



Chapter Chatter

Todd Robinson, Associate Editor

Not Very Funny at the Time . . .

I still haven't decided if time has really made this story funny or not. I get more chills than chuckles when I imagine myself in Dave's shoes. In any case, this must have been an excellent opportunity for Dave to update his resume. As usual and customary, our story is told by the teller, with very minor editing to enhance the text flow (believability) by the editing staff.

"Well, there was the time back in the mid 1970's when I was performing an Electrostatic Discharge demonstration for the Dallas Chapter with a home made discharge probe. My ESD probe was about 30 inches long and had a banana jack receptacle located at the hand held end of the probe. The receptacle was used for a ground strap or a loop of wire (to generate a magnetic field), which formed the return path of the generator.

I placed the Unit Under Test (UUT) on the top of a table and proceeded to turn the UUT power on. This particular UUT was a word processing system, which included a large floor standing tower. It literally took two people to lift and place the UUT on the table top for my demo. The side cover for the card cage area, containing all the circuit boards, had been previously removed and I forgot to replace the side cover

for my presentation. Once the UUT was in place, I proceeded to "fire-up" the ESD gun, which did not have a trigger as the high voltage was on the tip all the time.

So, the UUT was sitting on top of the table with the side cover off. Everyone in the room was seated and watching as I explained what I was about to do. The ESD gun had about 25 KV on the tip. Then, I dropped my paper with my notes to the floor. As I bent down to pick up my notes, I accidentally touched the card cage area of the UUT with the ESD probe tip. There was a large discharge noise and then I realized what I done. I had just damaged numerous circuit boards and blown many ICs. This incident was not really funny, but then again it was. The UUT I borrowed was the only prototype my employer had on this particular project. Yes, I had borrowed the UUT from my employer for this ESD demonstration. When my error became known, you could have heard my manager screaming from two blocks away.

There are several lessons I learned at the time: 1) don't borrow the only prototype of a project from anyone, and 2) when a person is talking they are not really paying attention to what they are doing, and finally 3) be really careful when dealing with a high voltage device."

Austria

On June 12, the EMC Chapter in Austria, the Institute for Electronics (TU-Graz) and the Seibersdorf EMC Test Laboratory (Company Austrian Research Centers - ARC) organized a well-attended "EMC Meeting 2007" at the University of Technology in Graz. The following topics were presented and discussed:

- Radiation from Bus Cables (Austrian Research Center - ARC)
 - Working relationship of System- and Chip-Designers (Austria Microsystems)
 - Design of filters for EMC (Würth Elektronik)
 - Improvements in EMC measurement (Rohde & Schwarz)
 - Electromagnetic Emission of integrated Circuits (Uni-Linz)
 - Design of filters using LT-Spice
 - Circuit- and PCB-Design with regard to EMC (Infineon, TU-Graz)
- During the lunch break and after the presentations, the audience enjoyed the opportunity to discuss the presentations, visit with colleagues and enjoy the small, but high quality exhibition.



Over 50 people participated in the one-day EMC event organized by the Austria EMC Chapter.



Exhibitors showcased the latest in EMC products and services in the exhibition area at Austria's EMC Meeting 2007.

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Austria EMC Chapter Members and speakers shown left to right, forward to back: Winkler (TU-Graz), Deutschmann (Infineon), Maier (Austria Microsystems), Stecher (Robde & Schwarz), Ostermann (Uni-Linz), Lamedschwandner (ARC, Campus Seibersdorf), Klein (Würth).



Distinguished Lecturer Dr. Erping Li visited the Benelux EMC Chapter in Amsterdam and gave a presentation on high-speed electronics and related EMC problems.

