Wyle Aided System Gets Named to Space Technology Hall of Fame

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EL SEGUNDO, Calif., May 20, 2013 /PRNewswire/ -- A medical diagnostic technology that experts at Wyle helped perfect for use both in space and on Earth was inducted recently in the Space Technology Hall of Fame.

The technology assures high quality, secure handling and transmission of diagnostic imagery generated by compact and low-power ultrasound units, like those used in hospitals and medical offices. Real time remotely guided ultrasound is already the diagnostic imaging solution of choice for human space missions. Tests have shown that the system can be used to quickly diagnose many medical situations in space.

"Future space missions will use this approach for astronaut care as well as for research," said Genie Bopp , a vice president at Wyle's Science, Technology and Engineering Group based in Houston, Texas. "It also holds great promise for a large segment of the world's population that has no access to specialized imaging expertise. Those who embrace this system will likely see better medical outcomes and also save resources along the way."

In 2000, NASA approached a team including Dr. Scott Dulchavsky , chair of the Department of Surgery of Henry Ford Hospital in Detroit, and Wyle's doctors Ashot Sargsyan and Douglas Hamilton to develop medical ultrasound remote diagnostic techniques for use by non-expert astronauts aboard the International Space Station. The goal was to create the basis for an operational telemedicine capability for future advanced space missions.

Dulchavsky was named the principal investigator for NASA's Advanced Diagnostic Ultrasound in Microgravity experiment with Wyle experts as co-investigators on the team. Using novel training tools, the Dulchavsky/Wyle team prepared non-expert astronauts in remotely guided ultrasound procedures, and conducted a wide variety of diagnostic-quality medical imaging sessions on the International Space Station.

Medical experts on the ground quickly received these diagnostic-quality images from the International Space Station through satellite downlink, demonstrating the effectiveness of ultrasound as a multipurpose, transmittable diagnostic tool in space. The experts were able to analyze the medical images as though they were present during the ultrasound exams, although in reality their "patients" were thousands of miles away.

Wyle clinicians and engineers led the development of the remote guidance techniques and data transmission on orbit as well as handling the testing of the ground implementation.

Buoyed by the successes in space, the Dulchavsky/Wyle team decided to deploy the technique on Earth, teaming with Henry Ford Hospital to develop cost-effective, technologically viable methods for sending ultrasound scans over long distances on Earth without loss of image quality.

The system does not require highly specialized electronic wiring or extensive cabling of work areas, and uses the existing information technology infrastructure to connect to any consulting expert desired by the local medical experts.

Dulchavsky, Mike Sandler and Dr. Leroy Chiao were inducted into the Hall of Fame for their work while Mediphan [1]and NASA Johnson Space Center were inducted as organizations, and Wyle was recognized with an organizational commendation. Wyle has been providing medical services to NASA's astronaut corps since the late 1960s.

Wyle, a privately held company, is a leading provider of high tech aerospace engineering and information technology services to the federal government on long-term outsourcing contracts. The company also provides test and evaluation of aircraft, weapon systems, networks, and other government assets and other engineering services to the aerospace, defense, and nuclear power industries.

For more information, go towww.wyle.com

Links:
[1] http://www.mediphan.com/