

A Ten-Year Retrospective on Building CREATE Air Vehicle Tools Consistent with Much of the CFD2030 Vision

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The Department of Defense High Performance Computing Modernization Program (DoD HPCMP) submitted a POM08 initiative to improve DoD acquisition program timeline, cost, and performance through the use of Computational Science and Engineering (CSE) tools for ships, aircraft, and antenna design and analysis. The resulting program is called the Computational Research and Engineering Acquisition Tools and Environments (CREATE) Program and has been managed by Dr Douglass Post of the DoD HPCMP for the last 10 years. The CREATE Program started out as a \$360M 12-year program executed by a tri-service team under the direction of Dr Post but has become a core part of the DoD HPCMP mission to provide hardware, software, and network connectivity to the Research, Development, Test and Evaluation (RDT&E) community. The air vehicles portion of CREATE is referred to as CREATE-AV and has been headed by Dr Robert Meakin of the DoD HPCMP over the same time frame. This presentation will document the progress of a few of the air vehicle products (primarily Kestrel and Firebolt with some discussion of Helios) over the last 10 years, discuss lessons learned over the last decade developing the products, show how the CREATE Vision has been consistent with much of the CFD2030 Vision and where the CREATE-AV tools are on the CFD2030 milestones, and discuss the future of the CREATE Air Vehicles portion of the CREATE Program.