

An Air Force Contractor Goes to Sea Aboard the Navy's Mighty USS THEODORE ROOSEVELT (CVN 71)

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I recently heard from a Navy intelligence officer I have known for some time, and who is now a Lieutenant Commander (LCDR, same as a USAF major). He is currently stationed in Yokosuka, Japan with Task Force 70, and is embarked on the USS RONALD REAGAN (CVN 76).

He is a brilliant forward-thinking former enlisted sailor who was the first enlisted intel sailor to be selected for the Navy's "Seaman to Admiral-21" program, which resulted in the Navy sending him to college to get his degree, after which he was promoted to Ensign (same as a USAF 2/Lt). He eventually graduated from the Naval Postgraduate School, has been assigned to the Chief of Naval Operations' Rapid Innovation Cell, as the Chief Network Scientist to the Office of the Secretary of Defense's Strategic Capabilities Office, and he recently served (prior to arriving in Japan in December for his required periodic return to sea duty) as the Chief of Sensor Exploitation office at NGA.

This officer has been striving to advance the Navy's technical intelligence capabilities into the modern age – and beyond - for many years now. In doing so, he has frequently run afoul of more traditionally-thinking senior Navy officers who have not cared too much for his efforts, especially when they go to sea. Perhaps some reading this story can relate. For myself, I can recall sharing my admittedly self-serving view with younger folks at FTD and NASIC that if you come up with a great new idea that will improve performance and efficiency and results around here, and your management chain rises up to resist it, that is the first sign that you are probably on the right track.

Anyway, I first learned about the operational sea-going Navy's aversion to "new stuff" when I was still serving NASIC/GS as their GEOINT/MASINT customer interaction/outreach officer.

This is that story.

I retired from Federal Civil Service at the end of 1999, and was hired back into NASIC in Feb 2000 on a contract with Riverside Research that had me imbedded in what is now NASIC/GSI and serving as NASIC/GS' primary GEOINT/MASINT Customer Interaction and Outreach Officer. That is a job that cannot be done by sitting in Dayton, OH, so I was frequently TDY somewhere in the US, as well as somewhere overseas.

One day, in the late summer of 2007, I arrived at my desk at NASIC (on the relatively rare occasions I was not TDY somewhere) to start preparing for my next TDY, and to catch up on mail and projects. I noticed that I had recently received an email from a Navy officer I did not know. He told me he was a Navy Lieutenant Junior Grade, or LTJG (same as a USAF 1st Lt), and that he was assigned as Chief of the "SUPPLOT" division (the all-source indications and warning intel center on US Navy NIMITZ-class aircraft carriers) on the USS THEODORE ROOSEVELT (CVN 71). The Navy also refers to that gigantic ship simply as the TR; crews often refer to her as "The Big Stick." He also explained that the TR was in port in Norfolk for an extended period of upgrading prior to her upcoming deployment to the Gulf.

He said he was contacting me because he wanted to learn more about airborne GEOINT/MASINT capabilities, to learn more about what the TR intel staff and aircraft intel staff (mostly WRT to the TR's FA-18s, since they were equipped with certain sensors) could do to contribute to the use of GEOINT/MASINT, and more about how the TR could take advantage of GEOINT/MASINT in support of their upcoming operations with OIF and OEF in the Gulf. As mentioned, I had no clue who this guy was or how he found out about me, so I asked him. He said he had been referred to NASIC by some folks at NGA who knew that - at the time - NASIC did far more with airborne GEOINT/MASINT than NGA did, and the NGA folks he was talking to knew that I taught "how can community-wide airborne GEOINT/MASINT support combat operations" stuff to US Army and USMC warfighters as a part of my regular outreach mission at NASIC.

He asked me a lot of questions, and it soon became apparent that our back-and-forth approach over secure email had its limitations for both of us, so I offered to come out to where he and the TR were located then, which was the world's largest Navy base at Norfolk, VA, and provide his ship's intel staff and carrier air wing folks with presentations on all that good stuff.

