Simulation Software for Naval Surface Warfare Training

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Abstract: This paper presents a prototype simulation software system that provides support for centralized command and control in naval surface warfare. To build this prototype, we have designed the modes of operation for the system and have created algorithms needed for its execution. These algorithms include intercepting an enemy target platform and calculating an escape route. A detailed graphical user interface interface with easy-to-use options for the user facilitates the interaction with the computer by navy commanders and tactical action officers. The software was designed and developed using a systematic engineering approach, supported by the Unified Modeling Language as specification and design notation. The paper provides background information on naval surface warfare, describes the main elements of the prototype’s software model, and details the system’s interface and modes of operation. Several directions of future work are also presented in the paper.