

MARSOC



RAIDER 40: VOL 1-3

ARCTIC URGENCY

A Fictional Intelligence (FICINT) Short Story

Author: Neal Ellsworth

Mentored by: August Cole and P.W. Singer





The following “useful fiction” narrative is designed to help envision key elements of the MARSOC operational concept known as SSR — Strategic Shaping and Reconnaissance. This story builds upon the “Safe Harbor II” origin story as part of MARSOC’s RAIDER 40 series.

The intent of this story is to spur conversation around applications of information and nonkinetic effects in strategic competition. The story also addresses partnered operations, human-machine teaming, spectrum management, and communications in denied environments.

And as you’ll find out, human adaptation is still a critical component in future competition and conflict.

Author’s Note: This story was created in part by generative AI software to experiment and learn its capabilities and limitations. It is incumbent upon the SOF community to continue to learn and adopt new technologies, and generative AI will play a growing role in how people interact with the digital world. Using the AI tool enabled the author to write and edit faster, but original ideas, with very human decisions, and copious editing created the story below.



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GLOSSARY

AI: Artificial Intelligence.

AR/HUD: Augmented Reality Heads-Up Display, typically goggles or glasses.

CD&I (G5): Combat Development & Integration.

EMSO: Electromagnetic Spectrum Operations.

F2T2EA: Find, Fix, Track, Target, Engage, Assess.

FICINT: Fictional Intelligence.

FSK: Forsvarets Spesialkommando (Norwegian Special Forces).

GPT (ChatGPT): Generative Pre-trained Transformer (AI Programming).

JIIM: Joint Intergovernmental Inter-agency and Multinational.

OAI: Operations, Activities and Investments.

NGO: Non-Governmental Organization.

MARSOC: Marine Forces Special Operations Command.

SOCOM (also USSOCOM): United States Special Operations Command.

SOF: Special Operations Forces.

SSR: Strategic Shaping and Reconnaissance.

White Hat Hacking: The authorized attempt to seek out vulnerabilities within a computer network or system.

SOMEWHERE OVER THE BARENTS SEA

“Morgan, you need to check this out. More alerts of Norwegian wind turbine malfunctions.”

Marine Raider Staff Sergeant Morgan Finch swiped open his information environment application on his helmet’s Augmented Reality Heads-Up Display, or AR/HUD. He quickly scanned the headlines and summary provided by the Hive.

He waved over to his team commander, Major Ben Cole. “Sir, I just got an alert about a possible trending story; *Statkraft Wind in Trouble*. Looks like more of the turbines are malfunctioning. Linking you in now.”

Major Cole acknowledged, looking at the information replicated in his AR/HUD. It certainly made their mission, to investigate one of the Norwegian wind turbines that had drifted into disputed Arctic territory, more challenging. He had hoped this event would remain low profile, allowing them to investigate before any media picked up the turbine’s movement into the disputed area. The Marine Raiders and Norwegian FSK had a long-standing partnership and had done combined missions in the Arctic now for over two decades. Now the combined special operations team was dressed in plain utility jumpsuits, riding in a Statkraft commercial tilt-rotor aircraft flown by Norwegian pilots to keep a low profile near the maritime border. Major Cole enjoyed the corporate ride. Unlike the Marine Corps Ospreys where there was an ever-present roar of the engines, this aircraft was near quiet.

“Good to know, anything popping about us, or anything related to our mission?” Major Cole asked.

Morgan thought for a moment. He knew the Hive didn’t just push all new stories his way so this must have been some reason the reach-back AI sent it.

“I’ll do some more digging and let you know,” he responded. Then, speaking into his headset directly to the Marines and AIs at the Hive back at Camp Lejeune, he asked, “Are there any other news stories that relate to this one?”

The Hive acknowledged and Morgan waited. He knew the Hive could respond near instantaneously, but bandwidth remained an issue with communications, especially in flight.

He remembered back to a few years ago when the Hive was first coming on-line. Everyone had been using AI for everything by then. After ChatGPT, generative AI spread quickly, except in the United States military. Late adopters as always, he knew adversaries had very sophisticated large language models that were trained on past conflicts and had been used in regional disputes and elections to shape events. The Hive sent Morgan a quick summary of the current tensions in the Arctic including statements by Scandinavian leaders on the next developments in wind energy for Europe. Included in the summary were testy statements about the Norwegian government’s expansionist aims and how their Wind Zone, a large swath of the Barents Sea claimed by Norway, was another country’s territory.

