Philips helps surgeons see

By Joe Robinson, strategic government affairs and policy lead, Philips North America, on November 15, 2015 at 6:22 pm

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Philips and RealView Imaging Ltd. have completed a clinical study that has demonstrated the feasibility of using an innovative, live 3D holographic visualization and interaction technology to guide minimally-invasive structural heart disease procedures.

In addition to viewing the patient’s heart on a 2D screen, doctors in the interventional team were able to view detailed dynamic 3D holographic images of the heart ‘floating in free space’ during a minimally-invasive structural heart disease procedure, without using special eyewear. The doctors were also able to manipulate the projected 3D heart structures by literally touching the holographic volumes in front of them. The study demonstrated the potential of the technology to enhance the context and guidance of structural heart repairs. Through innovation that matters, Philips is creating the curve on life and cost-saving procedures that touch lives in a meaningful way.

“The holographic projections enabled me to intuitively understand and interrogate the 3D spatial anatomy of the patient’s heart, as well as to navigate and appreciate the device-tissue interaction during the procedure,” said Dr. Einat Birk, pediatric cardiologist and director of the Institute of Pediatric Cardiology at Schneider Children’s Medical Center in Israel.

Dr. Elchanan Bruckheimer, pediatric cardiologist and director of the Cardiac Catheterization Laboratories at Schneider Children’s Medical Center, added “the ability to reach into the image and apply markings on the soft tissue anatomy in the X-ray and 3D ultrasound images would be extremely useful for guidance of these complex procedures.”

The technological advancements in the acquisition of live 3D images to guide minimally invasive procedures have also triggered the development of novel ways to visualize the data. Following the promising results produced by this pilot study, Philips and RealView Imaging will continue to explore the clinical value of combining live 3D imaging and medical holography, both in interventional cardiology and in other clinical areas.