IPC Committee Member Handbook

July 2019

IPC COMMITTEE MEMBER HANDBOOK

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ABOUT THIS HANDBOOK

IPC developed this handbook for all committee participants to gain knowledge on the IPC standardization process and to have useful guidelines for contributing to that process.

As a committee member, you will be vital to your committee achieving its objectives. Your participation can range from writing or contributing sections to a standard or publication to commenting on draft standards during the review processes or providing feedback during a face-to-face, phone or online meeting. This handbook explains these activities so you can become an active participant on any IPC committee.

We hope this handbook will encourage your participation on IPC committees.

Visit the IPC Committees home page to view all committees, subcommittees and task groups:
http://www.ipc.org/CommitteePage.aspx

If any group interests you, contact the staff liaison on that group's web page to request to be added to the roster.

BENEFITS OF PARTICIPATING ON IPC COMMITTEES

IPC committees are open to anyone to participate, and there are many benefits to you and your company:

- There is no cost to join an IPC working group, and your level of activity is up to you and your interest. Your level of participation can be such things as collaborating with others on the development of a standard, submitting content, photos, etc., commenting or actively participating in meetings.
- By actively participating, you will also have the opportunity to network with your peers, building new personal and business relationships.
- IPC lists people who participated in the development of each standard in the Acknowledgment section at the front of each standard. This is great personal and professional marketing.
- It is free education for you and you company. You will gain technical and technological knowledge from peer idea exchange, and you will also have valuable background information about reasoning behind content in the published standard.

1 ABOUT IPC STANDARDS

1.1 IPC Principles of Standardization

In May 1995 the IPC Technical Activities Executive Committee (TAEC) adopted Principles of Standardization as a guiding principle of IPC's standardization efforts.

Standards Should:

- Show relationship to Design for Manufacturability (DFM) and Design for the Environment (DFE)

- Minimize time-to-market

- Contain simple (simplified) language

- Just include specification information

- Focus on end-product performance

- Include a feedback system on use and problems for future improvement

Standards Should Not:

- Inhibit innovation

- Increase time-to-market

- Keep people out

- Increase cycle time

- Tell you how to make something

- Contain anything that cannot be defended with data

IPC standards and publications are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers. This is accomplished by facilitating interchangeability and improvement of products and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his/her need. Existence of such standards and publications shall not in any respect preclude any member or nonmember of IPC from manufacturing or selling products not conforming to such standards and publications, nor shall the existence of such standards and publications preclude their voluntary use by others who are not IPC members, whether the standard is to be used either domestically or internationally.

IPC has instituted a patent policy for the protection of IPC, the chair and member companies. IPC's Patent Policy is in compliance with the current version of the ANSI Patent Policy in the IPC Standardization Procedures.

1.2 IPC Patent Policy

Recommended standards and publications are adopted by IPC without regard to whether their adoption may involve patents on articles, materials or processes. By such action, IPC does not assume any liability to any patent owner, nor do they assume any obligation whatever to parties adopting the recommended standard or publication. Users are also wholly responsible for protecting themselves against all claims of liabilities for patent infringement.

IPC's Patent Policy is in compliance with the current version of the ANSI Patent Policy in the IPC Standardization Procedures.

In brief:

- If a company submits data or information for a standard and that data/information are related to one of its patented products or processes, the submitting company has the responsibility to inform the staff liaison of the patent.
- It is not the responsibility of staff or the chair to determine if submitted information is based on a patent.
- Chairs must remind committee members of this policy during each meeting.
- Recommended standards and publications are adopted by IPC without regard to whether their adoption may involve patents on articles, materials or processes.
- By such action, IPC does not assume any liability to any patent owner, nor do they assume any obligation whatever to parties adopting the recommended standard or publication.
- Users are also wholly responsible for protecting themselves against all claims of liabilities for patent infringement.

1.3 Antitrust Laws and How They Impact Committee Work

Trade associations are by nature groups of competitors who take collective action on matters of common interest. They are subject to antitrust laws designed to prevent unreasonable restraints of trade and to preserve open and free competition.

