August 3, 2012

Mr. Timothy Mooney
Regulatory Policy Division
Room 2099B
Bureau of Industry and Security
U.S. Department of Commerce
14th Street & Pennsylvania Ave., N.W.
Washington, D.C. 20230

Re: "Specially Designed" Definition (*Federal Register* Notice of June 19, 2012; RIN 0694-AF66)

Dear Mr. Mooney:

The Semiconductor Industry Association ("SIA") is the premier trade association representing the U.S. semiconductor industry. Founded in 1977 by five microelectronics pioneers, SIA unites over 60 companies that account for nearly 90 percent of the semiconductor production of this country. The semiconductor industry accounts for a sizeable portion of U.S. exports.

SIA is pleased to submit the following public comments in response to the request for public comments issued by the Commerce Department's Bureau of Industry and Security ("BIS") on a revised proposed definition of "specially designed" ("Proposed Definition").[1]

I. Executive Summary

The commercial semiconductor industry is at the leading edge of technological developments within the United States and while the vast majority of integrated circuits ("ICs") are deployed in civilian applications, many commercial technologies developed by the U.S. semiconductor industry are subsequently adopted by the defense industry. Furthermore, the health of the commercial semiconductor industry is dependent on exports and a global supply chain. Maintaining a vibrant semiconductor industry that is not encumbered by unnecessary export restrictions, therefore, is of great importance to both the health of the U.S. economy and, ultimately, the national security of the United States. Implementing a straightforward and principled definition of "specially designed" is critical for U.S. economic and security interests, as "specially designed" is central to the export control of integrated circuits.

[1] "Specially Designed" Definition, 77 Fed. Reg. 36,409 (June 19, 2012) ("Proposed Definition").

SIA applauds BIS for significantly improving the "specially designed" definition from its original proposal. In particular, SIA believes the following are especially valuable improvements:

- Emphasizing that a "particular application" is an essential element of "specially designed" as it pertains to components. For ICs, application-specific integrated circuits ("ASICs"), a term that is well defined within the semiconductor industry, most effectively captures this element;

- Recognizing that in certain circumstances a component is not "specially designed" if it has equivalent functionality to a component that is contained or reasonably expected to be contained in a "non-controlled" end item; and

- Renouncing unequivocally that "capable of" is an appropriate interpretation of "specially designed."

Properly applied and as a practical matter, these improvements can bring the definition of "specially designed" quite close to where it should be.

Despite these improvements, however, the Proposed Definition has serious shortcomings. The Proposed Definition is unnecessarily complex and convoluted, leaves too much room for overreach and distortion and does not ensure that the appropriate industry definition of ASICs will apply.

SIA maintains that a simple, common-sense approach to the definition would (i) be much easier to understand and apply, (ii) provide a clear distinction between ASICs that would qualify as "specially designed" and other ICs that would not, and (iii) limit the control of components to those having a direct responsibility for the parameters or character that trigger control of the related end item.

In short, SIA recommends the Proposed Definition of "specially designed" be modified to treat end items and components in a similar fashion under the proposed subsection (a) and include a Note to set forth an appropriate definition of ASICs.

If BIS is unwilling to proceed with such a straight-forward definition of "specially designed" rather than its "catch-and-release," decision-tree approach, SIA recommends the following changes to the Proposed Definition:

- Include in subsection (a)(1) application specific components of end items for which the control parameters or character can be ascertained from its listing.

- Replace the "necessary to function as designed" standard for components set forth in subsection (a)(2) with "required to function as a defense article under the U.S. Munitions List or a national security-controlled end item under the Commerce Control List." This standard would be limited to components for which no controlled parameters of the related end item are listed.

- Eliminate the enumeration of components as defense articles or end items on the U.S. Munitions List ("USML") or Commerce Control List ("CCL") so as to make subsection (b)(2) superfluous.

- Eliminate the reference in subsection (b)(3) to "form and fit" for components of equivalent performance.

- Narrow the scope in paragraph (b)(5) of "particular application" and create a note that provides an appropriate industry definition of ASICs.

These changes, along with other definitional changes, would properly reduce the scope of the "catch" in the Proposed Definition. They would also sharpen the exceptions in a more systematic way that is consistent with the derivative nature of components and reliant on widespread industry practice and understanding.

II. Introduction

In addressing export controls applicable to ICs, the Department should keep mind that the underlying technology associated with such devices and the most advanced applications to which ICs are put are now driven overwhelmingly by consumer products. While utilizing semiconductor technology, the defense sector accounts for only a small fraction of U.S. semiconductor output, and military items rarely utilize the most advanced semiconductor technology.

A healthy and vibrant consumer led semiconductor industry generates exports, productivity and highly skilled jobs, all ingredients of a strong economy that can support national security. By being able to maintain a global leadership position, the U.S. semiconductor industry helps to assure that the United States will not fall behind other nations in information technology that supports national security. ICs have been among the largest exports of the United Sates over the past five years, so lowering unnecessary barriers to the export of such devices is very much in the national interest. When national defense requires a truly specialized, specifically designed IC, it is the groundwork established in a healthy civilian industry that will allow defense development in a timely manner.

SIA's comments naturally concentrate on the appropriate treatment of components, and, more specifically, ICs, on the CCL and the USML. The adoption of common principles for the classification and treatment of semiconductor components is essential to a positive listing of ICs based on objective criteria.

As it implements a new, unified definition of "specially designed," BIS must recognize that for the Proposed Definition to be successful, it is imperative that no part or component be subject to increased control merely as a result of those revisions. Any implementation of the Proposed Revisions that results in re-control or new control would constitute a step backwards.

