

A METHODOLOGY FOR MODELING THE SEQUENTIAL IMPACT OF MODERN PRECISION GUIDED MUNITIONS - PHASE II

Robert K. Cameron, Kelly Binkley, Elisabetta Jerome, Ph.D
46th Test Wing Munitions Test Division Eglin AFB, FL

This paper describes an approach to addressing a shortfall in current modeling and simulation techniques applicable to evaluation of precision guided weapon system effectiveness. The approach leverages limited fullscale testing with a blend of sub-scale testing, hydrocode analysis, and fast running empirically based simulations. A methodology was developed that utilizes calibrated hydrocodes to augment the test data. This paper will describe the process used and present illustrations comparing the hydrocode, test, and fast-running code results. Several surprising results were generated in the test program that dispute conventional wisdom. These and other lessons learned are described. This work represents an innovative approach to coupling the "physics-based" typically slow running models to the fast running needs of modern effectiveness modeling and simulation.