Excellence In Surgical Products 2012 Winners

This year’s Excellence In Surgical Products (ESP) Awards gave readers the difficult task of picking the winners from all of the great submissions received. From the entrants rose three Best of Show products which include a wireless video solution, thermal underscrub shirt and an all-in-one positioning kit.

The Best of Show winners were given the opportunity to talk more in-depth about their products, primarily the catalyst behind the product's creation and how the product helps in the OR. Immediately following the Best of Show responses, the category winners and honorable mention products are showcased.

First Place, Best of Show, ZeroWire Wireless HD Video, NDS Surgical Imaging

ZeroWire Wireless HD Video, NDS Surgical Imaging

SP: *How was the idea for the product developed?*

NDSSI: Extensive research showed that healthcare OR professionals had long sought a wireless technology as a means to improve the level of efficiency, flexibility and safety. However, due to strict requirements on OR equipment including personnel safety, image quality, operating distance, radiation level, and co-existence with other equipment, until now this has not become a reality.

ZeroWire® is the first fully-operational, FDA-approved, medical-grade technology to provide a robust wireless video link in the modern surgical OR. Utilizing the Ultra-wideband (UWB) frequency spectrum between 3.1 to 4.8 GHz, ZeroWire avoids interference with and from other devices. Designed for minimally invasive surgery and interventional procedures, ZeroWire allows surgical staff to view full HD surgical

video (1080p60) wirelessly in real time, with less than 1-frame latency. The product allows optimum flexibility in the placement of monitors and relocation from room to room, or procedure to procedure. It also eliminates cables and wires, improving safety and efficiency in the OR, while reducing cleaning time, removing potential tripping hazards and the need for frequent cable replacement.

SP: *What is the concept behind the product?*

NDSSI: Using ultra-wideband technology, ZeroWire allows fully wireless connectivity and signal reliability between surgical displays in the OR. This is achieved though a memory-enabled pairing system, specifically designed to work within a 30-feet (10-meter) range to contain the signal to the OR environment. Installation is quick and easy with no hindrances to existing systems, while helping to eliminate cables and wires.

SP: *What are some of the potential drawbacks with similar products?*

NDSSI: Uncontained signals can be boosted beyond the immediate OR space, causing interference with electrical equipment in other rooms. ZeroWire is a contained signal to 30 feet (10 meters).
Some products can cause interference with the numerous electrical devices already in the modern OR, including electro-cautery, radiology equipment, and wireless LAN. ZeroWire utilizes the ultra-wideband spectrum, which is out of the range of other electronic devices.

SP: *What important information should OR personnel keep in mind when using your product?*

NDSSI: a. ZeroWire allows faster turn-around time of ORs through reduced down-time, easy room-to-room transfer, and shorter cleaning time between procedures
b. Allows surgeon and staff to view medical-grade, surgical quality video with greater versatility of placement, more convenient distances and angles, and instant mobility to suit staff needs during procedures
c. Eliminates the safety hazard of long cables across OR during procedures, and reduces clutter, giving the surgical team ease of movement
d. Allows flexible equipment layouts to suit patient/procedure needs
e. Easy to install, connect (bond) and maintain, making video more accessible to more procedures and patients

Second Place, Best of Show, Under-Scrub Shirt, UndORwear Inc.

Under-Scrub Shirt, UndORwear Inc

SP: *How was the idea for the product developed?*

UndORwear: The idea for the UndORwear, Inc. thermal undershirt was developed by a practicing anesthesiologist that saw a need for a product to help keep people warm while working in the cold, sterile environment of the operating room. Most operating rooms are kept between 58-65 degrees Farenheit and hospital employees, nurses, and doctors are restricted to wearing thin cotton or polyester scrubs. For infection control reasons, most institutions follow strict AORN and department of public health guidelines that do not allow workers to wear clothing from that outside that is visible under the scrubs. Our shirt is specially designed to NOT be visible under standard scrubs and utilizes a super-soft, moisture wicking, and antimicrobial thermal material that helps insulate you from the cold of the OR.