Morgan craned his neck around and stared out the window in the side of the aircraft. A blanket of clouds hung over the ocean, turning the midsummer sunlight pale and washing the colors out. Grey skies and grey water as far as he could see. As the journey stretched beyond two hours, they flew past some of the turbines which stood like sentinels reaching into the clouds. After a long stretch of empty ocean, a lone turbine came into view. All the Raiders received an alert from the

aircrew that they had just passed into adversary-claimed territory. As the aircraft approached the turbine, Morgan felt the familiar stomach drop as the aircraft transitioned to a hover and began descending toward the turbine's platform. He looked upward through the window at the massive propeller blades extending into the sky.

Morgan gazed in amazement. "They must be as tall as a skyscraper!" he said to Henrik.

Nilsen, one of the Norwegian commandos who also happened to be the team's drone specialist.

Henrik replied, "Taller. One of these is as tall as your Empire State Building."

"These have to be twice as tall as the ones I grew up near," Morgan said.

The aircraft landed hard on the floating platform and the commandos quickly disembarked, sprinting across the deck straight for the maintenance hatch set into the tower. Henrik was last out, wheeling a large, ruggedized case with him. Major Cole paused on the deck for a moment to radio back to the aircraft.

"Stick close by, we may need a quick exit!" he shouted over the rotor noise. The pilot acknowledged, "I'll remain in friendly airspace, we don't need any unwanted attention."

As the tilt-rotor lifted off the deck in a swirl of ocean spray, Major Cole turned and stepped inside to the shelter of the turbine's base, passing Morgan who had set up their satellite antenna just outside the hatch. Satellite communications still had the highest bandwidth to access the Hive. Henrik opened his ruggedized case and assembled their most versatile tool: an advanced drone modeled after the cormorant, a bird known for its unique ability to fly and dive underwater. After assembling the drone and ensuring a solid connection, Henrik launched the drone into the Arctic air with a swift throw. The drone's sleek body cut through the wind as it circled about the turbine platform. The drone served as their close in over-watch, its sensor feeds piped directly to Henrik's AR/HUD. He saw nothing of interest except grey waves and signaled all clear to Major Cole.

Inside the turbine's base, the open hatch illuminated everything inside with the flat, pale light of the overcast day. The room at the turbine's base was spartan, with a bank of machines and diagnostic panels against one wall and a small elevator extending upward into the darkness against another wall. Chief Warrant Officer Salvatore Lecce, the team's cyber specialist, moved to the diagnostic panels.





“Main power is off-line but we’re still running on backup power. I wonder why it didn’t just switch over and keep going.”

He swung his backpack off, pulled a bulky plastic case out, and set it on the floor. It contained an on edge, stripped-down version of what the Hive offered. Salvatore opened the case and connected the wires in the case to the diagnostic panel. Salvatore then connected his AR/HUD to the case. It didn’t have the processing capability of the full reach-back AI but enabled on-scene support much faster.

Salvatore’s AI was designed around a specific purpose: cyber diagnostics, intrusion, and hacking support. He spoke a couple of commands to the AI.

“Run diagnostics to see what’s going on. First, I want to know why the on-board AI isn’t working. And second, I want to understand why backup power wasn’t sufficient to keep this turbine on course. That should get us started.”

The Edge-Hive acknowledged, diagnostic data from the turbine’s systems appeared on Salvatore’s AR/HUD. After a couple of minutes, an overview of the diagnostic appeared in front of him. As he panned around the room, the HUD overlaid multiple yellow and red warning indicators over the machines and diagnostic panels. The turbine’s autonomous inspection capability was apparently off-line and had forced an emergency shutdown of the entire system. Scrolling across the bottom of the HUD the Edge-Hive was making multiple attempts to work rerouting processes to re-engage power, but a strange code was blocking them. He manipulated the 3D projection of the code, relying on his AI to find and highlight aberrant code sections. A section of code was highlighted and centralized by the AI for closer human inspection.

“Sir, I found something here,” Salvatore said. “Back when I was in the private sector, I did some white hat work for Microsoft. I noticed some of this same syntax, or code, appearing in some of their AI software. It created inhibitors to specific processes and caused hallucinations around specific topics. Took a while, but we figured out where the malicious code originated. It was a Belarusian company. But that was four years ago, and the US heavily sanctioned them, tying their actions to cyber terrorism that was passed off to the counter threat finance folks. The company went under within a year.”

Salvatore mused aloud, “I wonder if someone’s recycling this code? But it’s old...”

Major Cole turned over Salvatore’s comments in his head. He knew tensions were high in the Arctic, and everyone from nations to corporations to Non-Governmental Organizations (NGOs) were in a semi-secret fight over resources.

The commandos couldn’t upload everything they pulled from the turbine to the Hive from here. They would have to get back to their operating base ashore. He keyed his headset.

“Raider Main, this is Raider Three Two, standby for sit-rep.”

Silence.

