

PRINCETON UNIVERSITY *University Research Board*
4 New South Building, Princeton, NJ 08544-0036

TO: Science and Engineering Faculty

DATE: December 3, 2004

FROM: William Happer *WH*

SUBJECT: Export Controls

Over the last few years, the University Research Board and ORPA have been keeping you informed on matters related to export controls whereby the university could be prevented from sharing or engaging in certain types of research activities. This issue has come to the forefront recently as a result of some proposed new changes in the current export control laws that would result in a tightening of regulations.

It is important for you to understand the parameters of the export control regulations with respect to sharing data and shipping equipment and other items to researchers in other countries and to understand that Princeton must comply with the law regardless of the sponsor. Therefore, I am enclosing for your review a briefing document on the issue of "deemed exports" and Princeton's approach and policy regarding the issue. In accordance with the Rules and Procedures of the Faculty, Princeton only engages in basic and applied research in science and engineering, and will not accept awards with publication restrictions or those with restrictions limiting access to research by foreign nationals.

c: C. Eisgruber
M. Christy
Department Managers

Briefing Document on “Deemed Exports” for Faculty and Senior Research Staff

Many thanks to Julie Norris and her staff at the Massachusetts Institute of Technology for developing and sharing this document.

1. What are “deemed exports”?

“Deemed” exports are transfers of controlled technology to foreign persons, usually in the U.S., where the transfer is regulated because the transfer is “deemed” to be to the country where the person is a resident or a citizen. For example, transfer of infrared camera technology to an Indian national in the U.S. may be regulated as if the transfer of the technology was made to the Indian national in India. The transfer is thus “deemed” to be to India even though all activities would take place in the U.S.

The Commerce Department’s Export Administration Regulations (“EAR”) and the State Department’s International Traffic In Arms Regulations (“ITAR”) define **“deemed exports”** as (a) the transfer or disclosure (visually, electronically, or in any other medium) (b) of “technologies” (EAR) or “technical data” (ITAR), meaning information beyond general and basic marketing materials (e.g., source code or equipment installation, operation and repair instructions), as well as consulting, instruction, training, or lectures, concerning export-controlled equipment, materials, or items (“Materials or Items”), (c) to a foreign entity or individual (d) in the U.S. (even on campus). Deemed exports do not include the mere transfer of the actual controlled Materials or Items without any associated information. (See 15 C.F.R. 734.2; 22 C.F.R. 120.17 regarding “deemed exports” and see 15 C.F.R. 772, 774; 22 C.F.R. 120.10(5) regarding “technologies” and “technical data.”) Note that the ITAR does not use the term “deemed export” as is used under the Commerce Department regulations, but the concept is the same under both the EAR and ITAR.

Although a transfer of information that is technology or technical data about controlled Materials or Items falls under the deemed export definition, a license is not always required. As explained below, if the information is “in the public domain” under ITAR or “publicly available” under EAR, or constitutes “fundamental research” under EAR and ITAR, it is not subject to EAR or ITAR at all. If the information falls under a license exception, a license is not required.

2. Since 1985, the Federal Government’s Policy, as articulated by the presidential security directive, NSDD-189, has excluded some information that is public in nature from regulation under EAR and ITAR.

NSDD-189 (issued in 1985 and reaffirmed in 2001) “Fundamental research” means basic and applied research in science and engineering, the results of which ordinarily are

published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons. It is the policy of this Administration that, to the maximum extent possible, the products of fundamental research remain unrestricted. It is also the policy of this Administration that, where the national security requires control, the mechanism for control of information generated during federally-funded fundamental research in science, technology, and engineering at colleges, universities and laboratories is classification... 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 policy embodied in NSDD 189 is currently in debate at the Commerce Department and certain other agencies. See the next section (3) below.

3. Isn't information relating to controlled equipment used in research projects, classes and teaching labs on campus covered by the fundamental research or other exclusions from EAR and ITAR--so that a "deemed export" license would not be required before foreign students, faculty, researchers and visitors receive that information?

Colleges and universities would say yes. We have assumed that a reasonable interpretation of the "fundamental research" and educational exclusions from ITAR and EAR, the "publicly available" exclusion from EAR, and the "public domain" exclusion from ITAR, must include the right for foreign students, researchers and visitors to use (and receive information about how to use) controlled equipment while conducting fundamental research on U.S. university campuses or while studying at the institution. However, see item #7 for a different interpretation which is a current significant issue for colleges and universities as the Commerce Department moves to formally change this interpretation.

