

FIELD MEDICAL INFORMATION GATHERING

SUMMARY

In early October 2008 UltraCell's XX25 25-watt fuel cell provided uninterrupted power in the latest Medical Readiness Training Exercise (MEDRETE) in Las Calderas, Dominican Republic. This exercise was sponsored by DARPA/CERDEC and the SOUTHCOM joint command.

UltraCell provided portable, reliable, uninterrupted power to img Surf's MRT laptop medical data gathering terminals. These terminals were used in a variety of locations, off grid, to collect medical data during the delivery of medical services in this exercise.

This enabled medical specialists from USS Kearsarge, Fleet Surgical Team (FST) 4, the U.S. Public Health Service, Canada, Brazil, France and Project HOPE, together with Dominican Republic medical professionals, to provide more than 16,000 patients with primary medical care, including nearly 750 dental exams and procedures, more than 2,100 optometry exams, 35 surgeries aboard Kearsarge, and filling more than 31,600 prescriptions at several sites in the area.

THE PROBLEM

SOUTHCOM is a joint command representing the Army, Navy, Air Force, Marine Corps, Coast Guard, and several other federal agencies. SOUTHCOM's humanitarian assistance missions and programs are a central part of efforts to enhance security, stability and prosperity in Central America, South America and the Caribbean. MEDRETE's Mission Objectives are to support SOUTHCOM's efforts by providing U.S. military personnel training in delivery of medical care in austere conditions while promoting diplomatic relations between the United States and host nations in Central America, and providing humanitarian and civic assistance via long-term proactive programs.

For seven days in early October 2008, img Surf was on deployment in the Dominican Republic running MEDRETE field trials using their MRT (Modular Recognition Terminal). The img Surf MRT system is based upon an Asus Eee Pc 701 laptop computer. In these remote locations, there was little available AC power and carrying enough laptop batteries for the full deployment was impractical. Img Surf needed an advanced, simple, flexible, and transportable power system to enable them to integrate with the US Navy's existing MEDRETE workflow, processing patient identification, intake and processing, medical record management, and improving overall care.

THE SOLUTION

UltraCell provided img Surf with the Darpa/Cerdec sanctioned UltraCell Fuel Cell to allow for **an uninterrupted supply of DC power for the duration of his field trials.**

UltraCell Corporation provided img Surf with two XX25 25-watt Fuel Cells, cables designed for their laptop's requirements, universal CLA (cigarette lighter adaptor) cables, manuals, and 64 fuel cartridges (250cc) to last one month. The fuel was shipped directly by UltraCell to the field site in the Dominican Republic, with the fuel cells and cables easily carried onboard with img Surf's field personnel to the site.



The fuel cells performed admirably. The cells provided lightweight power enabling us to complete our mission and no issues with power quality or consistency were experienced. In fact, the units were strikingly portable and rugged.

Backed by the power provided by UltraCell, the performance of the MRT successfully validated our ability to collect useful electronic health care records during medical relief efforts.

- Dan McClary, img Surf

FIELD MEDICAL DATA GATHERING CASE STUDY

UltraCell also provided on-site training by a qualified UltraCell applications engineer in img Surf's Phoenix offices, including normal startup, power cable strategies, fuel cell handling, fuel cartridge management, troubleshooting, and proper shutdown and storage. This training and the system's ease-of-use allowed img Surf to **run the equipment with no UltraCell technical support needed** in the rugged, isolated environment of the Dominican Republic.

Backed by the power provided by UltraCell, the performance of the MRT successfully validated img Surf's ability to collect useful electronic health care records during medical relief efforts, providing clear advantages over the existing US Navy MEDRETE record-keeping and patient-management protocols.

BENEFITS

The performance of UltraCell's solution allowed medical specialists from USS Kearsarge, Fleet Surgical Team (FST) 4, the U.S. Public Health Service, Canada, Brazil, France and Project HOPE, working together with Dominican Republic medical professionals, to conduct nearly 750 dental exams and procedures, more than 2,100 optometry exams, 35 surgeries aboard Kearsarge, provide more than 16,000 patients primary medical care and filled more than 31,600 prescriptions at several sites in the area.

- Lightweight, portable design lightened the load on relief workers and logistics
- Hot swappable cartridges ensured continuous operation of vital equipment
- Reliable power enabled mission success
- Intuitive ease of use enabled success without need for engineering support



UltraCell
399 Lindbergh Avenue Livermore, CA 94551 USA
Tel: (925) 455-9400 Fax: (925) 455-7750
www.ultracellpower.com sales@ultracellpower.com