September 9, 2013

Ms. Candace Goforth  
Director, Office of Defense Trade Controls Policy  
Directorate of Defense Trade Controls  
U.S. Department of State  
2201 C Street, NW  
Washington, DC 20520

VIA EMAIL: DDTCResponseTeam@state.gov


Dear Ms. Goforth:

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 Directorate of Defense Trade Controls (DDTC) regarding previously proposed U.S. Munitions List (USML) category revisions. IPC welcomes the opportunity to comment on DDTC’s re-proposal on Category XI (Military Electronics).

I. Summary Position

IPC commends DDTC for retaining its proposal to enumerate printed circuit boards (PCBs) in the above referenced rulemaking. The explicit enumeration of PCBs is the most effective and appropriate method of addressing the widespread confusion within the defense community about ITAR’s controls on PCBs and their designs. IPC, moreover, agrees with the level and scope of controls that the draft rule would establish for PCBs. PCBs must be controlled in the same manner as the defense articles for which they are designed because PCBs and their designs reveal valuable information about the workings of those defense articles.

IPC, however, continues to be concerned that DDTC’s proposed reliance on specially designed as the principal means of controlling PCBs will perpetuate confusion within the defense industry. The confusion stems from the mistaken, but commonly held, view that PCBs can be commercial-off-the-shelf components (COTS). PCBs, in fact, are always custom designed for the electronics into which they are incorporated. The draft rule’s use of specially designed to control PCBs may be interpreted by some in the defense supply chain to indicate that specially designed and non-specially designed PCBs exist. This confusion, IPC believes, will lead to continued inadvertent and preventable ITAR violations.
In addition, the reliance on the term *specially designed* introduces unnecessary complexity by requiring manufacturers to accurately apply the “catch-and-release” provisions of *specially designed*, despite the fact that only the “catch” paragraph of the definition is applicable to PCBs. Thus, the use of *specially designed* underlines the very clarity that the DDTC seeks to instill in the USML through the enumeration of PCBs.

IPC urges DDTC to enhance the clarity of ITAR controls on PCBs in a manner that is consistent with the principle that the applicability of ITAR to PCBs should generally follow the defense articles for which they are designed. Specifically, IPC recommends that DDTC modify paragraph XI(c)(2) to more clearly control PCBs by directly incorporating the relevant elements of *specially designed*. In the event that DDTC retains the use of *specially designed* in its enumeration, IPC urges DDTC to make clear in the final rule that the 120.41(b) “release” subparagraphs for “catch-all” and “technical data control” paragraphs do not apply to Category XI(c)(2). Regardless of the approach taken, IPC strongly encourages DDTC to: 1) affirm in the final rule that all PCBs are custom designed and, 2) reiterate that that PCB designs and digital data are controlled as technical data, per ITAR § 120.10.

II. About IPC

IPC is a U.S.-headquartered global trade association, representing all facets of the electronic interconnect industry, including printed circuit board design, manufacturing and assembly. IPC has more than 3,400 member companies of which 1,900 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, public policy advocacy and other programs to meet the needs of an estimated $2.02 trillion global electronics industry.

III. IPC Concerns with the Proposed Rule

A. Printed Circuit Boards

IPC commends DDTC for its thoughtful and greatly improved approach to the regulation of PCBs in paragraph (c)(2) of the proposed rule for Category XI:

“Printed Circuit Boards (PCBs) and populated circuit card assemblies for which the layout is ‘specially designed’ for defense articles in this subchapter.”

Consistent with IPC’s January 28, 2013 comments on Category XI revisions, we agree with and support DDTC’s decision to enumerate PCBs on the USML. The explicit enumeration of PCBs is the most effective and appropriate method of clarifying the regulation of PCBs and reducing the widespread confusion that has led to the unlicensed sharing of PCB design data with non-ITAR facilities. Moreover, the enumeration of printed boards is consistent with DDTC’s own stated goal of establishing a “positive control list” to delineate clearly between ITAR and non-ITAR covered items. IPC also supports, in concept, the level and scope of export controls on PCBs that paragraph XI(c)(2) would put in place.
IPC, however, remains concerned that the rule’s use of *specially designed* as the principal means of controlling PCBs will perpetuate confusion about ITAR’s treatment of PCBs, resulting in the continued unlicensed sourcing of PCBs for defense articles. While IPC understands that *specially designed* is a legal term that is defined in ITAR, manufacturers and exporters are likely to misinterpret it as implying the existence of non-specially designed PCBs, especially given its placement in paragraph XI(c)(2) as a modifier to PCB layouts. COTS PCBs do not exist; all PCBs are custom designed. The mistaken belief that some PCBs are COTS or non-custom designed could lead a manufacturer or exporter to inadvertently disregard the proposed controls on PCBs.