III. SIA Has Long Advocated Principles That Should Apply To The Control Status Of ICs

SIA understands the difficulty of developing a unified "specially designed" definition and appreciates the U.S. government's efforts to do so. Indeed, past practice has generated problems in the application of "specially designed" to ICs. There has been a misplaced emphasis on the mere use of a component in a controlled end item as a definitive indicator of the original design intent, when any such use is just one of many elements that define a design. Even more troublingly, the meaning of "specially designed" has in the past been mistakenly made equivalent to "capable of."

Nevertheless, the Proposed Definition, while certainly an improvement over the previous definition put forward by BIS,[2] continues to complicate and burden what should be a straightforward and easily-understood definition. The term "specially designed" as used within the semiconductor industry is well defined by its natural meaning and industry practice and hence is well understood in its application.

"Specially designed" is used as a control criterion throughout the CCL and USML.[3] The definition given that term should take account of that fact. Therefore, in the context of the CCL and the USML "specially designed" means designed and/or developed in a peculiar and particular manner for a specific end use or end item and contributing directly and significantly to that end use or end item. And because "specially designed" has been used to differentiate what is controlled from what is not controlled in a particular category of the CCL or USML, the direct and significant contribution to an end use or end item should be particularly responsible for the controlled feature of that end use or end item.

A. Components Such as ICs Should Have Their Control Status Determined By The End Items Into Which They Are Incorporated

BIS has defined "component" to be, among other things, "an item that is useful only when used in conjunction with an "end item."[4] Every IC fits squarely within this definition.

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[2] Proposed Revisions to the Export Administration Regulations: Control of Items the President Determined No Longer Warrant Control Under the United States Munitions List, 76 Fed. Reg. 41,958 (July 15, 2011) ("July 2011 Proposal").

[3] BIS states that an objective of the Proposed Definition is to not use "specially designed" as a control criterion. Proposed Definition at 36,410. However, that objective is not achieved. "Specially designed" is used as a control criterion in every instance where it appears in a catch-all provision of the CCL or USML.

[4] July 2011 Proposal at 41,980.

Indeed, ICs are quintessential components. ICs have no utility or impact standing alone and are purposeful only when incorporated into an end item.

Components such as ICs are inherently distinct from end items and their capabilities are achieved only when incorporated into end items. Accordingly, components' derivative nature means that they should not be set forth on a control list as enumerated or controlled end items themselves. Instead, the export control status of all components — and particularly of ICs not already enumerated as components in Category 3 of the CCL — should be determined entirely by the control status of the end items into which the components are incorporated. That is, all ICs that are not already enumerated as components in Category 3 of the CCL should be placed in catch-all categories on the CCL and USML, such that the export control status of such items is determined exclusively by the uses to which the components are put. Insofar as a component, by definition, is useless until it is employed in conjunction with an end item, it is only logical and appropriate that the control status of components that are not already enumerated as components in Category 3 of the CCL be determined in a derivative fashion.

No component should be positively listed on the USML or CCL as an end item, and no component that is not "specially designed" for a controlled end item or is not already enumerated as a component in Category 3 of the CCL should be subject to export controls beyond EAR99.

B. The Proposed Definition As Applied to ICs Should Be Limited To ASICs That Are Peculiarly Responsible For the Specific Controlled Parameters of the End Items Into Which They Are Incorporated

The only components worthy of export control as specially designed components are those that are application-specific. Components that are employed for a variety of purposes and/or in multiple end products should not be controlled as specially designed components. In the case of ICs, this means that only application-specific ICs — or ASICs[5] — should be subject to export controls beyond EAR99. An ASIC or custom IC by definition has a customized, special and compelling connection to the end item into which it is incorporated.

In contrast, general purpose ICs have no customized, special or compelling connection to the end items into which they are incorporated or to the applications of the controlled end item. General purpose ICs should not be controlled, for the simple reason that they are not specifically designed (in any natural sense of that term) for a controlled end item. BIS has recognized this, stating that "specially designed" does not mean merely "capable of use in" or "capable of use

[5] ASIC is a well understood and clearly defined term within the semiconductor industry. The longstanding definition of the JEDEC Solid State Technology Association for an ASIC is relevant and appropriate: "An integrated circuit developed and produced for a specific application or function and for a single customer." This definition captures a custom IC designed particularly to conform to a single customer's unique requirements. A prime example of ASICs is the ICs designed and developed by Intersil Corporation exclusively for the Trident missile system. Those ICs were unambiguously application-specific and end item-specific and so were quintessential ASICs. Many other ICs designed and developed by Intersil Corporation and other SIA member companies are not customized for a specific use in a specific end item and so do not qualify as ASICs. By utilizing existing industry terminology, exporters will have a clear basis upon which to classify an IC.

with," and that, in particular, non-ASIC, general purpose ICs "that are not designed for a particular application would not be "specially designed" items, even if they are used in controlled items."[6]

In addition, "specially designed" should apply only to ASICs (and other application-specific components) that are peculiarly responsible for achieving or exceeding the controlled parameters of end items into which they are incorporated. An IC is worthy of control as being specially designed only if it contributes significantly to the achievement of military advantage or national security sensitivity of an end item as described in and through the objective criteria of a control list. ASICs that provide benign functions that are separate from or contribute only indirectly to the national security features of an end item, such as routine communications or memory capabilities, should not be captured as specially designed controlled components.

IV. The Proposed Definition Constitutes A Major Improvement From The Previous Proposal And Is Much Closer To The SIA Principles, But Nonetheless Requires Further Improvement

A. BIS Has Adopted Several Positive Elements Into Its New Proposed Definition

SIA commends BIS for significantly improving the "specially designed" definition and moving that definition much closer to where it needs to be.

First, in paragraphs (b)(3) and (b)(4) of the Proposed Definition BIS has correctly stipulated that if a components is employed in several different end items with differing control status, then the component is not "specially designed." These exclusions should appropriately remove from control those devices that are general purpose or multi-purpose.

