The International Society for Optical Engineering

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Defense Acquisition Regulations Council
Attn: Ms. Amy Williams
OUSD (AT&L)
DPAP (DAR)
IMD 3C132
3062 Defense Pentagon
Washington, DC 20301-3062

Subject: DFARS Case 2004-D010
"Deemed Exports"

Dear Ms. Williams:

I am writing to you as Executive Director of SPIE — The International Society of Optical Engineering to request that proposed changes to export control regulations contained in ***DFARS Case 2004-D010*** be withdrawn completely or that they be substantially rewritten to prevent significant harm to U.S. economic and security interests and to the U.S. scientific research community.

SPIE is an international scientific professional society comprised of more than 17,000 scientists and engineers throughout the world. SPIE is the leading organization representing the optics and photonic communities. Our roots are in the U.S. aerospace industry and our 10,000 or so members in the U.S. work in industry, academia and government laboratories. Our members are on the cutting edge of fundamental scientific research in, nanotechnology, laser applications, alternative energy and many so-called "convergent" technologies that form the basis of our 21st Century economy.

SPIE strongly supports existing law and legal precedent governing the conduct of classified scientific research by foreign nationals through already established legal guidelines found ***in National Security Decision Directive 189 (NSDD 189).*** *NSDD189* was promulgated by the Reagan Administration in 1985 and reaffirmed in November 2001 by then-National Security Advisor Condoleeza Rice. *NSDD 189* has already established an appropriate means for protecting U.S. national security while encouraging necessary research by foreign nationals.

DOD's proposed "deemed export" regulations have also been issued at a time when the U.S. scientific community relies increasingly upon the talents of a large number of foreign nationals. Many of these individuals began their careers with American companies, universities, and even as federal workers when they were foreign students studying in the U.S.

In the past generation, the U.S. scientific and technology community (S&T) has become so reliant upon the world-wide network of enterprising and talented individuals who have immigrated to the U.S. that it would be impossible to maintain an advanced economy without such participation.

There were over 260,000 foreign students (undergraduate and graduate) in science and engineering fields enrolled in U.S. universities in 2003 (see http://opendoors.iienetwork.org/?p=49936). In 2003 foreign nationals earned 38% of the science doctorates and 58.9 % of the engineering doctorates awarded by U.S. institutions. Temporary U.S. residents constituted 59% of U.S. postdoctoral scholars in science and engineering in 2002.

Almost half of the U.S. Nobel laureates in science fields since 1990 were foreign researchers. (For this and other data on foreign participation see the recent report of the National Academy of Sciences Committee on Science, Engineering, and Public Policy (COSEPUP), *Policy Implications of International Graduate Students and Postdoctoral Scholars in the United States (*May 2005; available at http://www.nap.edu/books/0309096138/html/).

In the science teaching area alone, a National Science Foundation survey published in 2000 found that foreign-national faculty in U. S. higher education represented 35% of the engineering professors, 40% of the professors in computer science, and 27% of the professors in mathematics.

These trends will continue for the foreseeable future, especially given the low interest accorded science education by American culture at large and the poor showing of American students in various objective international student comparisons.

Simply put, we already face a very serious threat to U.S. competitiveness and we should not attempt to thwart the process of cross-border scientific training and education. Worse, zealous efforts to deny foreign access to our university and industry research enterprises might result in the U.S. becoming cut off from the vital supply of talent that replenishes its own scientific knowledge. The grave threat to our national security and economy is well detailed in the ***Hart-Rudman Report of 2001*** and has been brought to your attention in other comment letters.

Summary

SPIE wishes to see the following areas addressed in future efforts of this nature, should DOD feel compelled to go ahead with revising these rules and not simply withdraw them:

1. SPIE supports the current "classification" process, as defined by ***National Security Decision Directive 189 (NSDD 189).*** This policy was promulgated by the Reagan Administration in 1985 and reaffirmed in November 2001 by then-National Security Advisor Condoleeza Rice. NSDD 189 establishes an appropriate means for protecting national security while encouraging necessary research. The proposed regulations should be withdrawn until such time as there is a clearer policy emanating from the Department of Commerce.

