

STATEMENT OF CONSIDERATIONS

ADVANCE WAIVER OF THE GOVERNMENT'S U.S. AND FOREIGN PATENT RIGHTS AND ADVANCE APPROVAL TO ASSERT COPYRIGHT RIGHTS UNDER SUBCONTACT B554331 ISSUED BY LAWRENCE LIVERMORE NATIONAL LABORATORY TO INTERNATIONAL BUSINESS MACHINES CORPORATION FOR THE BLUEGENE/P DESIGN ARCHITECTURE, PHASE III - PROTOTYPE HARDWARE BUILDOUT AND BLUEGENE/Q - ADVANCED ARCHITECTURAL INVESTIGATIONS; DOE WAIVER NO. W(A) 05-048

The Petitioner, International Business Machines Corporation (IBM), has requested an Advance Waiver of the Government's Intellectual Property Rights in the above-cited research and development subcontract for (1) the BlueGene/P Design Architecture, Phase III (Prototype (BG/P III) and (2) the BlueGene/Q Advanced Architectural Investigations (BG/Q). In its request, IBM has agreed to accept the same terms and conditions that were incorporated in the two previous BG/P subcontracts- B542702 for the BlueGene/P Design Architecture, Phase I (Feasibility Study) which was authorized under DOE Advanced Waiver W(A)-04-053 and B548850 for BlueGene/P Phase II (Design and Fabrication) which was authorized under W(A) 05-014.. See Enclosures 1, 2 and 3, IBM's facsimile Request for Proposal No. B554331, DOE Advance Waiver W(A)-04-053, and DOE Advanced Waiver W(A) 05-014, respectively. These same terms and conditions were negotiated in the earlier LLNL Subcontract B517552 with IBM for the BlueGene/L Program and were authorized under DOE Advance Waiver W(A)-01-018 (SAN 688). See Enclosure 4, DOE Advance Waiver W(A)-01-018.

Background: The earlier BlueGene/L Subcontract No. B517552 was the first initiated under the Advanced Simulation and Computing (ASC) Advanced Architecture Program. The ASC 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 the ASC program's complex applications. The BlueGene/P Program is for the development of a second generation system which builds on the first generation BlueGene/L design based on several proprietary IBM hardware and software technologies. The leverage of these IBM technologies is expected to lead to a BlueGene/P design having significant improvement over BlueGene/L in cost performance. The current Subcontract B554331 is for the construction of a prototype scalable computer having a one petaFLOP/s peak operating performance (BG/P III); and then advance the BG/P technology towards a computer capable of achieving ten petaFLOP/s peak operating performance (BG/Q). As in previous subcontracts under various aspects of the ASC program, IBM has expressed its reluctance to accept a subcontract award if a waiver of intellectual property rights is not granted.

The BlueGene/P Program contemplated three phases of research and development - the technology choice and architecture phase, the design and fabrication phase and the prototype hardware build-out phase. The BG/P I has been successfully completed and BG/P II is scheduled for completion in December 2005. Subcontract B554331 is for BG/P III and BG/Q, and has a projected budget of approximately \$9 M for BG/P III and \$19 M for BG/Q, subject to funding by the ASC Program. There is a 40/60 IBM/DOE cost-sharing allocation. The BG/P Program is

contemplated to run through the 2007 and the BG/Q Program is contemplated to run through 2010.

Scope of the Waiver: IBM has agreed to accept the same scope as in the previous waivers under the ASC Program - W(A) 05-014 (BG/ P II, W(A)-04-053 (B/G P I) and W(A)-01-018 (BG/L). Briefly, 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. DOE will retain a royalty-free, non-transferable, irrevocable, nonexclusive license to practice any subject invention by or on 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. IBM will conduct R&D activities under this subcontract principally (level of effort > 90%) in U.S.-based facilities, and for a period of one year after the subcontract completion, subsequent R&D on subject technologies substantially (level of effort > 50%) in U.S.-based facilities. The agreed upon U.S. Competitiveness provision is made applicable to this subcontract. See Enclosure 5, U.S. Competitiveness Clause.

IBM is granted prior approval to establish copyright subsisting in all published and non-published data. DOE will retain a paid-up, nonexclusive, irrevocable worldwide license on behalf of the U.S. government in such copyrighted data to reproduce and prepare derivative works, and perform by or on behalf of the Government. In the case of computer software, after five (5) years from the date of production, this license will expand to include the right to distribute copies to the public, and perform publicly, and display publicly, by or on behalf of the Government.

Conclusion: Given the past progress of the ASC program with the present parties under the BlueGene/P Phase I and Phase II subcontracts and the applicability of the previously negotiated terms and conditions to this next stage of research and development, it is desirable to continue the proposed BlueGene/P Phase III and BlueGen/Q efforts under the same terms and conditions.

Accordingly, in view of the statutory purposes of DOE waiver policy, and the objectives of the Accelerated Strategic Computing program, 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 this advance waiver will best serve the interest of the United States and the general public. It is therefore recommended that this waiver be granted.

[Redacted Signature]

William Daubenspeck
Office of Counsel
NNSA Service Center


Date: 12/14/05

Based on the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by waiver of the United States' domestic and foreign patent rights, copyright in software and a delay in the release of technical data as set forth herein, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the IBM subcontract where, through such modification or extension, the purpose, scope or DOE cost of the subcontract has been substantially altered. This waiver shall not affect any waiver previously granted.

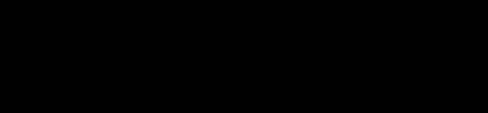
CONCURRENCE:



Date: 12/15/05


Dimitri Kusnezov
Director of Office of Advanced Simulation
And Computing (NA-114)

APPROVED:



Date: 12/15/05

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

Encl. (1)-(5)

U.S. Competitiveness

The Subcontractor agrees to conduct research and development activities under this Subcontract principally in U.S.-based facilities. "Principally" is defined as greater than a ninety (90%) percent level of effort. Subcontractor also agrees that for a period of one (1) year following Subcontract completion, subsequent research and development by the Subcontractor for the purpose of commercializing technologies arising from the intellectual property developed under this Subcontract shall be performed substantially in U.S.-based facilities. "Substantially" is defined as greater than fifty (50%) percent level of effort. The Subcontractor further agrees that any processes and services, or improvements thereof, which shall arise from the intellectual property developed under this Subcontract when implemented outside the U.S., shall not result in a reduction of the Subcontractor's research workforce in the United States. Finally, it is understood between the DOE and the Subcontractor that any subsequent follow-on subcontracts and/or future phases of work under the Government's ASCI Program will be subject to a separate U.S. Competitiveness determination.