Second, in paragraph (b)(5) of the Proposed Definition BIS has correctly stipulated that non-application specific components — in the case of ICs, non-ASICs — are not "specially designed." This appropriate exclusion should remove from control those components that are not inextricably tied to the controlled parameters of an enumerated end item. As BIS itself notes, non-ASIC, general purpose ICs "that are not designed for a particular application would not be "specially designed" items, even if they are used in controlled items."[7]

Finally, in its discussion of the Proposed Definition BIS has explicitly rejected "capable of" as a possible meaning of "specially designed." This is a long-overdue and extremely important clarification. Moreover, the BIS discussion of this point in conjunction with explaining paragraph (a)(1) of the Proposed Definition is worth highlighting:

[6] Proposed Definition at 36,410.
[7] Proposed Definition at 36,410.

> even if something is capable of being used with a controlled item, it is not captured by this part of paragraph (a) unless someone did something during the item's development so that it would achieve or exceed the performance levels, characteristics, or functions described in a referenced ECCN or USML paragraph.[8]

This stipulation is in harmony with the export control principles laid out in the previous section and SIA strongly supports BIS in this regard.[9]

B. Notwithstanding These Improvements, The Proposed Definition Has Several Short-Comings and Requires Further Improvement

1. A "Catch-and-Release" Methodology Is Unorthodox, Unnecessary and Unduly Complex

BIS's reliance on a "catch-and-release" methodology for determining which items are "specially designed" is unnecessary and significantly complicates the "specially designed" definition. This is particularly true for ICs. Paragraph (a)(2) of the Proposed Definition captures almost all components, as almost all components are "necessary" for the functioning of the end items into which they are incorporated. It is counterintuitive and convoluted to determine that virtually every IC is "specially designed" before excluding certain types of ICs from that definition.

The plain meaning of the term "specially designed" is limiting and narrow in its scope. That natural meaning cannot be squared with the concept of capturing all (or virtually all) components and accessories, only to "release" certain of those items after further analysis. Given the central role that "specially designed" plays in determining the control status of components, the meaning given that term should be clear and intuitive, not complex and uncommon.

For end items (*i.e.*, all items other than parts, components, accessories and attachments that can operate independently), BIS employs a straightforward positive definition of "specially designed" that adheres closely to the natural and commonly-understood meaning of that term: a "specially designed" end item is one that

> has properties peculiarly responsible for achieving or exceeding the performance levels, characteristics, or functions in the relevant ECCN or U.S. Munitions List (USML) paragraph.[10]

[8] Proposed Definition at 36,412.
[9] However, BIS has inexplicably and wrongly limited this principle only to end items, excluding components and accessories. It should not do so, but, as explained in the following subsection, instead should apply this principle to all items, including components.
[10] Proposed Definition at 36,418.

This definition captures all end items that should qualify for "specially designed" without any need to "release" items based on exclusions. It is easy to understand, straightforward to administer and in conformance with the natural meaning or the term "specially designed." There is no apparent reason why this same definition could not be applied to all items — components, accessories, attachments and end items alike.

2. The Proposed Definition Does Not Increase Certainty or Objectivity

Setting aside its needless complexity, the Proposed Definition does not increase certainty or objectivity — at least vis-à-vis components and accessories. First, certainty is not increased with complexity, and the "catch-and-release" nature of the Proposed Definition is necessarily more complex than a straightforward positive definition of "specially designed" (such as paragraph (a)(1) of the Proposed Definition). Second, as discussed in further detail in the next section, several of the terms employed in the Proposed Definition are undefined and so are inherently subjective. In particular, the term "reasonable expectation" contains a subjective element just as does the term "specially designed" itself.

3. The Proposed Definition Renders The Term "Specially Designed" Meaningless When Employed Outside of a Catch-All Category

Paragraph (b)(1) of the Proposed Definition makes the term "specially designed" entirely devoid of meaning when employed outside of a catch-all category. It is awkward in the extreme to have a term at once with and without a meaning in the CCL or USML. It is especially problematic to have such an important term — explicitly used to differentiate items subject to control from those not subject to control — meaningless in several instances within the CCL and USML. As discussed in more detail below, paragraph (b)(1) should either be eliminated or modified such that "specially designed" has a discernible meaning when applied to components throughout the CCL and USML, not just when used in catch-all categories.

C. A Positive Definition of "Specially Designed" For All Items Would Be Simpler, Easier to Understand, and in Keeping With Normal Statutory and Regulatory Interpretation

As it has done with respect to end items, BIS should implement a positive definition of "specially designed" for components, accessories and attachments. Such a definition — a modified version of paragraph (a)(1) of the Proposed Definition — would be far simpler, easier to understand and in keeping with normal statutory and regulatory interpretation. Moreover, such a positive definition would comport with the natural meaning of the term "specially designed," and would implement the principle that only a particular subset of items are "specially designed."

There is no credible reason why paragraph (a)(1) of the Proposed Definition should not apply to parts and components. As BIS notes, an item should not be deemed "specially designed" simply because it is capable of being used with a controlled item; instead, an item should not be deemed "specially designed"

> unless someone did something during the item's development so that it would achieve or exceed the performance levels, characteristics, or functions described in a referenced ECCN or USML paragraph.[11]

That logic applies with equal force to parts, components and end items. Indeed, it is noteworthy that among the examples discussed by BIS in its Note to paragraph (a)(1) is a component for a robot covered by ECCN 2B007.a.[12] That discussion clearly evidences the applicability of this paragraph to components. BIS should explicitly codify the applicability of paragraph (a)(1) to components in the manner indicated below.

It is true that in certain instances "specially designed" components of end items appear within ECCNs or USML paragraphs that do not contain any specified performance levels, characteristics or functions; however, as noted above, those limited instances should not be permitted to control the treatment of all components, especially given the derivative nature of components and their proper inclusion only within catch-all provisions of the USML and CCL.

