A Letter Home from a Marine in the Future

Inside Experimental MAGTF 2022–2023

by LtCol Neal K. McCarthy

Hey dad,

It feels good to finally be writing a long letter to you instead of the monthly "I'm OK but cannot talk about it" postcards. They warned us we would not be able to communicate back home for several months (and I warned you and mom).

We're winding down and heading home. Considering that you were a Marine for over 30 years, I figured you would want to know what the future of the Marine Corps is going to look like. So, where do I start?

Day one: this Marine Corps one-star steps up to the podium. His name was Gen Mark Hashimoto, and for the next twelve months, he is the Commanding General of Experimental MAGTF 2022–2023—or "XMAGTF-22/23" for short.

The general opened: "Let me tell you about our MAGTF and the challenges we have ahead. We'll be testing and possibly executing (real world) three missions: protecting the fleet, amphibious assault, and the long-range amphibious raid. Everything we do will be at a range of 100 miles or greater. The raid may travel up to 1000 miles. We will attempt a number of new concepts for the Marine Corps as per the *Commandant's Planning Guidance* of 2020: mass without concentration, not just of forces, but also fires, mobility, and surveillance. We will do so in the hostile

>LtCol McCarthy retired from the USMCR after over 30 years. He served over ten years of various periods of active duty. His primary MOS was Communications/Data with a secondary of Information Operations.

"Stand In" zone between a vulnerable ship and a hostile enemy with anti-ship missiles, leveraging an "Internet of Things" (IoT) approach with tools and technologies that are both "affordable and plentiful." We will leverage our global network for extensive reach back support for such things as intelligence, planning, fires, drone operations, and cyber security—all dedicated to our MAGTF without the extensive footprint normally required on ships."

We then spent the next two months at Camp Pendleton doing individual training: basic infantry skills, these new man-portable French missiles, drone operations, and rubber boat operations. They took us out surfing every other morning—something about "finding peace with the ocean." (Not a bad idea since we basically lived on these little rubber boats in the middle of the ocean.) Every other weekend was liberty in San Diego.

We embarked on the USS *Portland* (LPD), and for the following two and a half months, we made five two-week trips back and forth between Pendleton and Hawaii working on unit tactics. Enjoyed three "96's in Waikiki.

So, we (3d & 4th Platoon) use three boats that are connected to each other with six Marines. The first boat is your typical Zodiac boat. (They are all Zodiac boats with interchangeable components.) The second boat has a giant flexible fuel bladder (~150 gallons) and a motor. The third boat is interesting. So, in order to maneuver from over 100 miles out, we need comms. But we also do not want to put out this massive electromagnetic signature, and I guess they just cannot buy every boat a satcom phone. The third boat also has a 150-gallon fuel bladder and a small almost watertight generator that powers a 50-pound drone. The drone is tethered to the boat by a detachable cable that feeds it electricity. It hovers about 300 feet up and has all kinds of stuff. So, at 300 feet up, it supposedly has line-of-sight for about 20 miles and can cover something like 1,200 square miles. This drone has everything: comms and "repeater" capability, optics, a laser range finder, an electromagnetic detector (full spectrum: radio comms, missile/ship radar, etc.), IR, and obviously a GPS. All of our comms/navigations devices are internetworked.

So, when this drone finds another drone—as well as a ship, airplane, or any other "node"—we are all plugged into each other. It also "talks" to all of our tactical comms that we carry, and our comms repeat for each other also. Everybody is connected to everybody. The third boat also has this 150-pound underwater tube thing. It is heavy, but once it is in the water, it sort of floats (sinks slowly). We at first thought it was just a big sonar array; however, it turns out to be a torpedo that can listen. This also communicates via the drone that is connected to the network. All of this is accessible by anybody on the network. This third boat is completely self-contained. These boats are meant to be detached and "daisy chained" about every 30 miles so now we have this "link" back to the mother ship (or to anybody with a high-volume satellite uplink). It also provides a "passage" for all the follow-on activity. People and things can navigate by it and drones charge on them—all tracked on the "network" and all interconnected.

