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Comment letter on Department of Commerce recommendations on deemed export controls

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June 24, 2005

Mr. Alexander Lopes
Director, Deemed Exports and Electronics Division
U.S. Department of Commerce
Bureau of Industry and Security
Regulatory Policy Division
14th & Pennsylvania Avenue, NW
Room 2705
Washington, DC 20230

Dear Mr. Lopes:

This letter responds to the Advance Notice of Proposed Rulemaking (ANPR) published in the Federal Register on March 28, 2005 (RIN 0694-AD29) asking for comments on the recent recommendations of the Department of Commerce Inspector General (IG) with regard to "deemed exports" in the context of university fundamental research.

The Council on Governmental Relations (COGR) is an association of 160 research intensive universities, affiliated hospitals and research institutes in the United States. COGR works with federal agencies to develop a common understanding of the impact that federal policies, regulations and practices may have on the cutting edge research conducted by these institutions. The application of "deemed export" requirements to fundamental research at universities is a matter of great interest and concern to the COGR membership.

The university community is committed to helping protect the country against potential threats. However, COGR believes that the changes recommended by the Commerce Department Inspector General report (IPE-16176, March 2004) are based on misunderstandings of the fundamental research exclusion from export controls and of the university research process. Both would be seriously harmed if the IG recommendations were implemented. The IG has presented no evidence as to why these changes are necessary or how the existing mechanisms of visa screening of foreign nationals and classification do not adequately protect U.S. national security interests.

In the following sections of this letter we discuss our concerns in more detail. We appreciate the interest of the Commerce Bureau of Industry and Security (BIS) in evaluating through the ANPR the impact the changes would have on U.S. academic institutions. We ask that BIS:

1) reconsider and not accept the IG's interpretation of the scope of the fundamental research exclusion from export controls;
2) clarify the Export Administration Regulations in a number of ways that would help establish clearer compliance standards and facilitate university compliance (see in particular #8 below); and
3) seek to foster a continuing high level dialogue among stakeholders both within the government and the regulated communities. This dialogue should include federal research funding agencies, the Office of Science and Technology Policy, the government security community, the National Academies, and academic and industry groups to assure the necessary balance among the full range of physical and other security interests. This dialogue should focus on undertaking a cost benefit analysis of the IG's recommendations, taking into account any as yet to be identified specific security concerns that are not being addressed by the current visa and classification processes and the burden on university research that would also ultimately undermine national security.

Our comments cover the anticipated impacts, review existing protections, describe the university fundamental research process and the university research environment, discuss the nature and volume of university equipment, note the confusion caused by the discussion of equipment use and use technology in the IG report, suggest an alternative approach, and respond to the IG's recommendation on country of birth. Further discussion of these points and references are provided in the attached Background section. We expect that COGR member institutions will provide you in their individual responses with additional information as to the potential impacts of implementing the IG recommendations on their individual campuses, to the extent they are able to make these determinations.

Summary of COGR Comments

1. Implementation of the IG recommendations will adversely affect U.S. economic competitiveness and national security since it will make US universities appear much less welcoming.

Implementation of the IG recommendations will adversely affect U.S. economic competitiveness and national security since American universities will be seen as (and in fact will become) much less welcoming to foreign students and researchers. Even the perception may pose a greater threat to our national security in the long-term than would any risk associated with allowing foreign nationals to receive technology to use equipment freely available for purchase in the U.S. in conducting fundamental research at universities. Recent reports from a variety of respected sources indicate that the international competitiveness of U.S. universities has declined since the events of 9/11/01. The reports also demonstrate that the contributions of foreign students and scholars are critically important to U.S. science and engineering and to our national innovation capability. We concur with this view.

2. Primary reliance should continue to be placed on the existing visa and classification process.

In order to assure the necessary screening for those foreign nationals who may actually threaten U.S. security, primary reliance should continue to be placed on the existing visa process before admitting individuals to the U.S. for study and research at U.S. universities. The classification process should continue to be used for the limited subset of university research that may pose real security threats. The IG report provides no evidence that the existing visa and classification processes fail to adequately address concerns about transfer of sensitive technologies. It does not cite any example where an inappropriate transfer has occurred. The visa screening process has been under ongoing review and improvement to make it more effective and efficient. Extensive background checks are conducted on foreign students and scholars entering the United States to study or do research. Once cleared to enter through this process, foreign researchers should be free to conduct fundamental, unclassified research without requiring special licenses to use, or receive information or instruction on how to use, equipment.

