August 3, 2012

Directorate of Defense Trade Controls
Office of Defense Trade Controls Policy
Department of State
VIA EMAIL: DDTCResponseTeam@state.gov

Re: Amendment to the International Traffic in Arms Regulations: Definition for “Specially Designed” (Federal Register Docket ID. 2012–14471, RIN 1400–AD22)

IPC - Association Connecting Electronics Industries has a long history of cooperation with, and support of, the agencies that develop and implement national security policy. In this vein, IPC has offered its views to the Department of State regarding U.S. Munitions List (USML) category revisions, and it now welcomes the opportunity to comment on the above referenced proposed definition of “specially designed.”

IPC commends the Department of State for its efforts to eliminate from the USML the use of broad catch-all terms that result in the regulation of militarily insignificant items. IPC also acknowledges that limited use of the catch-all term “specially designed” may be unavoidable.

IPC, however, is concerned that “specially designed” will become the primary mechanism for regulating the export of printed boards designs if they are not enumerated on the USML. The proposed definition of “specially designed” will do little to address confusion about the treatment of printed boards and is likely to perpetuate the unlicensed exporting of printed board designs that now undermines U.S. national security. To avoid such confusion, IPC urges the Department of State to explicitly control printed boards and their designs for ITAR items in Category XI (military electronics) or elsewhere in the USML. At a bare minimum, the Department of State, should, in the preamble to the final definition and relevant USML category revisions, clarify that printed boards and their designs for ITAR items are covered by ITAR.

I. About IPC

IPC is a U.S.-headquartered global trade association, representing all facets of the electronic interconnect industry, including design, printed board manufacturing and printed board assembly. IPC has more than 3,300 member companies of which 1,900 members are located in the United States. IPC is the definitive authority on standards used by the global electronics industry and is the leading source for training, market research and public policy advocacy and other programs to meet the needs of an estimated $1.7 trillion global electronics industry.
II. National Security Importance of Printed Boards and Their Designs

Each printed board and printed board assembly is uniquely designed for the specific function of the electronic items in which it is incorporated. Drawing upon very precise specifications for the design and placement of parts which are to be electronically connected, a printed board contains a roadmap for the operation of that item. Manufacture of the printed board requires access to and use of all of the printed board design information. This access exposes a significant portion of the intellectual property for both the printed board and the item for which it is uniquely designed.

As an example of the significant information contained in printed boards, consider the Joint Counter Radio-Controlled Improvised Explosive Device (“RCIED”) Electronic Warfare (“JCREW”). JCREW jammer systems are used to prevent remote detonation of improvised explosive devices (IEDs). These systems are high-power, modular, programmable, multiband radio frequency jammers that deny enemy use of selected portions of the radio frequency spectrum. Three printed boards help determine the frequency and range capability of JCREW systems. Access to the design of these printed boards could lead to an understanding of the system architecture and how to circumvent the jammers. Protection of the printed boards and their designs are critical to the functioning of the JCREW and our troops’ security.

Releasing sensitive information to adversaries through the sharing of printed board designs exposes defense articles to malicious intrusion that may undermine the reliability of U.S. weaponry and other critical equipment. Moreover, failure to properly secure the information embedded in printed boards that are custom-designed for defense articles could result in a breach of national security and theft of critical defense-related intellectual property.

The unlicensed export of manufactured printed boards carries similar concerns to those regarding printed board designs. IPC’s members are frequently asked by the U.S. Department of Defense to reengineer printed boards for legacy defense articles for which the printed board designs are no longer available. The same process of shaving down layers of a printed board to ascertain the printed board’s design can be used by adversaries to replicate and/or compromise the operation of a mission critical defense system. For these reasons, printed boards and their designs must be appropriately protected under ITAR.