Even if U.S. academic institutions convince the government to retain NSDD 189's policy and the longstanding interpretations of the academic exclusions from export controls, you need to know the requirements of these exclusions:

Fundamental Research Exclusion from EAR and ITAR: The fundamental research exclusion applies literally to (a) information (but not to export controlled Materials or Items) (b) resulting from "basic and applied research in science and engineering" (c) conducted at an "accredited institution of higher education" (EAR) or "higher learning" (ITAR) (d) "located in the United States" (e) that is "ordinarily published and shared broadly within the scientific community" and (f) that is not "restricted for proprietary reasons or specific national security reasons" (EAR) or subject to "specific U.S. Government access and dissemination controls" (ITAR). (15 C.F.R. § 734.8 (a), (b); 22 C.F.R. 120.11(8).) This exclusion permits U.S. universities to allow foreign members of their communities (e.g., students, faculty, and visitors) to participate in research projects involving export-controlled information on campus in the U.S. without a deemed export

license. **This exclusion does not permit the transfer of export-controlled information, Materials or Items abroad, even to research collaborators, except under very limited circumstances.**

Information that is Publicly Available or In the Public Domain: Public domain (ITAR) and publicly available (EAR) information that is not subject to export controls must be already published, not just ordinarily published, through: a) libraries open to the public, including most university libraries; b) unrestricted subscriptions, news-stands, or bookstores for a cost not exceeding reproduction and distribution costs (including a reasonable profit); c) published patents; d) conferences, meetings, seminars, trade shows or exhibits held in the U.S. (ITAR) or anywhere (EAR), which are generally accessible by the public for a fee reasonably related to the cost and where attendees may take notes and leave with notes; or e) websites accessible to the public for free and without the host's knowledge of or control of who visits or downloads software/information (clearly an acceptable method of publication under EAR, and likely an acceptable method under ITAR). (See 22 C.F.R. 120.10(5), 120.11, 125; 15 C.F.R. 734.3(b)(3), 734.7-734.10.)

Information that is publicly available or in the public domain can be conveyed abroad—but controlled Materials or Items (e.g., computers, equipment, chemicals, biological materials) cannot be exported abroad under this exclusion.

Educational exclusions from EAR and ITAR: Whether in the U.S. or abroad, these exclusions cover teaching foreign nationals general science, math, and engineering commonly taught at schools, colleges and universities (ITAR, see 22 C.F.R. 120.10(5)) and conveying to foreign nationals information through courses listed in course catalogues and in associated teaching laboratories of academic institutions (EAR, see 15 C.F.R. 734.3(b)(3), 734.9), even if the information concerns controlled Materials or Items. **The EAR exclusion does not cover controlled information conveyed outside of the classroom or teaching lab of an academic institution.**

4. Princeton's Policy

Under Princeton's policy, foreign faculty, students, staff, and scholars will not be singled out for restrictions in their access to Princeton's educational and research activities and Princeton will not agree to restrictions on publication of research results (see the University's policy on Classified Research, attached). Princeton will not accept publication or access/dissemination restrictions (such as approval requirements for participation by foreign nationals) in research awards. Princeton will allow a short period (generally 30-60 days) for sponsor review (but not approval) of proposed publications to remove inadvertently included proprietary information provided by the sponsor or to seek patent protection. **Deviating from Princeton's policy will destroy the fundamental research, publicly available, and public domain exclusions/protectations provided by the government. Without these protections, EAR or ITAR will apply to information (technology or technical data) concerning controlled Materials or Items. Unless a license exception applies, a "deemed export" license will then be required before the information is conveyed (even visually through observation) to foreign students,**

researchers, staff or visitors on campus and an actual export license will be required before the information is conveyed abroad to anyone.

5. What can I do to be sure that any information I convey to foreign nationals is not subject to export controls and does not require a deemed export or actual export license?

- Publicly communicate and publish research results in a timely manner through one of the means that qualifies as “publicly available” or “in the public domain.”
- Make certain that there are no restrictions on publications or research results or on the individuals who can participate in the research in any agreement. ORPA will always maintain this position and ensures that no restrictions are permitted in Princeton’s negotiated research agreements; however, unspoken or “handshake” agreements to comply with the restrictions destroy any protection the university and its researchers have under fundamental research, public availability and public domain exclusions.
- Contact ORPA early in the planning stages of a proposed research project with industry sponsors, where you anticipate shipping materials or equipment to other countries, or where a federal sponsor believes export controls will apply.