3. The products of university generated fundamental research and the process for obtaining the research data are not separable.

We do not agree with the IG's premise that the products of fundamental academic research and the process for obtaining the research results are separate and distinct. The use of equipment and the conveyance of technology on how to use equipment are inseparable in academic research. The only reasonable interpretation of the fundamental research provision in the Export Administration Regulations (EAR) is that it must include the right for foreign students and researchers to use, alter and create, and to receive information on how to use, alter and create, controlled equipment while conducting fundamental research. We ask BIS to reconsider its interpretation with regard to the proper scope of fundamental research. We believe that the IG position would eviscerate the fundamental research exclusion. Its acceptance would be a serious error and a challenge to longstanding government policy on controls on fundamental research that the present Administration has confirmed. Acceptance of the IG's position in fact substantially changes universities' understanding and Commerce's administration of the present rules.

4. The open campus research environment is different from that which characterizes most corporate research, and this difference needs to be recognized in considering security measures appropriate for universities.

We disagree that the IG's premise that security measures appropriate for industry research are equally appropriate for the university research environment. A variety of federal policies recognize that there are fundamental differences (e.g. Federal Acquisition Regulations, Office of Management and Budget cost principles as well as the export regulations). Regardless of the number of deemed export licenses actually required, acceptance of the IG recommendations would alter the whole context of university fundamental research in critical ways, delaying or

precluding members of research teams and their colleagues from the university community from freely visiting each other's laboratories, participating at the spur of the moment in work with equipment, and conveying ideas and information, without constraint. These are essential attributes of the university environment. In addition to fundamentally changing the open nature of university research, implementation of security measures typically found in corporate research labs will be very costly. This concern heightens the need to carefully examine whether these measures are appropriately justified.

5. Foreign nationals at U.S. universities use a substantial amount of equipment that is controlled for transfer of "use" technology to these foreign nationals.

The requested projection of how much equipment with sensitive technologies would be subject to licensing at universities is complicated by the lack of clarity in the current regulations on "use technology." In addition, universities cannot fully define in advance the specific roles individuals will play in research or when or how they may receive controlled technology. Given the open spontaneous campus research environment, universities may need to assume that any foreign student or researcher may receive controlled technology at any time. The number of foreign nationals on campus may be more determinative than the number of items of equipment controlled for use technology in determining the number of licenses required.

Universities have identified to COGR a range of research equipment in their inventories, but this equipment requires identification and designation of the relevant export control requirements. COGR asked member universities to estimate the number of deemed export licenses that might be required under the IG's interpretation, but the difficulties in interpretation and application of the regulations in a university setting and the high cost of making determinations (see #6 below) made it impossible for universities to quantify this number with any degree of precision. However it is evident that the large number of foreign students and scholars and the volume of research equipment at our campuses would result in a substantial increase in license applications. We note, for example, that some universities report that close to 6,000 individuals on campus could require licenses; a six-fold increase over BIS' current total annual deemed export licensing volume just for a single campus.

6. Universities face a substantial burden simply in determining what equipment on their campuses may be subject to controls on transfer of "use" technology.

The administrative burdens and costs for universities are based on both assembling the inventory of potentially sensitive equipment and on the determination of whether and how each item of equipment to be used in research would be controlled for use technology. A typical research university has thousands of pieces of research equipment in its inventory, and hundreds if not thousands of new pieces are acquired each year. Indeed, one university reports that it has more than 50,000 pieces of equipment with an acquisition cost of more than $5,000 each. This does not include the substantial number of items of equipment below $5000 that are not maintained in the capital equipment inventory, but also may be controlled. Another university reports more than 70,000 pieces of equipment and one university system reports almost 140,000 pieces of equipment spread over many campuses. Each item of equipment would need to be evaluated for

controls in relation to each foreign student and researcher on campus because, unless the open research environment is profoundly altered, any member of the campus community could encounter and receive use technology relating to any piece of equipment.

