Fieldwork: War Zone Frights and Follies

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Fieldwork was basically just that—you went into the field and worked. Some of the most exciting fieldwork was in war zones. Planes would be getting shot down on both sides and our job was to get to the wreckage of downed enemy aircraft and gather as much information as possible from the wrecks. Occasionally, an enemy fighter would "defect" by landing at an airstrip in a friendly nation. Sometimes this happened on purpose and sometimes it was by accident. When this happened, the fieldwork was usually pretty hectic because the losing nation would be on the floor of the United Nations the next morning, demanding that their aircraft be returned forthwith. Field teams had to gather as much information as possible before the aircraft went back.

Finally, there was the rare occasion when a pilot defected and the government of the country where he landed basically told the other side that they would get their aircraft back when hell froze over. In those cases, teams worked on the aircraft for an extended period of time, sometimes in shifts. The original crew might come in and tear the aircraft apart; the second crew would do all of the information gathering it could on the components; and the third crew came in to reassemble the aircraft and ready it for flight tests by the host nation. In any of these cases, the analysts involved might be getting their hands on equipment and systems that they had only guessed about prior to the field endeavor. It was a great time, but it also had some real low points.

Working with the bomb, gun, and rocket guys could be pretty exciting at times. An analyst named Everett was housed in a motel-like structure that was so close to the line of conflict that it had been abandoned. Everett dropped by the room of another analyst who was sitting on his bed with his fingers in the nose of a 250-pound bomb. When Everett opened the door, the other analyst said he was very glad to see him, and would he mind reaching into the bomb for a minute to hold a spring-loaded mechanism open for him? Everett did so, and the other analyst got up from the bed and exhaled a giant breath.

"Thank goodness you showed up. I have been waiting here forever. Just hold that thing apart and I will be right back." He left the room and was gone for about five of the longest minutes Everett could remember, while Everett wondered what he had gotten himself into. When the other guy returned, he had a bunch of wooden shims held together with a rubber band. He wedged them down into the bomb as Everett extracted his fingers, and then offered to buy Everett a dinner downstairs.

The next morning at a briefing roundtable, the guy explained that he had just stopped the mechanism from setting the bomb off and that Everett had saved him. This led to a group decision to move any live ordnance outside the living quarters. The rest of the morning, Everett watched as one analyst after another brought stuff out of their rooms and took it to a tent that had been set up a fair distance from the motel. Two days later, the tent blew up when something finally clicked into place.

During the same period, another group of analysts found an operational surface-to-air missile (SAM) system and started working on it. They did not complete their work during the day and left the area that night. The host government set up a perimeter around the site and staked out guard dogs to warn if anybody tried to approach the SAM during the night. The next morning, a team of analysts and host infantry returned to the site. The first thing they noticed was all the dogs were lying on their sides. On closer inspection, it was found that all of the dogs were dead. The morning sun was just breaking the horizon and there was a thin red mist around the base of the missile, which had been positioned in a kind of natural bowl in the local surface terrain. It was the remains of a leak of red fuming nitric acid (RFNA), which the SAM used as an oxidizer. RFNA is one of the most deadly and corrosive gasses in the world.

As the team considered what to do, the local winds started to increase in strength and the bowl was cleared of gas. Only the calm nighttime air had allowed the gas to concentrate in the bottom of the depression, which is why they had been able to work on the missile the day before with no immediate side effects. The dogs had saved them that morning. If they had walked into the depression that morning, unchecked by the sight of the dead animals, they could have been blinded, burned, or killed by the gas.

On a lighter note, some of the fieldwork could generate humor that would live on for years afterward. In one case, an analyst from FTD arrived on site accompanied by a friend of his from the Avionics Lab at Wright-Patterson. The FTD analyst had suffered a sever case of peritonitis as a youth, and it had destroyed most of one of his hipbones. The specialist from the Labs had also suffered as a youth, loosing both hands and parts of his forearms in a farming accident. He had grown up with a set of prostheses that he had learned to use in even the most delicate kinds of electronics work.