He agreed, and he got all that set up. Not long afterwards, however, I began to have serious concerns that this

particular “training/outreach” effort would fail, as I knew next to zip, nawww, I knew absolutely zip about anything regarding a modern US Navy’s aircraft carrier intel operations, to include their communications systems and capabilities at sea, their missions in the Gulf, what kind of intel they got when afloat and how they used intel in support of those missions, how they tasked for intel, what intel they needed but did not currently get, and what intel they could use but did not know was even available to them. Sadly, and even tragically in some cases, this situation was a very common occurrence with combat Soldiers and Marines.

So, I suggested to this officer that I needed some time with him before speaking to all those intel folks assigned to the TR in order to acquaint myself with all those things I did not know, after which I could tailor my presentations to those key Navy carrier-based issues and processes and missions.

I advised the officer that I would soon be attending an ACC MASINT conference at Langley AFB, VA and that, if useful, I could stay an extra day or two to get together with him so I could at least try to learn what I needed to learn in order to tailor the presentations to the TR’s missions and intel situations.

Well, it turned out that he had a better idea. He advised me that the TR was going out to sea for a short 5-day “underway” to check out her new systems, etc, and that that the ship would be sailing two days after the ACC conference ended. He then invited me to join him on that underway, during which I would have the run of the ship and he would use that underway to address all my questions about the TR’s missions in the Gulf as well as her intel capabilities, processes and needs associated with the deployment.

It took me about 1/2 a second to tell him, “Sign me up!”

During that underway, the officer did all he promised to do, and more, in order to educate me on all things “Navy” that I needed to prepare the GEOINT/MASINT education sessions for the TR’s intel crew. What an education that was.



Next to the flight deck on the TR

At sea aboard the TR
The Atlantic Ocean
December, 2007

While watching a pilot bring in his/her F/A-18 for a landing one morning, I noticed that the pilot’s aircraft was rolling from one side to the other. I remarked to a sailor standing next to me that the pilot appeared to be having a hard time keeping the aircraft steady. “Not at all,” replied the sailor. “That pilot is matching the aircraft’s motion to the ship’s roll so that he will be aligned with the deck when he lands.”
I felt like an idiot...



Up on “vulture’s row” on the TR

After I returned to NASIC, a multi-discipline team of several people was formed, which was made up of NASIC and one GA individual who used the information provided by this young officer during the first underway. We went out to sea on the TR for her next underway so that we collectively could train her personnel on all the aspects of GEOINT/MASINT ahead of TR sailing to the Gulf.

That second underway indeed happened as planned, with only one significant logistical difference: on the first underway, I simply sailed on the TR back to Norfolk, disembarked, and flew home. On the second underway, our team could not just sail back to Norfolk. As it turned out, the TR was not returning to Norfolk, but was on her way elsewhere. So, after a few days at sea, the Navy kindly put us on one of these:



US Navy Grumman C-2 Greyhound

and then catapulted us off the TR. We were then flown back to Naval Air Station Norfolk. Not your average TDY flight, for sure.

I cannot get into the details about all this, but our team ended up briefing the operation and “lessons learned” in some detail, to include illustrating how various kinds of GEOINT and MASINT – if requested and used properly – could indeed support specific aircraft carrier missions during Gulf (and other) operations in ways not currently being used, to senior Naval Intelligence in the DC area.

The briefings really apparently went well; however, somewhat to my dismay, it did not turn into the “let’s do this for every carrier strike group preparing to go to the Gulf” operation that I had hoped it would.

Still, all that I learned aboard the TR was not totally lost. Later on, freshly armed with newly gained insight into the Navy’s use – or lack of use - of technical intel in support of combat maritime operations, I began to provide, at a Navy O6’s invitation, a “GEOINT/MASINT Support to Maritime Operations” training program to the Navy Postgraduate School (NPS) in Monterey, CA, as well as to other Navy locations. Yeah, I know, Monterey. Well, y’know, somebody had to go to places like that. Anyway, that part *did* work out, as I was invited to return to the NPS to repeat that program to certain NPS classes about twice a year for many years to follow.

However, while the experience eventually worked out well for me, our NASIC/NGA visits to the TR had other consequences for the young officer. Later on, I learned about all the grief that young officer went through in order to have first me and then our NASIC/NGA team come aboard the TR to train her intel folks on what they could get from GEOINT/MASINT that would provide significant assistance to them when they deployed to the Gulf. It turns out that while the younger intel sailors on the TR were all over learning about the new (to them) intel info we were bringing to them, and were enthusiastic to learn while we were underway, this officer’s chain of command were strongly opposed to us being there, had next to no interest in learning about what we were offering, did not see the point of it, did not want their next combat sailing mission to be any different than the last one, and, prior to our arrival, had all but directly ordered the young officer to not bring us aboard.