6. What if I Make a Mistake?

Violation of the export control laws and regulations can result in both civil and criminal penalties for the **individual** and for the **University**. Penalties are determined at the discretion of the federal agencies, based on the seriousness of the violation and the prior history of the offender, and they are clearly intended by the agencies to send a warning to other potential violators. Voluntary self-disclosure of violations, if made appropriately, can mitigate the seriousness of the violation. Penalties apply to each **individual** violation, which means that if a violation relates to more than one controlled Material or Item or occurs on more than one occasion, **each item or incident** may trigger a penalty; this can easily result in financial penalties in the millions. **Contact ORPA immediately if you think you may have made a mistake and violated export controls since the University can then best assess how to remedy the violation.**

7. Are there any other current issues that I should know about?

In two reports filed with Congress, one by the Commerce Inspector General (IG) in March 2004 and the second, an interagency report by the Commerce, Defense, Energy, State, Homeland Security and FBI IGs in April 2004, the IGs state that that **a deemed export license is required before foreign nationals engaged in fundamental research on U.S. universities’ campuses may receive any technology or technical data (i.e., information beyond basic and general marketing materials, including through consulting, instruction, training, lectures) on the “use” (i.e., “operation, installation...maintenance...repair, overhaul and [/or] refurbishing,”) of EAR controlled (or ITAR-controlled) equipment** (even if the information is only conveyed visually, through observation of the operation of controlled equipment). (See 15 C.F.R. 772, 774; 22 C.F.R. 120.10(5).) **The same reports are critical of the educational exclusions from export controls that allow colleges and universities to teach**

foreigners without first obtaining deemed export licenses, and suggest regulatory amendments that would limit or eliminate these exclusions. Princeton and other colleges and universities are working with government leaders to refocus attention on the important policy embodied in NSDD 189 and the need to maintain the export control protections that are relied upon by U.S. academic institutions to avoid having to obtain deemed export licenses for our foreign students, faculty and visitors on campus. You need to know the IGs' interpretation in the meantime.

Note that even under the IGs' very troubling interpretation of fundamental research, and even if the educational exclusions from export controls were limited or eliminated, the information being conveyed on campus would have to both concern controlled equipment (or other Materials or Items) and not already be excluded from export controls as a consequence of being in the public domain (ITAR) or being publicly available (EAR), in order for a deemed export license to be required.

In addition to this issue, there is a current initiative within the government agencies to require academic institutions to identify the country of origin, as opposed to the county of citizenship, of students, researchers and others in order to determine whether a deemed export license is required before controlled information is conveyed. Princeton, like most other universities, does not track country of origin and to do so would impose a significant administrative burden. In addition, there are issues related to discrimination on the basis of national origin, privacy and the meaning of citizenship in the U.S. to consider. This change would require rulemaking on the part of the government and would probably be opposed by a number of organizations.

There has recently been an attempt to undermine NSDD-189's policy that the only proper way to control information in an academic setting is by classification. A new designation on information to be shared between the partners of a research collaboration has been seen recently from several agencies – the designation of “sensitive but unclassified” or, alternatively, a labeling of “confidential information” or similar designations. While NSDD-189 has been reaffirmed, there continue to be initiatives on the part of the agencies to implement this category of information; such a designation increases the difficulty of being able to share information related to research freely with foreign nationals.

The Department of Commerce is also suggesting that the “ordinarily publishable” aspect of the fundamental research exclusion is unduly broad, because “ordinarily publishable” information may never actually be published. Although rulemaking has not been suggested yet, there is a concern that Commerce may change its approach and require “actual” publication to take advantage of the protections for fundamental research.. This is why Princeton urges its faculty and researchers to get information onto publicly available web sites in a timely manner.

All of the above issues are being dealt with proactively by the senior administration, but it is not certain how these issues will evolve over time. Thus, it is important that each researcher stay informed about the latest laws and regulations; in particular where foreign

nationals are participating in a research program that the potential for a “deemed export” exists.

Revised by Michelle D. Christy, Director, ORPA
November 24, 2004