

Mobile Medicine: Physio-Control Uses the Cellular Development Platform to Navigate the Technology Landscape and Arrive at Improved Patient Care

Driving Innovation

Physio-Control, a wholly-owned subsidiary of Medtronic, Inc., manufactures products designed to save lives in emergency situations. The LIFEPAK® series of portable monitor/defibrillators allows responders to gather and send critical patient care information over the cellular network to its web-based LIFENET® data management platform, a first-of-its-kind service in the field of mobile medicine. The LIFENET System then routes real-time patient data to hospital personnel allowing care teams to prepare for the patient ahead of their arrival so that the patient can receive appropriate treatment as quickly as possible.

A Bump in the Road

To ensure the best patient outcome, Physio-Control is continuously striving to provide hospital staff the highest quality patient data as quickly and reliably as possible. With over 800,000 LIFEPAK external defibrillators in operation worldwide, Physio-Control is the global leader in external defibrillation. The LIFENET System relies on wireless connectivity to receive patient data, however cellular infrastructure varies from city to city and country to country around the globe and new technologies are being introduced at an unprecedented rate. Physio-Control faced the challenge of upgrading their LIFENET software to accommodate faster, more reliable mobile connectivity while preserving the usability of the LIFEPAK units already deployed.

Bridging the Gap

To align with their long-term wireless strategies, Physio-Control adopted the Cellular Development Platform from Multi-Tech Systems. The Cellular Development Platform combines a Linux-based software development environment with a complete industrial hardware solution, including on-board processing and memory coupled with a cellular modem. The open development environment allows Physio-Control to control their software engineering internally, while ensuring continued interoperability with countless global wireless technologies. The Multi-Tech technology enables Physio-Control to migrate field units to the fastest technology available in a given location quickly and cost-effectively.

Cellular Development Platform

- 2G & 3G models
- Application-ready hardware
- Custom deployment options available



Solution

- Cellular technology bridges field and hospital care teams to improve time to treatment
- 3G platform enables more patient data to be transmitted faster to improve patient care
- Internal control of software engineering and legacy quality system
- Future-proofs designs

The Road Ahead

The Multi-Tech solution ensures that Physio-Control will continue to enjoy access to the latest wireless technologies in a consistent hardware application. Commented Randy Merry, Physio-Control Vice President of Business Development and Product Realization, "When we first launched, medics used cell phones to transport data to the LIFENET System and there were challenges with hardware durability and dropped connections. For hospital care teams, being able to gather as much data about a patient ahead of arrival helps to plan for that patient, be better prepared, and reduce time-to-treatment. Having faster data speeds allows for the communication of larger amounts of data more quickly, and we only see the need for data increasing. We use the Cellular Development Platform from Multi-Tech to stay equipped with the latest wireless technologies."

To learn how LIFEPAK defibrillator/monitors and the LIFENET System use technology to save lives, visit www.physio-control.com.



Physio-Control

- Global leader in external defibrillation
- LIFEPAK defibrillators transfer patient data over the cellular network
- Cellular solution enables quicker time to treatment