However, the young officer was so strongly committed to trying to advance his ship’s abilities to execute her next mission to the Gulf that he did it anyway, and did so - not by disobeying orders - which he would never do, but by assuring his chain of command that nothing would be required of them, that he would take care of all logistical, operational and security details, and that the visits would in no way interfere with any of the ship’s operations or require any of the ship’s intel staff’s time, other than attending the instruction/briefing sessions. That, in turn gained him a reputation of something of a “trouble-maker” with his chain of command on these two underways, and subsequently with the Navy’s career assignment staff, one that has stayed with him - for his continuing efforts, not just for this one - for his entire career.

During the first underway, I got to see how incredibly impressive young Navy enlisted intel sailors were, and how difficult and demanding their lives aboard ship could be. I also experienced that there is an “officer” vs “enlisted” culture aboard Navy ships that was different from my USAF experiences; rather it was almost more like I experienced when working with the UK Navy folks in Hong Kong years ago. Just one instance of when that would show up when, several times a day, a gong would go off followed by an announcement “Sailors, sailors, man your brooms,” at which point many enlisted sailors would drop whatever they were doing, grab a broom, and proceed to clean up the areas immediately around their work stations. There were also significant different conditions between the officers’ dining and sleeping areas and those of the enlisted personnel.

I also got to see the amazing skill and bravery required of Navy aircraft carrier pilots, and of the personnel who direct and service those aircraft out on the deck, especially during flight operations, and extra especially during night flight operations. During the second underway, and while we were only a couple of hundred miles, maybe less, from the Navy’s Naval Air Station Oceania in Virginia Beach, VA, an F/A-18 unit flew out to the TR to conduct carrier certification flights. Pilots from this unit were already highly skilled in terms of flying the F/A-18 Hornets and Super Hornets, but some of their pilots had not yet been certified to land their aircraft on an aircraft carrier at sea. After months of training using a simulated aircraft carrier deck on land, this unit sent their pilots out to the TR to demonstrate that they were now ready to accomplish both daytime and nighttime landings on an aircraft carrier that was underway out at sea.

If you have never seen anything like this happen, have a look at these videos; I did not make them, but they show both daytime and nighttime flight operations aboard the TR:

Daytime: <https://www.youtube.com/watch?v=mTf0sssGbsl>

Nighttime: <https://www.youtube.com/watch?v=IS90hRR9tqg>

I was fortunate to be able to watch these pilots bring their F/A-18s in for their first daytime landings up on “vulture’s row,” what would look like an outside balcony high up on the carrier’s island, and to share – at a distance – the excitement they must have felt the first time they planted that sleek supersonic-capable F/A-18 down on the TR’s deck at just the right spot so that one of the arrestor cables stretched across the deck would snag the F/A-18’s tail hook and bring the aircraft to a rapid stop...as in a couple of seconds ... to a rapid stop. Some missed the arrestor hook, and were “waved off” to go around and try again. That night I again returned to vulture’s row to watch the night landing operations. By now it was raining, and the carrier deck was rolling from side to side as well as pitching up and down. I cannot imagine a more difficult thing to do than to land one of those aircraft, at night, in bad weather, on a moving deck like that. I just can’t. Actually, as it worked out, not all of those fine pilots were able to make that happen on the first few tries. Actually, the ones that missed three landings were sent back to Oceana to a) refuel and b) get their nerves back together for another try. Not getting this done was not an option.