IPC staff and chairs work to ensure there are no breaches of antitrust laws during committee activities. Chairs play a part of this in every meeting by reading aloud the IPC Antitrust and Export Control Statement, and IPC encourages all committee volunteers to familiarize themselves with this statement (see 1.3.1).

1.3.1 IPC Antitrust and Export Control Statement

IPC standards shall be developed in accordance with applicable antitrust and competition laws, and meetings amongst competitors to develop IPC standards are to be conducted in accordance with these laws.

It is a practical impossibility to delineate the permissible limits of discussion at an IPC meeting, because so much is dependent upon the context in which any particular subject is to be raised. Nevertheless, a prudent rule, which is to be followed at all IPC meetings, is that no commercial topics be acted upon or even considered.

To avoid the most sensitive areas, there should never be a discussion of the following at IPC meetings:

1. Price or any elements of price or pricing policies, including costs, discounts, etc.

2. Sales or production quotas, territories, allocations, boycotts or market shares.

3. Identified individual company statistics, inventories or merchandising methods.

4. Particular competitors or customers.

5. Commercial liabilities, warranties, guarantees or the particular terms and conditions of sales, including credit, shipping and transportation arrangements.

6. Anything dealing with "arm-twisting," trade abuses or excluding or controlling competition.

IPC standards shall be developed and meetings conducted in accordance with all applicable export, reexport, retransfer controls, sanctions, and antiboycott restrictions.

Meetings of IPC standards committees are generally accessible to the interested public through advanced notice of the meetings to the public, unlimited access to meetings by any interested person, and unlimited distribution of meeting minutes at no cost afterwards. No matters shall therefore be discussed that do not qualify as in the "public domain" or as "published." Participants are advised to familiarize themselves with the definitions for these terms in all applicable export control regulations.

Participants are specifically cautioned that these definitions may not apply to discussions occurring between or among two or more committee participants outside formal committee proceedings. Such exchanges that are not generally accessible to the interested public may therefore be subject to deemed export or deemed reexport licensing requirements.

1.4 International Trade Compliance Policy

IPC standards and publications are designed to serve the public interest. When participating in standards development, contributors need to abide by the rules of IPC's antitrust/export control statement and patent policy. Information must be not be shared if it is restricted by your country's export laws and regulations (e.g., ITAR).

1.5 Status of Standardization

You can monitor the development of all IPC standards and publications on the IPC Status of Standardization page http://www.ipc.org/Status.aspx.

2 COMMITTEE STRUCTURE AND ROLES AND RESPONSIBILITIES OF COMMITTEE LEADERSHIP AND IPC STAFF

2.1 Structure of IPC Committees

2.1.1 General Committees

IPC general committees are standing committees. Their scope of operations spans categories as functions within the technical mission of IPC. General committees may form subcommittees and task groups to achieve their established charter. The chair and vice chair of IPC general committees are members of the IPC Technical Activities Executive Committee (TAEC).

2.1.2 Subcommittees

Subcommittees, formed under general committees and approved by the TAEC, address more specific areas of the technology dictated by the general committee. Like general committees, subcommittees are most often standing groups. Subcommittees may take on specific technical projects, including developing standards in cases where there is not a task group under the subcommittee, but they are primarily responsible for overseeing the activities of task groups which form under them to work on specific projects.

2.1.3 Task Groups

A task group can be formed as part of a general committee or subcommittee and is approved by the TAEC. The task group is formed to undertake a specific assignment in accordance with the charter of the general committee. This may be to develop or update a specific standard or to address a particular technology process or problem.

2.2 Chairs and Co-chairs

Each committee is comprised of a chair, who is a volunteer IPC member responsible for guiding the direction of your committee. Some committees will have co-chairs, who hold equal leadership. Chairs and co-chairs hold many responsibilities, such as:

- Preparing meeting agendas
- Encouraging committee members to provide input on activities during and between meetings
- Assigning tasks/action items to volunteers and work with those individuals to meet deadlines
- Providing leadership to assure the goals of the committee are met
- Driving consensus

2.3 Vice-Chairs

Most IPC committees will have a vice-chair to support the committee chair. This person is responsible for:

- Leading meetings in the chair's absence
- Taking meeting minutes and providing them to their staff liaison
- Gathering data and/or working with volunteers to ensure action items are completed on time

2.4 IPC Staff Liaisons

An IPC staff liaison is assigned to each committee. Liaisons provide support to chairs and volunteers to ensure they meet their objectives and do so according to IPC's procedures. IPC encourages all volunteers to collaborate with your staff liaison on ideas to further your committee's technical programs, discuss issues affecting your group or to ask any questions or for assistance. IPC also encourages you to contact your liaison regarding any questions or issues you have regarding your participation on IPC committees. For example, a negative experience during a meeting or with a chair; rules about submitting content, figures or data for IPC standards; your interest in chairing a group; or how to submit a topic for a new standard.

