

# Fundamental Research Exclusion Outside of the U.S.A.

Issue Date: August 2014

ASSOCIATION OF UNIVERSITY EXPORT CONTROL OFFICERS

The [International Traffic in Arms Regulations](#) (ITAR) and [Export Administration Regulations](#) (EAR) collectively referred to as “export regulations” restrict the dissemination of technologies (including information) to non-U.S. persons and locations. Because university research frequently involves the creation of technology as well as open collaboration, it is important to ensure that the information resulting from research is not restricted by export regulations. Fortunately, both the ITAR and the EAR treat information resulting from fundamental research as public domain information, generally excluded from the scope of export control. This exclusion is referred to generically as the “fundamental research exclusion” (“FRE”) and each regulation delineates this exclusion slightly differently with caveats and limitations for its applicability. One particular area of limitation is fundamental research that is conducted in foreign locations. When evaluating overseas research projects for export controls, it’s important to understand the distinctions between the ITAR and the EAR.

## FRE in the ITAR

FRE in the ITAR is derived from interpretations of its definitions of “technical data” (see [120.10](#)) and “public domain” (see [120.11](#)). In the U.S., a “deemed export” can occur if technical data for a controlled technology is provided to a foreign person regardless of their location. Within the definition of technical data is an exclusion for information “...concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities or information in the public domain as defined in §120.11 of this subchapter” (see [120.10\(b\)](#)). 120.11’s definition of public domain includes: “...**fundamental research** in science and engineering at **accredited institutions of higher learning in the U.S.** where the resulting information is ordinarily published and shared broadly in the scientific community...” (see [120.11\(a\)\(8\)](#)). By including “fundamental research” in the definition of “public domain”, it is commonly interpreted to mean that research results are excluded from the scope of ITAR as long as the research is conducted on a U.S. campus with the intent to publish and without restrictions from the sponsor on foreign participation or publication.

Although fundamental research, in its generic sense, can occur anywhere, the ITAR limits its definition to “accredited institutions of higher learning in the U.S”. While the EAR addresses cases of fundamental research that occur outside of U.S. universities, the ITAR is notably silent. For this reason, it is generally interpreted to mean that research related to an ITAR technology is only excluded from ITAR control if it is conducted on a U.S. campus or if the results have already been published in accordance with items 1-7 of the public domain definition (see [120.11\(a\)\(1-7\)](#)). Even if the information has been published, if the research is related to, or involves the use of, a specific defense article on the United States Munitions Lists (USML) within the ITAR (see [121.1](#)), it is important to look at the ITAR’s definition of “defense service” which includes “furnishing of assistance (including training) to foreign persons, whether in the United States or abroad in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing or use of defense articles” (see [120.9\(a\)\(1\)](#)). Whether in the US or abroad, a defense service could occur anytime a foreign person is provided assistance with a defense article. The definition does not limit itself to non-public domain information adding another layer of complexity to any compliance review. Section [125.4](#) does contain a very limited exemption for U.S. funded defense services to NATO using basic research. The limitations of this exemption are significant enough that this exemption is considered to be of little utility for university compliance professionals. In summary, any research related to technology controlled under the ITAR should be looked at very closely to ensure it falls within the FRE and does not involve a defense service. If there are foreign collaborations or if any portion of the research is conducted off-campus, legal and/or export compliance professionals should review the proposed research to determine whether the research results need to be restricted.

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## FRE in the ITAR (continued)

The USML identifies all material controlled under the ITAR. While some of the items on the USML include the caveat “specifically designed, modified, configured or adapted for military purposes” others do not. For this reason, it cannot be assumed that equipment developed during fundamental research are not subject to ITAR control if they meet the USML criteria. Any shipment (including hand carrying on an airplane) of USML material out of the U.S. requires an export license from the U.S. Department of State or use of an ITAR exemption if available. Section [123.16](#) contains a very limited exemption for certain space related articles to NATO countries. Like 125.4, 123.16 is considered to be an exemption of limited utility. For USML technology material that is already in a foreign location (either non-U.S. origin or legally exported from the U.S.), keep in mind that any assistance to the foreign party could be considered a “defense service” as defined above which could require a Technical Assistance Agreement (TAA).

