MARS Operators In Haiti: Providing an Essential Communications Link

By David J. Trachtenberg, N4WWL/AFA3TR

Makeshift tents set up at a triage unit at the Port-au-Prince airport house volunteer medical teams from the United States (Courtesy Louis Cruz, N4LDG)

On January 12, 2010 the island nation of Haiti was rocked by a magnitude 7.0 earthquake and multiple aftershocks that devastated the country, destroying roads, collapsing buildings, and killing, by some estimates, up to 250,000 people. The country's fragile infrastructures, including its communications networks, were demolished. At the time of this writing more than a month after the initial quake, relief efforts are continuing to help the survivors and restore a sense of normalcy to that troubled land.

Throughout this disaster, amateur radio operators played a substantial role in providing essential life-saving communications. This includes the efforts of operators who are members of the Military Auxiliary Radio System (MARS).

The Military Auxiliary Radio System (MARS) Comes of Age

MARS is a Department of Defense (DoD)-sponsored organization of volunteer licensed civilian amateur radio operators who provide contingency radio communications support to DoD and civil authorities at all levels. Formerly known as the Military Affiliate Radio System, the program is separately managed and operated by the Army, Air Force, and Navy-Marine Corps.

In years past, MARS primarily relayed morale messages between U.S. military personnel stationed abroad and their families at home. The advent of cell phones, e-mail, and the internet, however, has generally supplanted this function. Emergency preparedness has now assumed a more prominent role in day-to-day MARS operations.

A new DoD Instruction published on December 23, 2009 revalidated the importance of MARS, upgrading it to an "auxiliary" organization, and officially broadened its mission to include precisely the type of emergency response communications capabilities that have proven to be a lifeline for many in Haiti.

The DoD Instruction not only refocuses MARS on providing contingency communications support to DoD and civil authorities at all levels in support of homeland defense requirements; it also integrates MARS more tightly to the DoD Components; invests a greater number of Office of Secretary of Defense-level entities with equities in the program; mandates an annual reporting mechanism as a metric for focusing attention within DoD on MARS issues; and authorizes additional membership benefits that can accrue to MARS members. The text of the DoD Instruction can be found at **http://www.dtic.mil/whs/directives/corres/pdf/465002p.pdf**.

Connecting Those in Need to Those Who Help:

On the Scene…

Volunteer Army, Navy-Marine Corps, and Air Force MARS operators traveled to Haiti in teams as part of the medical and humanitarian organizations assisting in the disaster response effort.[1] In particular, doctors and medical support personnel from the University of Miami's Project Medishare program and the Nassau University Medical Center in Long Island, New York were on site in Port-au-Prince and elsewhere in Haiti tending to the needs of the injured. To overcome the lack of telephone and internet connectivity, these medical teams relied significantly on the communications support provided by amateur radio and MARS operators.

Amateur radio operators associated with the University of Miami Hospital, the WX4NHC Amateur Radio Club Station at the National Hurricane Center in Miami, the American Radio Relay League (ARRL), and others organized a well-coordinated effort to provide medical units with this backup emergency communications capability. Julio Ripoll (WD4R), Louis Cruz (N4LDG), John McHugh (K4AG), University of Miami officials, and other team members did a remarkable job in getting this effort off the ground and making it a success. Travel arrangements, other logistical coordination, and reciprocal licensing were only some of the issues that this group of communicators successfully confronted.

As one of the first MARS operators to arrive in Port-au-Prince with the Project Medishare team, Air Force MARS operator Jack Satterfield of St. Pete Beach, Florida (W4GRJ/AFA4DG) helped set up the communications tent at the airport to support the medics working at a triage unit there. He spent a week embedded with the medical team and facilitated numerous contacts by radio in the initial critical days after the first team arrived.

In one instance, Satterfield made radio contact with the American hospital ship USNS Comfort stationed off the Haitian coast and requested assistance for a critically injured 13-year-old girl needing emergency surgery. The Comfort sent a fast boat to the port and the girl was transported in less than 30 minutes. As Satterfield noted in one of his daily situation reports, "The doctor said she would have died if this didn't happen."

Working with other MARS and amateur radio operators to establish a reliable communications link, the most suitable location for transporting another injured patient was determined, and resulted in the patient's prompt transport to a University of Miami hospital facility in Port-au-Prince. The "patient's

[1] It is important to stress that the MARS operators who traveled to Haiti to assist in the relief effort did so on their own, under the auspices of the humanitarian organizations they supported, and not as part of any official DoD activation of MARS. Their efforts were tangible evidence of the spirit of volunteerism in action.

life was saved by their actions," noted Satterfield.