He tried twice more with no luck. Looking down at his radio, Major Cole realized he had no connection to the satellite. He checked his radio, the cables, and the antenna and all appeared in working order. The link appeared severed. He switched frequencies and tried to hail the aircraft. No luck there either. He ran outside and looked over to where the aircraft remained in a holding pattern.

His HUD should have fed him the aircraft location and status, but he could barely see the aircraft, a black dot moving against the grey sky. He tried to reach the aircraft again with no response.

“Henrik, I hope we still have our drone. I’ve lost all comms out and I get a sense we’re going to start having problems.”

Henrik gave him a thumbs up and responded, “Drone connection is solid! I’m going to send it out farther to get a sense of what else is in the area.”

Cole nodded and turned back to his radio, knowing he needed to reestablish a connection to the Hive as fast as possible. Because of the sensitive nature of the mission, they were relying on external support, back in Norwegian territory, to get them out if things went sideways on the turbine.

▲ THE HIVE: MARSOC HEADQUARTERS

Lieutenant Colonel Marcus Wright watched the Norwegian mission unfold from the Hive. Up until a few moments ago, he was watching the positions of the aircraft and the team on the wind turbine.

Now he had nothing: their live feed was gone.

Lieutenant Colonel Wright frowned and noticed the satellite connection to Major Cole’s team go dark on his display too. The operational feed was replaced by a static map with the last known locations of the team members. He turned to his information chief, Master Sergeant Lisa Vaughn.

“Vaughn, we’ve lost contact with Raider Three Two. Can you check the comms?” he ordered.

Vaughn quickly started troubleshooting, her jaw clenched in concentration. Meanwhile, Wright continued to monitor the other feeds. He could see



the aircraft's beacon was still active, and the team was still in position on the turbine in disputed Arctic territory. The turbine appeared stationary, but there was no way to be sure with the satellite link down.

"Sir," Vaughn said, her voice tense. "I can't restore the connection. It's like they've gone dark. And I'm also seeing this..."

Vaughn projected her display to the main screen, showing a stream of social media updates, anomalies, and trending topics.

She highlighted a rapidly emerging thread for Lieutenant Colonel Wright: a military helicopter landing on what appeared to be the very same wind turbine the team was investigating. The initial post appeared to be a shaky video of a military helicopter with "US Navy" on the side descending onto the wind turbine's helipad, followed by an influx of troops streaming out. The caption read: "Military invasion or routine check? You decide. #MysteryChopper."

As a seasoned information specialist, Vaughn knew this was a faked video. She quickly sent the post and the trending hashtag into her social media modeling software. She watched as it predicted several future trend lines for the story. The most dangerous visualization showed an explosion of data points, like a supernova of retweets, shares, and comments. On the common information environment picture, she watched the story spread across multiple media platforms.

She sat back, staring at the screen in disbelief. She knew they needed to get ahead of the story, but the viral nature of the situation was already spiraling out of their control. Unanswered questions raced through her mind. As Vaughn watched the unfolding situation with growing concern, an urgent news alert from a reputable international news outlet blinked on the screen, its headline emblazoned in bold letters: "Arctic Leaders Condemn Militarization of the Arctic, Expansionist Actions on Norwegian Wind Turbines." The news piece includes a punchy hashtag: #Polarpowerplay.

In the article, several leaders of adversarial nations vehemently criticize the apparent military involvement in the Arctic, specifically pointing out the wind turbine incident in Norway. Their denunciations, coupled with the video of the military helicopter landing, sent stronger ripples across the digital landscape.

Vaughn added this new information to the modeling software. She watched as the visualization of the data points morphed, adding more layers of complexity to the rapidly spreading story. The software predicted a significant increase in the virility of the story with the addition of the international condemnation.

The story wasn't just going viral – it was evolving into an international incident, a real-time digital wildfire. And she's in the center of it all, with a front-row seat at an event that could potentially reshape geopolitical dynamics in the Arctic. She began working on a counter-narrative, with the Hive's AI generating possible trending hashtags and image content. She wondered if it would be too late.

♣ SOMEWHERE ON THE BARENTS SEA

From his position on the wind turbine, Henrik quickly lost sight of the drone as it sped toward the horizon, its on-board cameras and sensors transmitting real-time data back to him. It wasn't long before the drone pinpointed an anomaly: a lone fishing trawler, seemingly innocuous but for a large shipping container on the aft deck that stood out like a sore thumb. Henrik's AR/HUD flagged the container as

unusual, and the drone's sensors picked up a massive spike in radio activity emanating from it. In response to Henrik's swift series of commands, the drone nosedived into the icy sea, disappearing beneath the frigid surface with little more than a splash.

The drone navigated the undercurrents with ease, homing in on the electromagnetic signals streaming from the trawler. It maneuvered beneath the vessel, deploying a small, unobtrusive tracking device and affixing it securely to the ship's hull. Mission accomplished, the drone resurfaced and took to the air once more, making its way back to the turbine.

