



This thesis investigates the usage of robotics and enhanced geospatial imagery to increase the training effectiveness of the Expeditionary Warfare Demonstrator (EWD) located aboard NAB Little Creek in Norfolk, VA. Originally constructed in 1953, the EWD was the US Military's first joint maritime training simulator. Although now considered outdated, it is still used to demonstrate doctrine, tactics, and procedures for all phases of amphibious operations to Navy, Marine Corps, Joint, Coalition and Civilian leaders. With only one major upgrade in the last 56 years, the EWD is losing its viability as a training tool for today's technically savvy Marines and Sailors. This thesis aims to change that. Upon completion of our work, we plan to recommend methods to employ the SunSPOT microcontroller, enhanced X3D Earth animated scenes, and digital holography to PMTRASYS for the EWD upgrade. We also expect numerous possible applications of these technologies to emerge for training tools across all services.

EWD at NAB Little Creek

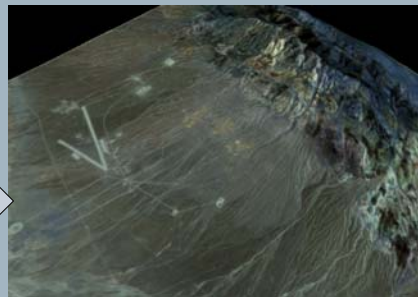


ONR allowing usage of Virtual Sand Table to construct small prototype of EWD at NPS.

Testing animated scenes within X3D Earth on Virtual Sand Table will begin in late May 2009. This thesis will be complete in September 2009.



X3D Earth Imagery of B-17 Range near NSAWC Fallon, NV



Wireless controlled vehicle constructed at NPS planned to replace ship models above.