CONTRACTOR-PERFORMANCE WORK STATEMENT (C-PWS)
FA8051-24-S-0001 Attachment 3

*****Review the PWS template/instructions in each CALL. If instructions are different from these template/ instructions, comply with the CALL template/ instructions. *****

1.0 OBJECTIVE

1.1 The objective of this effort is to investigate: (a) techniques for generating code for (whatever); (b) technology that connect transformed variants of programs, crucial to debugging and performance analysis; and (c) exploitation of XXX by software environments.

2.0 SCOPE

2.1 The scope of this effort is to develop technology for building integrated computational environments for XXXXX and distributing a set of advanced computational software tools based on this technology that demonstrates the ability to achieve improved performance on current XXXXXX computers.

3.0 BACKGROUND

3.1 XXXXXX and computer communications networks are increasingly important to scientific advancement, economic computation, and national security. The technology is reaching the point of having a transforming effect on our society, industries, national defense, and educational institutions. The goal of the XXXXXXXXXXXXXX program is to accelerate significantly the commercial availability and utilization of the next generation of XXXXXXXXXXXX computers and software.

3.2 The key is by aggressively pursuing research in XXXXXXXX, and intelligent XXXXXXXXXXX to deliver revolutionary advances in XXXXXXXXXX software tools. An ideal XXXXXXXXXXXX environment will ultimately depend on a pervasive understanding of the relationship between XXXXXXXXX programming methodology, XXXXXXXXX, XXXXXXXX implementation, and system performance characteristics.

4.0 TASKS/TECHNICAL REQUIREMENTS

4.1 The contractor shall accomplish the following:

4.1.1 Design and implement a XXXXXXXXXX for a XXXXXXXXX computer. The XXXX shall include the design of initial data structures.

4.1.2 Develop an execution analysis infrastructure to debug and study the performance of XXXXXXXXXXXXX without having to understand the transformations caused upon the program by the XXXXXXXXXX, which includes:

4.1.2.1 Implementation of connections between XXXXXXXXXXX and XXXXXXXXXXXXX.

4.1.2.2 Implementation of connections from XXXXXXXXX to XXXXXXXXXX representation.
4.1.3 Develop technology to utilize the power of XXXXXX on the XXXXXXXXXXX tasks to develop a general XXXXXX environment which includes: 4.1.3.1 Tools for XXXXXXX to be XXXXXXXXX scheduled on XXXXXXXXX;

4.1.3.2 Interfaces for automatic scheduling of tools that are specifically designed to be executed on XXXXXXXX; and

4.1.3.3 Integrating the XXXXXX paragraph 4.1.1.

4.1.4 Identify XXXXX community members with relevant applications to experiment with the XXXXXXXXX of the XXXXXX from paragraph 4.1.1 and the general XXXXXXXX from paragraph 4.1.3.

4.1.5 Reporting.

4.1.5.1 Continually determine the status of the effort and report progress toward accomplishment of contract requirements. (See CDRL, A001)*

4.1.5.2 Continually determine the status of funding required for contract performance. (See CDRL, A002)**

4.1.5.3 Document all technical work accomplished and information gained during the performance of this acquisition. This shall include all pertinent observations, nature of problems, positive as well as negative results, and design criteria established, where applicable; also, procedures followed, processes developed, "Lesson Learned", etc. The details of all technical work shall be documented to permit full understanding of the techniques and procedures used in evolving technology or processes developed. Separate design, engineering, or process specifications delivered during this acquisition shall be cross-referenced to permit a full understanding of the total acquisition. (See CDRL, A003)***

*(See CDRL, A001) - indicates an R&D Project Summary Report, due either monthly or quarterly.
**(See CDRL, A002) - indicates a Contract Funds Status Report, due either monthly or quarterly.
***(See CDRL, A003) - indicates Final Technical Report due at the end of the contract term