

InteliShirt - Blast Detection Technology

POWERED BY NEUROMUSCULAR TECHNOLOGY



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System Integration

- ◆ This system allows monitoring of the specifically identified soldier, vehicle seat position, location co-ordinates, and precise blast waves affecting the individual.
- ◆ The wireless communication system creates a self-forming / self-healing mesh network. These shirts all talk to each other in micro-second length bursts to determine where the head-end is and to direct all traffic to it.
- ◆ The range is 1000 meters for each unit - they communicate to each other - maximum 63,000 unit.
- ◆ Each unit stores the information collected and can be programmed to send this information every 1 minute, 1 hour or as requested by the “Head” unit.
- ◆ Alternately, the data can be accessed by "pinging" the unit selectively at a chosen time so as not to disclose its location.



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Garment Component List

Garments:

The garment is a multi-use washable garment designed to have permanently installed devices to take biometric measurements as well as environmental measurements. An alternative mesh (InteliVest) garment can be attached inside protective armor.

Wireless module:

The transmission module fitted into the shirt sleeve can be removed easily by un-clipping a water resistant latching connector fitted to the shirt wiring harness. The Transmission module is fitted with a rechargeable battery.



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Sensors

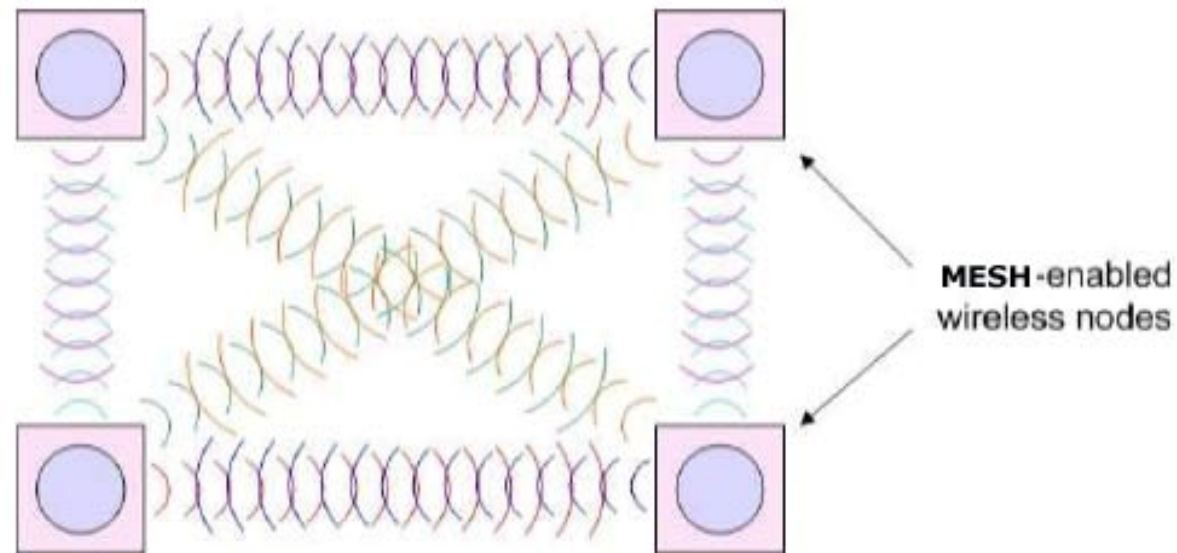
- ◆ A Pressure Transducer is used to measure pressure conditions related to the soldier and changing pressure conditions in the environment of the individual wearing the garment.
- ◆ Accelerometers are used in the garment to measure direction and magnitude of blast exposure in all planes including lateral and circular movements of the individual wearing the shirt. Sensor arrays can be added to detect chemical, biological, or radiation exposure.
- ◆ There is a GPS positioning system fitted. The GPS is in a passive state until a signal is received that triggers the GPS. The “Head” unit can then receive co-ordinates of the GPS resulting in a location determination.



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Mesh Technology

The MESH protocol can support up to 63,000 nodes in a single network. Since these are full mesh networks, there is no single point of failure. Any node can talk directly to any other node that is in range, and any node can talk indirectly to any other node via intermediate nodes. The InteliShirt RF Module thus provides peer-to-peer mesh networking capabilities.



A simple MESH-enabled wireless network.

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MARKET ADVANTAGE

- ◆ IntelliShirt is an ideal way to gather instant information on the status of a patient who has been a victim of a blast.
- ◆ IntelliShirt is an easy to deploy system that has been developed for immediate use with military applications.
- ◆ IntelliShirt technology can easily be adapted to suit other applications such as NASCAR, Motorcycle Racing and equestrian.
- ◆ IntelliShirt can be adopted for use in special/covert operations where risk of explosions and/or high impact crashes is imminent.

MARKETS

InteliShirt can provide an effective solution for sophisticated blast and external environmental detection to a variety of markets including:



WHO IS

ISOTECHNOLOGY

- ◆ IntelliShirt has been pioneered by Dr. Terence Vardy, an international expert in medical devices, and his qualified team, over the past 35 years.
- ◆ Dr. Vardy, whose educational credentials and qualifications are extensive, has also:
 - Practised in Harley Street, London, United Kingdom from 1988 to 1991.
 - Lectured at NASA – at the Ames Research Center, San Jose and Houston Space Center between 1994 and 1997 on Exercise Countermeasures for -1G.
 - Consulted to US Government Officials on health and medical devices development.
 - Been a Prime Contractor to the USA Government Department Of Defense from 1999.
 - Been extensively involved in various research projects in the USA, UK, Australia and Russia, and has a number of articles published across a wide range of related medical topics.
- ◆ IsoTechnology has assembled a team of technical and industry experts to assist in the development of this technology. These research personnel and associates, located in various countries, are actively working with the product to ensure the the company develops the leading edge technology in every aspect – practically and efficiently.



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INTELISHIRT

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