

IPC-1755-WAM1 **with Amendment 1** **2015 - March**

Conflict Minerals Data Exchange Standard

Supersedes IPC-1755
March 2014

A standard developed by IPC

Association Connecting Electronics Industries



JEITA

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Conflict Minerals Data Exchange Standard



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Developed by the Conflict Minerals Data Exchange Task Group (2-18h) of the Supplier Declaration Subcommittee (2-18) of IPC in partnership with the following associations:

AIAG – Automotive Industry Action Group

CFSI – Conflict Free Sourcing Initiative

JEITA – Japan Electronics and Information Technology Industries Association

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Users of this publication are encouraged to participate in the development of future revisions.

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Conflict Minerals Data Exchange Standard

1 SCOPE

This standard establishes the requirements for exchanging conflict minerals data between suppliers and their customers. To meet the needs of a broad range of users, this standard provides flexibility in the scope of the products covered within a single declaration.

This standard applies to business-to-business transactions. It is not intended to be used by the general public when making purchasing decisions. This standard is not a compliance guide.

1.1 Purpose This standard is intended to benefit suppliers and their customers by providing consistency and efficiency to the conflict minerals due diligence data exchange declaration process. It establishes standard electronic data exchange formats that will facilitate and improve data transfer along the entire global supply chain.

2 APPLICABLE DOCUMENTS

The following documents can be used as references to the extent specified herein. The revision of the document in effect at the time of solicitation **shall** take precedence.

2.1 IPC¹

IPC-T-50 Terms and Definitions for Interconnecting and Packaging Electronic Circuits

2.2 Informative References The following references are related to the standard but are not required for usage of the standard.

2.2.1 Dodd-Frank Wall Street Reform and Consumer Protection Act (Section 1502)² Section 1502 of the Dodd-Frank Act requires that all companies who file reports with the SEC disclose their use of conflict minerals.

The U.S. Securities and Exchange Commission (SEC) is the agency responsible for developing and enforcing conflict minerals reporting rules under Section 1502³. The SEC rules implementing Section 1502 are found in 17 CFR part 240 and 249b.

Note: Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act will be referred to in this standard as Section 1502. The SEC rules implementing Section 1502 will be referred to in this standard as the SEC rules.

2.2.2 Conflict Free Smelter Program (CFSP) Compliant Smelter List The Conflict Free Smelter Program (CFSP) Compliant Smelter List is a published list of smelters and refiners which have undergone assessment through the CFSP, a program of the Conflict-Free Sourcing Initiative (CFSI) or industry equivalent program (such as Responsible Jewelry Council or London Bullion Market Association) and have been validated to be in conformance. If a smelter or refiner is not on the list, it has either not completed a CFSP assessment or is not in compliance with the CFSP protocol.

A list of smelters and refiners which have been validated to be compliant to the CFSP can be found at www.conflictreesourcing.org.

2.2.3 Organisation for Economic Co-Operation and Development Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas The mission of the Organisation for Economic Co-operation and Development (OECD) is to promote policies that will improve the economic and social well-being of people around the world.

The OECD has authored the “OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas⁴.” As per Section 1502 of the Dodd-Frank Act, any person described must conduct a due diligence assessment in accordance to a nationally or internationally recognized framework.

1. <http://www.ipc.org/ContentPage.aspx?Pageid=Standards>

2. <http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf>

3. <http://www.sec.gov/news/press/2012/2012-163.htm>

4. <http://www.oecd.org/investment/guidelinesformultinationalenterprises/46740847.pdf>

3 REQUIREMENTS

The following requirements are applicable to all of the Conflict Minerals Data Exchange Standard processes.

3.1 Terms and Definitions All terms are in accordance with IPC-T-50 and certain terms have been listed below to assist in interpretation of this standard. Additional terms defined by this standard are included below. (See Appendix E for further information regarding the requirements for Section 1502.)

3.1.1 3TG 3TG are the metals derived from conflict minerals as identified in Appendix C.

3.1.2 Conflict Minerals Conflict minerals covered by Section 1502 are columbite-tantalite (coltan), cassiterite, gold, wolframite, and their derivatives.

The SEC rules define and limit the covered derivatives of columbite-tantalite (coltan), cassiterite, and wolframite to tantalum, tin, and tungsten, respectively.

The U.S. Secretary of State can, at any time, add other minerals to this list if the minerals are determined to be financing conflict in the DRC or an adjoining country.

3.1.3 Covered Countries The SEC rules define covered countries to include: Democratic Republic of the Congo (DRC), Angola, Burundi, Central African Republic, the Republic of the Congo, Rwanda, South Sudan, Tanzania, Uganda, and Zambia. See Appendix B for the list of covered countries.

3.1.4 Division A division is a defined unit of business which performs a specific service or produces a specific category of products.

3.1.5 DRC Conflict Free Products that do not contain conflict minerals that directly or indirectly finance or benefit armed groups in the DRC or an adjoining country.⁵

3.1.6 Person Described A person described is a person who is required to file reports to the SEC and for whom conflict minerals are necessary to the functionality or production of a manufactured product⁶.

3.1.7 Product Any substance, material, sub-part, part, sub-assembly, or assembly up to a completed original manufacturer's assembly that is the subject of a declaration.

3.1.8 Recycled or Scrap Sources Recycled or scrap sources are recycled metals, that are reclaimed end-user or post-consumer products, or scrap processed metals created during product manufacturing. Recycled metal includes excess, obsolete, defective, and scrap metal materials that contain refined or processed metals that are appropriate to recycle in the production of tin, tantalum, tungsten and/or gold. Minerals partially processed, unprocessed or byproducts from other ores are not included in the definition of recycled metal.

3.1.9 Requester The party initiating the IPC-1755 communication when using the request/response communication mode. The requester is the recipient of the supplier's response.

3.1.10 Smelter A smelter or refiner company is a company that procures and processes mineral ore, slag and/or materials from recycled or scrap sources into refined metal or metal containing intermediate products. The output can be pure (99.5% or greater) metals, powders, ingots, bars, grains, oxides or salts. The terms "smelter" and "refiner" are used interchangeably throughout various publications. For clarification purposes, within this standard they will be referred to as a "smelter."

3.2 Changes in Requirements A number of external factors may drive the need for updates to this standard including: changing or new legal requirements, or advances or improvements in industry due diligence practices through experience gained in implementing conflict minerals due diligence.

5. 2010 United States legislation, Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502
<http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf>

6. 2010 United States legislation, Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502
<http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf>

4 DESCRIPTION OF THE DECLARATION CLASSES

The Conflict Minerals Data Exchange standard is supported by an XML schema.

This standard supports three classes of conflict minerals disclosure: company, product or list of products, and user-defined (as defined in 4.1 through 4.3). This standard provides the user with the ability to respond to queries (see Section 6 Query List) at the company, product or list of products, or user-defined class. Indication of declaration class is *mandatory*.

4.1 Company Class A company level disclosure **shall** include responses to the query list (see Section 6 Query List) for all the products manufactured by the company completing the declaration. Customers wishing to receive information only on the products supplied to them should request reporting via the user-defined class. As discussed in 5.2, this standard is based on the concept of products regardless of what declaration class is used. Therefore, if the user is reporting conflict minerals data at the company level, they will be reporting conflict minerals data on all products they manufacture.

4.2 Product (or List of Products) Class A product or list of products disclosure **shall** include one set of responses to the query list for those product(s) specified by the company.

Product is defined in 3.1.7. The description of the product or list of products **shall** be identified using the Product Identification fields in 5.2.

4.3 User-Defined Class The user-defined class allows a user to describe the scope to which the conflict minerals disclosure is applicable. The scope of this class **shall** be defined in a text field as agreed to by the supplier and requestor. This disclosure may apply to a company's specific division or category of products. A category of products is a group of products that can be described by an industry recognized generic term (ex. capacitors). When using this class, the user **shall** provide responses to the query list for each 3TG (as defined in Appendix C) used in the products of the specified user-defined class.

5 DATA REQUIREMENTS FOR A CONFLICT MINERALS DECLARATION

This section provides the principles and details necessary for declarations between members of a supply chain. This section also contains generic information regarding trading partners. The data requirements for the declaration process management concepts consist of two modes of data exchange. The first mode is that of "Request/Reply" where a user wishes to obtain information about a product. The second mode is that of "Distribute" where a supplier wishes to make product information available to customers.

This standard is published outside of the IPC-175x series of data exchange standards. All fields relevant to conflict minerals data exchange are discussed in this standard. Other fields included in IPC-1751A that are not relevant to conflict minerals data exchange are included in Appendix F. In order to facilitate a seamless integration of this standard to the 175x series of data exchange standards, the plan for integration is explained in Appendix G.

5.1 Requester Information This information describes the company and person who are requesting a declaration. This information is only relevant when a request/response mode is being followed. This section contains several data fields that identify the company and the individual requesting a particular declaration.

Each field is described in the following sections.

