

Course Correction

By S.A Thurtle

Andy May leaned back in his seat and took in the scope and glory of it. His office, situated above the operations floor, gave him a full view of the massive screen which covered the wall at the end of his control room. The screen was covered with a simple outline of the territory that his team covered, stretching from the east coast of Australia to the western seaboard of the US. Known as APAC, this was his area, his patch. Scattered all over his patch, green arrows. Slow moving green arrows. Each crawling towards a destination far from home. Each a massive, autonomous container ship hauling containers full of... well, everything. Food, raw materials, furniture, cheap toys from Chinese factories and luxury cars from Europe. All winding their way, slow and steady, across the screen.

The right hand of the screen had a thick bar with key information. The time, date, things like that. But also, some of the scary figures, active vessels, 27,034. His head always hurt when he saw that. Shipping had always been huge, his own great grandfather had been a shipping magnate based in Cyprus, so he knew that back in the early 2020's they'd see fifty-thousand ships a day globally. But when the CAPTAINS AI system had been introduced, it rocketed. Over five short years every vessel had moved onto the CAPTAINS platform, each joining and sharing information via the systems Mesh-Mind network. Faster than any one person could register it, thousands of vessels would know that weather conditions in an area were adverse or beneficial and all courses correct as appropriate. The savings in fuel, time and crew costs were astronomical. Plus, of course, the environmental benefits from shorter trips and more efficient operation kept the Eco-warriors quiet too.

Then he looked at the next figures on the screen, vessels offline, zero. Accidents in the last 12 months, zero.

With each able to monitor and report their status down to the slightest drop in performance, issues were detected and fixed before they were a problem. Maintenance volumes went up, but time spent on that maintenance dropped through the floor. Less time in dock, more time at sea. Andy had even heard some dry-docks were going out of business. Just not enough work. He felt bad for them, of course, but then, this was the future so evolve or die.

Even the petrochemical industry had begun to implement AI within their fleets. Opting for a different platform than CAPTAINS, but based on similar tech. Still, Andy was glad not to have those under his care too. There was only so much pressure a man could take, he thought, picking up his coffee and taking a sip with a grin. He put the cup down as an email pinged up on his screen, a meeting requested from Mike Rowan, the head of engineering. He clicked it open, looked at the time and the title, then hit accept. The meeting was scheduled for 3 minutes time and was labelled urgent. In all the years they'd work together, Mike had never been anything but calm and even. A steady voice in moments of stress. Urgent did not sound good.

Standing up from his desk, Andy walked quickly to the window, intending to gesture Mike up, but before he could get to there, his door banged open, as the engineer barrelled into the room, arms full of paperwork. He paused when Andy wasn't at his desk.

"Mike, what can I..." he began, then paused as Mike spun to look at him. Normally well-groomed and professional, the older man had thick black rings under slightly bloodshot eyes. His usually plump, rosy cheeks now sunken and white.

"Andy, big problem. Real big." Mike said, out of breath.

"Okay, sit." Andy said, closing the door to his office on the way back to his desk. The sight of the usually calm Engineer in such a mess genuinely rattled him. Sitting down, he took a breath, turned off his screen to give Mike his full attention. "Tell me."

Mike paused, his mouth opening and closing for a second. "I don't know where to begin with this."

"At the start." Andy replied, his voice calmer than he felt, as the Engineer reached over, picked up Andy's coffee and drained it in one.

He put the cup down, looked at it again, “Sorry” Mike said, Andy brushed the comment away and waited, “Okay, the start. You remember we got that call from Europe Command yesterday?”

“Yesterday? That was Wednesday?” Andy said, “Hang on, when did you last go home?”

“In that case, I’ve not left since Wednesday morning. Not important. They called as they’d had an incident and wanted my input.”

Andy nodded, Mike was well known for his expertise, “Yes, some type of accident?”

“More than that. One of the Gen8 RORO vessels ploughed into another vessel in the port of Southampton in the UK. Damn near cut the other ship in half, both ships took on a huge amount of water. Estimates are that we they lost about 5,000 of the 12,000 brand new cars which were on the two.”

Andy whistled, “Wow, okay, that’s a concern.” He leaned back in his chair, trying to remember when he’d last heard about an accident and came up blank. “So, what happened? Hardware failure?”

“That was the issue. Everything in the CAPTAINS system was fine. No hardware or software failures. That’s why the EuroCom sent it to me to check out. They were lost as to why a perfectly functioning AI decided to just try and sail through another vessel and the quay. So, they gave me access to everything they had and remote into the Gen8 as well. It took a bit, but I figured out the issue. Do you remember the upgrades they made us install on the Backstop hardware in January?”

“Yeah, some senator got another layer of security put in place, active intrusion countermeasures, right?”

“More like paranoia, that’s the best way I can put it. CAPTAINS has built in threat detection, and it’s part of why we’re here, to look out for things like that. But this idiot got a stick up his ass and then some external specialist

company, owned by his son, gets to 'upgrade' the whole fleet." Mike shook his head, "They made millions, hundreds of millions, overnight. For pushing out a software patch."

"Nice work if you can get it."