The following are some examples of how IPC staff liaisons support their committees:

- Work with chairs to plan and arrange meetings.
- Prepare and distribute meeting notices, surveys and correspondence related to a project or initiative.
- Coordinate materials needed for the appropriate functioning of a committee, including proposals, announcements and informational documents.
- Maintain rosters and update volunteer contact information
- Ensure all records related to a committee project are properly maintained, including meeting minutes, compilation of comments, the master copy of draft revisions of standards with changes tracked, correspondence, action items, etc.
- Solicit assistance of subject matter experts (SMEs) and work with other organizations to acquire pertinent technical documents, information and resources.

- Provide technical support and assistance for use of the IPC Works online committee collaboration workspace (see Section 5).
- Serve as a resource on IPC standards and publications that may affect your committee's assignment.

2.5 Committee Leadership Groups

The following is an explanation of the three IPC committee chair leadership groups.

2.5.1 Global Technical Activities Executive Committee

The Global Technical Activities Executive Committee (TAEC) is comprised of seven members (two each from Europe, Asia and the Americas and the TAEC Chair) to conduct administrative business (i.e., PIN status reviews, questions, etc.) on a quarterly basis. The Global TAEC also reviews activities of each general committee annually (as prepared and submitted by the general chair) and may request a leadership change if progress is not being made with a group.

2.5.2 Technical Activities Executive Committee

The Technical Activities Executive Committee (TAEC) consists of all chairs and vice-chairs of IPC general committees. It is the responsibility of the TAEC to review all questions and problems pertaining to IPC Technical Programs. In certain cases, particularly in the discussion of programs involved with expenditures of IPC funds, or involved with IPC policy, the TAEC will make recommendations to the IPC Board of Directors.

2.5.3 Committee Chair Council

The Committee Chair Council (CCC) is comprised of chairs, co-chairs and vice-chairs of all IPC general committees, subcommittees and task groups. The basic function of the CCC is to meet twice a year in connection with the semi-annual meetings of IPC to discuss technological developments that can affect future programming for the IPC. CCC meetings are designed to keep all committee chairs and vice-chairs up to date on technical developments that may affect the work of their committees.

3 IPC STANDARDS DEVELOPMENT PROCESS AND GUIDELINES

As an American National Standards Institute (ANSI)-accredited organization, IPC needs to assure its constituents that the process by which standards and specifications go from inception to market are fair and for the better of industry.

This process is detailed in the IPC Standardization Procedures, which have been approved by ANSI. These are the step-by-step rules by which IPC standards and publications go from inception to market, so it is important that you make yourself familiar with these procedures.

Because you will hear about and participate in many of these steps, IPC has provided some general information about the standards development process for your knowledge. Never hesitate to contact your chair or IPC staff liaison if you have specific questions about any procedural step or guideline discussed in this section.

3.1 Project Initiation

Before any standards project can begin, the IPC Technical Activities Executive Committee (TAEC) must first approve the project. This is done through a formal project initiation (PIN) form, which is submitted by an existing chair or by a volunteer(s) from industry with a proposal for a new standards project which would require formation of a new task group.

IPC encourages everyone to consider a new standards project. If you would like to propose a new standard, contact your chair or a staff liaison for more information and assistance in writing and submitting your PIN form to TAEC.