5.1.1 Company Information

5.1.1.1 Company Name This field identifies the legal name of the company requesting the declaration document. This field is *mandatory*.

5.1.1.2 Company Unique ID This field is used by industry to uniquely identify the requester company. For example, in the U.S. a Dun & Bradstreet Data Universal Numbering System (DUNS) number is a commonly used unique identification (ID). This field is *optional*.

5.1.1.2.1 Unique Identity This field identifies the name or known designation of the requester company. This field is *optional*.

5.1.1.2.2 Unique ID Authority This field identifies the organization that assigns the unique ID. In the example above, Dun & Bradstreet would be the authority assigning the unique ID. This field is *optional*.

5.1.2 Request Information

5.1.2.1 Request Date This field identifies the date when a user requests a declaration document. All date fields use the XML date format. This field is *mandatory*.

5.1.2.2 Request Document ID This field identifies the request to help the user and supplier reference the communication. A revision method should be established to identify different configurations of the same request. The methodology may be simply a single letter or date that establishes the appropriate linkage. This field is *optional*.

5.1.2.3 Comment This field provides additional information to the supplier regarding the request. This field is *optional* (see 5.1.4.1).

5.1.2.4 Respond By Date This field identifies the date when the supplier is expected to respond to the request for information. This field is *optional*.

5.1.2.5 Internal Supplier ID This field identifies a company's internal designator for a supplier. It might be a name or a supplier identification code. This field is *optional*.

5.1.3 Contact Information

5.1.3.1 Contact Name This field identifies the name of the person to contact with questions about the request for declaration. This field is *mandatory*.

5.1.3.2 Contact Title This field identifies the title of the contact person. This field is *optional*.

5.1.3.3 Comment This field provides additional information to the supplier regarding the requester contact information. This field is *optional* (see 5.1.4.1).

5.1.3.4 Contact Phone This field identifies the telephone number for the contact person. This field consists of two attributes: the first is the phone number and the second is the phone type, e.g., business, personal, mobile, etc. There may be multiple phone listings for the requester contact. This field is *mandatory*.

5.1.3.5 Contact Email This field identifies the email address for the contact person. This field consists of two attributes: the first is the email address and the second is the email type e.g., general office, personal, department etc. There may be multiple email listings for the requester contact. This field is *mandatory*.

5.1.3.6 Additional Contact Information - Address The requester may provide a physical address as part of the requester contact information. These fields are *optional*.

5.1.3.6.1 Internal Any internal routing information necessary.

5.1.3.6.2 Street The street number and name.

5.1.3.6.3 City The name of the city.

5.1.3.6.4 State The name of the state or province.

5.1.3.6.5 Country The name of the country.

5.1.3.6.6 Zip Code The postal code.

5.1.3.6.7 Comment Additional comments related to the contact or contact information.

5.1.4 Other Descriptions

5.1.4.1 Requester Comments or URL for Additional Information This field provides additional information to the supplier, such as definitions of the authorized representative field in the supplier information section, submission instructions, additional contact information, or other information. These can be provided either directly or by a URL address which shows where the additional information can be obtained. If a URL is provided, it should be of the form **http://xxx.xxx.xxx**. This field is *optional*.

5.1.4.2 Business Information – Attachment Many attachments may accompany the request for information that is exchanged between the user and the supplier. This field is *optional*; however, when initiated, several attributes are *mandatory*. The first of these is the name of the attachment since multiple attachments may be attached and the comments provided should reference the appropriate one. The second is the file type which defines the method that may be used to read the data. The third is the data file itself.

5.2 Product Information The IPC-175x series of standards are based on declarations for products (as defined in 3.1.7) manufactured by a company. Declarations can be made for a single product or a group of products including all the products manufactured by a company.

The product object is an identification of a product or group of products to which information is associated using the IPC-1755 schema. The declaration **shall** contain one or more product objects or group of product objects. Each product object may represent one or more products as defined in the product ID fields. The product object contains the identifying information which the requester selects if in Request/Response mode, or which the supplier chooses if in the Distribute mode.

The product object may contain a single product number, multiple product numbers, or a single product number representing an entire family of products. The requester and supplier are advised to clarify the correspondence between requester product identification and supplier product identification to ensure that supplier information associates correctly with requester product numbers.

Sections 5.2.1 through 5.2.10 provide information identifying each product object of interest.

5.2.1 Requester Product Number This field identifies the requester's number for each product included in the product object. This field is only applicable in the request/response mode. The requester is cautioned to include only those product numbers for which requested information will be identical. A new product object may be defined for other products or product families for which a different response is anticipated. The first product number listed in the product object definition is the primary one for database structuring purposes as necessary in specific implementations of the required schema. See Table 5-1 for reporting obligations based on declaration class.

5.2.2 Requester Product Name This field identifies the name of each product in the requester's system corresponding to each product number. This field is only applicable in the request/response mode. See Table 5-1 for reporting obligations based on declaration class.

5.2.3 Manufacturer's Product Number This field identifies the number for each product in the supplier's (manufacturer's) system as perceived by the requester. See Table 5-1 for reporting obligations based on declaration class. In the Distribute mode the supplier would provide the Manufacturer's Product Number.

5.2.4 Manufacturer's Product Name This field identifies the name for each product in the supplier's (manufacturer's) system as perceived by the requester. See Table 5-1 for reporting obligations based on declaration class. In the Distribute mode the supplier would provide this entry for each product number.

5.2.5 Manufacturer's Product Version This field identifies the version of the product in the supplier's (manufacturer's) system as perceived by the requester. See Table 5-1 for reporting obligations based on declaration class. In the Distribute mode the supplier would provide this entry for each product number.

5.2.6 Manufacturing Site This field identifies the site at which the product is manufactured as perceived by the requester. See Table 5-1 for reporting obligations based on declaration class. In the Distribute mode the supplier would provide this entry for each product number.

5.2.7 Effective Date This field provides the date upon which the information provided in an IPC-1755 declaration becomes effective. See Table 5-1 for reporting obligations based on declaration class. If not provided, the effective date for all information provided is assumed to be the date of the response.

5.2.8 Effective End Date This field provides the date after which the information provided in an IPC-1755 declaration is no longer effective. See Table 5-1 for reporting obligations based on declaration class.

5.2.9 Instance ID The Instance ID field is provided to allow either the requester or the supplier the means to further specify each product to which the declared information applies. That is, a requester may want to provide specific serial numbers of the products for which he is requesting a declaration, or a supplier may want to provide a SKU number, a lot code, a date code, an RFID number, etc. These would be entered in the Instance ID field. Instance IDs are associated with one particular product number only. The Instance ID field comes with a secondary field that is an optional open field to use in one-to-one correspondence with each Instance ID. There may be one or more Instance IDs associated with each product in a declaration. See Table 5-1 for reporting obligations based on declaration class.

5.2.10 Instance ID Authority The Instance ID authority is the entity that issued the Instance ID. It becomes *mandatory* only if there is an Instance ID. The authority may be defined as the supplier in the absence of any other assigning authority.

Table 5-1 Applicability of Product Information Data Fields to Appropriate Declaration Class

Data Field	Data Exchange Mode		Declaration Class		
	Request/Reply Mode	Distribute Mode	Company	Product or Group of Products	User-Defined
Requestor Product Number	✓	NA	N/A	Mandatory	Optional
Requester Product Name	✓	NA	N/A	Optional	Optional
Manufacturer's Product Number	✓	✓	N/A	Mandatory	Optional
Manufacturer's Product Name	✓	✓	N/A	Optional	Mandatory
Manufacturer's Product Version	✓	✓	N/A	Optional	Optional
Manufacturing Site	✓	✓	Optional	Optional	Optional
Effective Date	✓	✓	Mandatory	Mandatory	Mandatory
Effective End Date	✓	✓	Optional	Optional	Optional
Instance ID	✓	✓	N/A	Optional	Optional
Instance ID Authority	✓	✓	N/A	Optional	Optional

5.3 Supplier Information This information concerns the company and persons who are supplying a declaration document. Each field is described in more detail below.

5.3.1 Company Information

5.3.1.1 Company Name This field contains the legal name of the company supplying the declaration document. This field is *mandatory*.

5.3.1.2 Company Unique ID This field is used to uniquely identify the supplier. The DUNS number is an example of a unique ID. This field is *optional*.

5.3.1.3 Company Unique ID Authority This field identifies the organization that assigns the unique ID. This field is *mandatory* if a Company Unique ID is provided.

5.3.2 Response Status

5.3.2.1 Response Date This field identifies the date of the supplier's response to the request for information. If the Distribute mode is being used, this is the date when the data provided in the declaration is completed. This field is *optional*.

5.3.2.2 Response Document ID This field identifies the response in order to help the user and supplier reference communication. Establishing a revision method is recommended to identify different configurations of the same response. The

methodology is as established by the supplier or the trading partners and may simply consist of a single letter or date code that establishes the appropriate linkage. This field is *optional*.