COGR asked a number of universities on a blind basis to estimate the burden of assessing the need for deemed export licenses for foreign nationals working in specific laboratories on their campuses. Several universities calculate that it would cost as much as $5 million initially for each of them to classify all of the research equipment and apply for deemed export licenses for their researchers and millions of additional dollars in ongoing annual compliance costs. Universities with substantial amounts of equipment have estimated it would take 40,000-60,000 person hours necessary to complete the analysis and apply for licenses. The only way universities could pay the cost for such additional manpower would be through a significant reallocation of existing research dollars.

7. The IG report appears to confuse access to equipment with the type of technical information the Export Administration Regulations were designed to control through the deemed export provisions.

It is not the nature of the use of the equipment but the transfer of certain use technology that is the focus of deemed export concerns. Mere operation of equipment without any transfer of controlled use technology, other than information on how to operate or alter it, should not require a license. We urge the BIS staff to clarify the distinction. The current regulations confuse rather than clarify the issue in implying "use" includes "operation." Changing "and" to "and/or" in the EAR Part 772 definition of "use" as proposed by the IG will further confuse the distinction and will not address the issue of what constitutes "use technology." One possible solution would be to revise the General Technology Note in the EAR to indicate that mere access to or operation of, and mere observation or demonstration of how to operate, equipment controlled on the CCL does not in and of itself constitute the export of technology required for use of that equipment.

8. Controlled "use technology" within the context of university fundamental research should be defined to encompass only information that is not generally available to the public in the U.S. without significant restrictions. The focus should be on situations where proprietary information is transferred on an exclusive basis or under a non-disclosure agreement that significantly restricts access.

Controlled use technology needs to be clearly defined in the regulations. The EAR itself does not clearly define "use" technology but clarification is necessary to establish clear compliance standards. We propose that BIS amend the regulations to clarify that controlled "use technology" within the context of university fundamental research encompasses only information (including information in user manuals and information that may be subject to a click-on or other non-exclusive license) that is not generally available to the public in the U.S. All other technology that is generally available without significant restrictions to anyone in the U.S who is willing to pay for it should be considered publicly available for purposes of being excluded from deemed export licensing requirements. The EAR 734 Supplement No. 1 "Qs & As" implies this

understanding, which needs to be confirmed either through a modification of the current Q's and A's or a specific definition in the EAR.

In considering an appropriate definition of "deemed exports through controlled use technology," BIS should focus on situations where proprietary information (e.g. source code, blueprints or engineering designs) is transferred on an exclusive basis or under a non-disclosure agreement that restricts access to a limited group of individuals. In such cases, a foreign national performing U.S. university fundamental research involving access to such information would have access to information that clearly is not actually publicly available, but would be controlled, i.e. pursuant to confidential non-disclosure agreements.

9. The Department of Commerce should weigh carefully the constitutionality and practical implications of creating new regulations that discriminate based on place of birth.

The IG's recommendation that deemed export license requirements be based on a foreign national's country of origin rather than on the individual's most recent country of citizenship or permanent residency should be reconsidered. As proposed it will raise questions with regard to constitutionally proscribed national origin discrimination and may not be legally defensible.

In any event, the proposal seems to lack strong logic because it is based on the erroneous assumption that individuals retain a lifelong allegiance to their countries of birth that will always take precedence over their adopted countries, and that a foreign-born person is more likely than anyone else to export technology. Universities do not presently track this information, and would incur significant additional costs and burdens in doing so. We question both the legality and the logic of such a requirement.

In Conclusion

In addition to our own comments, we agree with and endorse the comments submitted by the Association of American Universities, the National Association of State Universities and Land-Grant Colleges, the Association of American Medical Colleges, and the discussion and recommendations on export controls in the *White Paper on Security Controls on Scientific Information and the Conduct of Scientific Research* submitted by the Center for Strategic and International Studies (CSIS).

We hope that BIS will consider our concerns, particularly with regard to assessing the burdens of implementing the IG recommendations versus the benefits achieved. COGR and its member research universities are strongly committed to supporting national security. However, we believe that the implications of acceptance of the IG's position coupled with the lack of clarity in the current regulations threaten this objective. We hope that BIS will carefully consider the options discussed above.