Even for items with no stated performance levels, characteristics or functions, it is surely possible to distinguish what features make the item inherently military or sensitive to national security. For example, tanks covered by USML Category VII(b) are inherently military items and are controlled due to their ability on a mobile basis to both withstand attack from most firearms and inflict damage via the firing of ordinance. These military capabilities of a tank can be readily distinguished from such capabilities as its air conditioning system. Similarly, an ASIC used in a targeting system in a jet fighter would be "particularly responsible for achieving the control parameters" of the jet fighter, while an ASIC used in a weather navigation system in the same jet fighter would not be "particularly responsible for achieving the control parameters" of the jet fighter.

There is no reason why a "catch-and-release" methodology is required, and such an approach should be replaced with a single-stage, positive definition that only "catches" or "captures" items worthy of control. The following revised version of paragraph (a) of the Proposed Definition is all that is required and should be implemented by BIS:

> *An "item" is "specially designed" if, as a result of "development," it:*
>
> > *(a) is an end item having properties peculiarly responsible for achieving or exceeding the performance levels, characteristics, or functions in the relevant ECCN or U.S. Munitions List (USML) paragraph , or*
> >
> > *(b) is an application-specific part, component, accessory or attachment having properties peculiarly responsible for achieving or exceeding the performance levels, characteristics, or functions*

[11] Proposed Definition at 36,412.
[12] Proposed Definition at 36,419.

> *of an end item enumerated in the relevant ECCN or U.S. Munitions List (USML) paragraph.*
>
> ***Note to definition**: In the case of integrated circuits, only ASICs are captured by this definition, where "ASIC" means an integrated circuit developed and produced for a specific application or function and for a single customer.*

Such a single-stage, positive definition appropriately would place all items on an equal footing and would obviate the need for any exclusions or "release" of items that are obviously not designed specially. The various exclusions contained in paragraph (b) of the Proposed Definition would no longer be necessary because only parts, components, accessories and attachments developed in a special and particular manner for the end items into which they are incorporated or with which they are used would be deemed "specially designed" in the first instance — just as is the case for end items under the Proposed Definition.

This straightforward and streamlined "specially designed" definition would comport with the natural meaning of the term and would greatly simplify the analysis required by exporters. Accordingly, SIA urges BIS to implement this definition.

V. At Least With Respect To Components, The Proposed Definition Of "Specially Designed" Fails To Achieve Several Of The Objectives Set Forth By BIS

A. As Applied to Components, The Proposed Definition Does Not Correspond to The Natural Meaning of The Term "Specially Designed" and Is Not Easily Understood or Easy to Apply

The "catch-and release" methodology employed in the Proposed Definition vis-à-vis components is inherently complicated and requires special expertise generally not held by many exporters. Contrary to BIS' claim,[13] paragraphs (b)(4) and (b)(5) of the Proposed Definition do to a significant extent depend on a determination of the predominant market application for a component in order to determine whether the component is "specially designed." More importantly, there are several terms and phrases used in the Proposed Definition that are undefined and are therefore subjective and unclear:

- First, while the term "enumerated" is defined in Note 1 to the Proposed Definition, the distinctions between an "enumerated commodity," a "referenced commodity," a "commodity described on the CCL," and a "commodity" are unclear. Without an understanding of the differences between these various items and a definition of each of the items, it is difficult, if not impossible, to decipher the Proposed Definition.

- Second, the meaning of "application" (as employed in paragraph (b)(5) of the Proposed Definition) is unclear. This term can be subject to widely

[13] Proposed Definition at 36,410.

divergent interpretations, some of which are so broad as to render the exclusion provided by paragraph (b)(5) essentially useless.

B. The Proposed Definition Is Not Necessarily Consistent With Definitions Used by the Multilateral Export Control Regimes

The only definition provided for "specially designed" within the Wassenaar Arrangement is the Missile Technology Control Regime (MTCR) definition that, at least explicitly, applies only to items covered by the MTCR. What's more, at least vis-à-vis components, the Proposed Definition is far more complicated and apparently far broader in scope than is the MTCR definition of "specially designed." The MTCR definition requires exclusive use in a particular end item; the Proposed Definition does not go nearly so far. The Proposed Definition is likely to capture items that are not encompassed in the MTCR definition of "specially designed," as exclusive use is narrower than "reasonable expectation of use."

Whether the Proposed Definition is consistent with the Wassenaar Arrangement as a whole is unclear and a matter for conjecture, as there is no generally applicable definition of "specially designed" within the Wassenaar Arrangement. However, it is clear that the Proposed Definition, at least vis-à-vis components and accessories, is not consistent with the natural meaning of that term and is convoluted — attributes that are not consistent with the Wassenaar Arrangement.

C. By Trying to Avoid an Ostensible "Definitional Loop," The Proposed Definition Creates New Definitional Problems

As an initial matter, BIS states it intends for the Proposed Definition to avoid using "specially designed" as a control criterion.[14] This is a curious statement, as it is undoubtedly the case that "specially designed" is used as a control criterion in every instance in which it appears in a catch-all provision throughout the CCL and USML.[15] If BIS intended to state that among its objectives for the Proposed Definition is to avoid using "specially designed" as a control criteria within non-catch-all provisions of the CCL and USML, then it should have stated as much.

Beyond that, BIS notes that paragraph (b)(1) of the Proposed Definition exists in order to avoid a "definitional loop."[16] Regardless of the validity of that justification, paragraph (b)(1) generates definitional problems of its own by creating situations in which "specially designed" has no meaning whatsoever. If "specially designed" plays no definitional role in the control of a USML enumerated item (*i.e.*, an item not within a non-catch-all provision of the USML), then "specially designed" should be eliminated from the description of that enumerated item.

[14] Proposed Definition at 36,410.
[15] Indeed, the definition of a catch-all paragraph provided by the State Department explicitly notes that "specially designed" is the control criterion used in such paragraphs. Amendment to the International Traffic in Arms Regulations: Definition for "Specially Designed," 77 Fed. Reg. 36,428, 36,432 (June 19, 2012).
[16] Proposed Definition at 36,410.