5.3.3 Contact Information

5.3.3.1 Contact Name This field identifies the name of the person to contact regarding the contents of the declaration information. This field is *mandatory*.

5.3.3.2 Title - Contact This field identifies the title of the contact. This field is *optional*.

5.3.3.3 Phone - Contact This field identifies the telephone number for the contact. This field is *mandatory*.

5.3.3.4 Email - Contact This field identifies the email address for the contact. If an email address is not available, state “not available” or “n/a.” A blank field may cause an error in form implementation. This field is *mandatory*.

5.3.4 Other Descriptions

5.3.4.1 Authorizer This field identifies the person responsible for the content of the declaration. The authorizer may be a different individual than the contact person. It is not correct to use the words “same” or similar identification to provide the name of the authorizer. This field is *mandatory*.

5.3.4.2 Title - Authorizer This field identifies the title of the authorizer. This field is *optional*.

5.3.4.3 Phone - Authorizer This field identifies the phone number of the authorizer. This field is *mandatory*.

5.3.4.4 Email - Authorizer This field identifies the email address of the authorizer. If an email address is not available, state “not available” or “n/a.” A blank field may cause an error in form implementation. This field is *mandatory*.

5.3.4.5 Supplier Comments or URL for Additional Information This field contains additional information that may be provided which may include a URL pointing to more information. This field is *optional*.

5.4 Declaration Specifics In some instances the declaration requires substantiation of the details provided. Although the fields are *optional*, they become *mandatory* when the requester requires verification of a commitment by the responding authority. In that instance, 5.4.1 through 5.4.3 apply.

5.4.1 Commitment to the Data Provided in a Completed Declaration Versions of the declaration forms may have been created to allow requesters to specify that the provided information requires substantiation and/or to specify that the information is true and correct to the best of the knowledge and belief of the supplier at the time the form was completed.

At the discretion of the company requesting the declaration (requester), the declaration may require substantiation of the details provided. In this situation, the supplier **shall** complete all the required fields in the document and designate an authorized representative of the company to sign the document to verify the commitment by the responding authority. Any disagreement regarding the statement terminology **shall** be mutually resolved between the two trading partners.

5.4.2 Legal Statement For declarations which are published by the supplier, the supplier may provide a legal declaration which explains the extent to which the user may rely on the information provided in the declaration and which may limit liability. Requesters asking for data from a supplier may provide a similar legal statement which can be accepted or not accepted by the supplier.

5.4.2.1 Standard The standard legal statement follows:

“Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those

certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form."

5.4.2.2 Custom A custom legal statement may be used if the standard statement cannot be used. In the request/response mode, the requester will input the custom legal statement. In the Distribute mode, suppliers may input a custom legal statement as well.

5.4.3 Supplier Signature By signing and submitting a declaration, either digitally or in hard copy, the authorizer representative signing the declaration is indicating acceptance of the legal statement as it applies to all of the data provided in the declaration. If signing and submitting a declaration, an XML file **shall** be signed with an XML signature conforming to the XML-Signature Syntax and Processing as defined in the W3C Recommendation (12 February 2002). This field is *optional*.

5.5 Attachments The supplier may attach any substantiating data files to the declaration that explain or characterize the position of the declaration descriptions. Attachments are *optional*.

Documents may be embedded in the declaration XML file by using the attachment element in EBusinessInfo (in which case the total size of the XML file **shall** be limited to 10 MB) or they may be provided separately to the declaration XML file, in which case the location of the documents may optionally be specified by using the attachment element in EBusinessInfo. Example is a Zip file supplied with the XML which includes a folder called "Supporting_Information" which includes the document "Report_ABC1.pdf" and then the XML file could optionally include fileZipLocation = "Supporting_Information/Report_ABC1.pdf."

If the attachment element is used then the Attachment Name **shall** include the file extension.

6 QUERY LIST

This section provides the details of a conflict minerals declaration. 3TG are defined in 3.1.2. The Query list can be applied at the product or group of products level, company level, or a user-defined level. The requestor and supplier **shall** decide the type of declaration.

The first group of queries, discussed below in 6.1, is designed to collect information about the use of 3TG in the company's product(s) to allow for the determination of regulatory applicability.

The second group of queries, discussed below in 6.2, collects information about a company's due diligence program and **shall** be answered at the company level.

6.1 3TG Reporting The responses to the queries in this section can be used to determine applicability and completeness of 3TG reporting.

6.1.1 Use of 3TG The queries in this section must be completed for all 3TG. If the response for a given metal to 6.1.1.1 and/or 6.1.1.2 is positive, then the queries in 6.1.2 **shall** be completed for that metal and the queries in 6.2 **shall** be completed about the company's overall due diligence program.

Note: There is an ongoing industry discussion regarding whether or not the metals derived from conflict minerals include any usage of the elemental metal, as in alloys and compounds including ceramics, polymers, etc. The committee will monitor this discussion and recommend modifications further clarifying this point when an industry consensus opinion is reached.

6.1.1.1 Is the 3TG intentionally added to your product? This is the first of two queries for which the response is used to determine whether the 3TG is within the scope of conflict minerals reporting requirements. This query relies upon the guidance provided by the SEC in the final rules regarding the determination if a 3TG is "necessary to the functionality" of a product. The SEC guidance is based upon the presumption that a company in the supply chain for a product would not intentionally add a 3TG to that product or any of a product's sub-components if that 3TG was not necessary to the product's generally expected function, use, or purpose. This response to this query serves to exclude any trace-level contaminants such as tin in steel. This question **shall** be answered for each 3TG. Valid responses to this question are either *yes* or *no*. This question is *mandatory*.

6.1.1.2 Is the 3TG necessary to the production of your company's products and contained in the finished product that your company manufactures or contracts to manufacture? This is the second of two queries for which the response is used to determine whether the 3TG is within the scope of conflict minerals reporting requirements as described in the SEC's final rules regarding the determination if a 3TG is "necessary to the production" of a product. This query is separate and independent from the query and response to 6.1.1.1. This query is intended to identify 3TGs which are intentionally used in the manufacturing process of a product and where some amount of the 3TG remains in the finished product. The 3TGs likely were not intended to become part of the final product nor are they likely "necessary to the functionality" of the product but are only present as residuals of the manufacturing process. In many cases, the manufacturer may have attempted to remove or facilitate consumption of the 3TG during the manufacturing process, however, some amount of the 3TG remains. Should the 3TG, which is used during the manufacturing process, be completely removed during that process, the response to this query would be "no." This question **shall** be answered for each 3TG. Valid responses to this question are either *yes* or *no*. This question is *mandatory*.

6.1.2 3TG Sources The queries in this section **shall** be completed for any metals for which the responses to 6.1.1.1 and/or 6.1.1.2, were positive.

6.1.2.1 Do any of the smelters in your supply chain source the 3TG from the covered countries? This is a declaration that any portion of the 3TGs contained in a product or multiple products originates from the DRC or an adjoining country (covered countries). The answer to this query **shall** be *yes*, *no*, or *unknown*. This question is *mandatory*. The covered countries are listed in Appendix B.

6.1.2.2 Does 100 percent of the 3TG (necessary to the functionality or production of your products) originate from recycled or scrap sources? This is a declaration that identifies whether 3TGs contained in the product(s) necessary to the functionality of that product(s) originate from recycled or scrap sources. The answer to this query **shall** be *yes*, *no*, or *unknown*. This question is *mandatory*.

6.1.2.3 Have you received data/information for each 3TG from all relevant suppliers? This is a declaration to determine whether a company has received conflict minerals disclosures from all direct suppliers reasonably believed to be providing 3TGs contained in the products covered by the scope of this declaration. This question is *mandatory*. Permissible responses to this query are:

- Yes, 100%
- No, but greater than 75%
- No, but greater than 50%
- No, but greater than 25%
- No, but less than 25%
- None

6.1.2.4 Have you identified all of the smelters supplying the 3TG to your supply chain? This query verifies if the supplier has reason to believe they have identified all of the smelters providing 3TGs in the products covered by this declaration. The answer to this query **shall** be *yes* or *no* along with a comment in certain cases, e.g., list of smelters. This question is *mandatory*.

6.1.2.5 Has all applicable smelter information received by your company been reported in this declaration? This query verifies that all of the smelters identified to be providing any of the 3TGs contained in the products covered by the scope of this declaration have been reported in this declaration. The answer to this query **shall** be *yes* or *no* along with a comment in certain cases, e.g., list of smelters. This question is *mandatory*.

6.2 Due Diligence This section is intended to gather data on a company's due diligence program. The responses to queries in this section **shall** be answered on a company basis. Responses to the queries in this section are answered regardless of which declaration class is used to answer queries in 6.1.1 through 6.1.2.

6.2.1 Do you have a policy in place that addresses conflict minerals sourcing? This is a declaration to disclose whether a company has a conflict minerals sourcing policy. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.2.2 Is your conflict minerals sourcing policy publicly available on your website? This is a declaration to disclose whether a company's conflict minerals sourcing policy is available on the company website. The answer to this query **shall** be *yes* or *no*. If yes, the user **shall** specify the URL in a query comment field. This question is *mandatory*.