In the meantime, Major Cole had succeeded in reestablishing a shaky connection to the Hive via an alternative High-Frequency (HF) long-haul transmitter. The connection offered voice and limited data transmission capabilities, a stark contrast to the high bandwidth satellite communications they were accustomed to.

"Raider Main," Major Cole's voice crackled over the connection, urgency evident in his tone. "We found evidence indicating sabotage in the turbine's AI."

"Say again, Raider Three Two!" came Lieutenant Colonel Wright's response, a note of concern creeping into his voice.

Cole wasted no time in elaborating on their discovery. "We found malevolent software embedded within the wind turbine's control systems. The code is highly sophisticated and seems designed to disrupt, if not outright seize control of, the turbine's systems."

"That's grave news," Wright conceded. "Can you trace the source?"

"We have a working theory but need to send the software back to the Hive for confirmation," Cole explained.

"Also, we suspect we're being jammed. There's a vessel nearby emitting a powerful electromagnetic signature that matches known adversary jamming tech. Our aircraft is out of reach—we need extraction ASAP."

There was a pause as Wright processed the information. "Understood, Three-Two," he finally said.

"We'll try to contact the aircraft. In the meantime, can you transmit the software to us for analysis?"

"Bandwidth is restricted, sir, but we'll compress the software and send it over in parts," Cole assured him.



“Get to it,” Wright instructed. “We’re mobilizing our resources to support you. Raider Main out.”

As the tilt-rotor aircraft approached the turbine, Henrik watched in his HUD feed as the icon representing the beacon attached to the trawler picked up speed, indicating a retreat from the area. Almost simultaneously, their satellite link came back on-line. Information flooded in, the queue of delayed messages from the Hive pouring into their system. Morgan reviewed the flood of information from Vaughn back at the Hive as the commandos prepared to depart the turbine.

They boarded the aircraft, their mission complete but their work far from over. As they lifted off, Morgan established a private link with Vaughn back at the Hive.

“Master Sergeant, this narrative,” Morgan said over the private link, “the timeline, it feels familiar. We’ve seen this pattern before.”

Vaughn paused on the other end of the line. “What are you getting at, Morgan?” she asked.

“It’s not just the wind turbine,” Morgan responded. “I’m seeing similarities to what happened to the team in East Africa six months ago. There was a narrative there, too. It started with a seemingly unrelated incident, then came the social media trend, followed by political posturing. Next thing you know the host country kicked us out and brought in adversary trainers instead.”

Vaughn’s breath hitched as she remembered the event. “You think there’s a connection?”

“I’m not certain yet, but the parallels are there,” Morgan replied. “I think we need to analyze this further.”

Vaughn responded, “I agree. We need to understand if this is a pattern. We could be looking at some sort of positioning for a future event but on a global scale.”



↑ CONCLUSIONS:

Key topics are Information Operations, Joint Intergovernmental Inter-agency and Multinational (JIIM), Electromagnetic Spectrum Operations (EMSO), Cyber, and the Find, Fix, Track, Target, Engage, Assess or F2T2EA methodology.

- The story provides a scenario to demonstrate various aspects of Strategic Shaping and Reconnaissance, like EMSO characterization, Cyber access and operations, Battle Space Awareness, Information Operations, and dynamic tasking of information collection assets as opportunities presented in an all-domain environment against unknown but suspected illicit activity.
- There are tangible risks of over-reliance on technology and the assumption of living in an “always connected” environments. This story reinforces that the centrality of human adaptation remains a critical pathway for all-domain operations and effects in MARSOCs future.
- Investments in Edge Processing, reach back support, communications resiliency are critical to enabling real-time operational analysis, and execution by aggregating all-domain capabilities that fuse information to maximize not just awareness but driving forces behind Operations, Activities and Investments (OAI)s.





The contents of this pamphlet are unclassified.

MARSOC CD&I/G5 appreciates the time you have taken to read this RAIDER 40 Origin Story. It will be used to develop the Future MARSOF 2040 Vision, Strategy and Operating Concepts. Your involvement and feedback are a critical tenant to making MARSOC successful in the future.

MARSOC would like to continue the annual FICINT publication to promote and shape the MARSOF community's understanding and investment in the future. It takes readers like you to generate and promote ideas, write papers and tell your tales to resonate across the force for generations.

FICINT is a mechanism for telling the future through stories that make people think, respond and get involved. Topics for writing are nearly unlimited, the majority of which will directly affect the MARSOC future force design, force development, and force employment.

Please provide feedback, comments, and questions to the CD&I – G5 Strategy and Plans Branch, located in RR400, on Stone Bay, Camp Lejeune North Carolina.

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