Alternatively, if "specially designed" does play a substantive role in the control of an enumerated item, then the term should be given a clear meaning — and it should be the same one used throughout the USML and CCL.

The solution to the "definitional loop" problem referenced by BIS is not to create a term with no meaning, but rather to eliminate all situations in which a "definitional loop" might arise by removing "specially designed" from all places in the regulations where it is not needed. Having "specially designed" mean different things in different instances or, even worse, providing no meaning whatsoever to "specially designed" in certain instances is in complete opposition to BIS' stated goal — supported by SIA — of developing a single, cohesive and unified definition of this important and often-used term.

D. The Proposed Definition Covers Both End Items and Components, But Applies Quite Differently to End Items and Components

While it is true that the Proposed Definition nominally covers all items, it is not a positive, unified definition that applies equally to all items. For no apparent reason and without any convincing justification, the Proposed Definition applies a straightforward positive definition to end items, but applies a convoluted "catch-and-release" definition to parts, components, accessories and attachments. This dichotomy is unwarranted and should be eliminated.

The same positive definition consistent with the natural meaning of the term "specially designed" should apply to all items. Moreover, the Proposed Definition does not apply to "components that were "specially designed" for particular end items" if the components are enumerated on the USML. As noted in the previous section, that definitional vacuum should be eliminated.

VI. Several Of The Rationales Provided By BIS In Support Of The Proposed Definition Are Unconvincing And Warrant Scrutiny

A. It Is Not Apparent That The Proposed Definition Applies the "Normal Commercial Use" Carve Outs

BIS claims that the Proposed Definition would "consistently apply the normal commercial use carve outs."[17] However, the term "normal commercial use" is never defined. Accordingly, it is unclear whether the Proposed Definition actually would "consistently apply the "normal commercial use" carve outs." "Normal commercial use" should include having a reasonable expectation of use within a civil, commercial application, such that if the developer of a component has a reasonable expectation that the component will be incorporated into civil, commercial end items, then the component should be in "normal commercial use" — regardless of the extent to which the component is incorporated into defense articles. The regulation should define "in normal commercial use" to encompass a reasonable expectation that the component

[17] Proposed Definition at 36,410.

will be incorporated into a civil, commercial end item or utilized in a civil, commercial application.

B. The Directorate for Defense Trade Controls Should Not Have the Discretion to Override the Plain Meaning of "Specially Designed"

In discussing the Proposed Definition, BIS notes that

> the ITAR and the new "600 series" ECCNs should not control items that (a) have predetermined civil applications and performance equivalents to those used for civil applications and (b) do not have significant military or intelligence applicability such that control under the new ITAR (or new "600 series" ECCN) is warranted.[18]

This statement implies that both requirements must be met in order for controls not to be warranted, which in turn implies that if the Directorate for Defense Trade Controls ("DDTC") and/or BIS determines that an item has "significant military or intelligence applicability" it may control that item even if the item clearly falls outside of the definition of "specially defined." If an item falls outside of control as a result of being not "specially designed," then that should be the end of the matter. Neither DDTC nor BIS should have the discretion to impose controls on such an item by denying the actual character of the item simply based on a belief that the item has "significant military or intelligence applicability."

At a minimum such a policy would render the entire classification process opaque and indeterminate — contrary to the express goal of BIS. More importantly, it would significantly undercut the usefulness of a "specially designed" definition, given that such a definition could be overridden at any time based on a finding of "significant military or intelligence applicability." The policy of the U.S. government should be that any item, and any IC in particular, having civil applications and performance equivalents to those used for civil applications or a reasonable expectation of such civil applications and performance equivalents, *i.e.*, in normal commercial use — will be deemed not "specially designed" for munitions items of applications. Any different policy would undercut the usefulness and efficacy of a "specially designed" definition, especially as applied to ICs.

As BIS itself notes in its discussion of paragraph (b) of the Proposed Definition:

> [I]n general, a commodity should not be ITAR controlled if it has predominant civil application or has performance equivalent . . . to articles used for civil applications. If such an article nonetheless warrants control under the ITAR because it provides the U.S. with a critical military or intelligence advantage or for another reason, then it is or should be enumerated on the USML . . . .[19]

[18] Proposed Definition at 36,410.
[19] Proposed Definition at 36,413.

C. The Example for Paragraph (a)(1) Evidences The Applicability of That Paragraph to Components

The example used by BIS to illuminate paragraph (a)(1) of the Proposed Definition contrasts a component having properties that allow a robot to conduct 2D image processing (and therefore is not peculiarly responsible for achieving or exceeding the robot's controlled characteristics) with a component having properties that allow a robot to perform in real time full three-dimensional image processing (and therefore is peculiarly responsible for achieving or exceeding the robot's controlled characteristics).[20] That example conclusively demonstrates that, as is the case for end items, it is quite feasible to differentiate components that are peculiarly responsible for achieving the controlled parameters of an end item from components that are not. Nothing about the example provided differentiates end items (or equipment) from components. That the example could easily apply to a component underscores the appropriateness of including components in paragraph (a)(1) of the Proposed Definition.

The explanation of and justification for paragraph (a)(1) — an item is not "specially designed" unless "someone did something during the item's development so that it would achieve or exceed the performance levels, characteristics, or functions described in a referenced ECCN or USML paragraph"[21] — does and should apply with equal force to components as it does to end items. There is no reason provided, and no compelling reason available, why such should not be the case, especially with respect to ICs.