6.2.3 Do you require your direct suppliers to be DRC Conflict Free? This is a declaration to determine whether a company requires their direct suppliers to be DRC conflict free. The answer to this query **shall** be *yes* or *no* along with a comment in certain cases. This question is *mandatory*.

6.2.4 Do you require your direct suppliers to source the 3TG from smelters whose due diligence practices have been validated by an independent third party audit program? This is a declaration to determine whether a company requires their direct suppliers to source conflict minerals from validated, conflict free smelters. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.2.5 Have you implemented due diligence measures for conflict free sourcing? This is a declaration to disclose whether a company has implemented conflict minerals sourcing due diligence measures. This declaration is not intended to provide the details of a company's due diligence measures. The aspects of acceptable due diligence measures **shall** be determined by the requestor and supplier. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.2.6 Do you collect conflict minerals due diligence information from your suppliers which is in conformance with the IPC-1755 Conflict Minerals Data Exchange standard? This is a declaration to disclose whether a company requests their supplier to fill out a conflict minerals declaration. The answer to this query **shall** be *yes* or *no* along with a comment in certain cases, i.e., to provide the format used for collecting information. This question is *mandatory*.

6.2.7 Do you request smelter names from your suppliers? This is a declaration to disclose whether a company requests their supplier to provide a list of smelter names used. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.2.8 Do you review due diligence information received from your suppliers against your company's expectations? This is a declaration to disclose whether a company reviews their suppliers' due diligence information against their expectations. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.2.9 Does your review process include corrective action management? This is a declaration to disclose whether a company's review process includes corrective action management. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.2.10 Are you subject to the SEC Conflict Minerals rule? This is a declaration to disclose whether a company is subject to the SEC rule. The answer to this query **shall** be *yes* or *no*. This question is *mandatory*.

6.3 Smelter Identification List This section allows for the identification of smelters. There are ten (10) smelter identification declaration statements, as described in 6.3.1 through 6.3.10 below. The following questions **shall** be answered for each conflict mineral.

6.3.1 Smelter Name Provide the name of the smelter for the conflict mineral. If the mineral is not present in the product then this query is not relevant for that mineral. This field is *mandatory*.

6.3.2 Smelter Country Provide the country where the smelter for the conflict mineral is located. If the mineral is not present in the product then this query is not relevant for that mineral. This field is *mandatory*.

6.3.3 Smelter Contact Information Smelter contact information is described in 6.3.3.1 through 6.3.3.6.

6.3.3.1 Smelter Contact Name Provide the name of the contact person or role at the smelter. This field is *optional*.

6.3.3.2 Smelter Contact Email Provide the email of the contact person or role at the smelter. This field is *optional*.

6.3.3.3 Smelter Contact Street Provide the street name on which the smelter is located. This field is *optional*.

6.3.3.4 Smelter Contact City Provide the city name of where the smelter is located. This field is *optional*.

6.3.3.5 Smelter Contact State/Province Provide the state or province where the smelter is located. This field is *optional*.

6.3.3.6 Smelter Contact Postal Code Provide the postal code or zip code where the smelter is located. This field is *optional*.

6.3.4 Smelter Identification A unique identifier assigned to a single smelter or refiner location according to an established smelter and refinery identification system. It is expected that multiple names or aliases could be used to describe a single smelter or refiner location and therefore multiple names or aliases could be associated to a single “Smelter ID.” This field is *optional*.

6.3.5 Source of Smelter Identification Number The name of the smelter and refinery identification system for which the specified “Smelter ID” is in accordance. This field is *optional*.

6.3.6 Does 100% of the smelter’s feedstock originate from recycled or scrap sources? Indicates whether the smelter solely obtains inputs for its smelting process(es) from recycled or scrap sources. The answer to this query can be *yes* or *no*. This field is *optional*.

6.3.7 Proposed Next Steps This is a comments area, which allows the company to specify the next steps to manage smelters. This field is *optional*.

6.3.8 Name of Mines This field allows a company to define the actual mines being used by the smelter. This field is *optional*.

6.3.9 Location (country) of Mine(s) This is a free field that allows a company to define the location of the mines being used by the smelter. This field is *optional*.

6.3.10 Comments This is a free text field for the user to enter additional information. This field is *optional*.

APPENDIX A Field Mapping and Descriptions

Table A-1 IPC-1755 Data Fields Name Mapping to Descriptive Sections in the Standard

Parent Element	E/A*	Element or Attribute Name	Element Type	Section	M/O**	Comments
MainDeclaration		MainDeclaration	MainDeclaration			
MainDeclaration	E	BusinessInfo	BusinessInfo	5.1		
MainDeclaration	E	Product	Product	5.2		
MainDeclaration	E	Organization	Organization			
MainDeclaration	E	ds:Signature	ds:Signature	5.4.3		
MainDeclaration	A	Version	string		M	Must be 1.0
BusinessInfo	E	Response	Response	5.1.2.4	O	
BusinessInfo	E	Request	Request		O	
BusinessInfo	E	Declaration	Declaration		O	
BusinessInfo	E	EbusinessInfo	EbusinessInfo	5.1.4.2	O	
BusinessInfo	A	Mode	string		M	
Response	E	Authorizer	Contact	5.3.4.1	M	
Response	E	SupplyCompany	Company	5.3.1.1	M	
Response	E	Contact	Contact	5.3.3	M	
Response	A	Date	Date		M	
Response	A	docID	string	5.3.2.2	O	
Response	A	Comment	string	5.1.2.3	O	
Request	E	Contact	Contact	5.1.3	M	
Request	E	RequestContact	Company	5.1.1.1	M	
Request	A	Date	Date	5.1.2.1	M	
Request	A	docID	string	5.1.2.2	O	
Request	A	Comment	string	5.1.2.3	O	
Request	A	respondByDate	string	5.1.2.4	O	
Request	A	internalSupplierID	string	5.1.2.5	O	
Request	A	Comment	string	5.1.2.3	O	
Declaration	A	LegalType	string	N/A	M	
Declaration	A	supplierAcceptance	Boolean	N/A	M	
Declaration	A	legalDef	string	N/A	M	
EbusinessInfo	E	Attachment	Attachment	5.5	O	
Product	E	ProductID	ProductID		M	
Product	E	ConflictMineralProductInfo	ConflictMineralProductInfo		M	

Parent Element	E/A*	Element or Attribute Name	Element Type	Section	M/O**	Comments
Product	A	Comment	string		O	
ProductID	E	InstanceID	UniqueID	5.2.9	O	
ProductID	A	ProductDeclarationClass	string	4	M	
ProductID	A	itemName	string	5.2.2	O	
ProductID	A	itemNumber	string	5.2.1	O	
ProductID	A	manufacturingSite	string	5.2.6	O	
ProductID	A	effectiveDate	Date	5.2.7	O	
ProductID	A	effectiveEndDate	Date	5.2.8	O	
ProductID	A	Version	String		O	
ProductID	A	requesterItemName	string	5.2.4	O	
ProductID	A	requesterItemNumber	string	5.2.3	O	
ConflictMineralProductInfo	E	ConflictMetalInfo	ConflictMetalInfo	6.1	M	One required for each metal.
ConflictMetalInfo	E	ConflictMetalProductQueryList	QueryList	6.1	M	
ConflictMetalInfo	E	ConflictMetalProductSmelterList	SmelterList	6.3	O	
ConflictMetalInfo	E	Comment	string	6.3.10	O	
ConflictMetalInfo	A	Metal	string		M	
SmelterList	E	Smelter	Smelter	6.3	O	
Smelter	E	SmelterName	string	6.3.1	M	
Smelter	E	SmelterCountry	string	6.3.2	M	
Smelter	E	SmelterContact	Contact	6.3.3	O	
Smelter	E	Smelter100PercentRecycled	Boolean	6.3.6	O	
Smelter	E	SmelterProposedNextSteps	string	6.3.7	O	
Smelter	E	SmelterMineList	SmelterMineList		O	
SmelterMineList	E	SmelterMine	SmelterMine		O	
SmelterMine	E	SmelterMineName	string	6.3.8	O	
SmelterMine	E	SmelterMineCountry	string	6.3.9	O	
Organization	E	ConflictMineralOrganizationInfo	ConflictMineralOrganizationInfo		M	
Organization	E	Comment	string		O	
ConflictMineralOrganizationInfo	E	ConflictMineralOrganizationQueryList	QueryList		M	
ConflictMineralOrganizationInfo	E	Comment	string		O	

* E= Item is XML Element; A= Item is XML Attribute

**M=Mandatory; O=Optional

Table A-2 Query ID Values for Reporting About An Organization's Products Using ConflictMetalQueryList