On the other hand, 1st and 2d platoon were assigned to AAV's. They have one Zodiac with two motors called a "pusher" connected behind them. It has a reinforced frame and a 150-gallon fuel bladder and another boat with a fuel bladder in tow. It can almost double the AAV's speed and extends its range to about 150 miles. The "pushers" typically disconnect and loiter three to five miles from the beach. *Everything* has GPS enabled comms, which makes it easy to find in the middle of the ocean.

The MAGTF also has these portable pontoons that they use for the Helos and the HIMARS. They are 5 feet by 5 feet, and you lock them together to become 30 feet by 30 feet. They can float a HIMARS truck or a Cobra helicopter. A little floating island in the middle of nowhere. They use two of the same boats that the AAV's use, and they can push this pontoon setup for almost 200 miles at a max speed of 20 mph. The helicopters just do not have the range to fly from the LPD to the shore and still be useful; thus, they live on these pontoons. Again, all with GPS, comms and interconnected. I do not

think they work for Harriers or Ospreys, but I could be wrong.

We have portable missiles. They are manufactured by some French company. We travel with three variants. They all work with our one Missile Delivery Console (MDC). It sits on your shoulder, and you screw whatever missile you want to shoot into the back of it. It weighs about 20 pounds without a missile. It is also the laser designator. We carry two 150-pound missiles; three 20-pound, short and fat; and one 20-pound, long and narrow. Now, the key here is that these are not just for our use. What I mean is, obviously I can point one of these at a target that I want to destroy and shoot it (it is called "Local Mode"). But the key difference is that since MDC's are all networked, we are also a distributed weapons delivery platform for someone else. They call it the "Command Execution" mode. The MDC tells us where to point and to squeeze the trigger and hold it when we are ready to fire. We have no idea where it is going or if it is even going to fire.

The 150-pound rockets have a 5-mile range and a payload of 35 pounds. The fat/short 20-pound rockets have a 10-pound payload and a range of just under a mile. The skinny/long missile is for anti-air (anti-missile).

We also have dozens of drones, flying independently in support of operations, with operators spread throughout the MAGTF. They can fly 30 mph for up to 2 hours. Each squad has a drone controller. The Company Commander's AAV has four drone operators inside. The next echelon is in a hardened HUMMWV. Drone operators on the USS *Portland* can support the assault and/or execute fleet protection. We also have reach back drone support in CONUS. Every fuel bladder has a drone pad for recharging. There are also spare batteries that we can just swap out. The AAV's have a drone pad on them. There is a whole strategy for employing them for ISR as well as fire support. They traverse the "Daisy Chain" to get from ship to shore, charging along the way.

So, six months into this, we are doing yet another "real-world" screening mission for the USS *Portland* and some

container ships near Indonesia (more pirate attacks than Somalia). We deploy fifteen 3-boat teams, 7 AAV's with pushers, and 3 pontoons with pushers (1 each for the 2 Cobras, and 1 with the HIMARS truck) to create a mobile 100-mile radius "bubble" around the USS *Portland*. We are on the move—7x24. Every four days, we would come in for fuel and two days of hot showers and real food. One day, we intercepted some pirates. But because the drones have such a long range (surveillance)—120 miles out—we were able to determine which little island they came from. So, the Indonesian navy decides to do some law enforcement actions; and instead, their frigate gets blown up by two anti-ship missiles. They were ten miles off the coast of the island. Rumor has it that it sank in less than five minutes. Everyone on board perished.

Well, now all bets are off. We are tasked with taking the island the next day. It is about fifteen square miles, supposedly uninhabited, and we have been given the green light from the Indonesian Navy to do whatever is necessary. The White House (Trump) authorizes military action in support of a friendly nation—just like ordering pizza.

