us. Questions exploded: "Who?" "How?" "What do you mean?" All the chattering made it almost impossible for anyone to answer. Troy silenced everybody with a piercing whistle.

He passed control of the room over to Melissa. "Mel, would you explain to everybody what this means?"

Melissa still appeared to be in shock, but despite being dazed, she responded with metered words, "As unbelievable as it sounds, we seem to have made contact with an alternate universe. That's the only rational explanation for those coordinates that I can think of."

The room remained totally silent as the group digested what they had heard. Then the excited babble returned. Melissa had to wave both her hands above her head to get quiet again. When the noise finally subsided, she continued, "This is an incredible opportunity, but we have to be careful. We can't delay too long in responding, or the whatever-they-are at these coordinates may think it's just a glitch and turn off their invitation."

"But we have their coordinates." I interjected.

Melissa nodded. "True, but if they've moved on, they might not respond to us. We don't know how or why this came about. If we don't act quickly, we might lose the chance to make contact. On the other hand, we can't just open the interface. That could be an invitation to disaster." She looked at Troy. "I can't see any reason why we can't open the interface in visual-only mode, can you?"

"Radiation. Heat. Glare. But other than that, no." His humor went over most everyone's head. "It would be safer to respond to them without opening the interface in any mode. Maybe we could send a pulse pattern through the call-in circuit. They could tell from the pattern it wasn't natural and know it wasn't some kind of glitch. In the meantime I could adjust the opacity of our teleportal so none of that nasty stuff could get through."

He turned to me. "Sam, would you send the pulses?"

"Got it." I sat down at the computer and started sending a dot-dash pattern where the number of dots and dashes increased and then decreased. I was in my second repetition when the call light started flashing with incoming dots and dashes.

I almost jumped out of my seat again. It was Morse code: "HELLO"

I felt like a kid who had just aced my first test in school. I responded with "HELLO YOURSELF [pause] WHO IS THIS"

In those few seconds while we were waiting for a response, Troy finished adjusting the teleportal parameters so the interface bandwidth was limited to visible light and the

transmissivity was opaque. Then he nodded for me to accept the call-in. I had to wait for the incoming response to finish. It said, "YOU SPEAK ENGLISH."

Rather than send a reply, I clicked the accept button. The opening of the primary portal, a metal door frame, went from being transparent to being filled with an interface that shimmered and went black. Then, as Troy slowly cleared the interface, the vague gray shapes on the other side began to take form and brighten. In a way it was anticlimactic. We were looking at people. They appeared to be ordinary humans. This had to be another Earth.

Melissa whispered, "Alternates." The name immediately stuck.

For the longest time everyone on both sides of the interface, we and the Alternates, could only stand there with our mouths open. Then someone, Greg's daughter, I think, smiled and waved, and pandemonium broke loose; both sides began waving and chattering excitedly. Kevin was the first to take useful action. He surprised us by dragging the white board over in front of the portal and erased all the scribblings. He quickly wrote, "You can read this, can't you?" I have to admit it was faster than my Morse code.

The Alternates gaped. They all nodded, and a couple mouthed, "Yes." One of them ran up to their portal and turned it so it faced their white board, which was firmly attached to a wall. He wrote "We sure can."

Melissa took over our white board and started an exchange with the Alternates. Everyone else stood around watching the exchange and commenting on it—everyone except for Troy.

He removed the cover from the call-in box of the teleportal and began hooking a microphone and speaker into the circuit. When he finished, he held the box in front of the portal and showed the Alternates what he had done. They understood, but it took them a little longer to hook up a mike and speaker because they had to remove the cover from their portal to make the same modification. When they were through, one of the Alternates took the initiative and said, "Okay, we're hooked up. Do you hear me?"

Troy responded, "You bet."

We could talk to each other. Since we had already seen they wrote in English, it was no surprise that they spoke it as well, albeit with a vague accent.

We introduced ourselves all around. Troy started it. "I'm Troy Santori. I'm still trying to wrap my mind around this. What say we start by introducing ourselves individually back and forth? Who wants to be first on your side?"

A plump man, a little shorter than I, stepped closer to their portal. His round face and horn-rimmed glasses reminded me of a puppet scientist I'd seen on television. Unlike the puppet, however, he had a full head of brown hair. "That would be me. I'm Dr. Eric Friedlund. It's a pleasure to meet you and quite a surprise."