Authority	Query ID	Query	IPC-1755 Section	Additional Information
IPC-1755	P01	Is the 3TG intentionally added to your product?	6.1.1.1	Comment permitted if necessary
IPC-1755	P02	Is the 3TG necessary to the production of your company's products and contained in the finished product that your company manufactures or contracts to manufacture?	6.1.1.2	Comment permitted if necessary
IPC-1755	P03	Do any of the smelters in your supply chain source the 3TG from the covered countries?	6.1.2.1	Comment permitted if necessary
IPC-1755	P04	Does 100 percent of the 3TG (necessary to the functionality or production of your products) originate from recycled or scrap sources?	6.1.2.2	Comment permitted if necessary
IPC-1755	P05	Have you received data/information for each 3TG from all relevant suppliers?	6.1.2.3	Comment permitted if necessary
IPC-1755	P06	Have you identified all of the smelters supplying the 3TG to your supply chain?	6.1.2.4	Comment permitted if necessary
IPC-1755	P07	Has all applicable smelter information received by your company been reported in this declaration?	6.1.2.5	Comment permitted if necessary

Table A-3 Query ID Values for Reporting About An Organization's Due Diligence Process Using ConflictMineralOrganizationQueryList

Authority	Query ID	Query	IPC-1755 Section	Additional Information
IPC-1755	C01	Do you have a policy in place that addresses conflict minerals sourcing?	6.2.1	Comment permitted if necessary
IPC-1755	C02	Is your conflict minerals sourcing policy publicly available on your website?	6.2.2	URL to sourcing policy required if yes
IPC-1755	C03	Do you require your direct suppliers to be DRC Conflict Free?	6.2.3	Comment permitted if necessary
IPC-1755	C04	Do you require your direct suppliers to source the 3TG from smelters whose due diligence practices have been validated by an independent third party audit program?	6.2.4	Comment permitted if necessary
IPC-1755	C05	Have you implemented due diligence measures for conflict free sourcing?	6.2.5	Comment permitted if necessary
IPC-1755	C06	Do you collect conflict minerals due diligence information from your suppliers which is in conformance with IPC-1755 Conflict Minerals Data Exchange standard?	6.2.6	Comment permitted if necessary
IPC-1755	C07	Do you request smelter names from your suppliers?	6.2.7	Comment permitted if necessary
IPC-1755	C08	Do you review due diligence information received from your suppliers against your company's expectations?	6.2.8	Comment permitted if necessary
IPC-1755	C09	Does your review process include corrective action management?	6.2.9	Comment permitted if necessary
IPC-1755	C10	Are you subject to the SEC Conflict Minerals rule?	6.2.10	Comment permitted if necessary

APPENDIX B

List of Covered Countries

Table B-1 Covered Countries

Covered Countries
Democratic Republic of the Congo (DRC)
Angola
Burundi
Central African Republic
The Republic of the Congo
Rwanda
South Sudan
Tanzania
Uganda
Zambia

APPENDIX C

3TG List

This table provides a list of the metals for which reporting is required under this standard.

Table C-1 3TG

Metals
Gold
Tantalum
Tin
Tungsten

APPENDIX D

Verification Guidance

Verification involves ensuring that the information provided is accurate. Verification of declared materials information has a number of different aspects, described below. The following sections are specific to conflict minerals declaration.

D1 Validation As the first step in verification, validation involves checking that the data provided are of the correct type. Requesters are encouraged to systematically validate data where possible to reduce the required verification effort. A file may be validated by comparing it against the 1755 XML schema file. Data type accuracy can be improved by using drop-down menus, click-boxes, radio buttons and logic that ensures that names are alpha-numeric characters, weights are numeric, etc.

Requesters may ask suppliers to include analytical data or other documentation to confirm the data provided in the material declaration. The request for confirmatory documentation may be listed through a hyperlink to a web page or with the request as an attachment. Suppliers may also wish to submit confirmatory documentation even if this is not requested.

D2 Data Quality A requester may request supporting documentation to substantiate the smelter name(s) provided meet the definition of a smelter when a supplier lists smelter(s) not currently on the list of Known or Validated Smelters⁷. It is recommended that verification of the smelter's business includes review of information on the products the company produces, output purity level of the metal products, description of input materials and average purity level of materials received. Other types of verification may include a link to the smelter's website.

D3 Data Sampling An additional level of verification is to sample the information as provided by a supplier and compare to product descriptions. If a supplier did not claim one of the 3TGs to be in use within the 3TG query list, a requester may ask for analytical data or product spec sheets to validate data accuracy. It is recommended products known to contain certain metals based on technology and/or competitor data are reviewed by the requester when declarations are received from suppliers. An additional level of verification is to review the metals claimed by the supplier within the 3TG query list to the smelter identification query list. When a supplier claims a 3TG is used within the product(s) declared, one or more smelters will be listed to match each metal listed.

D4 Other Documentation Other types of documentation may be provided for confirmation to support answers given within the 3TG specific queries. This may include a copy of a company's Conflict Minerals Sourcing Policy, mine source details as provided by smelters, smelter validation, or other documentation with detail related to the scope designated by a company when selecting the "user-defined class."

D5 Audit A requester may request that a supplier participate in an audit to review the supplier's due diligence process and to ensure proper systems are in place to gather data related to 3TG specific queries.

7. A "Known or Validated Smelter" is a smelter company which has been validated as a true metal smelter/refiner and deemed to be the appropriate level in the supply chain for the CFSP audit program.

APPENDIX E

The SEC Conflict Minerals Rule, Pursuant to Section 1502 of the Dodd-Frank

The SEC Conflict Minerals Rule applies to companies that are required to file annually to the SEC, have conflict mineral(s) contained in their manufactured product and the conflict mineral(s) is necessary to the functionality and/or production of the product. The final rule can be found at: <http://www.gpo.gov/fdsys/pkg/FR-2012-09-12/pdf/2012-21153.pdf>

Companies that use a conflict mineral that is necessary to its functionality and/or production of the product must conduct a Reasonable Country of Origin Inquiry (RCOI). The purpose of a RCOI is to determine whether the conflict minerals originated in the covered countries. If it is determined that the conflict mineral(s) come from recycled or scraped sources, or outside of the covered countries, then a company only has to file a Form SD describing the RCOI it conducted. If it is found that the conflict mineral(s) did, or may have, originated in the covered countries, then a company must exercise due diligence on its supply chain. The due diligence must conform to a nationally or internationally recognized due diligence framework.

If it is found after exercising due diligence that the conflict mineral(s) did not originate in the covered countries, then the company must file a Form SD describing the RCOI and the due diligence steps taken to determine the outcome.

If it is found that the conflict mineral(s) did, or may have, originated in the covered countries, then a company must: (a) provide a Conflict Minerals Report as an exhibit to the Form SD; (b) provide a description of the products that are not DRC Conflict Free and the facilities used to process the product(s); (c) disclose the location of the mine and the steps taken to make this determination “with the greatest possible specificity;” and (d) provide audit results. The sections of the Conflict Minerals Report that discuss the design of the company’s due diligence framework and the due diligence measures performed must be audited by a third party. The report and the audit results are to be posted on the company website for one year.

Manufacture

The SEC rule does not define “manufacture.” However, the SEC has provided some guidance regarding its intentions: 1) the SEC does not consider servicing, maintaining, or repairs to be manufacturing; 2) assembly is considered to be manufacturing; and 3) mining is not considered to be manufacturing.

Contract to Manufacture

This is dependent on the degree of influence exercised over the manufacture of the materials, parts, ingredients, or components. If the following is true, then an issuer will *not* be considered to be contracting to manufacture: 1) the contractual terms do not directly relate to manufacturing of the product; 2) the contractor only affixes its brand, marks, logo, or label to the product; and 3) the contractor only services, maintains, or repairs the product.

Intentionally Added

Intentionally added is commonly known as the deliberate use of a substance, or in this case metal, in the formulation of a product where continued presence is desired to provide a specific characteristic, appearance or quality.⁸

While the SEC does not define the phrase *intentionally added* in the final rule, the rule’s preamble states:

“[W]e agree that being intentionally added, rather than being a naturally-occurring by-product, is a significant factor in determining whether a conflict mineral is “necessary to the functionality or production” of a product. This is true regardless of who intentionally added the conflict mineral to the product so long as it is contained in the product. [D]etermining whether a conflict mineral is considered “necessary” to a product should not depend on whether the conflict mineral is added directly to the product by the issuer or whether it is added to a component of the product that the issuer receives from a third party. Instead, the issuer should “report on the totality of the product and work with suppliers to comply with the requirements.” Therefore, in determining whether a conflict mineral is “necessary” to a product, an issuer must consider any conflict mineral contained in its product, even if that conflict mineral is only in the product because it was included as part of a component of the product that was manufactured originally by a third party.”