3.2 IPC Standards Development Process

Once a project is approved, all IPC standards adhere to the same development procedures, with a caveat of flexibility during the working draft stage. Figure 3-1 provides a graphical representation of this process.
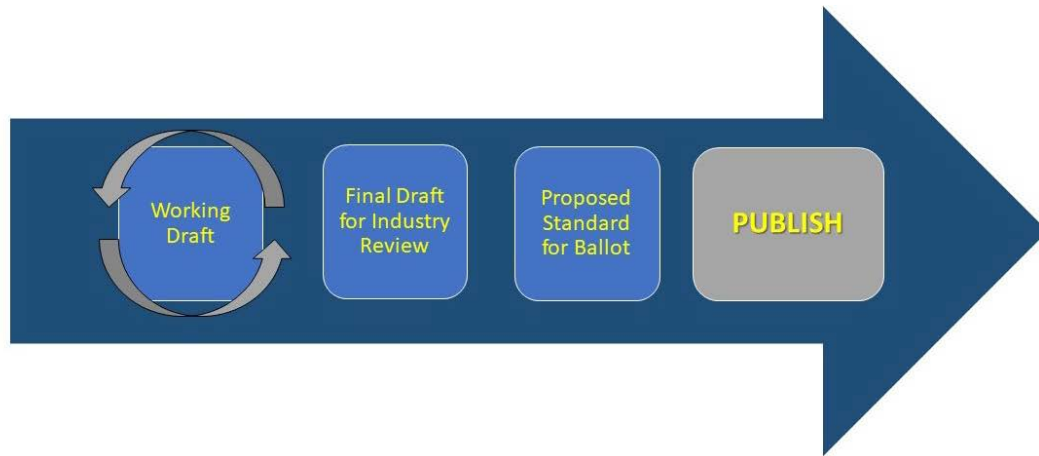

Figure 3-1 IPC Standards Development Process

Figure note: For IPC Test Methods, the Proposed Standard for Ballot stage is replaced by Gage R&R Validation.

The following is a brief explanation of each of these steps (see IPC Standardization Procedures for specifics):

3.2.1 Working Draft

The working draft stage is an ongoing cycle of developing and updating a draft document. There may or may not be formal circulations to the originating committee to collect comments or input from the developing task group.

Note: At the chair's discretion – and with input from IPC staff – the chair may opt to make the first call for comments the Final Draft for Industry Review stage. The decision to move directly to FDIR review is based on several factors (i.e., length of document, number of changes if it is a revision, chair's and developing group's perception on readiness of document, etc.).

3.2.2 Final Draft for Industry Review

You will often hear this stage referred to by its acronym FDIR. During this stage, the draft document is made available for 30-day review for comments to the working group, Committee Chair Council (CCC) and other IPC groups with interest. IPC also makes the document available to the general public. During this stage, IPC forms the consensus ballot group for the standard (see 3.5).

3.2.3 Proposed Standard for Ballot

Following Final Draft for Industry Review, IPC distributes a ballot packet containing the standard (clean and marked-up versions), FDIR resolution of comments and the ballot roster to the ballot group for consensus vote.

Note: Working group members who did not join the ballot group will still have the option to submit comments on the proposed standard for ballot.

3.3 Submitting Comments

During each call for comments for a draft standard or publication, you will have the opportunity to submit comments for resolution by the originating task group. The IPC Standardization Procedures detail this process, but the following are helpful guidelines and general rules for submitting comments.

Each comment should be categorized as Technical or Editorial:

- Technical comments are those which, if accepted, would result in a substantive change to the document. A substantive change is one that directly and materially affects the use of the standard or publication. Examples include:
    - Changing "shall" to "should" or "should" to "shall"
    - Any addition, deletion or revision of a requirement or of mandatory compliance with referenced standards
    - Any change to a statement, sentence, paragraph or definition that alters its original meaning
- Editorial comments, for the most part, are minor and would not result in a change to the technical tone or requirements of a document.

- Graphics comments are comments on figures in a draft standard. These comments typically are addressed by a graphics A-team.

Each comment must include a proposed change to the content of the document based on the comment.

Comments which do not include a proposed change may be cited as Not Accepted or Deferred for Revision by the originating task group during its resolution of comments.

3.4 Resolution of Comments

Once all comments have been collected, the staff liaison will work with the chair to schedule a meeting to resolve comments. If you submitted comments, it is important that you attend this meeting, so you will have the opportunity to discuss your comments and state your case for the changes you are requesting.

