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The Goal Protecting Fundamental Research - Handout from February 2001 Session

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The GOAL: Reaffirmation of National Security Decision Directive 189

In 1985, an exclusion from the access and dissemination restrictions of export controls was established by President Reagan with National Security Decision Directive 189 (copy attached). That Directive states that 1) fundamental research is the conduct of basic or applied research in science and technology, the results of which will be placed in the public domain, 2) university-based fundamental research is excluded from export controls such that there will not be restrictions on participation, access, or dissemination, and 3) the government is to review all its research projects prior to award to determine whether the research should be classified. Classification is thus the means for keeping research with national security implications "secret" and for otherwise restricting access thereto. NSDD 189 has not been revoked.

As a result of legitimate national security concerns made manifest over the past few years, the U.S. Congress transferred ALL satellites (including research satellites), associated equipment (including scientific payloads), and related data from Commerce Department to State Department jurisdiction, making them subject to the International Traffic in Arms Regulation (ITAR). Consequently, regardless of level of sophistication or intended civilian use, anything falling within these categories is now subject to the same export controls as weaponry and defense technologies. Access and dissemination restrictions with regard to foreign nationals are among these controls.

Universities do space-based fundamental research. Universities matriculate foreign students and engage in research activity with foreign educational institutions. Now, however, unclassified, non-secret, fundamental research that is reliant on satellites may be subject to ITAR access restrictions with regard to participation by foreign researchers. These restrictions would require universities to acquire an export license for each foreign student, and for each non-US-citizen collaborator, who may work on such research. Prerequisite to obtaining such a license, a university must register as a provider of defense services or equipment. Such a registration is tantamount to conceding that the work the university is doing is not fundamental research, thus opening the door to such restrictions on dissemination in other disciplines. As to the licenses, the State Department generally will not approve such licenses for foreigners from certain specified countries (an ever-changing list).

Violation of ITAR carries penalties including significant institutional fines and individual jail sentences.

As a result of the expanded ITAR jurisdiction and the personal liability that attaches for ITAR violations, university faculty are feeling extremely vulnerable and are responding accordingly. For example, those whose work in any way implicates satellite technology are declining to speak at academic conferences abroad, are refusing visits from their colleagues from abroad, and are

concerned even about what they may teach and with whom they may collaborate. Similarly, federal agencies and industrial partners contracting with universities have become equally conservative, including clauses in their research agreements that require, for example, that the university provide personal biographical data about individual researchers on demand, in order that they may perform background checks of participants.

The State Department's concern with satellites and associated or ancillary items has led them to begin viewing other technologies, such as remote sensing devices, radiation-hardened electronics, robotics of the types that can be put to use in satellites as "associated equipment" to which ITAR may apply. In fact, language imposing access restrictions has already been seen in NASA contracts involving unclassified fundamental propulsion and turbulence studies, for example. and the issue has arisen in a grant for environmental studies.

Many universities are engaged in fundamental research as defined by NSDD 189. ITAR, however, defines fundamental research differently: Only the public domain data resulting from the research constitutes "fundamental research" accessible even to foreign nationals without an export license. According to ITAR, the hardware used and the processes involved in conducting the research are equivalent military technology, such that participation by foreign nationals in the research may be prohibited. Aside from changing the definition found in NSDD 189, the expansion of ITAR to space-based fundamental research in this manner overlooks the NSDD 189 requirement that the government scrutinize its projects for classification purposes before awarding the work. That way, universities having policies precluding classified or other secret research are able to simply avoid that particular project.

It is also worth noting that, under ITAR, individual faculty must make research participation determinations based on citizenship, even though discrimination based on nationality, ethnicity, country of origin, gender, or race is forbidden by law at universities accepting federal funding.

Affirming the viability of NSDD 189, its definitions and policy, and clarifying that this Directive precludes application of ITAR export restrictions to university-based satellite-related fundamental research, will eliminate the inappropriate obstacles and discrimination currently resulting from failure of the ITAR to recognize an exclusion for the conduct (hardware and processes) of fundamental, unclassified, non-military research.