



Mobile  
Health

**Zephyr**  
Measure Life... Anywhere



Connected  
by AT&T

## Genuine remote monitoring of human performance

### Description of solution

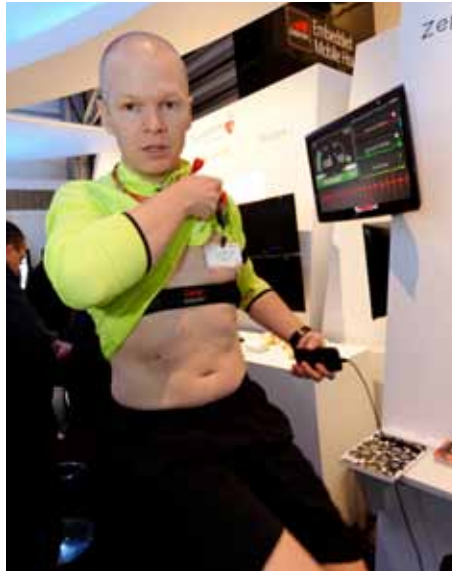
The BioHarness™, manufactured by Zephyr and Connected by AT&T, enables the capture of critical vital signs, including ECG, heart rate, breathing rate and skin temperature, and then contextualizes this information with the individual's physical activity using an accelerometer. The device transmits the data over the AT&T mobile broadband network and it can be viewed through the Zephyr portal or pushed to electronic health records and applications.

### Benefits of the solution

The BioHarness™ has applications in any field requiring high-level wireless and remote physiological monitoring, including research, training and tele-health situations. It offers a vital advantage to users in a diverse range of sectors, including academic and research, sports, defense, health and wellness. The device can be worn in virtually any environment – from combat situations to the sports field. It maintains performance under extreme activity. Offering fast, accurate collection and analysis of high-quality, in-depth data, BioHarness™ is the definitive product for remote physiological monitoring in all conditions.

### Core technologies

The BioHarness™ is a sensor that monitors heart rate, breathing rate, skin temperature and includes accelerometers to identify vertical position and activity. The data is sent over a communications network and displayed on a PC. All of the



vital sign information is presented in an easy-to-understand BioGauge, similar to a tachometer in a car. The BioHarness™ uses a rechargeable battery and can log up to 20 days of data and operate live for up to 23 hours. All of the technology including the Smart Fabric Sensors, communications and the software display was developed by Zephyr's team.

### Interoperability and scalability

Zephyr promotes the interoperability between all devices and applications, so it provides developer communities the BioHarness™ API's and makes its best attempt to follow the latest industry standards.

### Timescales and success to date

The BioHarness™ received FDA approval in December 2010. The availability of the 3G version will be announced at a later date. As the market evolves, Zephyr's solution will continue to further leverage the cloud for storage, data sharing and dissemination.

Zephyr has sold a significant number of systems to US Special Forces, Naval Special Warfare, NASA, CST, HazMat and First Responders on a State and Local Level.

### Testing and certification

Zephyr's technology was used by its early adopters as well as new customers to collect data in dozens of experiments, yielding abstracts and papers validating the technology for remote physiological monitoring. These testers included academic researchers and strength and conditioning coaches in hundreds of universities, as well as professional and amateur sports teams around the world. The device has FDA 510(k) clearance.



"With the BioHarness™ Connected by AT&T, cardiologists will have the ability to remotely monitor ECG's, defense commanders and medics will have on-demand visibility into the condition of military personnel, and athletes will have the ability to share live performance data – all occurring seamlessly over the AT&T network." **Glenn Lurie**, president of emerging devices, resale and partnerships, AT&T.