The originating task group – you included as a meeting participant – will resolve all technical comments. The resolution of comments will be distributed to the originating task group, which will include the people who commented.

The following is an explanation of each possible comment resolution:

- Accepted – The recommended change must be made to the document.

- Accepted with modification – The comment was accepted, but during deliberation, a change was made to the document to satisfy the comment but which does not direclty reflect the proposed change. The resolution of comments document will include the reason for the modification and decision on the final change to be made to the draft standard.

- Not accepted – The reason for not accepting the comment must be explained in the resolution.

- Open with action assigned – If the committee feels that a comment could be justified but needs further explanation or data, it can choose to withhold a decision until it has more information to make an educated decision.

- Overcome by events (OBE) – OBE is used for comments that are nullified due to changes made to the draft standard based on previous comments.

- Deferred – The comment will be deferred until the next revision or amendment of the standard. The reason for this decision will be stated in the resolution of comments.

Important:

After submitting comments, comment submitters are allowed to change the designation (editorial/technical) of their comments, but this change must be documented by the chair and/or staff liaison. The comment submitter can request this change prior to the comment being resolved or during the meeting(s) when comments are resolved.

To best use volunteers' time during meetings, the staff liaison, chair and/or an A-Team (see 7.1) may act on behalf of the committee to propose resolutions to technical comments. The proposed resolutions of technical comments will be distributed to the committee in advance of the meeting. The proposed resolutions will be discussed during the meeting, and the attendees will be given the chance to deliberate the proposed resolutions and then asked to accept or reject any or all of the proposed resolutions.

3.5 Ballot Group Formation

When IPC distributes the Final Draft for Industry Review for comment, we form the ballot group for the standard.

IPC does not automatically add volunteers to voting groups. You must opt to join the group using the ballot group formation tool IPC provides during FDIR review. You spent the time to develop the document, so be sure to join the ballot group to put your final stamp of approval on your group's work.

When you join the ballot group, you will be asked to declare your interest in the content of the standard. IPC needs to know these categories for all voters so we can ensure a balanced representation of interest categories on the ballot group, in accordance with IPC's Standardization Procedures.

The following explains IPC's voter group categories. Please note these are guideline descriptions, so the verbiage can change based on the standard. You must read the specific descriptions of each category on the ballot group signup page.

Supplier – A person or company that supplies the product or technology from the scope of the standard.

User – A person or company that buys/uses the product or technology from the scope of the standard.

General Interest – A person or company that neither supplies nor uses the product or technology from the scope of the standard but has an interest in it.

3.6 Voting on the Proposed Standard for Ballot

Volunteers who joined the ballot group for a standard will receive the opportunity to vote on the draft standard at the Proposed Standard for Ballot stage. During this 30-day review period, it is imperative that everyone who volunteered to vote on the standard submit their vote. IPC has requirements for minimum vote returns, and if those requirements are not met, IPC will not publish the standard.

You have the following voting options:

> Yes – Accept the content of the standard as is.
> Yes, with comments – Accept the standard but with editorial comments.
> No – All no votes must be accompanied by at least one technical comment.

Abstain – No position on the standard.

Any comments received must be resolved the same as any other call for comments (see 3.4).

3.7 Vote Return Requirements

The following are IPC's minimum requirements for voting for publication:

- At least 65% of the designated ballot group must cast a vote (including abstentions).
- At least 65% of the total returned ballots (not including abstentions) must be affirmative; no more than 20% can be negative.

As with all other review cycles, all comments received must be resolved by the committee.

IPC can publish a standard with a negative vote, if an attempt was made to resolve the issue. In such cases, the vote is recorded as a "maintained negative."

The IPC Standardization Procedures explain the steps that must be taken in these events.

3.8 Appeals

People who feel they have been or will be adversely affected by any substantive or procedural action or inaction by IPC have the right to appeal. Appeals must relate to the document development process and not to the content of the negative vote. Appeals should be directed to the IPC vice president of standards and technology.

4 IPC STANDARDS FORMAT AND GUIDELINES FOR PROVIDING CONTENT

4.1 IPC Standards Style and Format

Each IPC standard and publication follows a specific format, which can change based on the series type (printed board design, performance or materials). The IPC staff liaison will provide a clean template to chairs for use in developing or revising a standard or publication. This template follows the IPC Standards Style Guide. You can request a copy of the IPC Standards Style Guide from your chair or IPC staff liaison.