Mike let out a quiet laugh, then continued "Thing is, this was the same senator who had us put in the Backstop hardware in the first place five years. I told you it was weird at the time. Why put a high-powered computer in on each ship with a gyroscopic compass? It made no sense. CAPTAINS had fail-over and redundant systems. It doesn't need a secondary compass back-up, especially one powered by the second most powerful hardware on the vessel." He shook his head again, "I guess we know why now. This must have been the plan from the start."

"Okay, enough of the conspiracy theories, what does this have to do with the accident?"

Mike coughed and rubbed his eyes, "Sorry, well, what has happened, from what I can tell, is that this new AI on the Backstop has, for want of a better term, become paranoid. Every two-years we apply an adjustment to gyro compasses to allow for the movement of the magnetic north pole. It moves a bit ever year, so we need to adjust for the deflection, it's not a big amount, but it's important, right?"

"Yeah, I recall, we sent that out with the update on Monday, right?"

"Yes, Sir, yes, we did. Now, that hit the CAPTAINS platform and was installed as it should be. However, when it was pushed to the Backstop system, the new AI on this Gen8 decided that it didn't like the look of it. So, it didn't install it. Then it seems to have had a think for about twenty-four hours. Can't tell you what it was doing. But it suddenly sprang to life as the vessel was running up the Solent which is the waterway to Southampton. It decided that the new location of north was, in fact, an attack. It then identified the CAPTAINS network as the attacker."

“Jesus.”

“Yup, pretty much.” Mike said, “At this point it just went crazy. You see, our senator friend required that this new AI should have admin control over the whole vessel. Complete command and control. At every level.”

“What? Why?” Andy said, “We don’t give AI that level of root control, just in case. Why would he override such a simple basic...” his worlds failed in the face of the vast stupidity.

“I know. And not only did they not tell us that they had done it, but they also actually told me that they hadn’t. So, I asked for their testing data yesterday, this is it.” Mike gestured at the folders, “They ran it in a simulator for ten, thirty-minute sessions, then passed it for use.”

Andy’s mouth opened, shut, then opened again.

“Exactly what I thought.” The engineer said, “Now, with all this power, what it did is went back through and systematically deleted every update applied to the vessel since it was commissioned, because it all came from the CAPTAINS network, which is now an aggressor.”

“Everything?”

“Everything. Including that GPS glitch from two years ago. The one where the onboard GPS was being processed incorrectly and was adding an extra degree or two to the ship’s true location.” Mike said.

“What? I never heard about that. When the hell did that happen?” Andy demanded, his day getting worse by the second.

“You didn’t hear about it because we picked up the issue here during a standard two-day simulator test. It was built into a planned update. We asked to delay the update, which got rejected by the powers that be, so Ricky

wrote a patch, and we rolled that out globally with the update. It was never an issue. But that update was when we were trying a new method of delivery, so it's not from the CAPTAINS network, though our patch was."

"You're telling me that this admin AI is enabling a broken patch and removing the fix?"

"Amongst other things. Honestly, some of the changes it made to CAPTAINS seem almost arbitrary."

Andy shook his head, "Okay, so this Gen8 is now offline? What's the likelihood that the issue has spread?"

"One hundred percent," Mike replied, sounding very tired, "When the Gen8 hit the other ship, it followed standard procedure. It sent out a mayday and blasted the root of its issue to the Mind-Mesh so that the rest of the network could learn. The EuroCom team didn't pick this up. They also didn't take it offline."

"Isn't it standard to take the AI offline in these instances?"

"Only CAPTAINS, not the Backstop. So, that continued to broadcast its situation to other Backstop AIs. From its perspective, as it was attacked, probably hijacked. Then, when I began my investigation and started remote accessing the Backstop it had a complete meltdown, blasted a message across the Mind-Mesh then cut all external communication."

"How can it even begin to do that?" Andy asked, his eyes shifting to the green arrows on the screen behind Mike.

"Because someone gave it admin access. I think it deleted the driver software for all the modems on the ship. All of them. I had one of the EuroCom team go down there and plug into one of the network ports on the bridge, and it was dead."

Andy took a deep breath, rubbed his forehead, "Okay, how bad is this?"

“From what we can tell it’s spreading across the Mind-Mesh. Affected ships go dark to the CAPTAINS network and adjust their course instantly, based on ‘corrected’ GPS data. They seem to be heading towards their planned location, but if they’ll arrive, stop in the middle of a sea lane, run aground, or follow the same example as the Gen8, we have no idea, as we can’t tell which ships will louse up their navigation information at this point.”

Andy stood up and walked to the window. The green arrows crept their way across the screen. On the side, the figure of 27,034 active vessels remained unchanged. As did zero accidents. But for how long? Closing his eyes, Andy let a moment of panic wash over him, cars, raw materials... food.

His eyes sprang open, taking a deep breath, he strode back to his desk, “Okay, Mike, I am going to make a call then you’re going to have to explain all that again, okay?”

“Sure, boss, just, can we get some coffee up here first?”

Andy nodded, picked up the phone to get some coffee sent up, just as the active vessels number changed to 27,026 then started to slowly tick down...