## FRE in the EAR

Fortunately, for research technology related to items on the Commerce Control List (CCL) of the EAR (see [Supplement 1 to Part 774](#)) the FRE is not quite as limiting as it is in the ITAR. In order to understand how FRE is construed from the EAR, the best starting point is [Part 734](#) which describes the scope of the regulations. [734.3\(a\)](#) describes items and technologies subject to the EAR and [734.3\(b\)](#) describes items and technologies not subject to the EAR. “Publicly available technology and software” is excluded from the EAR which includes technologies that “...**arise during, or result from, fundamental research**, as described in §734.8 of this part.” To follow the thread, [734.8](#) includes a definition of fundamental research as well as criteria for determining if the research can be considered fundamental. Section [734.8\(b\)](#) includes the following: “*University based research.* (1) Research conducted by scientists, engineers, or students at a university normally will be considered fundamental research, as described in paragraphs (b) (2) through (6) of this section (“University” means any accredited institution of higher education **located in the United States**.)” Note the exception for *in the United States* which initially appears to be a similar limitation as found in the ITAR. However, 734.8 proceeds to list other forms of fundamental research including FFRDC research, corporate research, and research based elsewhere (734.8 (c-e)). Although 734 does not explicitly state that fundamental research conducted by university personnel off campus is not subject to the EAR, Supplement 1 of Part 734 provides additional insight on the intent of 734 which has led to a common interpretation that in the EAR it does not matter where the research occurs (See Question D(8) pasted in full below):

*Question D(8): In determining whether research is thus open and therefore counts as “fundamental,” does it matter where or in what sort of institution the research is performed?*

*Answer: In principle, no. “Fundamental research” is performed in industry, Federal laboratories, or other types of institutions, as well as in universities. The regulations introduce some operational presumptions and procedures that can be used both by those subject to the regulations and by those who administer them to determine with some precision whether a particular research activity is covered. Recognizing that common and predictable norms operate in different types of institutions, the regulations use the institutional locus of the research as a starting point for these presumptions and procedures. Nonetheless, it remains the type of research, and particularly the intent and freedom to publish, that identifies “fundamental research,” not the institutional locus ([§734.8\(a\)](#) of this part).*

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## FRE in the EAR (continued)

The EAR controls all “items” that are not under the control of the ITAR including virtually all items in the U.S. or containing U.S. origin components (see [734.3](#)). Similar to the USML, the CCL does not exclude items from control that were developed during fundamental research so when shipping items out of the country, it cannot be assumed that an item is not controlled based on its development history. Unlike the ITAR, the EAR includes more useful exemptions, and fewer licensing requirements for most items. However, for any foreign research, it is important for the university legal staff or compliance professionals to do a review of any items that need to be shipped overseas to make a determination of whether there is a licensing requirement.

## Other Export Compliance Considerations for Foreign Research

In addition to export regulations (ITAR and EAR) certain countries have economic sanctions, administered by the Office of Foreign Asset Controls (OFAC) of the U.S. Department of Treasury, which can prohibit transactions involving goods or services. Currently, Iran, Syria, Cuba, North Korea, and Sudan have the most severe sanctions. For the researcher contemplating research in a sanctioned country, or perhaps utilizing the services of an individual or company from a sanctioned country, it is important to be aware of the specific sanctions related to the location. Basic information on sanctions can be found at OFAC's [website](#).

## Questions to consider when reviewing overseas research for Export Controls

- Who are all of the parties involved (sponsor, collaborators, subcontractors, foreign consultants, vendors, etc.) and are any from sanctioned countries or subject to export denials?
- What is the anticipated end-use of the research results?
- Is the technology related to items on the USML or CCL?
- Will material be shipped overseas?
- Will there be proprietary information transmitted?
- Will the research results be published or are there any limitations on publication?
- What equipment will the US researchers be using overseas?

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