4.2 Submitting Content and Photos

Resources provided by you for the development of a standard or publication should be considered voluntary contributions from industry. This includes volunteer expertise during meetings, writing content, submitting a company data table or spreadsheet or providing images such as microsections or equipment photos.

IPC takes copyright violations very seriously, but we need volunteers to help us ensure IPC standards will not infringe on copyright.

The following are some rules to follow when providing content and photos for an IPC standard:

1. It is your responsibility as the content submitter to obtain permissions from your employer to provide company-developed resources _before_ submitting the content or images.
2. Do not use images, illustrations or other graphics from other sources unless you have the appropriate permissions. This includes images from copyrighted sources such as Wikipedia, news organizations or other sources that do not have knowledge that their materials are being used.
3. You must reference resources that provide content for the standard or publication. This reference must be to the original source.
4. All images submitted for use in your document should be print-ready and high-resolution. IPC will give credit to photo contributors.

4.2.1 IPC Image Library and Graphic Design Services

IPC has hundreds of images from published IPC standards that you can use during the development of a standard. If you know of an image that could be helpful, ask your staff liaison to help track it down for you.

IPC also provides graphic design services. If you have an image (even hand-drawn) that you can provide, the staff liaison can work with IPC's graphic designer to create a professionally drawn illustration for the published standard.

4.3 Access to Other Industry Documents as Resources

If during the development of your standard, you need access to or information from another organization's published standard, specification or resource, your IPC staff liaison will do his/her best to acquire this information.

Do not share copyrighted information with your committee without first consulting your staff liaison. This includes posting resources to IPC Works.

4.4 IPC Test Methods

If your document references an IPC Test Method that may require revision, or if your standard will require an entirely new Test Method, consult your IPC staff liaison and chair. The liaison and chair will work with you on the process for developing or revising an IPC Test Method.

See the IPC Test Method Development Packet for information on revising or developing IPC Test Methods.

5 IPC WORKS ONLINE COMMITTEE COLLABORATION PORTAL

IPC provides IPC Works, an online portal for committee collaboration for all standards activities. In IPC Works, you will find the following information, at a minimum, in each of you committee folders:

- Draft documents for review
- Compilations and resolutions of comments
- Meeting minutes and agendas
- Resources used in the development of standards
- Meeting calendar
- Ballot history
- History of past revisions of your standard.

You will only be able to view the committees of which you are a member.

Important: To maintain your role on an IPC working group, you must annually validate your account in IPC Works.

Only chairs and IPC staff can upload documents to folders, but IPC Works provides other ways for you to collaborate and communicate with your committee and other IPC Works members:

- Idea Box – Have an idea about a new standards topic or something an IPC committee or IPC overall should undertake? Put an idea in the Idea Box to see what other IPC Works participants think.
- Share an Update – Pose a question, provide insights on a technical topic or share an important update with other committee members. You can even include document attachments

- Messages – Send a message to one of your committee members or to another IPC Works participant.

There are several videos on IPC Works to explain how to use the collaboration workspace. Contact your IPC staff liaison for information and training on how to use IPC Works or if you have any technical issues accessing or using it.

If you have any questions, email IPCWorks@ipc.org.

6 COMMITTEE MEETINGS

IPC provides many opportunities for committees to meet during the development of their standard.

6.1 APEX/EXPO and SummerCom Meetings

IPC hosts two large meetings each year: IPC APEX/EXPO early in the year and the SummerCom meetings in summer. These meetings present the best opportunities for face-to-face discussions. You can plan ahead for IPC APEX EXPO and SummerCom meetings by visiting your Calendar on IPC Works.

These meetings will not include web or telephone remote access, unless deemed necessary by the staff liaison.

6.2 Teleconference and Web Meetings

Most IPC committee work takes place via teleconferences and web meetings. IPC provides Zoom for web meetings, but there will also be times when the chair or a volunteer uses their own online meeting tool.

