



Standards Operating Procedure: An IPC Expo Diary

t's -55 degrees outside, and I see clouds and stormy weather on the horizon. Our group of brave travelers is huddled closely together (for warmth they say) while dining on food barely fit for human consumption. I'm braving these inhospitable living conditions to write this column for you. No, I'm not on top of Mount McKinley, I'm writing from 30,000 feet up on an airplane taking me to Stockholm for the semi-annual IEC working group meetings (hey, at least I am toughing it out in economy).

As I reflect back over all that happened at IPC Expo, from the early breakfast meetings to the late dinner meetings, I thought I'd write a summary of the "goings on" for those of you who couldn't make it. Those of you who know me understand that I spend a significant amount of my time working on the future of our industry standardization efforts, and for some reason April was the month this year for everybody to meet . . . at once.

My Expo week actually started the Saturday before Expo (April Fools Day), when diehard "fools" like myself meet in committee sessions. These all-day weekend meetings draw only the hardcore participants, and substantial work usually gets accomplished. Most Expo-week committee meetings are two to three hours long, and they draw many people that have not been involved in the document development up to this point. This causes both great joy and great sorrow. The joy comes from the fact that new people who come to the meeting give new perspectives and life to the small group of us who actually do most of the "grunt work" of creating or revising a standard. The sorrow comes from these same people; they have not been involved up to that point in the document development, and much of the meeting time is spent discussing history and the reasons certain things are in the working proposal. With all of this going on, it is difficult to actually make significant progress on a specification during Expo week.

Sunday April 2

On Sunday, the IPC/CCA Golf tournament invaded three prominent San Diego golf courses. As chairman of the IPC/CCA, it was my duty to be a part of the tournament. Anytime I can use the word "duty" when referring to playing golf, it is a joyous occasion! The tournament is always a good networking opportunity and gives both suppliers and competitors a chance to let their hair down

without spending too much time talking about work. That evening, the golfers got together for the awards and raffle dinner. They were treated to a great steak dinner and raffle.

Monday April 3

Early Monday morning is when the technical committee meetings started in earnest. There were meetings on rigid board performance and design, HDI materials, halogen-free materials, and flexible materials. I taught a class in the afternoon on testing tools for the PWB industry to a packed room of students. IPC Video taped my class, so I had to watch my P's & Q's. In general, the tutorial and workshop sessions throughout the week exceeded everyone's expectations. There was a tremendous amount of on-site registration for all of the training sessions, which is a feat when the sun is shining in San Diego. Monday evening capped off the day with the IPC's Technical Activities Executive Committee meeting to continue work on future IPC plans.

Tuesday April 4

Tuesday's technical sessions centered on high-frequency design and performance, HDI board performance, and test methods. Tuesday's hot topic was the newly published IPC-A-600F and IPC-6012A—and what direction their successor(s) would take. Talk of merging these documents into one brought everyone out of the woodwork. Nothing firm was decided, but emotions on the issue ran high in both directions.

The exhibition also opened on Tuesday to the typical fanfare and ribbon cutting, and this first day actually turned out to be the best day of the exhibition for our booth. For some strange reason the Expo Hall was left open until 7:00 p.m. that night. The only saving grace to this crazy late hour was that beer was served on the show floor from 5:30 until close. The only booths with traffic from 5:30 to 7:00 were the ones that were near the Beer Distribution Points (BDP). For next year's Expo I have already put in our booth reservation near one of these coveted BDP spots. I hope to offer pretzels, and wholeheartedly believe that I will have the majority of my booth traffic within that pretzel serving hour-and-a-half!

Wednesday April 5

Wednesday started early with the IPC/CCA breakfast, which featured talks on the future of e-

commerce in our industry. I then moved on to more technical committee meetings on controlled impedance, flexible board performance, PTH reliability, plugged via performance, and current-carrying capacity. The show opened at 10:00 a.m., and I was finally able to break from the committee meetings around 11:00. I was sitting in our booth at noon when my cell phone rings, and Doug Sober from Polyclad is on the other end telling me he is sitting on a podium at the awards lunch head table. There's an empty chair next to him on the podium with my nametag on it. And lunch is about to start. Needless to say I bolted out of the exhibition hall and ran to the awards lunch, where I sheepishly slunk up to the head table. I had mistakenly scheduled this event for Thursday, and was very glad that Mr. Sober was kind enough to call me as I received my lifetime sentence . . . I mean membership to the Technical Activities Executive Council (TAEC) that afternoon.

Wednesday was also home to the IPC's committee on Underwriters Laboratories (UL) specifications. The IPC group put together comments from the industry. Those of us on UL's Industry Advisory Group (IAG) will take those comments to UL's meeting.

Thursday April 6

This year, UL decided to have its IAG meeting in conjunction with the IPC meetings. Group members hail from industry all over the world and work with UL to try and improve the quality of UL's documents. We met both Thursday and Friday in San Diego to work on the UL specifications for materials, rigid boards and flexible boards.

This was an especially interesting meeting, as some major changes are taking place for UL and its standards. UL standards have historically been developed inside of UL with little help or input from industry. UL has recently made the decision to move its standards into the "industry consensus" mode to get American National Standards (ANSI) approval. Our IAG group will be changing to a "Standards Technical Panel" (STP) in order to facilitate ANSI approval of UL documents. Ultimately, UL would like its documents to be internationally IEC approved standards; obtaining ANSI approval is the path it has chosen to partially accomplish this.

As you can see I had a fun-filled week in San Diego. Until next time, this is your Expo correspondent at 30,000 feet.

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