2. The proposed regulations do not provide any explicit exemption for "fundamental research" as would be expected from *NSDD 189.* Further, DOD 6.1 and those portions of DOD 6.2 research activities considered "fundamental" in nature need to be expressly exempted from the proposed regulations.

3. The proposed regulations need to make an explicit exemption for "grants."

4. SPIE is concerned about the overall effects the proposed regulations would have on academic institutions. If implemented, the recommendations would require that universities restrict the participation of international students in research once they arrive in the United States until an export license is obtained some students may by forced to wait intolerably long periods of time for additional export control licenses to be issued before they can conduct and use equipment essential for the conduct of basic research.

5. SPIE is concerned new badging and segregation measures in an academic environment. As we understand the proposed regulations, universities would have to implement additional controlled access to their research laboratories to ensure that individuals without proper licenses are not permitted to enter, requiring costly new systems of access control (e.g. security guards and badges for students) at university research laboratories.

In summary, this particular provision seems impractical, costly, discriminatory, and excessively bureaucratic given the current system for preventing unauthorized access to classified research. It works.

6. SPIE is concerned about changes in export control regulations that would restrict the participation of foreign students and scholars in non-classified, non-proprietary research once they arrive in the United States. Once cleared through the appropriate processes, including the current Visa MANTIS process, foreign visitors should

be free to use equipment required for the conduct of fundamental, unclassified research without additional barriers, background checks and/or export licenses.

7. Of even larger concern to SPIE, which is an international organization that crosses many borders, is the very tone of the proposed regulations. These proposed rules have the potential to create two ”classes” of students on campuses, thwart industry participation in university-based research, and even prevent existing faculty and naturalized U.S. citizens from participating in basic (fundamental) research. The proposed changes could also “send the wrong message” to foreign nationals and create unwarranted social tension between and within research teams.[1]

8. DOD must address the potential problems of training and compliance — even for its own program officers. Any revisions of these regulations ought to describe, by example, the distinctions between grants, contracts, sub-contracts and fundamental versus applied research and development activities.

9. SPIE asks for clarification and examples of how to comply with instances of “dual use” technology research. The proposed regulations appear to be silent on this topic. It is also concerned about the likelihood that, when in doubt, compliance officials would err on the side of caution and probably be overly restrictive in ambiguous situations.

10. SPIE asks for clarification and examples of how multiparty contracts, third-party relationships and mixed contract-grant arrangements are to be considered within the scope of the proposed regulations. We urge DOD to make sure that proper guidance is provided for compliance through prior consultation with the academic and industrial research communities affected.

11. SPIE opposes issuance of Final Regulations in ***DFARS Case 2004-D010*** on this matter for the reasons cited above. In such a critical matter, it is important that we consult as widely and openly as possible with all parties affected. Should DOD re-issue these proposed regulations, we further suggest that another comment period be provided to insure that our community’s concerns have been addressed.

Sincerely,

Dr. Eugene Arthurs
Executive Director
SPIE — The International Society for Optical Engineering

1. In the words of the Council on Government Relations (COGR) an organization which represents many academic, hospital and other research institutes in the United States:

> … (I)f, to undertake DoD research, universities must establish segregated facilities to assure that foreign members of the campus community (unless specifically licensed by the government) do not have access to any export-controlled information or technology, universities will have to decline to do such research or will have to undermine the open, collaborative, and international research environment that underlies the productivity and success of the U.S. academic research endeavor and, ultimately, contributes to our nation’s security. While a few universities have controlled facilities on campus, most do not. They are unlikely to establish them both as a matter of policy and because of the substantial costs associated with such facilities. Universities will face the difficult choice of substantially altering the normal open campus research environment to comply with the requirements or “walking away” from the conduct of DoD-funded research. Many can be expected to choose the latter option.