(56296 Federal Register / Vol. 77, No. 177 / Wednesday, September 12, 2012 / Rules and Regulations)

8. Section 3 Terms and Definitions. Joint Industry Guide No. JIG-101Ed. 4.1. May 2012.

Necessary for the Functionality of a Product

The SEC does not provide a formal definition of this phrase, however it provides some guidance: A conflict mineral will be considered to be necessary to its functionality of a product if it meets the following: 1) is intentionally added to the product or any component of the product and is not a naturally-occurring byproduct; 2) is necessary to the product's generally expected function, use or purpose; and 3) is incorporated for the purpose of ornamentation, decoration, or embellishment, whether the primary purpose of the product is ornamentation or decoration.

NOTE: The conflict mineral must be contained in the product to be applicable.

Necessary for the Production of a Product

The SEC does not provide a formal definition of this phrase; however, it provides some guidance: A conflict mineral will be considered to be necessary to the production of a product when: 1) it is intentionally included in the product's production process, other than if it is included in a tool, machine, or equipment used to produce the product (such as computers or power lines); 2) it is included in the product (MUST be contained in the product to be applicable); and 3) it is necessary to the product.

Reasonable Country of Origin Inquiry (RCOI)

The SEC does not prescribe the expected steps for the RCOI. The rule only states that the inquiry is to be done in good faith.

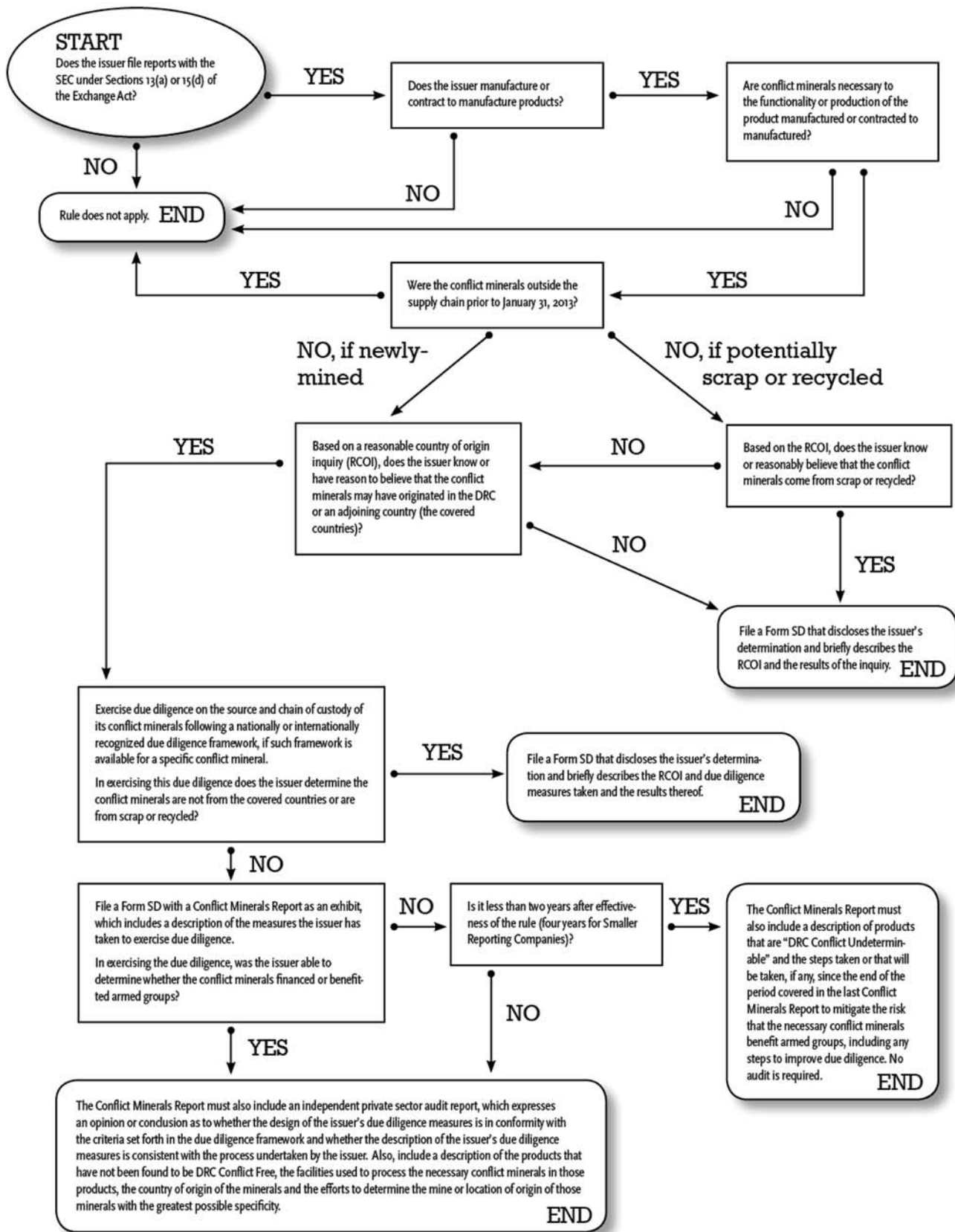
The purpose of a RCOI is to determine the origin of the conflict mineral(s), so the determination of whether it came from a covered country can be made.

Recycled or Scrap Sources

The conflict mineral(s) are considered recycled if they are reclaimed end-user or post-consumer products, or scrap processed metals created during product manufacturing. This includes excess, obsolete, defective, and scrap metal materials that contain refined or processed metals that are appropriate to recycle in production. This does NOT include minerals that are partially processed, unprocessed, or a byproduct from another ore.

Recycled or scrap sources are considered DRC Conflict Free. Companies will still need to report to the SEC via a Form SD describing their RCOI and the results, e.g., recycled or scraped sources.

(Page 33 of the final rule release)



APPENDIX F

IPC-1751A Fields Not Relevant to IPC-1755

F1 Product Amount This field identifies the total amount of product mass in terms of a unit of measure and a value. This field is *mandatory* and is provided by the supplier whether in Request/Response mode or Distribute mode.

F2 Unit of Measure (UoM) This field identifies the unit of measure for the product mass - milligrams, grams, kilograms, parts per million, or mass percent. This field is *mandatory*.

F3 Unit Type This field identifies the basis of quantification of the subject product or subproduct, the unit of product to which the associated mass (amount - UoM and value) applies. This field is called Unit Type to distinguish it from Unit of Measure. If the product is a discrete object, the Unit Type would be "Each." If the product is a potentially boundless material, such as a length of wire, a sheet of laminate, or a liquid, the unit type would be per meter (millimeter, centimeter), per square meter (square millimeter, centimeter), or per liter, respectively. Volume may be based on cubic linear units or liters. The Unit Type is intended to refer to the variable dimension of the product, where the other dimensions are assumed to be held constant and implied or specified elsewhere, as in the product or subproduct identification.

This field is *mandatory*. In the Distribute mode, the supplier provides this information. The default value is per "Each."

F4 Subproduct A subproduct is a portion of a declared product. An example would be an integrated circuit in a printed circuit board assembly where the printed circuit board assembly is the primary product or a subassembly in a computer where the computer is the primary product. Subproduct information **shall** consist of Mass, Unit of Measure, and Unit Type for every Subproduct Name.

The Subproduct function is intended to allow a supplier to declare the product according to the detail of their assembly structure as their engineering documentation or bill of materials defines it. Subproducts therefore would reflect the supplier's assembly levels as the supplier's product definition dictates. The IPC-175x schema does not limit the levels of subproducts allowed.

F5 Number of Instances The number of instances or occurrences of the subproduct within the parent product or subproduct. This field is *mandatory* for every subproduct named, and the default value is 1. This field allows the supplier to state the quantity of each subproduct that occurs in the declared parent product or subproduct, such that when each subproduct quantity is multiplied by its mass and then the results for all subproducts are summed, the sum will theoretically equal the mass of the whole product.

F6 Uncertainty Statement The supplier may provide information on the uncertainties associated with the data provided. This field is *optional*.

APPENDIX G

Relationship of IPC-1755 to the IPC-175x Series of Data Exchange Standards: A Plan for Integration

This standard is based on the IPC-175x set of standards.

Due to the nature of the conflict minerals declaration, a large number of amendments to IPC-1751A are required before it can be incorporated by reference in IPC-1755.

Due to the time-critical nature of the Conflict Minerals Data Exchange standard, it was decided to produce IPC-1755 temporarily as a standalone standard. This section describes some key changes from the IPC-175x schema and briefly touches on the integration plan.

IPC-1751A contains a large number of mandatory fields which are not relevant to and have been removed from the schema for IPC-1755. In addition, certain fields which are set as required in the IPC-175x set of standards have been changed to optional in IPC-1755.

The IPC-175x set of standards supports declarations from multiple 175x standards in the same file. For instance, a single XML file can contain declarations for material composition and packaging. The IPC-1755 schema is incompatible with the current version of 175x and therefore cannot be included as part of a 175x declaration.

IPC intends to integrate IPC-1755 into the IPC-175x set of standards after the next revision of IPC-1751A is published to address these issues.

