Breathpal RIP Sensor Factsheet

Background

Human breathing characteristics are strongly influenced by illness, stress, concentration and delivery of efforts. Reliable information on breathing characteristics can be helpful for pulmonary disease experts, but also for coaching on stress management, sports, and even for self-help approaches to increase quality of live.

Unique Features for Consumer Use

It is found that only little or no suitable breathing sensors are available for personal, informal use. Therefore, a prototype is developed to meet the specific requirements for non-medical and home usage.

Features

- Easy attachment and operation by use of RIP strap poppers and instant working
- Small and light to allow invisible wearing: 6,2 x 2,9 x 1,0 cm, 20 grams
- Full day battery life and raw data storage. Recharging and logging data retrieval over USB
- Accurate 2-ch RIP: resolution up to 0.07 cm^2intersection surface change
- Low temperature drift and mutual influencing of both RIP bands
- Movement and orientation sensor: 3-D 12 bits accelerometer +/- 2G
- Temperature sensor: 1 ^{0}C resolution
- Tactile feedback with integrated vibration motor
- Sample speed up to 10 samples per second, Real Time Clock and Data stamps included.
- BLE 5.0 Wireless Communication for real time data communication via dedicated dongle
- Open and easy communication protocol; simple Windows presentation and storage tools
- Economical design, low cost at volumes. Call to discuss possibilities

Application Software and Open Protocols

- Data retrieval and storing to .csv text file by Visual Studio C# Windows application
- Live graph of both channels and accelerometer, live writing to file
- Fully disclosed communication protocols
- Adaptation of communication protocols on request

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Ben Bulsink
Innovatie met elektronica