So, the USS *Portland* is 120 miles off the coast. As we disembark, we "daisy chain" boats as we go providing a real-time link between the *Portland* (and SIPR) and the island. Drones are flying all over the place. 1st and 2d platoon are in eight AAVs, while 3d and 4th platoon are split between twelve boat teams. Two Cobras are at 3 to 4-mile standoff range, and a 6-pack of HIMAR's on a pontoon are 80 miles off the coast. About four miles miles out, everyone dumps their secondary rubber boats (with fuel tanks) and gets "native." Time to prep the beach: twenty 150-pound rockets within the company, 4 on each of the 2 Cobras, and 6 HIMARS; 34 rockets all hit targets on the island at roughly the same time flying in from everywhere. Explosion are erupting all over the place. The AAV's immediately go ashore and the assault begins. Our job (3d and 4th platoon) is to continue to provide fire support and reinforcements as needed. The HIMARS loaded up its second "six-pack"

of missiles and fired in support as well. Then the LCU drops off our *one* M1A1 tank, and it joins the assault. Within about twenty minutes, we fired off our remaining rockets and went ashore to join the fray. It took 4 hours to secure the island with 30 prisoners. We lost two Marines to hostile fire and two wounded because of stupidity. Once the Indonesian Navy took over, we disappeared.

Two days later, we get word that one of the prisoners provided very detailed info about another island that is the major supplier of weapons and missiles. The island was 600 miles toward China and had also been associated with Chinese "pirate" proxies.

Apparently, we were the only game in town. I was on the raid team. The raid package involves the LCU carrying additional fuel containers and supplies, which greatly extends its range. It carried a hardened HUMMWV with the drone operators and a high-speed satellite uplink to SIPR that works anywhere on the planet. The LCU also carried the HIMARS truck with a second six-pack of rockets, nine pontoons and two "pusher" boats to move it, and a combination forklift/crane to handle the cargo. In addition, four of our (three-boat) teams would tie up to the sides of the LCU. But here is where things got brilliant. You are familiar with scaffolding they use to paint buildings? They created a kit that was attached topside of the LCU. They then applied these very lightweight but extremely real looking panels that made the LCU look like a small cargo boat with ten 40-foot shipping containers (five across with two rows front to back) and an operational structure to the rear. The façade was big enough to cover the LCU, its cargo, *and* the six rubber boats tethered to each side. The façade was constructed to allow the rubber boats to slide in and out of the rear. The front opened so the ramp could be lowered. Also, the panels over the HIMARS could be opened to allow it to fire missiles. Finally, the sides collapse inward to enable the LCU to easily traverse the width of the LPD well deck. We were armed to the teeth and on our way for a 4-day/800-mile journey through "pirate" territory. Just some small local transport filled with shipping containers.

We executed a very simple plan successfully. At 120 miles out from the objective, the LCU partially lowered its ramp and disembarked the pontoons. Once they were all assembled, the pusher boats were disembarked. Then the HIMARS truck was driven onto the pontoons, strapped down, and "pushed" to 80 miles out from the island. The four boat teams "daisy chained" the entire length from the LCU to the island. We had drones doing ISR 25 miles in every direction from the "Daisy Chain." We had 7x24 reach back support and were getting realtime intel support during the entire operation. Everything on the island lined up with the intel we had. So, we took up our distributed firing positions (three miles apart) and waited for "Command Mode" to take over. "Reach back" was managing all the targeting and fires. The first vol- ley of synchronized rockets worked as planned. Each boat team fired two 150-pound rockets. They were coming in low and from four different locations targeting the anti-missile systems. The HIMARS were right behind them. Twelve of the fourteen rockets were successful. After some quick BDA from the drones, the second volley, five minutes later, of another fourteen rockets was "icing on the cake." The island was ablaze with exploding munitions and fuel. We bugged out. We reversed the process and were back to being a small container ship heading on its way. Five uneventful days later, we were back on the *Portland*.

After a very long shower, a good meal, and ten hours of exceptional sleep, I wrote you this letter. See you in about five weeks.

Give my love to mom,
Kevin

USMC