DEPARTMENT OF THE ARMY
ENGINEER RESEARCH AND DEVELOPMENT CENTER, CORPS OF ENGINEERS
INFORMATION TECHNOLOGY LABORATORY WATERWAYS
EXPERIMENT STATION, 3909 HALLS FERRY ROAD VICKSBURG,
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REPLY TO
ATTENTION OF

CEERD-IZP   2 July 2015

MEMORANDUM FOR DOD HIGH PERFORMANCE COMPUTING ADVISORY PANEL

SUBJECT: Announcement of TI-14 and TI-15 Capability Applications Projects (CAPs)

1. The Department of Defense (DoD) High Performance Computing Modernization Program (HPCMP) recently acquired four new high performance computing systems with 50,000 to 130,000 cores each. The HPCMP established CAPs to provide resources to test scalability and efficiency of application codes on a substantial portion of an entire system (Phase I) and solve large, meaningful problems in a relatively short time (Phase II).

2. I am pleased to announce the selection of TI-14 and TI-15 CAPs, listed in the enclosure, for Phase I work (scalability studies). These projects are based upon the recommendations of my senior staff and are expected to produce results that evaluate the scalability and efficiency of important DoD applications codes over the next few weeks. Upon successful completion of Phase I scalability work, a subset of these projects will be offered the opportunity to execute Phase II work during the remainder of fiscal year 2015.

3. My point-of-contact for CAPs is Ms. Sandy Landsberg, Associate Director for Resource Management. She may be contacted by phone at 703-812-4453, or via e-mail at sandy.landsberg@hpc.mil.

/signed/

Encl

DAVID A. HORNER, PhD. P.E.
Director, DoD High Performance
 Computing Modernization Program

TI-14 and TI-15 Capability Applications Projects

CEERD-IZA
SUBJECT: Announcement of TI-14 and TI-15 Capability Applications Projects (CAPs)

1. GEMS – General Equation and Mesh Solver, Matthew Harvazinski, Air Force
2. Maneuvering F-22 Capability Application Project, Chris Leone, Air Force
3. Unitary Quantum Lattice Algorithms for Turbulence, George Vahala, Air Force
4. Coastal Flood Modeling, Chris Massey, Army
5. Chem + Physics of Energetic Materials, Jonathan Mullin, Army
6. Using High Performance Computers to Accelerate the Evaluation of Next Generation Ground Vehicle and Signature Management Technologies, Denise Talcott, Army
7. Parallel in Time Development for the HPCMP-CREATE™-AV Helios Code, Andrew Wissink, Army
8. Massively-parallel Large Eddy Simulation Framework and Application to Combustion Dynamics in Gas Turbine Engines, Guillaume Bres, Navy
9. Highly Distributed Algorithms for Deep Neural Networks, Gavin Taylor, Navy
10. NEPTUNE - The Navy Environmental Prediction sysTem Utilizing the NUMA corE, Kevin Viner, Navy
11. Hydrodynamic Modeling of ORP Ship Concepts, Craig Wagner, Navy
12. Global Tidal Ensemble, Alan Wallcraft, Navy