Both men were told to report to an officer from the host government, who would assign them temporary quarters. They found him sitting at a wide table inside of a hanger door. As they approached, they captured his full attention. The FTD analyst walked with a decided shuffling motion with his body turned slightly to the side. The avionics specialist had a coat over one of his steel arms and was clutching the paperwork they had been given on landing in the claw on his other arm.

The receiving officer looked up at them and asked what their specialty was. Without missing a beat, the Lab technician told him they were with the Explosive Ordnance Disposal (EOD) team. The officer smiled up at them and said that they must be "very experienced." He then assigned them to some of the best quarters on the base. Thereafter, for many years, some of us would introduce our FTD analyst friend as part of the FTD EOD team, which would always send somebody off into a gale of laughter.

Another incident that generated some laughter for years came in the form of a little graffiti. A weapons analyst took it upon himself to write something about impregnating the entire Soviet Union on a

panel in an aircraft that was later returned to the Soviet Union. In a grievance document that came in later, one of the complaints was about abusive language found written in indelible ink on their airplane.

This same analyst was famous for his "pennings" before he left the outfit. In a report, he labeled a picture of an unidentified aircraft pod as a "BFOM pod." The report went out into the field and, about a month later, we received a question from a General Officer asking what BFOM stood for. When asked, the weapons analyst said, "Beats the —— Out of Me." The questioner, a staff officer, was incredulous. "You put this down here, didn't you? What do you mean, beats the —— out of you? What do the letters stand for?!!" When the reality of what had gotten out of the building in a formal report finally sank in, all hell broke loose. I believe the final answer sent back to the General Officer's Staff said that BFOM stood for "Bi-Furcated, Omnidirectional Mechanism," or something like that, and every editor was put on notice that no such thing would ever happen ever again. And, in case you are wondering, the officer retired as a Captain and was last known to be raising horses in Tennessee.

In one fieldwork exercise, one of the final tests involved firing up the engines and going through an engine test that was to terminate in a short firing of the aircraft's afterburner. The test was conducted out in the open, but at night to avoid being seen from above. The aircraft's main landing gear legs were attached to ground anchor points with lengths of chain and the engines were started. Everything seemed to be okay, so the afterburner test was cleared for a "go." What some of us never expected was that when the aircraft afterburner kicked in, the nose gear would not sustain the load placed on it by the line of force over the top of it. The resultant torque vector caused the articulated nose gear hydraulic cylinder to collapse and the nose of the aircraft went almost to the ground, while the tail, streaming blue fire, shot up into the night sky. All of this happened in a heartbeat at exactly the same time the thunderclap of afterburner lightoff slammed into the people around the plane.

The sudden shift caused one of the wing tanks to move forward on its support structures, and a plume of high-pressure JP-4 fuel started shooting down and all around the right wing. An alert crew chief turned to me and asked which side the pressurization system was on for the tank. I told him that I thought it was on the right side. He yelled back that he didn't give a rat what I *thought*, he needed to *know* which side it was on. I told him it was the right side and he ran in under the aircraft and turned the valve for the system in the right main gear well. The fuel stopped spewing all over the place just as the crew chief ran back out from under the aircraft and the engine was shut down. The airplane bucked up, came back to level, and stopped rocking in about a second; but most of us around the area had burned off about 5 years of life in the interval.

In one other hair-raising event, another weapons analyst was trying to trace cabling from an aircraft's gun sight inside the cockpit, when he caught the sleeve of his coverall on a precocked ejection seat spring trigger. In extricating himself, he fired the mechanism that controlled the motion of the leg restraint system on the seat. Consequently, the restraint mechanism turned below the seat, cocking it back into and locking it against the seat guide rails. That split-second action caused about a day's worth of "hairy" work trying to get the seat out of the airplane so that it could be "reset" without setting off its pyrotechnics.

Things could get pretty hairy in the field, working without any clear technical documentation on the foreign system and using only what you already knew about our own equipment. It was a tough job that was sometimes dangerous and physically exhausting, but there was no lack of volunteers to do it.