The next morning, I went up to the Admiral’s “combat station” high up on the island to look around. Since there was no admiral on board during this underway, I expected the station to be empty. However, when I got there, I discovered that a Navy officer was there before me. He was a Navy Captain (an O-6, same rank as an Air Force colonel), and from his flying suit and the patch on his shoulder I figured he was the commanding officer of the unit that had been trying to land their F/A-18s on the deck the previous night. I introduced myself, and during our brief conversation I learned that he was indeed the commanding officer of that flying unit. I made some little remark about how tough the conditions appeared to an outsider like me for his guys and gals trying to land the previous night. He looked at me with a kind of a steely “Top Gun” style stare, then slowly said exactly this: “Didn’t matter.” He was telling me in his short response that his pilots had to learn how to land and take off from a moving carrier under any conditions, just as they would have to do under combat conditions. Then, somewhat to my surprise, his real personality showed, as he smiled a bit at me and said, “Well, y’know, after all, it was pretty varsity out there last night!”

The TR was laid down in 1981, launched in October 1984, and commissioned in 1986. So I was sailing on board her basically about 23 years after she was launched. She was old, and yet, thanks to a number of in-service upgrades, many parts of her were also new. I got to see first-hand how old and new technology lived side-by-side on the TR. Some of the electronics aboard the TR were state of the art; others, however, were almost vacuum-tube technology...or even more basic than that.

For example, I was taken down to the flight deck area of the island to observe how the flight-deck crew managed the movement of all of the different kinds of aircraft on the flight deck outside. A Senior Chief Petty Officer (E-8) showed me how they use what they called the “Ouija Board,” which is a wooden tabletop model of the carrier’s flight deck. The crew moved - by hand - small models of jets, helicopters and other assets around that wooden model deck to match the movements of the real-life counterparts moving all over the deck just outside. Updates were called in via phones by sailors on the deck and received by the Ouija board’s operators. The little aircraft models would then be moved to their current location, and small bolts were placed upright or on their sides to signify whether an aircraft has received fuel or needed maintenance.

A young officer standing near the E-8 looked at me with a smile and stated “I can see you are not impressed by our technology.” I explained I was pretty surprised. The officer then went on to explain why such a simplistic tool was still in use aboard one of our Nation’s most advanced nuclear-powered aircraft carriers. He explained that power outages were not unusual on the ship, even during peacetime operations. Then he asked me to look out the window at what looked like – to me - sheer – and dangerous - chaos on the flight deck, with dozens of aircraft taxiing from one place to another, some being jet fighters, others being propeller aircraft with props turning, others being helicopters with rotors turning, all moving into position for refueling, take off, or parking and perhaps 200 or more sailors moving all over the deck, all wearing jerseys of different colors, some ducking under the wings of moving aircraft, others moving heavy lines into place, and several holding on to one another to keep their buddy from being blown off the deck by a fighter’s jet exhaust as it was turning into position to launch...or even been blown down by a heavy wind gust.

Speaking of those colored jerseys: We've all seen these colored jerseys whenever we have watched, say, a movie seen showing an aircraft carrier deck in operation. The different colored jerseys worn by the sailors out on the deck signify the different missions performed by those sailors:

- Yellow = aircraft handlers and directors as well as catapult officers and arresting gear officers
- Green = sailors who run and maintain the ships catapults and arresting gear, sailors who make sure the deck wires are in place to capture landing aircraft, and air wing maintenance personnel
- Blue = aircraft handlers, who work under the direction of yellow shirts, and who assist in moving aircraft around the deck, as well as operate the ship's aircraft elevators, drive tractors, and work as messengers and verbal liaisons
- Purple = sailors who work with aviation fuel
- Red = sailors who work with ordnance (munitions) as well as the EOD (explosive ordnance disposal) crews
- Brown = aircraft crew chiefs, responsible for overseeing the maintenance, lunch and recovery of their aircraft
- White = large group of personnel, including landing signal officers.

He then showed me how every single thing I could see on the deck was being exactly duplicated by hand on that "ouija board" device, and asked me what I thought might happen out there on the deck if the power suddenly went out, especially at night - during a storm. I looked at him and said, "OK, I get it." He then showed me how the phones that are used to communicate with the sailors all over the deck were voice-activated, and operated perfectly even when the power was out. By then I really did get it. I recently noted that in spite of the Navy's reliance on the ouija board, it began to be phased out of sea service in 2011. I am not sure some of the old-time E-8s thought that was a very good idea. I am also pretty sure their opinions did not matter all that much.

I was also surprised to learn that about 40% of the 3200 sailors that constitute the ship's company aboard the TR were female. The "ship's company" figure does not include the carrier air wing, which can add up to another ~2500 personnel. I would note that the ladies' language was at least as earthy as was the male sailors' language!