The Alternates turned out to be a teleportal research team at their version of NYU headed by Dr. Friedlund. Teleportals were their primary means of transportation, and his group had

gotten a grant to search for active teleportals in other universes. So far ours was the only one they had found.

When the introductions were over, Kevin with his usual direct approach asked, "Can we open the portal now?"

Melissa jumped in. "Sorry. We don't know if their universe and ours are compatible. Until we do, we'll have to be satisfied with this awesome stereo view." She glanced at the Alternates.

Dr. Friedlund was quick to agree that we needed to be cautious. "Opening a portal to an antimatter universe could be disastrous, and who knows what other dangerous variants there could be. The first thing we need to do is devise a way to safely test opening the interface before we do it without restrictions."

Kevin said, "Aw, I wanted to be the first person through." But he didn't press the issue.

The guards had to get back to their duties and the cook wasn't impressed, but over the next several hours the rest of us on both sides of the portal held an enthusiastic discussion of how our worlds were alike and how they differed.

The Alternates had managed to avoid World War II, and international tensions such as Stalinism and terrorism weren't a problem in their world. But they also had a twenty-year head start with teleportals, which had effectively done away with borders and given them a lot more insight into the use of portals than we had.

Since our primary concern was safety, we asked how they dealt with preventing misuse of their teleportals. Even though their political climate makes the misuse of portals less of a worry, they are still concerned about privacy and personal safety. Exchanging technology with them will definitely be a major help in developing our own security measures.

We were so engrossed in our discussions that we totally forgot the time. Before we knew it, the cook announced dinner was served. We quickly agreed on meeting the next morning to work on a sort of overview of what we could gain from each other and how we would go about it. Kevin once again surprised us by asking the Alternates for their exact time to make sure we were synchronized. It was a good thing because they were on Eastern Standard Time while we were on Mountain Daylight Time. They had briefly flirted with daylight savings time, but teleportals made it pointless.

As we headed for the dining room, Greg's wife wondered aloud whether we should invite government representatives to the table. Boy, did she cringe from the glares she got.



Day -24, 11:30 PM

When Troy and I went to bed that night I expected to continue where we had left off in the afternoon, but he was so excited about the first contact that he kept babbling about it. As we were climbing into bed, he said, "Other humans, can you believe it? Of course you can; you were there. Wow."

I snuggled up to him, and he put an arm around me. He continued, "Think of what we can learn from them. They've been using teleportals routinely for twenty years. Can you imagine?"

I brushed my fingertips across his lips and said, "Shush."

He stopped talking and kissed me. "I sure am glad you came today."

But then he said, "I still can't believe it, another universe." Eventually he ran out of steam and dozed off. I can't say I was really disappointed. I was excited too. I bent over and kissed him. He didn't stir. Oh, well, we were going to have a lot more nights together—hopefully, not all like this. I pulled the covers up and drifted off to sleep in his arms.

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Day -23

Contacting an alternate Earth had upset the whole dynamic at the safe house. Our original purpose there had been to develop ways of preventing terrorist and criminal exploitation of portals without having to resort to government control over all of them. Now, determining how far we could safely go toward opening the interface to the Alternates became our primary objective.

Jack, who already felt like a fifth wheel, volunteered to go back to DC and report on what had happened. This was too earth-shattering to talk about over a satellite phone. He caught the next plane out of Grand Junction.

I stayed on at the safe house, working with the Trio and the Alternates on a safe way to open the interface between our universes, but finding one remained elusive. In the meantime we used the portals to exchange thousands of terabytes of information, improving understanding on both sides of not just teleportal technology and the nature of the multiverse but also each other's histories. We could exchange information without physical contact, but stepping through the interface was our ultimate goal.

Unfortunately, the folks in DC had trust issues. They insisted on being sure the Alternates weren't aggressive non-humans hiding behind electronically generated human images. They wanted a way to confirm the Alternates were what they said they were, so they sent NSA specialists to watch over our shoulders. We at the safe house knew this was xenophobic hysteria, but as long as we were working out of a government safe house, we had no choice but to play along.

But not long after NSA arrived, confirming whether the Alternates were really human became irrelevant. Duncan Reid happened.