The Haiti tragedy was immense in its magnitude and effect and provided the first significant test of MARS's backup emergency communications role in a major disaster since disaster preparedness became its primary focus. From the comments of those on the ground assisting in the relief efforts, MARS passed this test with flying colors.

The after-action reports from those on the scene were welcomed by MARS officials back in the United States. Jim Edmonds, the National Exercise Coordinator for Air Force MARS, stated, "Although we hope our emergency communications capabilities are never needed, this is what we train for." Bo Lindfors, Chief of the Navy-Marine Corps MARS program, noted that the success of the MARS operation in Haiti "demonstrates the value of this contingency communications capability in a real-world emergency."

Amateur radio operator Louis Cruz N4LDG (left) and U.S. Air Force MARS operator Jack Satterfield W4GRJ/AFA4DG man the communications station in Port-au-Prince (Courtesy Louis Cruz, N4LDG)

Doctors take a break in the communications tent to assess the situation (Courtesy Jack Satterfield, W4GRJ/AFA4DG)

The rotation of amateur and MARS operators into and out of Haiti was coordinated by Neil Lauritsen (W4NHL/NNN0TFH) of Clearwater, Florida, one of the many Navy-Marine Corps MARS operators supporting the relief effort. Other Navy-Marine Corps MARS participants in-country included Carmelo Marchese (WA2STL/NNN0YTB) of Homosassa, Florida; Gary Mentro (N3OS/NNN0EKB) of Dade City, Florida; and Bill Williams (AG4QX/NNN0YTD-T) of Tampa Florida. Navy-Marine Corps MARS operator George Riedel (N1EZZ/NNN0ICH) traveled from Akron, Ohio to provide on-site communications support.

Amateur radio and Army MARS operator Ron Tomo (KE2UK/AAT2BC) of North Bellmore, New York performed exceptional service in support of the humanitarian relief operation. He not only provided thousands of dollars worth of radio equipment for use by the medical teams but assisted the Nassau University Medical Center doctors located outside Port-au-Prince under difficult conditions. As Jack Satterfield noted after returning to the United States, "Ron has a physical disability where he has no use of his right arm. He did amazing things under extremely difficult conditions with no help on site." Tomo was injured in the process of helping doctors move a patient to the hospital but took it all in stride, noting, "I had my own medical team there to attend to me."

Working together with other amateur radio operators that traveled to Haiti to support the work of the medical teams on site, MARS operators transmitted urgent requests for medical supplies, arranged transportation for injured survivors to appropriate medical care facilities, and facilitated other logistical arrangements for the doctors and surgeons who treated the wounded under extraordinarily difficult conditions. There were setbacks as well as successes, but the effort was conducted with professionalism and demonstrated the ability of amateur radio and MARS operators to work together as a team under difficult conditions in support of a major humanitarian relief mission.

...And Over the Horizon

Radio operators in the United States also played a valuable role in ensuring reliable communications links between Haiti and the United States. For example, Don Veckarelli (W4AWP/NNN0ICX) provided communications support from his location in Fleming Island, Florida. Fred Moore (W3ZU/NNN0JAD), located in Inverness, Florida, provided phone patches between Haitian quake survivors and relatives living in North America. He even posted a YouTube link to one of those conversations at http://www.youtube.com/watch?v=JqaKzIkyBug. In addition, Moore helped arrange transportation for recovering patients dislocated by the earthquake to an orphanage on the small island of Île à Vache, several miles off the southern coast of Haiti.

Operators with the Air Force MARS Phone Patch Net also facilitated communications between U.S. military aircraft en route to and from Haiti and ground stations in the United States. In one instance, Air Force MARS operators ran a phone patch for a transport aircraft returning from the Caribbean area with a group of foreign nationals on board.

"The volunteer service our MARS operators provide is greatly appreciated by the air crews who rely on us to get the job done," said Barry Priddy (K5VIP/AFA3CU), an Air Force MARS phone patch operator in Chesapeake, VA. "Sophisticated on-board communications equipment sometimes fails, but they know we are here 24/7 to help," he said.

