Press release

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US Navy's New Submarine Bridge Trainer to Feature Barco Visual Displays

Turnkey visualization system will provide "wraparound" high-resolution immersive training environment for US Navy submarine crews.

Sacramento, CA - 29 November 2017 - Visualization pioneer Barco announced today the successful installation of an eighteen-projector display system on a 28' diameter semi-spherical dome system for the US Navy's Submarine Bridge Trainer (SBT) at NAVSEA Newport, RI.

For years pilots have used highly realistic flight simulators with interactive visual displays for training on standard and emergency flight procedures. Now that same level of control and realism is available to the US Navy to trains its submarine crews.

The Submarine Bridge Trainer (SBT) provides the Navy with new opportunities to optimize individual and team proficiencies, conduct pre-deployment training, assess operational performance, mooring training, and provide operational safety and effectiveness training in an immersive training environment for a bridge party of up to eight watchstanders/trainees and one instructor on a flying bridge that closely matches all SSN classes.

The Barco turnkey display solution included a SimCAD design that optimized projector placement and performance around the tall sail structure in the dome center. On-site program managers oversaw the installation of the custom mechanical structures for the projectors and alignment system, $xRACU^{TM}$ projector control system, and the optimized Sim 5 multi-channel projectors deployed in the system.

Two arrays of Barco Sim5 projectors provide the overlapping images in two horizontal swaths. Barco's warping, cross-channel matching and edge-blending processes provide a seamless picture of the view, and the ship's simulated roll and pitch control the attitude of the projected scene, so that the trainees are given a sense of the ship's rotational motion. The projectors, electronic binoculars and periscopes will be driven by an image generation system derived from the system developed for submarine combat system training. Visual models of vessels have also been leveraged from the existing Submarine Multi-Mission Team Trainer system and the harbor visual databases were adapted from validated products procured by the Navy for the existing Submarine Piloting and Navigation system.



Page 1 of 2

Press release

Phil Laney, Barco's Market Development Manager for Simulation, remarks that "the SBT is a positive new training technology for the US Navy with a lookdown field of view and system resolution which will provide an immersive training environment that is unmatched by most maritime trainers."

Barco was placed under contract in March 2009 and was asked to meet an aggressive installation schedule that would have the SBT ready for preview by several flag officers by late Summer 2009. To date the SBT has received high marks from each admiral that has reviewed the facility. Barco was recently placed under contract to provide a second display system for another SBT planned for later in 2015.

Shelley McInnis, the US Navy's Program Manager, stated that "Barco's implementation team, given a schedule that was extremely aggressive with engineering changes we made along the way, was flexible and knowledgeable on how to execute this project in each of its stages which gave me confidence during implementation that I would meet my training goal at the end".

About The US Navy

The US Navy is the world's largest, strongest, and most advanced sea-based military force. It projects American power around the world.

About Barco

Barco, a global technology company, designs and develops visualization products for a variety of selected professional markets. Barco has its own facilities for Sales & Marketing, Customer Support, R&D and Manufacturing in Europe, North America and Asia Pacific. Barco (NYSE Euronext Brussels: BAR) is active in more than 90 countries with about 3300 employees worldwide. Barco posted sales of 925 million euro in 2014.

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