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Publishing an Industry-Consensus Standard

The pros and cons of an open process.

The IPC Technical Department is preparing for an audit by the American National Standards Institute (ANSI). As audits go, it will be pretty typical. We will set out stacks of papers, and the auditor will examine them for errors. A question will come up about something, and we will have to look through more papers. This year's audit is focused on standards that had to be reballoted because of negative votes. The concern is that IPC staff assured that the committee made every effort to resolve the vote to everyone's satisfaction.

We have an over 30-page document that defines the process we are required to follow. The process itself is periodically reviewed by ANSI against a set of minimum requirements. We know that every ANSI document we publish is subject to audit, and we are prepared. In the end, the auditor will present some recommendations to both our process and implementation.

Sometimes we have to negotiate on any changes in our process because IPC's peer-consensus process is more open than that of many other standard development organizations. Although, for example, ANSI can relegate final approval to its Board of Directors or to a small representative group from the industry, this approach is not acceptable to IPC.

We have learned that standards with the largest development group have the broadest content and are more readily accepted by industry. We have also learned, sometimes painfully, that large groups present our volunteer leaders and IPC staff liaisons with some pretty big challenges.

Because of our desire for maintaining an open process, we are willing to work through these challenges. For example, the IPC-A-610 committee has over 150 members and a typical meeting has 35 to 40 impassioned participants. With several hundred thousand users around the world, the committee recognizes that they cannot please everyone all of the time. Sometimes the best solution comes from recognizing that only one answer that is the best does not exist.

Our process of openness probably adds months to the development cycle. Staff liaisons to a committee must assure that every technical comment submitted to a draft is reviewed and resolved by the committee. They must also assure that the comment and resolution are made public.

IPC membership is not required to participate in document development, and committee participation does not require attendance at every meeting. We ask that you review documents that will impact your business and keep your comments technical and constructive. Also, be sure to substantiate your recommendations. ■

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Assembly Standards Update 2003 Published Standards

Design

IPC-2221A, *Generic Standard on Printed Board Design*

IPC-2226, *Sectional Design Standard for High Density Interconnect (HDI) Boards*

IPC-2501, *Definition of Web-Based Exchange of XML Data*

IPC-2546, *Sectional Requirements for Shop-Floor Equipment Communication Messages (CAMX) for Printed Circuit Board Assembly with Amendment 1*

Electronics Assembly

IPC/EIA/JEDEC J-STD-002B, *Solderability Tests for Component Leads, Terminations, Lugs, Terminals and Wires*

IPC/EIA/JEDEC J-STD-003A, *Solderability Tests for Printed Boards*

IPC-J-STD-027, *Mechanical Outline Standard for Flip Chip and Chip Size Configurations*

IPC-A-610C, *Acceptability of Electronic Assemblies in German, Danish, Finnish and Japanese*

IPC-7912A, *Calculation of DPMO and Manufacturing Indices for Printed Board Assemblies*

Printed Circuit Boards and Materials

IPC-WP/TR-584, *IPC White Paper and Technical Report on Halogen-Free Materials Used for Printed Circuit Boards and Assemblies*

IPC-5701, *Users Guide for Cleanliness of Unpopulated Printed Boards*

IPC-9151A, *Printed Board Process, Capability, Quality and Relative Reliability (PCQR2) Benchmark Test Standard and Database*

Optoelectronics

IPC-0040, *Optoelectronic Assembly and Packaging Technology*

IPC-8413-1, *Specification for Process Carriers Used to Handle Optical Fibers in Manufacturing*

IPC National Technology Roadmap for Electronic Interconnections