We appreciate the opportunity to comment.

Sincerely,

Katharina Phillips
President

Attachment

Background Discussion and References

1. Implementation of the IG recommendations will adversely affect U.S. economic competitiveness and national security since it will make US universities appear much less welcoming.

A variety of respected sources have documented the increasing international competition for scientist and engineers, and the importance of science, technology, engineering and mathematics ("STEMS") as drivers of the national and global economies. The June 2004 report of the President's Council of Advisors on Science and Technology (PCAST) on *Sustaining the Nation's Innovation Ecosystem: Maintaining the Strength of Our Science Engineering Capabilities* (at **http://www.ostp.gov/pcast/FINALPCASTSECAPABILITIESPACKAGE.pdf**) cautions that the U.S. is falling behind other nations in STEM fields, and that this threatens the nation's leadership in innovation and the global economy.

The PCAST report notes that "Clearly stated, foreign students and scholars are critical to our national vitality," and that "The openness of our campuses to students, scholars, and faculty from all over the world is one of our greatest strengths, and is at the heart of the phenomenal success of the American research university..." PCAST also notes that "[w]hile U.S. students' interest in STEM careers is declining, foreign countries are significantly increasing the number of STEM graduates…of their universities, enabling them for the first time to attract technology-based jobs in very large numbers." This places the U.S. at serious risk of falling behind other nations in these fields, and ultimately of losing its leadership in innovation and the global economy. The PCAST report concludes that due to the trends discussed above, "our entire national innovation ecosystem is at risk. It would be difficult to overstate the importance of this issue." We join industry in this concern about the country's future competitiveness.

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/**) elaborates on the concerns expressed by PCAST. The report finds that "Innovation is crucial to the success of the U.S. economy. To maintain excellence in S&E research, which fuels technologic innovation, the United States must be able to recruit talented people. A substantial proportion of those people—students, postdoctoral scholars, and researchers—come from other countries." Almost half the U.S. Nobel laureates in science fields since 1990 were foreign researchers (61 of 130). 16% (87 of 535) of the total Nobel prizes in science fields between 1907 and 2004 were credited to U.S. institutions and won by foreign researchers; see **http://nobelprize.org/nobel/nobelmuseum/**). The report also notes that "Other countries are expanding their technologic and educational capacities and creating more opportunities for participation by international students." COGR believes that we need to find a way to welcome and integrate these students, not to reject or alienate them.

The COSEPUP report contains much data on the participation of foreign nationals in U.S. science and engineering (S&E). For example, in 2003 foreign students earned 38% of the S&E doctorates and 58.9% of the engineering doctorates awarded by U.S. institutions. Temporary residents constituted 59% of S&E postdoctoral scholars in 2002. In FY 2003, there were 939, 216 foreign students and exchange visitors (F-1 and J-1 visa classes) in the U.S. in all fields. These included over 35, 000 from South Korea, over 20,000 each from India and China, and over 15,000 from Russia.

According to data from the Institute of International Education, there were over 260,000 foreign students (undergraduate and graduate) in S&E fields enrolled in universities in 2003/04 (see http://opendoors.iienetwork.org/?p=49936). Leading countries of origin were India, China, Korea, Japan and Canada (http://opendoors.iienetwork.org/?p=49933). As documented in the PCAST and COSEPUP reports, U.S. science and engineering is vitally dependent on these individuals. The reports also found no displacement effect on U.S. citizens.

However, evidence indicates that this talent source is declining. Recent data from the Council of Graduate Schools (CGS) International Graduate Admissions Survey documents a decline in foreign students. The CGS data show that U.S. international graduate applications for fall 2005 are down by 5 percent as compared to applications for fall 2004, which in turn declined 28 percent from the previous year. With regard to field of study, declines are shown in all fields of science and engineering. Engineering applications declined 36% from 2003 to 2004 and another 7% from 2004 to 2005. For physical sciences the declines were 22% and 3% respectively; for life sciences 24% and 1%; and for social sciences 20% and 4%.

The IG recommendations must be viewed in the context of their potential for further enhancing the perception or the reality that U.S. universities are less welcoming and less desirable for foreign students and researchers. COGR believes that the resulting loss of productivity and innovation would present a grave threat to U.S. national security.

