

STATEMENT OF CONSIDERATIONS

ADVANCE WAIVER OF THE GOVERNMENT'S U.S. AND FOREIGN
PATENT RIGHTS IN INVENTIONS MADE BY THE INTERNATIONAL
BUSINESS MACHINES CORPORATION IN THE PERFORMANCE OF
LLNL'S SUBCONTRACT NO. B517552 UNDER DOE'S
ACCELERATED STRATEGIC COMPUTING INITIATIVE
DOE WAIVER NO. W(A)-01-018, (SAN 688)

The Petitioner, the T.J. Watson Research Center of International Business Machines (IBM) Corporation, has submitted a petition for an advance waiver of the Government's domestic and foreign rights to inventions made during performance of the above cited Subcontract.

Background: DOE's Office of Integrated Computer Systems DP-142, has provided the NNSA's Tri-Laboratory community of Sandia, Lawrence Livermore and Los Alamos National Laboratories funding for the Advanced Simulation and Computing (ASCI) Program since FY97. In order to meet the needs of the Stockpile Stewardship and Management Program, the objective of ASCI has been to extend the computational powers of existing supercomputer systems so as to create predictive simulation of nuclear weapons behavior and performance in a virtual environment without actual testing. ASCI's 3-teraOPS Blue Pacific computer was installed by IBM under LLNL Subcontract No. 331593 at the beginning of FY99. ASCI's 12.3 teraOPS White computer, presently considered the world's fastest, was installed by IBM under LLNL Subcontract No. B338307 in 2000. The present LLNL Subcontract No. B517552 has authorized funding, subject to appropriations, for research and development of the ASCI Blue Light 180 teraOPS supercomputer through FY 2003. The subject petition for an advance waiver, attached hereto as Enclosure 1, was submitted by IBM on June 27, 2001. Such waiver petition is required in accordance with 10 CFR 784.4 because IBM is a large business entity.

Analysis: The Blue Light LLNL Subcontract No. 517552 is the first project initiated under ASCI's Advanced Architecture program. This program's objective is to identify inadequacies in today's high-end computing systems and to promote R&D efforts exploring alternative high-performance computing architectures that will address ASCI's complex applications. The first step of this program is the Blue Light research and development project whose goal is to attain a peak 180+ teraOPS ultracomputer. The entire Blue Light project consists of two phases - this R& D effort involving an aggressive chip test program along with software/hardware development followed by a prototype build-out. This first phase is a 40/60 IBM/DOE cost-sharing Subcontract with a project budget of \$20.9 million dollars. The latter build-out phase will be reviewed by the ASCI Program for further funding consideration during 2003 when/if the R& D phase under this Subcontract proves successful. Given the past progress of the ASCI Program with the present parties, it appears logical to pursue the proposed design effort between LLNL and IBM.

Scope of Waiver: The purpose of IBM's petition is to request an advance waiver of the Government's domestic and foreign patent rights under the authority of 42 USC 2182 and 5908, in accordance with DOE's patent waiver regulations at 10 CFR 784.4. The Petitioner will be able to retain the patent rights to its sole or joint (undivided) subject inventions in accordance with the terms and conditions set forth at 48 CFR 52.227-12 as amended by 10 CFR 784.12. This waiver is subject to DOE's retention of a royalty-free, non-transferable, irrevocable, nonexclusive license to practice any subject invention by or behalf of the U.S. Government anywhere in the world, march-in rights and a preference for United States industry provision comparable to those set forth in 35 U.S.C. 202 and 204.


The Petitioner has provided, within Enclosure 1 at Appendix C, an alternative benefits plan to meet DOE's U.S. Competitiveness policy. After some negotiation, IBM has agreed to conduct R&D activities under this Subcontract principally (LOE>90%) in U.S.-based facilities, and for a period of one year after Subcontract completion, subsequent R&D on subject technologies substantially (LOE>50%) in U.S.-based facilities. Refer to Enclosure 2 for the text of the agreed upon U.S. Competitiveness provision which has been made applicable to this Subcontract only. IBM has also requested DOE's prior approval to establish claim to copyright subsisting in all published and non-published data. DOE intends to retain a license on behalf of the U.S. Government in/to all such data. This retained license will expand from a narrow to a broad scope license after five (5) years from the date of production in the case of computer software. This treatment is consistent with the scope of Waiver No. W(C)-97-004 granted to IBM under previous subcontracts. See Enclosure 3.

Conclusions and Recommendations: Considerations relevant to the grant of the subject advance waiver include whether such grant is necessary to secure the participation of a particular contractor and whether such grant will expedite attainment of the purposes of the Program. Again, the ASCI Program has anticipated the need to involve many of the best industrial laboratories in the world in this Advanced Architecture project. The Petitioner has stated that it has previously invested more than \$100 million in a cellular architecture research program which has evolved into proprietary server systems and applications software. Additionally, in accordance with their business model, IBM has expressed its reluctance to "accept a subcontract award if the waiver request is not granted." Since IBM is proposing a 40% cost share contribution under this Subcontract, or approximately \$9 million over three years, DOE is essentially attempting to expedite an ongoing privately sponsored development program.

Granting this advance waiver should not have adverse effects on market concentration since the ASCI Program has maintained competition by spreading funding throughout the NNSA national security laboratories. Sandia National Laboratory is working with the Intel Corporation which has delivered the ASCI Red 3+ teraOPS supercomputer, while Los Alamos has recently signed a contract with Compaq Computer Corporation to deliver ASCI Q, a 30 teraOPS supercomputer scheduled for installation in 2002. Hence, the subject invention rights granted by this waiver should serve to enhance competition by encouraging


development of new or improved technologies, rather than serving to concentrate markets. Further, IBM has stated in their waiver request that it "is obligated to cross license inventions of Petitioner's employees to others under the terms of several hundred cross licenses" and that they are willing to license others "under an open licensing policy". Thus, the ASCI procurement framework as well as the availability of licenses from IBM itself should ensure broad distribution of the technology conceived and/or reduced to practice during performance of this Subcontract.

Accordingly, in view of the statutory purposes of DOE waiver policy, and the objectives of the Accelerated Strategic Computing Initiative, and in view of the factors to be considered under DOE's statutory patent waiver policy, all of which have been considered, it is determined that the advance waiver set forth above will best serve the interest of the United States and the general public. It is therefore recommended that this waiver be granted.



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Based on the forgoing Statement of Considerations, it is determined that the interest of the United States and the general public will best be served by waiver of United States and foreign patent rights, and therefore the waiver is granted. This waiver shall not affect any patent waiver previously granted. This waiver shall not apply to a modification or extension of this Subcontract where, through such modification or extension, the purposes, scope or DOE cost of the Subcontract has been substantially altered.

CONCURRENCE


Dr. William Reed
Acting Director, Office of Advanced
Simulation and Computing (DP-14)

APPROVAL


Paul Gottlieb, Assistant General Counsel
for Technology Transfer and
Intellectual Property (GC-62)

Date 10-16-01

(3) Encl