SP: *What is the concept behind the product?*

UndORwear: The concept is simple: Make the daily lives of people working in the operating room a little better by helping to keep them comfortable. Working in the operating room is very stressful. Working in the operating room while you are freezing is even more stressful. While there are scrub jackets, disposable thermo-reflective jackets, or surgeon gowns that can be worn in the operating room, we've modeled our shirt based on the studies and experience of outdoor enthusiasts that shows wearing form-fitting thermal layers close to the skin provides superior protection from the cold. We have designed a simple, compliant product that can be worn under scrubs that helps maintain your core temperature so you can better focus on the job at hand. As comfortable as our top is, we've taken it a step further

and added moisture-wicking and an eco-friendly antimicrobial agent that even inhibits the growth of MRSA.

SP: *What are some of the potential drawbacks with similar products? How does your product address these problems?*

UndORwear: There are cotton/polyester scrub jackets, disposable thermo-reflective jackets, or disposable surgical gowns that people do wear in the OR to help keep them warm. Potential drawbacks to these products include:
a. Cost. Disposable jackets in one community hospital cost up to $33,000/yr. Costs of using disposable surgical gowns for purposes other than keeping surgeons protected and the surgical field sterile can be even more. We offer bulk order pricing, and our shirt is a non-disposable item that can cut costs significantly.
b. Infection control. Not only is our shirt antimicrobial, but because it is worn under the scrub top it is not exposed to the patient or any potential infectious source. Disposable jackets are worn on the outside and can be bulky. They have a much larger surface area for contamination. Many workers wear them in the OR, then on a break, then from one patient to the next before discarding them at the end of the day. Surgical gowns are the same.
c. Effectiveness. Bulky jackets and surgical gowns do not "breathe" well. While wearing them people complain of sweating. Once the skin is exposed to the cold again you can actually feel colder. Our shirt is moisture-wicking and is designed with the knowledge that the closer to the skin the thermal material is the more effective it is.

SP: *What important information should OR personnel keep in mind when using your product?*

UndORwear: Not sure how to answer this one, because our shirt is so soft after a short while you won't even remember you have it on.

SP: How can using your product help facilities improve overall safety and efficiency in the OR?

UndORwear: In terms of safety, if hospitals would provide our shirts to their employees and physicians that work in the OR it would be much easier for them to maintain compliance with policies on OR attire and potentially help reduce bacterial transmission because our shirts are hidden under the scrub top AND antimicrobial.

Efficiency can be improved by keeping people comfortable. Numerous studies outside of the world of the OR (climbing, swimming, dogsledding for example) have demonstrated that mental acuity and physical responsiveness are significantly hampered even with mild hypothermia.

SP: Is there any additional information you'd like readers to know about this product?

UndORwear: There is nothing like the undORwear, Inc. thermal scrub undershirt on the market today. If you take a look at the testimonials on our website it's

obvious that this product fills a need, and those who have worn or purchased our product are extremely satisfied. Many customers will buy one shirt and within a few days we have an order for multiple shirts. . .from the same customer!

Third Place, Best of Show, Trendelenburg Positioner, AliMed

Trendelenburg Positioner, Alimed

SP: *How was the idea for the product developed?*

AliMed:The initial idea came from Tamara West, RNFA CNOR and Robotic Team First Assistant at Highland Hospital in Rochester, NY. West saw the challenges associated conventional positioning devices used in Trendelenburg positioning and was determined to keep her patients safe. She realized the short comings of an assortment of straps, foam, gel, tape and beanbags. These makeshift means are not only time consuming to staff, but do not do enough to keep the patient from sliding. West worked closely with the development team at AliMed to create the AliMed Trendelenburg Positioner, a complete positioning system.

SP: *What is the concept behind the product?*

AliMed: The AliMed Trendelenburg Positioner uses a unique method in order to secure patients in extreme position in place. An “anchor” secures around the base, keeping the patient from sliding (often called the “Trendelenburg Slide”). The positioner also incorporates integrated methods to secure the arms in place while safely stopping patients from sliding.

SP: *How can using your product help facilities improve overall safety and efficiency in the OR?*

AliMed: Not only is the AliMed Trendelenburg Positioner a complete system that will keep patients safe and secure during a procedure, it is disposable, reducing cleanup time and a facilities’ risk of cross contamination. A one-size-fits-all

complete positioning system, it is easy to remove from the table and dispose of after a procedure, there is no longer a need to clean bean bags, or replace table pads damaged by tape.

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