APPENDIX H

IPC-1755 XML Schema

```

<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://webstds.ipc.org/1755/1.0"
xmlns:ds="http://www.w3.org/2000/09/xmldsig#" elementFormDefault="qualified" targetNamespace="http://
webstds.ipc.org/1755/1.0">
  <xsd:import namespace="http://www.w3.org/2000/09/xmldsig#" schemaLocation="xmldsig-core-schema.xsd"/>
  <xsd:element name="MainDeclaration" type="MainDeclaration"/>
  <xsd:complexType name="MainDeclaration">
    <xsd:sequence>
      <xsd:element name="BusinessInfo" type="BusinessInfo"/>
      <xsd:element maxOccurs="unbounded" name="Product" type="Product"/>
      <xsd:element name="Organization" type="Organization"/>
      <xsd:element minOccurs="0" ref="ds:Signature"/>
    </xsd:sequence>
    <xsd:attribute name="version">
      <xsd:simpleType>
        <xsd:restriction base="xsd:string">
          <xsd:enumeration value="1.0"/>
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:attribute>
  </xsd:complexType>
  <xsd:complexType name="BusinessInfo">
    <xsd:sequence>
      <xsd:element minOccurs="0" name="Response" type="Response"/>
      <xsd:element minOccurs="0" name="Request" type="Request"/>
      <xsd:element minOccurs="0" name="Declaration" type="Declaration"/>
      <xsd:element minOccurs="0" name="EBusinessInfo" type="EBusinessInfo"/>
    </xsd:sequence>
    <xsd:attribute name="mode" use="required">
      <xsd:simpleType>
        <xsd:restriction base="xsd:string">
          <xsd:enumeration value="Distribute"/>
          <xsd:enumeration value="Request/Reply"/>
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:attribute>
  </xsd:complexType>
  <xsd:complexType name="Request">
    <xsd:sequence>
      <xsd:element maxOccurs="1" minOccurs="1" name="Contact" type="Contact"/>
      <xsd:element name="RequestCompany" type="Company"/>
    </xsd:sequence>
    <xsd:attribute name="date" type="xsd:date" use="required"/>
    <xsd:attribute name="docID" type="xsd:string"/>
    <xsd:attribute name="comment" type="xsd:string"/>
    <xsd:attribute name="respondByDate" type="xsd:date"/>
    <xsd:attribute name="internalSupplierID" type="xsd:string"/>
  </xsd:complexType>
  <xsd:complexType name="Response">
    <xsd:sequence>

```



```

    <xsd:element maxOccurs="1" minOccurs="1" name="Authorizer" type="Contact"/>
    <xsd:element name="SupplyCompany" type="Company"/>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="Contact" type="Contact"/>
  </xsd:sequence>
  <xsd:attribute name="date" type="xsd:date" use="required"/>
  <xsd:attribute name="docID" type="xsd:string"/>
  <xsd:attribute name="comment" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Declaration">
  <xsd:attribute name="legalType" use="required">
    <xsd:simpleType>
      <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Standard"/>
        <xsd:enumeration value="Custom"/>
      </xsd:restriction>
    </xsd:simpleType>
  </xsd:attribute>
  <xsd:attribute name="supplierAcceptance" type="xsd:boolean" use="required"/>
  <xsd:attribute name="legalDef" type="xsd:string" use="required"/>
</xsd:complexType>
<xsd:complexType name="EBusinessInfo">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="Attachment" type="Attachment"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Product">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="ProductID" type="ProductID"/>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="ConflictMineralProductInfo"
      type="ConflictMineralProductInfo"/>
  </xsd:sequence>
  <xsd:attribute name="comment" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="ProductID">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="InstanceID" type="UniqueID"/>
  </xsd:sequence>
  <xsd:attribute name="itemDeclarationClass" use="required">
    <xsd:simpleType>
      <xsd:restriction base="xsd:string">
        <xsd:enumeration value="All"/>
        <xsd:enumeration value="One"/>
        <xsd:enumeration value="UserDefined"/>
      </xsd:restriction>
    </xsd:simpleType>
  </xsd:attribute>
  <xsd:attribute name="itemName" type="xsd:string"/>
  <xsd:attribute name="itemNumber" type="xsd:string"/>
  <xsd:attribute name="manufacturingSite" type="xsd:string"/>
  <xsd:attribute name="effectiveDate" type="xsd:date"/>
  <xsd:attribute name="effectiveEndDate" type="xsd:date"/>
  <xsd:attribute name="version" type="xsd:string"/>
  <xsd:attribute name="requesterItemName" type="xsd:string"/>
  <xsd:attribute name="requesterItemNumber" type="xsd:string"/>
</xsd:complexType>

```



```

<xsd:complexType name="ConflictMineralProductInfo">
  <xsd:sequence>
    <xsd:element maxOccurs="4" minOccurs="4" name="ConflictMetalInfo" type="ConflictMetalInfo"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ConflictMetalInfo">
  <xsd:sequence>
    <xsd:element name="ConflictMetalProductQueryList" type="QueryList"/>
    <xsd:element name="ConflictMetalProductSmelterList" type="SmelterList"/>
    <xsd:element minOccurs="0" name="Comment" type="xsd:string"/>
  </xsd:sequence>
  <xsd:attribute name="metal" use="required">
    <xsd:simpleType>
      <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Gold"/>
        <xsd:enumeration value="Tantalum"/>
        <xsd:enumeration value="Tin"/>
        <xsd:enumeration value="Tungsten"/>
      </xsd:restriction>
    </xsd:simpleType>
  </xsd:attribute>
</xsd:complexType>
<xsd:complexType name="Organization">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="ConflictMineralOrganizationInfo" type="ConflictMineralOrganizationInfo"/>
  </xsd:sequence>
  <xsd:attribute name="comment" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="ConflictMineralOrganizationInfo">
  <xsd:sequence>
    <xsd:element name="ConflictMineralOrganizationQueryList" type="QueryList"/>
    <xsd:element minOccurs="0" name="comment" type="xsd:string"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SmelterList">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="Smelter" type="Smelter"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Smelter">
  <xsd:sequence>
    <xsd:element name="SmelterName" type="xsd:string"/>
    <xsd:element name="SmelterCountry" type="xsd:string"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="SmelterContact" type="Contact"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="SmelterIdentificationNumber" type="UniqueID"/>
    <xsd:element minOccurs="0" name="Smelter100PercentRecycled" type="xsd:boolean"/>
    <xsd:element minOccurs="0" name="SmelterProposedNextSteps" type="xsd:string"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="SmelterMineList" type="SmelterMineList"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SmelterMineList">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="SmelterMine" type="SmelterMine"/>
  </xsd:sequence>

```

```

</xsd:complexType>
<xsd:complexType name="SmelterMine">
  <xsd:sequence>
    <xsd:element minOccurs="0" name="SmelterMineName" type="xsd:string"/>
    <xsd:element minOccurs="0" name="SmelterMineCountry" type="xsd:string"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Phone">
  <xsd:attribute name="number" type="xsd:string"/>
  <xsd:attribute name="type" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Email">
  <xsd:attribute name="address" type="xsd:string" use="required"/>
  <xsd:attribute name="type" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="SurfaceAddress">
  <xsd:attribute name="internal" type="xsd:string"/>
  <xsd:attribute name="street" type="xsd:string"/>
  <xsd:attribute name="city" type="xsd:string"/>
  <xsd:attribute name="stateProvince" type="xsd:string"/>
  <xsd:attribute name="country" type="xsd:string"/>
  <xsd:attribute name="postalCode" type="xsd:string"/>
  <xsd:attribute name="type" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Contact">
  <xsd:sequence>
    <xsd:element minOccurs="0" name="Email" type="Email"/>
    <xsd:element minOccurs="0" name="SurfaceAddress" type="SurfaceAddress"/>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="Phone" type="Phone"/>
  </xsd:sequence>
  <xsd:attribute name="name" type="xsd:string" use="required"/>
  <xsd:attribute name="title" type="xsd:string"/>
  <xsd:attribute name="comment" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Company">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="CompanyID" type="UniqueID"/>
  </xsd:sequence>
  <xsd:attribute name="name" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="UniqueID">
  <xsd:sequence/>
  <xsd:attribute name="identity" type="xsd:string"/>
  <xsd:attribute name="authority" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Attachment">
  <xsd:attribute name="name" type="xsd:string"/>
  <xsd:attribute name="fileType" type="xsd:string"/>
  <xsd:attribute name="fileData" type="xsd:base64Binary"/>
  <xsd:attribute name="fileURL" type="xsd:anyURI"/>
  <xsd:attribute name="fileZipLocation" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="QueryList">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="0" name="Query" type="Query"/>
  </xsd:sequence>

```

```
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Query">
  <xsd:sequence>
    <xsd:element name="QueryResponse" type="xsd:string"/>
    <xsd:element minOccurs="0" name="AdditionalInformation" type="xsd:string"/>
  </xsd:sequence>
  <xsd:attribute name="queryIDAuthority" type="xsd:string" use="required"/>
  <xsd:attribute name="queryID" type="xsd:string" use="required"/>
</xsd:complexType>
</xsd:schema>
```

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ANSI/IPC-T-50 Terms and Definitions for Interconnecting and Packaging Electronic Circuits Definition Submission/Approval Sheet

The purpose of this form is to keep current with terms routinely used in the industry and their definitions. Individuals or companies are invited to comment. Please complete this form and return to:

IPC
3000 Lakeside Drive, Suite 309S
Bannockburn, IL 60015-1249
Fax: 847 615.7105

SUBMITTOR INFORMATION:

Name: _____

Company: _____

City: _____

State/Zip: _____

Telephone: _____

Date: _____

- This is a **NEW** term and definition being submitted.
- This is an **ADDITION** to an existing term and definition(s).
- This is a **CHANGE** to an existing definition.