In addition, the use of *specially designed* will unnecessarily require manufacturers and exporters to work through the application of *specially designed* to PCBs, a rather complex effort. As IPC understands the rule, paragraph XI(c)(2) does not constitute a “catch-all” paragraph, and therefore paragraph 120.41(a)(2) establishes releases from *specially designed* that are not applicable to PCBs. We are concerned that many manufacturers and exporters may mistakenly believe that PCBs are released from ITAR control under paragraph 120.41(b) of *specially designed* because they do not understand that Paragraph XI(c)(2) does not constitute a catch-all paragraph. The awkward use of *specially designed* in Paragraph XI(c)(2) will unnecessarily confuse exporters and manufacturers by failing to provide a clear and focused statement of ITAR controls.

The use of *specially designed* is additionally problematic because of its inconsistency with DDTC’s intended scope of coverage for PCBs. In the preamble to the draft rule, DDTC states that the “jurisdiction of a printed circuit board…should follow the jurisdiction of the article for which it was designed, as opposed to the jurisdiction of the overall system into which it is incorporated.” IPC supports this general approach, but believes that paragraph 120.41(a)(2) of the definition for *specially designed*, when applied to PCBs, may be much broader than intended by DDTC. Paragraph 120.41(a)(2) would broadly capture, “a part, component, accessory, attachment or software for use in or with a defense article.” The broad reach of 120.41(a)(2) is not problematic in the context of a “catch-all” paragraph because captured items will be subject to the releases outlined in paragraph 120.41(b) of *specially designed*. Category XI(c)(2), however, is not a catch-all paragraph, and therefore 120.41(a)(2) may unintentionally regulate, under ITAR, every PCB “for use in” a defense article, even those PCBs, for example, that are designed for commercial computers on an ITAR-covered aircraft. The inconsistency between 120.41(a)(2) and DDTC’s intended scope of coverage for PCBs will only add further confusion to the already problematic application of *specially designed* in paragraph XI(c)(2).

**B. Printed Circuit Board Designs**

IPC appreciates that the proposed rule controls technical data related to printed circuit boards for covered defense articles under paragraph XI(d):

> Technical data (see § 120.10 of this subchapter) and defense services (see § 120.9 of this subchapter) directly related to the defense articles enumerated in paragraphs (a) through (c) of
this category and classified technical data directly related to items controlled in CCL ECCN 3A611, 3B611, 3C611, and 3D611 and defense services using the classified technical data. (See § 125.4 of this subchapter for exemptions.) (MT for technical data and defense services related to articles designated as such.)

Although not specifically stated in the proposed rule, IPC understands that paragraph XI(d) would include the design and digital instructions necessary to manufacture a PCB for an ITAR item. IPC is concerned that the proposed rule does not clearly affirm that digital designs and instructions for PCBs constitute technical data under paragraph XI(d). Confusion on this point has led to unlicensed sourcing of PCBs for ITAR items from non-ITAR facilities under current law.

IV. Recommendations

IPC urges DDTC to take advantage of the opportunity afforded by export control reform to clarify controls on PCBs consistent with the principle that the applicability of ITAR to PCBs should follow the defense articles for which they are designed. Accordingly, IPC is proposing the following recommendations:

1. **Modify paragraph XI(c)(2) to replace specially designed with “Printed Circuit Boards (PCBs) and populated printed circuit board assemblies which, as a result of development, have properties peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions of defense articles in this subchapter; or which are for use in or with a defense article in this subchapter.”**

   Explicitly and clearly enumerating PCBs on the USML is both the most effective means of controlling PCBs and the most consistent with DDTC’s own stated goal of establishing a “positive control list.” For this reason, IPC strongly recommends that DDTC retain PCBs on the USML as an enumerated item and clarify paragraph XI(c)(2) by replacing the reference to specially designed with its applicable definitional elements, which are paragraphs 120.41(a)(1) and 120.41(a)(2) of specially designed. Paragraphs 120.41(a)(1) and 120.41(a)(2) capture a commodity if it:

   (a)(1) As a result of development, has properties peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions described in the relevant U.S. Munitions List paragraph; or 
   (a)(2) Is a part (see § 121.8(d) of this subchapter), component (see § 121.8(b) of this subchapter), accessory (see § 121.8(c) of this subchapter), attachment (see § 121.8(c) of this subchapter), or software for use in or with a defense article.