2. <u>Primary reliance should continue to be placed on the existing visa and classification process.</u>

It is our understanding that when foreign students or other visitors apply to study or perform research in technology areas that may give rise to security concerns, concerned federal agencies advise the State Department as to whether individual clearances should be granted ("Visa Mantis"). The academic community has worked closely with government agencies including the State Department, Office of Science and Technology Policy and others over the past year to improve and make this process more effective and efficient. In addition, the Student and Exchange Visitor System (SEVIS) provides verification that individuals are pursuing the approved course of study or research. If, after screening a foreign student or researcher, our government approves the individual's entry into our country under a visa that permits study and research at a U.S. university, that individual should be permitted to join the academic research community and fully participate. No additional barriers should be imposed such as subsequently requiring export licenses to use research equipment or receive technology on its use as part of fundamental research.

Recently, COGR joined with 40 leading academic, science and engineering associations in recommending to the Department of State some additional improvements in the visa system. The May 18, 2005 statement also recommended that "the federal government should not require that export licenses be obtained for international scientists and engineers to use equipment required to conduct unclassified, fundamental research in the United States… Requiring such licenses would further discourage top international scientists and engineers from making the United States their destination, prompting them to seek research opportunities overseas."

Careful screening at the entry level, combined with the already existing export controls and classification options would present a more promising approach than implementing a burdensome and costly deemed export control regime. Should the government subsequently obtain information about a particular individual that raises concerns, the university should be notified as recommended in the CSIS White Paper.

3. <u>The products of university generated fundamental research and the process for obtaining the research data are not separable</u>**.**

The IG report asserts that confusion exists on the part of universities over the definition of use and implementation of controls associated with the use of equipment controlled for use technology under the EAR by foreign nationals conducting fundamental research on U.S. campuses. The IG maintains that technology relating to the use of controlled equipment—regardless of how use is defined—is subject to the deemed export provisions of the regulations (EAR 734.2(b)), even if the research being conducted with that equipment is fundamental. We disagree with the IG. This interpretation is not supported by the way in which fundamental research is conducted, irrespective of particular disciplines. While BIS indicated its agreement with that interpretation in its response to the IG's report, BIS had not previously embraced this interpretation, nor is it supported in the "Qs and As" in Supplement No. 1 to Part 734. The IG report itself notes that in BIS' interpretation, "the same definition of use does not seem to apply to "deemed exports." We urge BIS to reconsider before accepting this new interpretation.

The research process cannot be segmented as implied in the IG report. Whatever activities are included in "use" (e.g., operations, repair, etc.), fundamental research cannot be conducted without using equipment and conveying information visually, through demonstration or otherwise, on how to use equipment. The path to discovery and new knowledge and an individual's role in research and likelihood of receiving new use technology cannot be predicted. It does not matter whether a piece of equipment is controlled for some aspects of "use" technology and not others. As noted in the Summary, for the fundamental research exclusion from export controls to be meaningful, it must include the ability of researchers to freely use otherwise controlled equipment, to alter existing equipment when a new idea or theory arises, to create new equipment, to install, repair and otherwise deal with the equipment, and to freely convey information on how to do all of these activities during the research process.

Existing Commerce guidance does not provide support for the IG's interpretation. The reinterpretation by the IG would amount to a major change in midstream. Denying that this is a

change and minimizing its resulting impact is not an acceptable option. Current U.S. government policy provides that classification is the preferred, appropriate and prevalent mechanism for government control of fundamental research information. This policy is expressed in National Security Decision Directive (NSDD) 189 which was confirmed by the current Administration in 2001. That Directive provides that "No restriction may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification, except as provided in applicable U.S. Statutes." The CSIS White Paper discusses the background of NSDD 189 and the inconsistency of the IG's recommendation with that policy directive.

4. The open campus research environment is different from that which characterizes most corporate research, and this difference needs to be recognized in considering security measures appropriate for universities.

As discussed above, there are many foreign nationals on U.S. university campuses and their contributions have been critical to the nation's innovation capacity, economic health and security. If we are to maintain the critically important open and free-flowing university research environment, universities must assume that any foreign student or researcher on campus may receive any controlled technology that exists on campus at any time.