6.3 Interim Face-to-Face Meetings

There will be times (i.e., small working groups working on the initial draft or a standards) when the chair or staff liaison may determine interim face-to-face meetings are necessary. These meetings tend to be all-day or multiple-day working sessions.

These meetings can be held during IPC conferences or other industry events committee members plan to attend, hosted by a committee member's company or even held at IPC's offices.

The IPC staff liaison will provide as much notice as possible prior to an interim meeting to allow those wishing to attend enough time to make travel arrangements.

6.4 Participant Behavior

IPC expects all volunteers and chairs to participate in meetings using respectful behavior. In the case this does not occur, IPC will invoke Robert's Rules of Order to deal with the offending parties.

7 OTHER COMMITTEE ACTIVITIES

During your committee work, there are other focused activities which you could participate on.

7.1 A-Teams

There will be times when a chair or staff liaison will call for the formation of a subgroup of committee members to take on a task or tasks specific to the development of a standard that would be time consuming for the entire committee. These A-Teams can serve many purposes including:

- Develop a working draft standard or individual sections of a draft standard for full committee review and comment.
- Provide recommended resolutions of comments to the full committee.
- Fully disposition editorial and graphics comments at working draft, Final Draft for Industry Review and ballot stages
- Reject comments submitted without a proposed resolution, recommendation or action.
- Filter substantive comments for resolution to appropriate ad-hoc groups.
- Prioritize the ranking of substantive comments and recommend which comments should be deferred to next revision or an amendment (e.g., low priority, proposed new sections of a standard, etc.).

Because A-Teams will represent the full committee in their tasks and could conduct their work over long periods of time (especially in the case of developing a draft document), the formation of these teams and an understanding of their specific task(s) will be agreed upon during a committee meeting.

7.2 Ad Hoc Working Groups

Ad hoc working groups are small groups of subject matter experts within a committee which are appointed by the committee chair to address a specific issue or question, such as data collection or investigating an issue to support the work of the committee or an A-Team.

Ad hoc working groups are less structured than A-Teams, subcommittees or task groups to allow maximum flexibility to address the issue at hand. The general committee chair is responsible for assigning an individual to chair the group for the duration of its efforts.

7.3 Round Robin Test Programs

Round robin test programs are conducted to obtain technology data and information for use in standards, specifications or technical reports.

Chairs may request a round robin test program to gather data for a standard or specification or in response to a request from committee members who feel information is needed in an area of technology.

Data are provided to the IPC and stored in its network files. These data are typically published as a white paper or technical paper that does not need industry consensus to publish. The following are some general guidelines regarding Round Robin Test Programs. Consult your IPC staff liaison for full information.

1. Requests for undertaking round robin test programs may originate from one of two independent sources. That is, a request for testing may come from any IPC technical committee or it may come from the IPC Testing Committee.
2. Present the round robin program and budget to the IPC staff liaison, who will evaluate the project for relevance and need against the annual budget for round robin testing. The program may apply for IPC special funding for projects.

3. If the budget does not allow for the program, or if there are any questions, the program can be submitted to TAEC for additional corroboration on the importance of the work.
4. If approved, commitments shall be obtained from volunteer testers who will accomplish the test required. A Test Planning Group also will be available to support.
5. The Test Planning Group will develop a plan of action. IPC staff, the Testing Committee and TAEC will be available to support.
6. Once the Test Planning Group feels their plan of action is complete, it will be submitted to the IPC Board of Directors for review and approval.

7.4 Technical Reports, Technical Papers and White Papers

There will be times when a committee feels there is a need for published data about a specific area of technology which is either not addressed or current with the times. These reports can fill a need found during the development of a standard or publication or may come from a request by someone or a group of people in the industry. Many technical reports and technical papers are a result of round robin testing programs.

These reports and papers can follow a similar format to the IPC Standardization Procedures, but they do not have to meet the procedures. To assure relevance, these reports should go through some level of peer review by a committee or group of SMEs.

The final report or paper will be submitted to the TAEC for review and approval.

If you would like to propose a topic for a report or paper, contact your staff liaison.

8 IPC NATIONAL COMMITTEES

IPC is an international standards development organization, meaning not only are our standards used worldwide, but we have a worldwide network of volunteers contributing to their development and management.