D. Paragraph (a)(1) and (a)(2) Are Quite Dissimilar in Their Scope and The Sole Justification Offered for Paragraph (a)(2) of the Proposed Definition Is Inadequate to Support The Need for That Paragraph

As an initial matter, BIS claims that paragraph (a)(2) of the Proposed Definition "is similar to (a)(1)."[22] That claim appears to be a gross overstatement. The scope of paragraph (a)(2) is far broader than the scope of paragraph (a)(1). While paragraph (a)(1) captures only items that are "peculiarly responsible" for the performance levels, characteristics or functions listed in the relevant CCL or USML category, paragraph (a)(2) captures all parts and components that are merely necessary for an enumerated item to function as designed. In doing so, paragraph (a)(2) appears to capture virtually all components, as almost all components may be said to be "necessary" for the proper functioning of the end items into which they are incorporated. These provisions do not appear "similar" in their scope.

In addition, BIS maintains that paragraph (a)(2) of the Proposed Definition is necessary "because not all descriptions of commodities on the USML and the CCL include performance levels, characteristics, or functions as a basis for control."[23] That justification is insufficient. Many components covered by the USML and CCL appear in provisions that <u>do</u> contain

[20] Proposed Definition at 36,419.
[21] Proposed Definition at 36,412.
[22] Proposed Definition at 36,412.
[23] Proposed Definition at 36,412.

descriptions with performance levels, characteristics or functions as a basis for control. In those frequent instances, there is no need for paragraph (a)(2) of the Proposed Definition.

It is inappropriate and counterproductive to force an overreaching definition on all components when only a subset of components warrants such treatment. Moreover, and perhaps more importantly, even in those instances where an end item's control criterion does not contain any performance level, characteristic or function, it is usually possible to distinguish what features make the item inherently military or sensitive to national security. Accordingly, even in those instances, it is appropriate to limit the "specially designed" definition to only those components that are peculiarly responsible for the controlled attributes of the end items into which the components are incorporated.

E. The Example Of A "Component" Excluded Under Paragraph (b)(1) and the Discussion of Positively Listed Components Evidences a Fundamental Flaw in The Treatment of Components

In its discussion of the Proposed Definition, BIS provides an example of a component that would be excluded under paragraph (b)(1) of the Proposed Definition.[24] BIS also notes at least twice that a component may be subject to export controls even if it is not "specially designed" for a controlled end item if the component is positively listed on the USML or CCL.[25] Those examples evidence a fundamental discontinuity in the structure of the USML and the CCL. No component should be enumerated on either the USML or the CCL as an end item. Because a component, by definition, is useless unless and until it is incorporated into an end item, all controls on components, with the exception of those components already enumerated as such in Category 3 of the CCL, should be derivative, *i.e.*, determined entirely by the end item(s) into which the component is incorporated. If a component is "specially designed" for a controlled end item, then the component should be controlled; if a component is not "specially designed" for any controlled end item, then the component should not be controlled as an end item itself and should be subject only to controls beyond those applicable to EAR99 items if it already is an enumerated component in Category 3 of the CCL. Any other practice violates the definition and inherent characteristic of components.

Furthermore, it undermines the overriding theory behind the "specially designed" definition to say that a component incorporated into USML and CCL end items should be controlled under the USML — as the BIS example does. Such a component is inherently dual use and hence not "specially designed" for the USML item into which it is incorporated. Controls imposed on such a component should be under the CCL, not the USML. Indeed, if BIS' claim that the Proposed Definition would "consistently apply the "normal commercial use" carve outs"[26] is to be at all credible, it should be the case that a component incorporated into both USML and CCL end items is employed in "normal commercial use" and accordingly should not be "specially designed" for purposes of the USML. "Normal commercial use" should describe

[24] Proposed Definition at 36,413.
[25] Proposed Definition at 36,415.
[26] Proposed Definition at 36,410.

any actual or reasonably expected use in a civil, commercial end item or within a civil, commercial application.

F. BIS' Discussion of General Purpose ICs Evidences The Illogic Underlying Treatment of ICs As End Items

In discussing the Proposed Definition, BIS notes that

> [n]on-application specific general purpose integrated circuits that are not designed for a particular application would not be "specially designed" items, even if they are used in controlled end items. [27]

SIA endorses this clarification and urges BIS to implement it. At the same time, this clarification evidences the illogic underlying USML Category XV(d). USML Category XV(d) captures all ICs that meet certain technical parameters regardless of whether the ICs are ASICs. As SIA has repeatedly pointed out, and evidenced in the BIS discussion quoted above, such a practice of controlling an IC as an end item is misguided, inappropriate and counter-productive.

VII. If A "Catch-And-Release" Methodology Is Retained, Then Modifications Should Be Made To The Current Structure

A. The Definition of "End Item" Should Be Modified

The definition of "end item" put forward by BIS is flawed and needs modification. End items must be able to operate by themselves and perform functions independent of other items. As currently drafted, the definition of "end item" could capture items that squarely fall within the definition of "component." For example, an IC, which clearly meets the definition of a "component," also meets the definition of an "end item," as it is "an assembled commodity ready for its intended use" and requires only energy "to place it in an operating state." Yet an IC cannot perform any meaningful operation by itself; instead, it must be connected to something else.

If wholesale confusion is to be avoided, there should not be any overlap between the definition of an "end item" and the definition of a "component."[28] In order to avoid such a result, BIS should modify its definition of "end item" as follows:

[27] Proposed Definition at 36,410.

[28] Properly defined, a "component" should have three distinguishing characteristics: (1) it is an assembled item; (2) it is used in another item; and (3) it has no functionality or performance capability on a stand-alone basis, but only when incorporated into another item. The definition of "component" put forward by BIS captures the first two distinguishing characteristics, but fails to capture the third distinguishing characteristic. This problem may be resolved by distinguishing "components" from "assemblies," with an "assembly" defined as an item sharing the first two distinguishing characteristics of a "component," but, unlike a "component," having functionality or performance capability on a stand-alone basis.

> *End item*. This is an assembled commodity ready for its intended use, **capable of operating by itself and performing functions independent of any other item**. Only ammunition, fuel or other energy source is required to place it an operating state. Examples of end items include ships, aircraft, **computers,** firearms, and milling machines.

