



## MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM (MRTS) 3D<sup>®</sup>

A family of trainers providing a virtual training environment simulating a variety of systems.



**MRTS 3D<sup>®</sup> Mobile  
Electric Power Plant (MEPP)**

*Each trainer consists of government-owned simulation software running on a stand-alone network of commercial-off-the-shelf (COTS) hardware and software components. A single MRTS 3D<sup>®</sup> hardware trainer can shift between the multiple software simulation applications within minutes. This capability enables a training command to use a single hardware device to give photo-realistic, virtual training on a variety of different systems. MRTS 3D<sup>®</sup> trainers are used in both Sailor pipeline courses and in pre-deployment team training. After the instructor sets up a training scenario, faults can be inserted at any stage. The student follows shipboard procedures, interacting with the simulation through multi-touch LCD monitors.*

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NAWCTSD's demonstrated success with 3D gaming technologies for virtual environment military training applications has wide implications for the Navy and the Department of Defense. Such technologies are easily transferable across the air-land-sea platform spectrum, providing the Fleet with vast new opportunities to improve training performance, reduce training and operational risks, and lower costs.



## **MRTS 3D® VIRGINIA TORPEDO ROOM TRAINER**

Replicating the functionality of the U.S. Navy's VIRGINIA-class submarine torpedo room down to the smallest detail, the trainer represents a significant step forward in low-cost, high-fidelity simulation of tactical shipboard equipment and sets the standard for future trainers. The simulator allows operators, by touching a display panel, to carry out all the steps to load a torpedo or cruise missile, make it ready, and launch it in a realistic 3D environment. What makes the NAWCTSD trainer stand out, in addition to 3D imaging, is the successful replication of the real-world physical characteristics of each task. For instance, valves do more than simply turn "on and off". Each valve is programmed to emulate common, real-world characteristics such as "stuck", "easy to turn", "hard to turn", and "sticky". As a result, NAWCTSD was able to achieve a training environment that is so realistic, that, according to one submariner, "it's almost like the actual component is there – and just sitting behind a sheet of glass."



## **MRTS 3D® VIRGINIA EMERGENCY DIESEL GENERATOR (EDG)**

Providing a software simulation of the entire VIRGINIA-class Auxiliary Machinery Room using advanced graphics with correct component locations. The system enables operator training on all operating and casualty procedures to start, run, and shutdown an EDG in a realistic shipboard environment.



## **MRTS 3D® MOBILE ELECTRIC POWER PLANT (MEPP)**

A photo-realistic software simulation of the diesel powered electric cart A/M32A-108 for servicing, starting, and maintaining aircraft. The MRTS 3D® MEPP software allows for operation, fault localization and trouble shooting. Total development time for the trainer was less than 12 months from conception to delivery.

For further information on this exhibit, or on business opportunities with NAWCTSD, please contact our Business Support Team by telephone at (407) 380-4903, by e-mail at [orlo\\_businesssupportteam@navy.mil](mailto:orlo_businesssupportteam@navy.mil), or by mail at Business Support Team, NAWCTSD, 12211 Science Drive, Orlando, FL 32826.