Because volunteers prefer to meet in their region, on their local time and in their native language, IPC allows for the formation of National Committees.

IPC National Committees can:

- **Create new IPC standards** which may be unique to their home country or involve an area of technology which interests a group of individuals from that nation or region. These standards would be developed by an originating task group formed under the IPC general committee structure.
- **Respond to comments** on draft or published IPC standards under the responsibility of the National Committee (i.e., the National Committee is lead OTG).

    Note: If someone votes on a comment resolution at a National Committee meeting, they cannot cast another vote for that same comment at another task group meeting.
- **Develop national consensus comments or opinions** on draft or published IPC standards.
- **Provide forums for local networking** through meetings and other collaborative opportunities.

Contact an IPC staff liaison for information on forming a National Committee or how National Committees operate.

9 RECOGNITIONS, HONORS AND AWARDS

A job well done deserves recognition by your peers. You may be nominated for one of the following committee recognition awards.

- *Committee Leadership Award* This award is presented to chairs, vice-chair and co-chairs upon completion of a standard or specific program. Any chair is eligible, and the award can be received more than once.
- *Outgoing Committee Leadership Award* This award is presented to an outgoing chairman who has made contributions over a period of time.
- *Distinguished Committee Service (DCS) Award* This award is presented to IPC committee members who have made an exceptional contribution to a specific standard or other IPC program. Any person who is actively involved on an IPC committee is eligible, except members of the board of directors. This award can be received more than once. Exceptional contributions include consistent participation through attendance or regular contributions, ballot submission and having significant impact on a document or project.
- *Special Recognition Award* This award is presented to individuals who have made exceptional contributions through participation in IPC. The activity can be short-term or a one-time event. This award can be received more than once.

Volunteers are also invited to nominate other volunteers or chairs. If you know someone who is deserving of one of these awards, contact your IPC staff liaison.

Other official IPC awards and recognitions:

The *IPC Dieter W. Bergman Fellowship Award* honors IPC members who have exhibited ongoing leadership in developing and promoting IPC and global standardization efforts. This recognition is given to individuals who have fostered a collaborative spirit, made significant contributions to standards development and have consistently demonstrated a commitment to global standardization efforts and the electronics industry.

The recipient of this award will be eligible to bestow the Dieter Bergman Memorial Scholarship upon the university or college of his/her choice.

The *IPC Peter Sarmanian Corporate Recognition Award* honors and recognizes an IPC member corporation (or appropriate division) in the printed circuit board industry (supplier, board manufacturer, or OEM) that has made contributions to the printed circuit board industry, while demonstrating support of IPC through participation in technical and/or management programs. While it is individuals who volunteer their time and talent, corporate support can be critical to any individual (or group of individuals) continuing to participate. This award recognizes companies who have not been content to "let the other guy do it," but who have actively made our industry better. The award is named for former IPC Board Chairman Peter Sarmanian, former president of Printed Circuit Corp. Companies may receive this award more than once.

The *IPC Stan Plzak Corporate Recognition Award* honors and recognizes an IPC member corporation (or appropriate division) in the electronics assembly industry (supplier, EMS company, or OEM) that has made contributions to the electronics assembly industry, while demonstrating support of IPC through participation in technical and/or management programs. While it is individuals who volunteer their time and talent, corporate support can be critical to any individual (or group of individuals) continuing to

contribute. This award recognizes companies who have not been content to "let the other guy do it," but who have actively made our industry better. The award is named for former IPC Board Chairman Stanley Plzak, former president of Pensar Corporation, and a founding member of the IPC Electronics Manufacturing Services Industry Management Council. Companies may receive this award more than once.

The *IPC Raymond E. Pritchard Hall of Fame Award* is given to individuals in recognition of the highest level of achievement, extraordinary contributions and distinguished service to IPC and in the advancement of the industry, including the creation of a spirit of mutual esteem, respect and recognition among members consistent with the goals and mission of the IPC on a long-term basis. This is the highest level of recognition that IPC can give to an individual and is based on exceptional merit over a long-term basis, the operative imperative being long term.

The *President's Award* is given to IPC members who have exhibited ongoing leadership in IPC and have made significant contributions of their time and talent to the association and the electronics interconnect industry. Individuals can receive this award only once.