Under the IG's interpretation of deemed export licensing requirements, universities would have to track and segregate foreign nationals from the rest of our campus communities and condition- limiting at worst, and significantly delaying at best- their participation in research, wherever they could encounter equipment controlled for use technology, regardless of the volume of such equipment. As indicated in #5 below, a substantial amount of equipment controlled for use technology is used in research at U.S. universities. Security procedures to restrict access to university laboratories would be needed. In practice, universities either will have to exclude foreign nationals from their campuses or implement security on their campus that resembles security in classified research. Experience with the recent new "select agent" regulations that apply to academic research indicates that many university researchers may not want to conduct research under conditions that restrict open collaboration. They will abandon pursuing such research, thus adversely impacting U.S. science. The experience of those few universities who conduct classified research has demonstrated that it must be done in controlled segregated facilities. This would fundamentally change the research environment and in our view undermine the success of U.S. academic research.

The only practical approach to maintaining an open, international research environment would be for universities to apply for deemed export licenses for all use controlled equipment for all foreign students and researchers on campus. The number of foreign nationals on campus, not the number of items of equipment controlled for use technology, would drive the number of licenses needed. This approach would significantly delay a foreign researcher's or student's research participation, and the effect is likely to be the same as a complete bar. Universities would expend significant resources in segregating foreign nationals from the research that proceeds while foreign nationals wait for export licenses. In the meantime, foreign nationals at U.S. universities would lose opportunities to participate. Under such constraints, the best and the brightest will pursue education and research outside the U.S.

5. Foreign nationals at U.S. universities use a substantial amount of equipment that is controlled for transfer of "use" technology to these foreign nationals.

A blind sample of COGR member universities indicated that they are pursuing fundamental research where foreign nationals have access to categories of equipment subject to technology controls including but not limited to ECCN's 2D101, 2E101, 2E301, 3E292, 6E101, and 6E201 for equipment such as chemical vapor deposition (CVD) furnaces, specialized cameras, oscilloscopes, certain sensors, carbon nanotubes, monitoring systems, lasers, pumps and specialized electronic equipment. Some of these categories are controlled for "use" technology transfers to every foreign national except those from Canada. There may also be equipment on campus controlled for use technology under categories 1E351, 2E301 and 9E102. In addition to what is noted above, every campus surveyed had thousands of pieces of equipment subject to "AT" controls for use technology. We recognize that this equipment is controlled for different aspects of use technology. However, university researchers may engage in all aspects of "use" as currently defined in the EAR as dictated by research needs.

We recognize that BIS' current interpretation is that the mere operation of equipment without access to any accompanying proprietary information would not trigger licensing requirements for "use" technology, but we are concerned that this interpretation would not permit additional instruction on campus on how to use the equipment. Moreover, while it is true that low-level equipment such as computers and GPS equipment frequently include publicly-available operating manuals, in our experience, many types of the highly sophisticated equipment on campus include proprietary operating manuals that do not meet the definition of "publicly available" under the EAR precisely because of specialized nature of the equipment.

6. Universities face a substantial burden simply in determining what equipment on their campuses may be subject to controls on transfer of "use" technology.

Universities typically have a substantial volume of equipment which would require determinations. A blind sample of COGR universities indicates that universities purchase significant amounts of research equipment. Some in the sample have 2,500 to more than 20,000 different types of equipment and as many as 50,000 individual pieces of equipment with an acquisition cost exceeding $5000 (the federal capitalization "threshold"), and acquire as many as 2,000 pieces of such equipment annually.

Each type of equipment must be reviewed individually to determine if technology controls apply to the equipment. Moreover, classifying individual pieces of equipment is a time-consuming process. Many manufacturers do not have the information readily available. University researchers, administrators and counsel must spend significant time reviewing the equipment and determining what technology controls would apply. One university received a commercial bid of $1.5M just to survey the equipment and develop a list of items controlled for use technology. This does not include the time necessary to make individual license determinations, complete the licenses, and follow-up on license implementation, which likely will be more time-consuming

and expensive than the classification of the equipment itself. Several universities have estimated the total direct costs of assessing existing inventories and applying for deemed export licenses at $5M per institution for the initial classification and licensing, with as much as $1M annually thereafter due to the constant changes in foreign nationals on campus and the constant addition of new equipment. The related facilities and administrative (indirect) costs are likely to add substantially to this number.