It is noteworthy that BIS itself included the requirement of "stand-alone use" in its original "end item" definition.[29] BIS erred in removing that requirement and should now re-insert it into the "end item" definition as indicated above. This definition should apply with equal force to both the CCL and the USML. Consistent with this definition, the universe of "defense articles" should consist entirely of end items, that is, items that need only an energy source to operate on a stand-alone basis and in accordance with their intended use.

B. If Paragraph (a)(1) of The Proposed Definition is Not Modified, Then Paragraph (a)(2) Should Be Modified to Distinguish Between Parts and Components Used With or In Enumerated End Items With Specified Performance Levels, Characteristics, or Functions and Parts and Components Used in Other End Items

Paragraph (a)(2) of the Proposed Definition should be modified to distinguish between parts and components used with or in enumerated end items with specified performance levels, characteristics, or functions in the relevant ECCN or USML paragraph and parts and components that are used with or in other types of end items. As noted above, the logic supporting the treatment of end items in paragraph (a)(1) applies with equal force to parts and components, and the only compelling reason not to apply the "peculiarly responsible" standard to certain parts and components is that in some unusual instances it may be difficult to do so.

Accordingly, paragraph (a)(2) of the Proposed Definition should be modified as follows:

> (2) **(i) In the case of a part or component for an enumerated end item having stated performance levels, characteristics or functions, is an application-specific part or component having properties peculiarly responsible for achieving or exceeding the performance levels, characteristics, or functions of the enumerated end item**; **or (ii) In the case of a part or component not meeting the requirements of (i),** is **an application-specific** ~~a~~ part or component **required** ~~necessary~~ for an enumerated ~~or referenced commodity~~ **end item on the CCL to function as a national security-controlled end item** ~~or defense article to function as designed~~ **or for an enumerated defense article on the USML to function as a defense article.**[30]

[29] July 2011 Proposal at 41,980.

[30] As discussed above, even for items with no stated performance levels, characteristics or functions, it is surely possible to distinguish what features make the item inherently military or sensitive to national security. Accordingly, an ASIC used in a targeting system in a jet fighter would be "particularly responsible for achieving the control parameters" of the jet fighter, while an ASIC used in a navigation system or for general avionics purposes in the same jet fighter would not be "particularly responsible for achieving the control parameters" of the jet fighter.

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And the following additional Note should be added to the definition:

> **Note to paragraphs (a)(2):** *In the case of integrated circuits, only ASICs are captured by this definition, where "ASIC" means an integrated circuit developed and produced for a specific application or function and for a single customer*.

The replacement of "necessary . . . to function as designed" with "required . . . to function as a national security-controlled end item . . . or as a defense article" in paragraph (a)(2) is needed in order to narrow the scope of that "catch" provision and target it more specifically to parts and components that are tied to the controlled attributes of an end item or defense article. As currently drafted, paragraph (a)(2) may capture virtually all parts and components. Such an all-encompassing "catch" is inappropriate. Instead, only parts and components contributing significantly to the controlled attributes of an end item or defense article should be deemed "specially designed."

C. Paragraph (a)(3) of The Proposed Definition Should Be Narrowed To Capture Only Accessories and Attachments Necessary to the Functioning of an End Item

As currently drafted, paragraph (a)(3) of the Proposed Definition captures all accessories and attachments used with enumerated or referenced end items. Given that the definition of "accessories and attachments" includes all items that enhance the usefulness or effectiveness of an end item,[31] virtually every "accessory" and "attachment" by definition will meet the requirement of paragraph (a)(3) of the Proposed Definition.

It is inappropriate and illogical for BIS to capture all accessories and attachments within the "specially designed" definition. Accordingly and consistent with the recommended treatment of components, BIS should revise paragraph (a)(3) of the Proposed Definition to capture only those accessories and attachments that are peculiarly responsible for the controlled characteristics of the end items with which they are used.

D. Paragraph (b)(1) of the Proposed Definition Should Be Eliminated, Rather Than Imposing a Convoluted Solution to a Self-Created Problem

Paragraph (b)(1) of the Proposed Definition stipulates that a part, component, accessory or attachment will not be "specially designed" if it is enumerated in a USML paragraph. For purposes of the USML, this provision essentially limits the applicability of the "specially designed" definition to parts and components that are within "catch-all" provisions of the USML,

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Similarly, components developed for a Helicopter Crew Safety System (HCSS) should not be considered "peculiarly responsible" for the controlled characteristics of a military helicopter, even if those components are developed to meet certain military specifications and requirements.

[31] Proposed Revisions to the Export Administration Regulations (EAR): Control of Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML), 76 Fed. Reg.41,958, 41,980 (July 15, 2011).

notwithstanding that "specially designed" may be employed with respect to parts and components listed outside of "catch-all" provisions of the USML. Accordingly, this paragraph would render the term "specially designed" meaningless whenever that term applies to parts and components outside of a catch-all provision of the USML.

It is untenable for a term to be devoid of any meaning in certain circumstances, and creating such a scenario is not a solution to any perceived problem of a "definitional loop." The appropriate (and obvious) solution to the perceived "definitional loop" problem is for DDTC to ensure that parts and components appear only in catch-all provisions of the USML.[32] As noted above, parts and components serve no purpose on their own and derive their usefulness only when used in or with end items. Any controls imposed on parts and components should be derivative in nature (*i.e.*, derived entirely from the end items into which the parts and components are incorporated), and, accordingly, parts and components, with the exception of those components already enumerated as such in Category 3 of the CCL, should appear only within catch-all provisions of the USML and the CCL.

If parts and components were removed from non-catch-all provisions of the USML, then there would be no need for paragraph (b)(1) of the Proposed Definition and that paragraph could be eliminated without effect.