   These definitional elements should be integrated into Category XI(c)(2) in order to avoid confusion that would certainly result from the use of specially designed. IPC is concerned that the use of specially designed would require exporters to determine the applicability of paragraph 120.41(a) of specially designed and to conclude correctly that paragraph 120.41(b) is not applicable. As discussed earlier, Category XI(c)(2) does not constitute a “catch-all”
control paragraph, and therefore, none of the releases under paragraph 120.41(b) of *specially designed* apply to PCBs. For this reason, IPC is recommending an alternative enumeration that clearly articulates the provisions of *specially designed* that DDTC seeks to impose on PCBs.

IPC strongly believes that both 120.41(a)(1) and 120.41(a)(2) of the definition of *specially designed* need to be integrated into the enumeration of PCBs. Merely integrating paragraph 120.41(a)(1) would give exporters the perception of wide latitude to claim that any given PCB is not “peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions” of the defense article into which it is incorporated. Additionally, IPC urges DDTC to provide a note explaining ITAR’s coverage to eliminate any lingering industry confusion about the scope of paragraph XI(c)(2).

IPC’s recommended language also replaces “populated circuit card assemblies” with “populated printed circuit board assemblies.” “Populated circuit card assemblies” is not a term commonly used within the printed circuit board or electronics manufacturing industries.

2. **If DDTC retains the use of *specially designed* to control PCBs, IPC recommends that DDTC include in the final rule a note clarifying that Category XI(c)(2) is not a catch-all and that therefore the 120.41(b) “release” subparagraphs for “catch-all” and “technical data control” do not apply.** It is not clearly stated or easily discernible that the 120.41(b) “release” subparagraphs for “catch-all” and “technical data control” do not apply to Category XI(c)(2). As a result, manufacturers and purchasers of PCBs may mistakenly apply 120.41(b) and inadvertently release PCBs designed for defense articles from ITAR coverage.

DDTC’s clarifying note, for example, could state: “Paragraph XI(c)(2) does not constitute a ‘catch-all’ or ‘technical data control’ paragraph and therefore 120.41(b) is not applicable to the enumeration of PCBs in paragraph XI(c)(2).”

Furthermore, IPC recommends that the DDTC improve the clarity of the rule by including in Section 121.1 a list of all instances, including Category XI(c)(2), in which the term *specially designed* is used in the USML in a context other than as a “catch-all” paragraph. In addition, DDTC should consider revising Section 121.1(d) to provide guidance on the application of *specially designed* to distinguish between controls that are “catch-all” and controls (such as printed circuit boards) that are not.

3. **Reaffirm that PCB designs and digital data are controlled as technical data, per ITAR § 120.10.** DDTC provided this explanation in the preamble to its April 16, 2013 rule (Initial Implementation of Export Control Reform):

> “Printed circuit boards ‘specially designed’ (see definition of this term in this rule) for articles in USML Category XIX, as well as for articles in all other USML categories, are controlled in USML Category XI and their related designs or digital data are controlled as technical data, per ITAR § 120.10.”
This same explanation should be restated in Category XI as it is the USML category chiefly responsible for controlling PCBs. Such a clarification is necessary given that design information is necessarily shared whenever the designer provides manufacturing data to a manufacturer. Without this clarification, some manufacturers of defense articles may assume that export controls do not apply to items not destined for export, thereby perpetuating the unlicensed sourcing of PCBs from non-ITAR facilities.

4. Clarify in the preamble or a note to the final rule that PCBs, by their very nature, are custom designed for each defense article into which they are incorporated. DDTC should take steps, with this rule, to address the underlying confusion that has led to the misapplication of the current law. In order to correctly apply Category XI(c)(2), manufacturers and exporters must understand that all PCBs are uniquely designed. IPC encourages DDTC to provide additional and explicit clarification about the custom nature of PCBs in the preamble or as a note to the final rule.

V. Conclusion

IPC supports DDTC’s goal of reforming the USML to clearly describe what items the list covers. In this vein, IPC endorses DDTC’s decision to enumerate printed circuit boards in Category XI, but expresses concern that the use of specially designed in controlling printed boards could undermine DDTC’s efforts to draw a bright line between what is and is not controlled. IPC recommends that DDTC clarify controls on PCBs by modifying paragraph XI(c)(2) of the rule to clearly enumerate PCBs, adding language to clarify the application of ITAR to PCB design data, and clearly stating that all PCBs are uniquely designed for the defense articles they will be part of. IPC believes these changes to the proposed rule will more clearly regulate PCBs and the sensitive information contained within them and their design files, thus reducing the sourcing of ITAR controlled PCBs from non-ITAR facilities and furthers the protection of our national security.

Thank you again for the opportunity to comment on the proposed amendments to USML Category XI. If IPC can offer additional information or assistance, please contact Fern Abrams at FAbrams@ipc.org or (703) 522-0225.

Sincerely,

Fern Abrams
Director, Government Relations and Environmental Policy