While we were at sea the first time, I recall walking into a large room that was down the p-way or passage way to the SUPPLOT. The room was occupied by two young enlisted imagery analysts, who happened to be ladies, and who were looking at imagery that had recently been downloaded to the TR. The room was rather large, but was empty save the two workstations over in one corner that were occupied by the two analysts. It was also freezing cold in there. I mean really freezing, not just uncomfortable. I asked the sailors what was with the temperature, and was it always that cold? They told me that the room used to be full of electronic equipment, that all that equipment had been removed back at Norfolk, but that the air conditioning for that equipment had never been turned off, that there was no way for them to turn it off, and that it was blasting into that room all the time. They were wearing heavy Navy jackets, but were still very cold. I asked them if they got sick; their answer: "all the time." I was truly astonished to learn that they also had no idea how to access, locate or download airborne imagery external to their air wing...but that little detail got taken care of during my time with them, and after half an hour or so with them, they were doing fine with that task.

Underway, I attended almost every very early morning (i.e., early as in before God woke up) and evening intel briefing the younger SUPPLOT enlisted sailors gave to the TR's senior officers (O6 level and below) while underway. On one morning occasion, a somewhat nervous young enlisted intel sailor, who was being trained for this task, began by telling the ship's XO (O-6) that he had no new intel for them. "Why the hell not?" was the O-6's direct response, pretty much in the young sailor's face. The young sailor explained that their classified connection had been down for six hours. "Oh, ok, carry on" replied the now-relaxed XO. I later learned that such outages were not all that unusual while at sea...which struck me as something organizations, like NASIC, organizations that are used to massive and always-available bandwidths, organizations that supply intel to such ships at sea, really need to know. For example, I knew that some of the NASIC products, intended specifically for at-sea carrier strike group support, were sometimes disseminated as 12-15 MB PowerPoint slide files. When I returned to NASIC I tried to convince the folks putting out some of those truly good products that while the content of the products was spot-on amazing for what a ship like the TR needed, the download speed over the ship's secure comm lines, and specifically the comm lines that those NASIC products were sent out over and then downloaded from while at sea, was so slow when the ship was at sea that the ship would likely be decommissioned before the sailors could get those kinds of products downloaded (slight exaggeration). Did

that office adjust their products accordingly? Not really. I guess the folks that did that kind of work - and their bosses - did not believe me.

During my attendance at those daily intel briefings aboard the TR, I also learned about what kinds of intel were required to be briefed to the senior operations officers while at sea, and I observed the detailed back-and-forth that routinely goes on between the senior officers and these young sailors. Further, during my conversations with some of the enlisted personnel in the SUPPLOT, I learned that these sailors were astonishingly well informed about the capabilities, peoples, history, and culture of the Gulf countries.

I also learned of the remarkable trust placed in fairly junior officers while at-sea. For example: If the SUPPLOT (where my friend, then a LTJG, was in command) detected an immediate threat to the TR, that information would be immediately passed to what amounted to the "Combat Direction Center," or CDC, that was under the command of a US Navy Lieutenant Commander, or LCDR (equivalent of a USAF major). Even though a US Navy carrier strike group is under the command of a Navy Rear Admiral, and the aircraft carrier itself is under the command of a US Navy captain (same as a USAF colonel), that young LCDR has "weapons release" authority - without checking with anyone else - if in his or her judgment the ship is under immediate threat.

It was up to the LTJG and his/her team to provide the indications and warning for a LCDR to fight the ship.

The survivability of the ship could well depend on these two officers working seamlessly together.

Well, this whole experience came to mind during my recent interactions with that no-longer-quite-so-young Navy officer. Our recent interactions reminded me of that amazing experience, which was just one of many experiences, probably somewhat similar in a sense to those many of you had while assigned to ATIC/FTD/NASIC, for which one could say, years later, "I just cannot believe I got paid to do that!"

And as for the young officer who risked so much bringing me and then others and me aboard the TR, his career has continued to be one of professional challenge to the status quo. As Larry Benson observed some time ago, with a measure of humor, "That young officer will end up as the Chief of Naval Operations, or will end up in Ft Leavenworth. Could go either way."