E. "Commodity" Should be Replaced With "End Item" in Paragraphs (b)(3) and (b)(4) of the Proposed Definition

The term "commodity" used in paragraphs (b)(3) and (b)(4) of the Proposed Definition is defined by BIS as "any article, material, or supply except technology and software."[33] The term therefore includes parts, components, accessories, attachments and end items. Yet, paragraphs (b)(3) and (b)(4) of the Proposed Definition pertain only to parts, components, accessories and attachments that are used in or with end items. Accordingly, "commodity" should be replaced with "end item" throughout paragraphs (b)(3) and (b)(4).

F. The Phrase "Same Form and Fit" Should Be Eliminated From Paragraph (b)(3) of the Proposed Definition

The exclusion contained in paragraph (b)(3) of the Proposed Definition is limited to parts, components, accessories and attachments with the "same form, fit and performance capabilities" as parts, components, accessories or attachments used in or with an non-enumerated end item. While the requirement that items have the same performance capabilities is well-reasoned and appropriate, the requirement that items have the same form and fit is baseless and inappropriate. Form and fit are inherently superficial and non-substantive characteristics and as such should play no role in the control status of a part, component, accessory or attachment. Two components that have equivalent performance capabilities should be deemed to be substantively

[32] In particular, USML category XV(d) of the USML should be eliminated and all components currently captured by that provision should instead by captured by the catch-all provisions of the USML.
[33] 15 C.F.R. §772.1.

identical and therefore worthy of the same control status, regardless of any differences in form and fit between the two components.

Accordingly, BIS should revise the first section of paragraph (b)(3) of the Proposed Definition as follows:

> (3) Has the same ~~form, fit, and~~ **basic** performance capabilities**, or substantively equivalent performance capabilities,** as a part, component, accessory, or attachment used in or with a**n** **end item** ~~commodity~~ that:

G. "Described" Should Be Replaced with "Enumerated" Within Paragraph (b)(4)

The term "described on the CCL" used in paragraph (b)(4) has no defined meaning. In order to clarify that paragraph and provide the appropriate parallelism, "described on the CCL" should be replaced with "enumerated on the CCL."

There are two possibilities if such a revision is made: (1) the meaning of the paragraph remains the same, but is clarified, or (2) the meaning of the paragraph changes. If (1) is the case, then there is every reason to make the change. If (2) is the case, then BIS must intend that the set of items "described on the CCL" is different from (and presumably broader than) the set of items "enumerated on the CCL." However, if that is the case, then it would be possible for "commodities not enumerated on the CCL" to also be "commodities described on the CCL," and, accordingly, the word "and" in paragraph (b)(4)(i) would be rendered superfluous and moot — at least in certain circumstances. Thus, under any circumstance, BIS should replace "described" with "enumerated" in paragraph (b)(4).

H. The Term "Particular Application" in Paragraph (b)(5) of the Proposed Definition Is Ambiguous and Should Be Modified with "Of A Particular End Item"

Paragraph (b)(5) of the Proposed Definition excluded from the definition of "specially designed" those parts, components, accessories or attachments that were or are being developed with no reasonable expectation of use for a "particular application." SIA endorses this exclusion and expects that it means that, in the case of ICs, only certain ASICs may be "specially designed." However, it is not entirely clear that such will in fact be the meaning of this exclusion, as the term "application" can be subject to wide-ranging interpretations.

If "application" is interpreted very broadly and given a meaning that would encompass, for example, an activity as broad as computing, communications, data processing, signal processing or data conversion, then very few items would ever be excluded from the "specially designed" definition under paragraph (b)(5) — rendering the paragraph largely, if not entirely, irrelevant. Instead, this paragraph should be given particular scope and meaning by ascribing a relatively narrow definition to "application."

This may be achieved by an appropriate regulatory history and by making the following modification to paragraph (b)(5):

> (5) Was or is being developed with no reasonable expectation of use **only** for a **customized or specific** ~~particular~~ application **and in a particular end item.**

This modification would tie "application" to a specific end item and so would narrow the scope of that term, thereby infusing the exclusion provided by this paragraph with meaning and usefulness.

In addition, the following example of a component excluded under paragraph (b)(5) provided by BIS should be included in the regulations in a Note to paragraph (b)(5):

> **Note to paragraph (b)(5):** A component that would not be "specially designed" as a result of paragraph (b)(5) is one that was developed for general or multi-purpose or non-customized applications. For example, many catalog electronic components are designed as basic building blocks for other equipment, regardless of whether the equipment is military or civilian, controlled or uncontrolled. At the same time, a component would not be "specially designed" if it is developed for a particular class or category of end items that have general or multi-purposes applications (e.g., general purpose computers or communications equipment). In contrast, a component that would not be excluded from the "specially designed" definition under paragraph (b)(5) would be one that is customized and/or specifically adapted for a particular use in a specific end item.

Inclusion of this new note in the regulations will clarify the intended scope of the exclusion contained in paragraph (b)(5).

VIII. Conclusion

SIA urges BIS to simplify and clarify the "specially designed" definition such that the definition captures the natural meaning of that term in a positive fashion without any need for overreaching and exclusions or exceptions. SIA also maintains that it is both logical and feasible to tie the control of a "specially designed" component to the related end item, but only to the extent that the "specially designed" component is peculiarly responsible for the controlled parameters or the controlled character as a whole of the end item.

If BIS for whatever reason chooses not to implement SIA's recommendations for all components, then, at a minimum, BIS should implement targeted modifications or additions to the Proposed Definition (*e.g.*, through a targeted Note to the definition) such that SIA's recommendations are implemented with respect to ICs.

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SIA appreciates the opportunity to comment on the proposed "specially designed" definition and looks forward to continuing its cooperation with the U.S. Government on this subject. Please feel free to contact the undersigned or SIA's counsel, Clark McFadden of Orrick, Herrington & Sutcliffe LLP, if you have questions regarding these comments.

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