7. The IG report appears to confuse access to equipment with the type of technical information the Export Administration Regulations were designed to control through the deemed export provisions.

When considering "use," we understand BIS' interpretation is that mere operation of equipment without any transfer of controlled use technology does not require a license. This view appears consistent with BIS' December 6, 2004 advisory opinion that when equipment is open to all members of the public for public sale within the U.S., any technology that might be transferred to a foreign national purchaser through access to the equipment is deemed to be publicly available under Part 734 of the EAR, and thus not subject to the regulations. BIS should consider clarifying in the regulations that this interpretation is correct. Of course, if BIS interprets visual observation and visual and other demonstration of how to operate equipment controlled for use technology as conveyance of controlled use technology, the December 6, 2004 interpretation does not address, even partly, our concerns.

Another possible approach would be for Commerce to create a limited technology exception similar to the "TSR" exception, but one that is available for all nationalities and is limited to technology for the "use" of items controlled on the CCL and limited to "basic operations, maintenance and training." This would have the effect of carving out a subset of "use" technology from deemed export licensing requirements. Commerce could further limit this exception to "use" in conducting fundamental research.

8. Controlled "use technology" within the context of university fundamental research should be defined to encompass only information that is not generally available to the public in the U.S. without significant restrictions. The focus should be on situations where proprietary information is transferred on an exclusive basis or under a non-disclosure agreement that significantly restricts access.

The APNR indicated that BIS is interested in receiving alternative suggestions regarding the IG concerns. BIS should take into account that the deemed export concept applies to the transfer of information. This is especially important in considering the application of deemed export rules in the U.S. university setting where information dissemination is a core goal. Controlled "use technology" within the context of university fundamental research should be defined to encompass only information that is not generally available to the public in the U.S. without significant restrictions.

We believe deemed export requirements should not apply to actually publicly available technology that anyone can obtain in the U.S. marketplace, regardless of whether the current

EAR definition of "publicly available" technology applies. There are insufficient security benefits to justify controlling access by foreign nationals to such information at universities in view of the onerous burdens that would result, especially when such information is readily available in the U.S. This interpretation also would be more consistent with the core EAR concept that publicly available technology is outside of the scope of the export regulations.

An alternative approach that we propose is to define controlled "use" technology to encompass only proprietary information that is not generally available for free or for acquisition on a non-exclusive basis by willing purchasers in the U.S. Unless we have misunderstood, BIS has stated this interpretation verbally on a number of occasions, but we urge BIS to make this clarification in writing. Otherwise, U.S. policy is inconsistent with the reality of the marketplace, because many types of equipment that are controlled for use technology under the EAR, along with their user manuals, can be acquired on a non-exclusive basis by anyone in the U.S. In some cases, a license agreement must be entered into in order to ensure that the users of the technology pay to use it, but anyone is free to pay, execute the license and obtain the technology. Such equipment's use technology may not satisfy existing definitions of "publicly available" information because license conditions apply or the means of acquiring the use technology are not those currently specified in the EAR. However, there is no intention to restrict acquisition of the technology and the use technology is, to any common understanding of the concept, publicly available. This should be contrasted with use technology that is licensed on an exclusive basis or under non-disclosure agreements that restrict access to specified persons.

It is very important that in redefining controlled "use" technology, BIS should also confirm that technology arising during or resulting from the research process itself is within the scope of the fundamental research exclusion. Thus if a foreign national in the course of research modifies an item of equipment that is controlled for use technology for his/her specific research purposes, or fabricates a new apparatus that otherwise would be subject to export controls, and, in the process creates use technology, no licensable event has occurred and the created use technology is not controlled, so long as the foreign national has no access beforehand to significantly restricted controlled technology (as defined above) and the research results are ordinarily published. While we believe this is consistent with both the EAR and BIS' current interpretation, it would be helpful to confirm this in writing, perhaps through adding a "Q & A" to this effect in the Supplement to EAR Part 734.