Term	Definition

If space not adequate, use reverse side or attach additional sheet(s).

Artwork: Not Applicable Required To be supplied

Included: Electronic File Name: _____

Document(s) to which this term applies: _____

Committees affected by this term: _____

Office Use	
IPC Office	Committee 2-30
Date Received: _____	Date of Initial Review: _____
Comments Collated: _____	Comment Resolution: _____
Returned for Action: _____	Committee Action: <input type="checkbox"/> Accepted <input type="checkbox"/> Rejected
Revision Inclusion: _____	<input type="checkbox"/> Accept Modify
IEC Classification	
Classification Code • Serial Number	
Terms and Definition Committee Final Approval Authorization:	
Committee 2-30 has approved the above term for release in the next revision.	
Name: _____ Committee: <u>IPC 2-30</u> Date: _____	

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- 50% discount on IPC standards
- Significant discounts on IPC publications and training materials
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Even if your membership anniversary is months away, you can take advantage of the added value of IPC's new membership packages today! Your current membership will be prorated and applied to your new membership package.

Use this helpful chart to compare the features of IPC's membership bundles; then select the best one for your company.

Features	Classic Membership	Technology Package	Business Package	Business & Technology Package
24/7 online access to members-only resources, including original articles and presentations on technical issues and industry/market trends	x	x	x	x
One single-user download of each new or revised IPC standard within 90 days of publication (with approximately 50 standards documents developed annually, that represents an average savings of more than \$2,400 each year)	x	x	x	x
50% discount on IPC standards	x	x	x	x
Significant discounts on IPC publications and training materials	x	x	x	x
Significant discount on exhibiting at IPC events, including IPC APEX EXPO	x	x	x	x
Reduced registration rates on IPC conferences and other educational events	x	x	x	x
Access to participate in IPC market research studies (along with complimentary report for each study in which company participates)	x	x	x	x
One All Access Package registration to IPC APEX EXPO		x	x	Includes two registrations
Your choice of one registration to IPC TechSummit or two registrations to other IPC technical conferences		x		x
One registration to IPC's annual Capitol Hill event			x	x
One copy of <i>IPC International Technology Roadmap for Electronic Interconnections</i>		x		x
One registration to an IPC management/business conference			x	x
Two registrations to IPC technology webinars		x		x
One copy of a Fast Facts market research study			x	x

Enterprise Package — For companies that recognize the importance of giving multiple company sites access to IPC membership benefits, the **Enterprise Package** provides Classic Membership to employees at select locations, plus additional discounts, unlimited complimentary admission to quarterly webinars and 50% registration discount to all official IPC events in North America and Europe

For more information about IPC's membership options and packages, visit www.ipc.org/membership or contact the Member Success team at membership@ipc.org.

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Visit www.IPC.org/offices for the locations of IPC offices worldwide.

"Juki gets tremendous value from our IPC membership ... we get quarterly market data which would cost us thousands of dollars if we commissioned it on our own. The industry standards generated by IPC committees allow us to design our equipment with certainty that it will meet industry requirements. The returns for our company are so great, they are beyond calculable."

Bob Black
President and CEO
Juki Automation Systems Inc.



Application for Site Membership

www.ipc.org/membership

Thank you for your decision to join IPC. Membership is **site specific**, which means that IPC member benefits are available to all individuals employed at the site designated on this application.

Company Name			
Street Address			
City	State	Zip/Postal Code	Country
Main Phone No.		Main Fax	
Company E-mail address		Website URL	
Number of Employees at this Site		Number of Employees Corporate-Wide	
Name of Primary Contact			
Title	Mail Stop		
Phone	Fax	E-mail	

To best serve your specific needs, please indicate the most appropriate member category for your facility. (Check one box only.)

- Printed Board Manufacturer**
 Facility manufactures and sells printed boards or other electronic interconnection products to other companies.
 What products do you make for sale? (check all that apply)
 One and two-sided rigid, multilayer printed boards
 Flexible printed boards
 Other interconnections
 Printed electronics

- Electronics Manufacturing Services (EMS) Company**
 Facility manufactures printed board assemblies, on a contract basis, and may offer other electronic interconnection products for sale.

- OEM — Original Equipment Manufacturer**
 Facility purchases, uses and/or manufactures printed boards or other interconnection products for use in a final product, which we manufacture and sell.
 What is your company's primary product line? _____
- Industry Supplier**
 Facility supplies raw materials, equipment or services used in the manufacture or assembly of electronic products.
 Which industry segment(s) do you supply?
 PCB
 EMS
 Both
 Printed electronics
 What products do you supply? _____
- Government, Academia, Nonprofit**
 Organization is a government agency, university, college or technical or nonprofit institution which is directly concerned with design, research and utilization of electronic interconnection devices.
- Consulting Firm**
 What services does the firm provide? _____



Application for Site Membership

Membership Packages and Dues

Membership will begin the day the application and dues payment are received, and will continue for one or two years (savings of 10%) based on the choice indicated below. All fees are quoted in U.S. dollars.

Please check one:

	Classic Membership		Business Package Membership		Technology Package Membership		Business & Technology Package Membership		Enterprise Package
	One year	Two years	One year	Two years	One year	Two years	One year	Two years	
Primary Facility/site: The first site of an organization to join IPC membership	<input type="checkbox"/> \$1,100	<input type="checkbox"/> \$1,980	<input type="checkbox"/> \$2,400	<input type="checkbox"/> \$4,320	<input type="checkbox"/> \$2,400	<input type="checkbox"/> \$4,320	<input type="checkbox"/> \$3,800	<input type="checkbox"/> \$6,840	Please call for a quote
Additional Facility/site: Membership for a facility of an organization that has a different location than its Primary Facility membership	<input type="checkbox"/> \$900	<input type="checkbox"/> \$1,620	<input type="checkbox"/> \$2,200	<input type="checkbox"/> \$3,960	<input type="checkbox"/> \$2,200	<input type="checkbox"/> \$3,960	<input type="checkbox"/> \$3,600	<input type="checkbox"/> \$6,480	
Company with annual revenue of less than \$5 million	<input type="checkbox"/> \$650	<input type="checkbox"/> \$1,170	<input type="checkbox"/> \$1,950	<input type="checkbox"/> \$3,510	<input type="checkbox"/> \$1,950	<input type="checkbox"/> \$3,510	<input type="checkbox"/> \$3,350	<input type="checkbox"/> \$6,030	
Government agency, academic institution or nonprofit organization	<input type="checkbox"/> \$300	<input type="checkbox"/> \$540							
Consulting firm (employing fewer than six individuals)	<input type="checkbox"/> \$650	<input type="checkbox"/> \$1,170							

Explanation of Packages

Classic Membership — IPC's classic membership provides core benefits to all employees at a company site/facility:

- 24/7 online access to members-only resources
- One single-user download of each new or revised IPC standard within 90 days of publication
- 50% discount on IPC standards
- Significant discounts on IPC publications and training materials
- Significant discount on exhibiting at IPC events, including the industry's flagship event IPC APEX EXPO
- Reduced registration rates on IPC conferences and other educational events
- Access to participate in IPC market research studies (along with a complimentary report for each study in which company participates)

Business Package — The benefits of IPC's Classic Membership, plus **additional benefits** valued at more than \$2,300:

- One All Access Package registration to IPC APEX EXPO®
- One registration to an IPC management/business conference
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Standard Improvement Form

IPC-1755-WAM1

The purpose of this form is to provide the Technical Committee of IPC with input from the industry regarding usage of the subject standard.

Individuals or companies are invited to submit comments to IPC. All comments will be collected and dispersed to the appropriate committee(s).

If you can provide input, please complete this form and return to:

IPC
3000 Lakeside Drive, Suite 309S
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Fax: 847 615.7105
E-mail: answers@ipc.org
www.ipc.org/standards-comment

1. I recommend changes to the following:

- Requirement, paragraph number _____
- Test Method number _____, paragraph number _____

The referenced paragraph number has proven to be:

- Unclear
- Too Rigid
- In Error
- Other _____

2. Recommendations for correction:

3. Other suggestions for document improvement:

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