III. ITAR’s Treatment of Printed Boards Elicits Confusion

ITAR rules for printed boards and their designs are not clear to many in the defense and aerospace industry. Although printed boards designed for ITAR controlled items are within the scope of the USML’s controls on “components” that are specifically designed for defense articles, understanding this requires understanding that each printed board is specifically designed. In fact, it is widely recognized within the electronics industry that confusion about ITAR has led to the inadvertent sourcing of printed boards for ITAR-controlled items from non-ITAR facilities. The confusion stems from the mistaken assumption by some in the defense industry that printed boards are not specifically designed for their end items, but rather commercial off the shelf components. On this basis, some companies overlook the regulation of specifically designed parts and components and source printed boards for ITAR items from non-ITAR facilities.
IPC regards the unlicensed export of printed board designs to be a serious threat to national security. In order to address concerns regarding potential violations of ITAR and national security, IPC has launched an educational initiative—Follow the Law, Protect the Board—to clarify export control rules on printed boards. The six-month initiative will include industry conferences, webinars, distribution of instructional material, and media outreach. While IPC believes this initiative will help raise understanding of the current regulations, a private sector educational campaign is no substitute for clear federal rules. Regulatory clarity for printed boards must be addressed as a part of export control reform.

IV. Export Control Reform: Establishing Clear Controls on Printed Boards

IPC supports the reform of U.S. export control rules, and it has welcomed the opportunity to comment on previous rulemakings related to the reform effort. In comments to proposed revisions of Categories VIII, VII, XIX, VI, XX, X, IX, IPC has urged the Department of State to establish clear controls on printed boards and their designs for ITAR-controlled items. Specifically, the Department of State should specifically list printed boards and printed board designs for ITAR items in the revised USML. In addition, the Department of State should clarify that the design and digital instructions for printed boards specifically designed for ITAR items are within the scope of the definition of “technical data” referenced in multiple USML categories and defined in 22 C.F.R. §120.10. Clear enumeration of printed boards will enhance national security by reducing existing confusion about ITAR regulations for printed boards.

IPC’s position is consistent with the Department of State’s stated goal of creating a “positive” control list that establishes objective criteria and parameters for clearly identified defense articles. IPC supports the creation of a “positive” list that enumerates printed boards designed for USML items. Such an approach is the most effective means to addressing confusion within the defense industry about ITAR’s treatment of printed boards which has resulted in the unlicensed export of printed board designs for ITAR items to support sourcing from non-ITAR facilities.

V. Proposed Definition of “Specially Designed”

IPC’s review of the proposed definition of “specially designed” reaffirms the need to explicitly enumerate printed boards and their designs on the USML. While the proposed definition of “specially designed” is an improvement over the currently used term “specifically designed,” it will fail to adequately control printed boards because it relies upon an understanding on the part of exporters that each printed board is specially designed for each USML application. IPC does not believe the proposed definition of “specially designed” can be modified to ensure clear understanding of the regulation of printed boards under ITAR.

IPC is concerned that, absent specific enumeration of printed boards on the USML, “specially designed” will be used as the principal mechanism for controlling printed boards, much as “specifically designed” is today. More specifically, IPC fears that the defense community may rightly conclude that while printed boards fall within, or are “captured” under paragraph (a) of
the definition, they may also wrongly conclude that they are then “released” from regulation under paragraph (b).

It is clear by the definition that printed boards are “captured,” at least initially under paragraph (a) because printed boards are “necessary for an enumerated defense article to function as designed” as described in paragraph (a)(2) of the proposed rule:

“(a) Except for commodities described in (b) of this section, a commodity is “specially designed” if, as a result of development, it: (1) Has properties peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions described in the relevant U.S. Munitions List paragraph;
(2) Is a part (see § 121.8(d) of this subchapter) or component (see § 121.8(b) of this subchapter) necessary for an enumerated defense article to function as designed; or
(3) Is an accessory or attachment (see § 121.8(c) of this subchapter) used with an enumerated defense article to enhance its usefulness or effectiveness.”