9. <u>The Department of Commerce should weigh carefully the constitutionality and practical implications of creating new regulations that discriminate based on place of birth.</u>

Whenever the government makes a distinction based on national origin, strict judicial scrutiny applies because "national origin [is] so seldom relevant to achievement of any legitimate state interest that laws grounded in such considerations are deemed to reflect prejudice and antipathy." Such laws must be narrowly tailored to achieve a compelling government interest (<u>City of Cleburne v. Cleburne Living Center</u>, 473 U.S. 432, 440 (1985)).

In particular, national origin is a suspect class, and laws relying on or using nationality or national origin are subject to strict scrutiny and will only survive constitutional scrutiny if they

are precisely tailored to further a compelling government interest. Doe v. Plyler, 458 F. Supp. 569, 580 (E. Dist. Tx. 1978). See Also Huynh v. Carlucci, 679 F.Supp. 61, 66 (D.C. Dist. 1988), citing Graham v. Richardson, 403 US 365, 372 (1971), Korematsu v. United States, 323 U.S. 214, 216 (1944). ("Government action that classifies citizens on the grounds of national origin is inherently suspect, subject to strict scrutiny and thus can be sustained only if necessary to achieve a compelling state interest").

While national security in a general sense may be considered a "compelling government interest," the nature of the national security interest to be protected needs to be identified with some specificity, not merely by generalized concerns. In particular, classified information is already subject to strict and separate controls. Military technology and technology being developed under government contracts are subject to separate or additional requirements. What is at issue here is unclassified "dual use" technology that is controlled for export purposes because of the possibility that it could be used for improper purposes.

In addition, there is no evidence that the IG's proposal is narrowly tailored to achieve a specific goal. The IG Report provides no evidence, empirical or otherwise, that a person's national origin, as opposed to citizenship, is a factor in whether that person poses a threat to national security generally, let alone for any specific threat, or furthers another compelling government interest. There is a real question as to whether a blanket rule is overbroad when it is premised on the assumption that all individuals who were born in a particular foreign country, but who are no longer citizens of that country, are particularly likely to export sensitive use technology to that country against the interests of the U.S. and must be subject to licensing requirements to which others are not subject, to protect the national security. Presumably, there is a reason why an individual chooses no longer to be a citizen of his or her country of birth; and such individuals may be as likely less inclined, than more inclined, to travel to his or her country of birth. In today's world of easy intercontinental travel and internet communications, it is not clear why a person who foregoes citizenship of a country would be more likely than anyone else to travel to that country or to communicate with current citizens of that country against the interests of the U.S. It is also unclear if it is constitutionally permissible to assume that all individuals who are born in a particular country and who have foregone their citizenship of that country pose the same security risk.

Further, in today's globalized world, it would appear that the same logic could apply to any individual with extensive foreign ties, regardless of citizenship status. The IG report specifically mentions the example of a Canadian citizen of Iranian origin. However, such an individual may have any number of circumstances, such as one or both parents working in a consulate or embassy at the time the person was born, or temporarily working for an organization that provides international services or whose family moved to the current country of citizenship when the individual was a small child. While we believe that it is valid to take citizenship and residency into account in any decision on whether or not to grant a license, it is not clear why the country of origin would pose a particular concern in these and other similar scenarios. The IG appears to make the erroneous assumption that individuals have a lifelong allegiance to their countries of birth that will always take precedence over any allegiance they may have to their adopted countries.

Whether or not a distinction based on national origin would pass constitutional muster in the deemed export context, such a distinction seems to us to be illogical and overbroad.

Miscellaneous Other Comments

1. Q/A A(4) Under Publication of Technology

We agree with BIS's proposed clarification of the answer, with the caveat that BIS needs to further clarify and to state that no deemed export license is required for disclosure of controlled technology to a foreign national if, in doing so, the awardee complies with all specific national security controls in the government contract. At that point the information is no longer subject to EAR licensing requirements. Also, our understanding is that when approval is received for a specific disclosure, at that point the information to be disclosed is considered publicly available and exempt from the requirements.

2. Q/A D(1)Under Research, Correspondence and Informal Scientific Exchanges

The answer should be clarified along the lines suggested above if the work requires access to significantly restricted use technology for controlled equipment, assuming BIS clarifies the definition as suggested. Otherwise the answer is correct as currently stated in the Supplement.