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3 August 2015

U.S. Department of Commerce
Regulatory Policy Division
Bureau of Industry and Security
Room 2099B
Washington, DC 20230

RE: RIN 0694-AG32 "Revisions to Definitions in the Export Administration Regulations"

MIT Lincoln Laboratory ("MIT LL"), a Federally Funded Research and Development Center ("FFRDC") operated by the Massachusetts Institute of Technology ("MIT"), appreciates the opportunity to comment in response to the Bureau of Industry and Security (BIS) RIN 0694-AG32, *Revisions to Definitions in the Export Administration Regulations*.

The proposed revisions, as well as the State Department's own offering under RIN 1400-AD70 regarding ITAR definitions, represent significant progress towards harmonized and constructive definitions of terms. However, certain proposed definitions would significantly affect the ability of U.S. universities, as well as the FFRDCs and/or University-Affiliated Research Centers ("UARCs") they may operate, to achieve their missions and maintain U.S. leadership in education and research. In the case of MIT, and MIT LL in particular where almost all research is U.S. government funded, the impact of these proposed revisions would affect the missions of our myriad U.S. government sponsors as well.

While MIT will submit a response that addresses aspects of the proposed revisions of interest to all of the departments/laboratories that comprise the Institute (including MIT LL), the intent of the following comments is to emphasize and provide an additional perspective on those of particular interest to MIT LL.

"Fundamental Research"

Proposed Alternative Definition

MIT LL welcomes BIS's proposed alternate definition of "fundamental research", which increases clarity while remaining consistent with NSDD-189: "'Fundamental research' means non-proprietary research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community." Our only concern is the undefined term

"non-proprietary." MIT LL proposes a minor revision: "'Fundamental research' means research in science and engineering, the results of which ordinarily are published and shared broadly within
the scientific community, and for which the researchers have not accepted restrictions for proprietary or national security reasons." This definition captures the intent of BIS in clear, unambiguous language.

If the proposed alternate definition is adopted, it will not be necessary to define "basic research" and "applied research," which will be subsumed by "fundamental research". These terms have led to uncertainty since there are multiple definitions in different areas of federal regulations; even with a single agreed definition, differing judgments are common. As MIT LL is at times a performer, but more frequently a funding "sponsor" (via subcontracts) of fundamental research, the proposed alternate definition is a welcome, commonsense revision.

Finally, the removal of "basic and applied research" from this definition appears to be more consistent with the spirit of the "Fundamental Research" memo issued in 2010 by then Under Secretary of Defense for Acquisition, Technology and Logistics Ashton B. Carter. While issued by DoD, and therefore perhaps of greater import to "fundamental research" as defined under the ITAR, it nonetheless serves as a U.S. government precedent for a more expansive view of "fundamental research."

The "Carter Memo," which reinforces earlier guidance and "deals explicitly with additional facets of fundamental research," expanded the types of DoD funding, beyond traditional "basic research" and "applied research" funding, that could be used to perform research free from restrictions on publications or personnel. While the "Carter Memo" does not explicitly state that unrestricted research performed with "other Budget Activities" is "fundamental research," it appears to portend that in spirit it should be considered as such.

"Fundamental research", "technology", and "software"

"Software" and fundamental research: The current §734.3(b)(3) states that "publicly available technology and software…[that] arise during, or result from, fundamental research" are not subject to the EAR. Under the proposed §734.8(a), <u>only</u> "'technology' that arises during, or results from, fundamental research and is 'intended to be published'" would not be subject to the EAR.

While the amount of "fundamental research" performed by MIT LL is small in comparison to the amount of controlled research performed for our U.S. government sponsors, much of our fundamental research involves collaborations with universities, including MIT. This change would significantly complicate and restrict our ability to engage in fundamental research with university partners: while natural-language documents written by a researcher would be "technology" that could be freely shared as arising during fundamental research, a computer-language document written by the same researcher, working on the same project (a program in source code), would be subject to deemed export restrictions. Additionally, for much of this fundamental research, the "result" of greatest interest to our U.S. government sponsors is the

software itself. “Software” resulting from university research is “published” as well as “technology,” as recognized in the current §734.7(b). The export definitions in §734.2(b) recognize the similarities between software and technology.

MIT LL strongly recommends that software arising during, or resulting from, fundamental research should not be subject to the EAR.

End-to-End Encryption Standard

MIT LL welcomes the addition of §734.18 listing activities that are not exports, reexports or transfers, in particular, the exclusion of sending, taking or storing software that is secured using end-to-end encryption from export activities. This will enable MIT LL to take greater advantage of commercial cloud storage/hosting for certain research activities. While the convenience of cloud storage/hosting has made it the preferred means of storage/hosting for many of our U.S. government sponsors, MIT LL has been reluctant to avail itself of such services due to export compliance concerns. The addition of §734.18 will greatly benefit both MIT LL and our U.S. government sponsors.

Questions and Answers - Technology and Software Subject to the EAR

MIT LL finds the questions and answers provided in Supplement No. 1 to part 734 in the regulations highly useful and urges BIS to retain this section. While we agree that the questions and answers are illustrative, inclusion of them in the EAR removes the uncertainty created by changes due to interpretive differences without benefit of the rulemaking process. We are concerned that removal of the questions and answers, which we use to guide export control decisions when interacting or considering interacting with universities, would create increased uncertainty in our application of key concepts.

Effective Date of the Final Rule

Although RIN 0694-AG32 and the accompanying RIN 1400-AD70 do not alter the CCL or USML, they would have a significant impact on MIT LL’s export compliance program, particularly as it relates to collaborations with university partners. While only a small portion our many ongoing research activities involve university partners, the benefits of these collaborations, which enable MIT LL and our U.S. government sponsors to work with some of the brightest minds in their respective fields, are disproportionately large and worthy of preserving. Ensuring that collaborations with university partners alone will be compliant with the final rules (we assume both would take effect concurrently) will represent a significant regulatory burden.

MIT LL suggests at minimum a 6-month delay in the effective date, and further that the revised regulations be applicable only to new sponsored research begun after the effective date of the Final Rule.

Thank you for the opportunity to provide comments on RIN 0694-AG32. If you have any questions or require additional information, do not hesitate to contact me at 781-981-5997, zsweet@ll.mit.edu.

Sincerely,

Zach Sweet
Export Compliance Officer