Working together, the Army, Navy-Marine Corps, and Air Force MARS Chiefs divided responsibilities for various aspects of the MARS-related portion of the communications support effort in Haiti among their respective MARS programs. This delegation of responsibility facilitated more efficient utilization of MARS communications assets in the overall relief operation.

Navy-Marine Corps MARS assumed responsibility for recruiting volunteers, who traveled to Florida at their own expense, to serve in Haiti as part of the essential communications link. Army MARS coordinated frequency authorizations and use of digital com-

munications for MARS operations on the island. And Air Force MARS was given primary responsibility for coordinating and releasing public affairs information on the activities of MARS radio operators assisting with the Haiti relief operation.

As Allen Eiermann, Chief of the Air Force MARS program, put it, "The delegation of responsibilities among the three MARS services not only makes practical sense, but is an excellent example of interoperability in action." This view was echoed by Jim Griffin, Chief Army MARS, who cited it as an example of "true unity of effort."

Amateur Radio in the Service of Humanity

Much of the credit for the success of the extensive communications support operation goes to the selfless volunteer efforts of other amateur radio operators and organizations. For example, the Salvation Army Team Emergency Radio Network (SATERN) was activated to provide communications support and many MARS stations across the country participated in its emergency nets. The Intercon Net and the Maritime Mobile Service Network, both operating daily on 14.300 MHz, served as on-the-air meeting points and relay stations for Haiti-related traffic.

An Air Force officer rests at the MARS station set up at the Port-au-Prince airport (Courtesy Jack Satterfield, W4GRJ/AFA4DG)

ARRL and the Amateur Radio Emergency Service (ARES) provided outstanding support, once again demonstrating the veracity of the ARRL maxim: "Amateur Radio – When All Else Fails."

Despite the fragility of Haiti's communications infrastructure, amateur radio and MARS operators were able to reliably communicate with the U.S. military, medical teams, and others working around-the-clock to treat the wounded and restore critical services to the devastated country. They also established reliable communications links between and among U.S. and foreign official and non-governmental relief agencies.

These communications links were carried over both HF and VHF frequencies. In addition to voice modes, medical traffic and situation reports were transmitted over the WinLink 2000 system, a digital emergency communications method developed by a non-profit consortium of amateur radio operators that allows users to send and receive e-mail by radio in the absence of internet connectivity. Army MARS has been an active user of the system for years and coordinated its use in the Haiti operation, as WinLink provided a key communications capability.

A number of U.S. government agencies and organizations worldwide use WinLink for emergency communications and its use by MARS operators in Haiti allowed them to be a more effective conduit of information regarding the on-going humanitarian relief effort and to provide reliable back-up communications to the agencies they support despite the sporadic availability of the internet.

"The successful use of this technology in a real-life emergency demonstrates its value as a communications tool," said Jim Griffin, the Army MARS Chief. "Our Army, Navy-Marine Corps, and Air Force MARS operators in Haiti have all used the system with excellent results."

Looking Ahead

Although MARS operators traveled to Haiti as part of the amateur radio contingent associated with humanitarian relief organizations and not as the result of any DoD-sponsored activation, there are numerous lessons to be learned from the experience. As the immediate crisis subsided, participants began to capture some of the lessons learned. These lessons, which are just being compiled at the time of this writing, will no doubt be analyzed for their applicability to any future emergency contingencies.

U.S. doctors work in spartan conditions in Haiti to treat those injured from the earthquake (Courtesy Louis Cruz, N4LDG)

In his after-action report, Jack Satterfield focused on the importance of interoperability. He noted that although "a lot of our recent MARS training and exercises have been focused on interoperability, this actual event put it to the ultimate test." Interoperability between the MARS Services, the military, ARES, and other organizations is critical in disaster situations, and the Haiti experience can provide useful examples for future operations.

The response to the Haiti disaster by the amateur radio community has been extraordinary. The dedicated amateur and MARS radio operators who have volunteered their time and effort – in some cases at great personal sacrifice and expense – to assist the people of Haiti in their recovery reflect the very best that amateur radio has to offer. Their commitment to public service is not only admirable but is a credit to the organizations they represent.

Hopefully, the services of these dedicated amateur radio communications specialists will never be needed again to deal with a domestic emergency of the scale and magnitude of the Haitian earthquake. But should the unthinkable happen, it is reassuring to know that the well-trained and "professional" amateur radio and MARS operators are there for us all.

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