However, IPC is concerned that defense community may wrongly believe that printed boards are not regulated under ITAR because they are “released” from regulation by the provisions in paragraphs (b)(2) and (b)(3):

“(b) A part, component, accessory, or attachment is not controlled by a U.S. Munitions List “catch-all” paragraph if it:
(1) Is enumerated in a U.S. Munitions List paragraph;
(2) Is a single unassembled part that is of a type commonly used in multiple types of commodities not enumerated on the U.S. Munitions List or the Commerce Control List, such as threaded fasteners (e.g., screws, bolts, nuts, nut plates, studs, inserts), other fasteners (e.g., clips, rivets, pins), basic hardware (e.g., washers, spacers, insulators, grommets, bushings, springs), wire, and solder;
(3) Has the same form, fit, and performance capabilities as a part, component, accessory, or attachment used in or with a commodity that:
(i) Is or was in production (i.e., not in development); and
(ii) Is not enumerated on the U.S. Munitions List”

In particular, IPC is concerned that defense manufacturers may incorrectly claim releases by considering printed boards to be a “single unassembled part” under paragraph (b)(2) or as having the same “form, fit, and performance capabilities as a part, component, accessory, or attachment” used in an item not enumerated on ITAR under paragraph (b)(3).

With regards to paragraph (b)(2), while a printed board is certainly not a “single unassembled part,” IPC is concerned that it could be seen as such by some in the defense community. A printed board, of course, is a component produced through an elaborate manufacturing process incorporating a variety of materials and metals. The resulting printed board is a highly complex product with electrical pathways connecting disparate components. To this end, a printed board is wholly unlike the examples of a “single unassembled part” (e.g. washer, screw, bolt, etc) provided under paragraph (b)(2), and in fact, the Commerce Department in its rulemaking specifically noted that it did not seek to provide a release for minor components, much less major components. Given the intent to harmonize the use of this definition in the USML and the Commerce Control List, IPC understands that the Department of State likewise does not intend to release components under (b)(2). Yet, to an individual with little technical expertise, a bare printed board lacking components may be perceived to be a single unassembled part. IPC’s experience with the current ITAR suggests that such a mistake could easily occur.
Equally concerning, individuals who believe that printed boards are commercially available off the shelf components may conclude by extension that all printed boards share the same basic “form, fit and performance capabilities” under paragraph (b)(3). No two boards, in fact, are alike because each is specially designed for its end item.

In the event that printed boards are not enumerated on the USML, they should certainly be regarded and regulated as “specially designed” components, but with recognition by the Department of State that this somewhat ambiguous regulation would perpetuate the confusion about ITAR’s current treatment of printed boards that currently exists. Controlling printed boards through “specially designed” will require greater vigilance on the part of federal enforcement officials to ensure that printed boards are being controlled as intended. Should the Department of State decide to address the control of printed boards for USML items in this manner, IPC urges to the Department of State to clarify its application to printed boards in the preamble to the final rule.

The publication of additional category revisions may address IPC’s concerns. As IPC has asserted in these comments as well as in comments to previously released category revisions, printed boards and their designs should be explicitly enumerated within Category XI. If the Department of State chooses to follow this recommendation, printed boards and their designs would be clearly regulated.

VI. Conclusion

IPC supports the Department of State’s goal of reforming the USML to clearly describe covered items in objective terms. In order to prevent the unintentional release of detailed design information about covered items, the Department of State should clarify that printed boards and their designs remain under the jurisdiction of ITAR when the end item for which the printed board is designed is a USML item. Control of printed boards through a “specially designed” catchall neither clarifies the status of printed boards, nor clearly places them on one side of a bright line between what is and is not controlled. Instead, the Department of State should enumerate printed boards in Category XI or elsewhere on the USML. The Department of State should additionally clarify that the design and digital instructions for printed boards specifically designed for ITAR items are within the scope of the definition of “technical data” employed in multiple USML categories and defined in 22 C.F.R. §120.10.

Thank you again for the opportunity to comment on the proposed definition of “specially designed.” If IPC can offer additional information or assistance, please contact me at FernAbrams@ipc.org or 703-522-0225.

Sincerely,

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