Benelux

On Friday September 21, Dr. Erping Li gave a lecture at the Amsterdam School of Technology. This lecture was organized by the IEEE Benelux EMC Chapter and was well attended by 32 people. They really enjoyed the detailed lecture titled "Electromagnetic Compatibility of High Speed Electronic Packaging and its Simulation." Dr. Li introduced the fundamental EMC and signal integrity issues of high-frequency electronic circuits and its packaging. The key EMC problems arising from high-speed ICs and their packaging were discussed. The current modelling and simulation methods used for IC packages related to EMC problems were identified and discussed. After the lecture, questions and discussions started, which were continued during the "after lecture borrel", as a drink is called in our region. Later on, Dr. Li was given a tour of Amsterdam, including some famous areas of the town. The Benelux EMC Chapter expresses its gratitude to the EMC Society Distinguished Lectur-

er program, that they could host Dr. Li for this interesting and well-attended meeting.

Central Texas

The Central Texas Chapter held a meeting at Professional Testing in Austin over the summer. The purpose of the meeting was to discuss planning for the 2009 IEEE International Symposium on EMC to be held August 17-21, 2009 in Austin, Texas. Chapter Chair Michael Royer of Professional Testing welcomed everyone and provided a deli sandwich buffet. At the meeting, held inside the lab's ten-meter chamber, Dave Staggs provided an overview of the administrative functions of the EMC 2007 symposium steering committee. Dave was on the committee for this year's symposium as the Special Sessions and Keynote Speaker Chair. That experience will serve him well as chair of the EMC 2009 symposium steering committee. Several chapter members attended, many of who had previous experience with EMC 1997

in Austin. That promises a great symposium will take place in two years!

Oregon-SW Washington

After a summer shutdown, the Oregon-SW Washington Chapter opened its September meeting with a talk by Brent DeWitt of HP titled "Changes in the Medical EMC Standard." Mr. DeWitt has 30 years experience in EMC, and has served 8 years on the IEC committee developing the EMC component of IEC Medical Standard 60601-1-2. The IEC Medical Devices Directive lays out the fundamental requirements for medical devices. Under this is 60601-1-1, 1st edition, which covers patient safety with specific EMC requirements, but it does not cover EMC affecting correct performance. The second edition added EMC requirements addressing performance but some elements depended upon the other standards, which were delayed, and this caused numerous problems and questions. To rectify the situation, Amend-



Central Texas Chapter members including (from left) Tim Stevens of Dell, Chair Mike Royer of Professional Testing, and Dr. Robert Blake of the University of Texas enjoyed a deli sandwich buffet prior to the start of the meeting.



Dave Staggs (standing rear) presents an overview of EMC 2009 committee functions to the Central Texas Chapter. In 2009, the annual IEEE EMC symposium will take place in Austin, Texas.



Brent DeWitt of HP discussing new EMC requirements for medical equipment at the Oregon and SW Washington Chapter meeting.



Mr. William Kimmel (right) fields some questions during his presentation to the Rocky Mountain Chapter last summer.

ment 1 was added. There was much controversy concerning the addition of EMI related performance specifications to a standard on patient safety. So the third edition returned the EMC component of 60601-1-2 to its original function of patient safety, and correct performance in an EMC environment were targeted for a new 60XXX standard. This standard is still under development. The present situation is that medical devices will not harm a patient in an EMI environment, but there are

no requirements for them to perform correctly in an EMI environment.

Rocky Mountain

Meeting in Westminster (a northern suburb of Denver), the Rocky Mountain Chapter of the EMC Society (RMCEMC) continues to have a strong program on a wide variety of EMC related topics. On May 15, Mr. Peter Biocca (Kester) spoke to the Chapter about "Lead-free Soldering

Materials and Processes." On June 12, Dr. Joan Mitchell (IBM) presented "Career Development" using the principles she wrote about in her recently published book, [Straight Talk About Taking Charge of Your Career](#). As an extra feature of this meeting, the Chapter brought in Senior Members and Fellows to interview well-deserving qualified engineers and sponsor them in the process of upgrading their IEEE membership to Senior Member status. As a result,

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Mr. Kimmel's Rocky Mountain presentation in progress ... all eyes on him.

the Chapter has five new IEEE Senior Members. Then on September 17, Mr. William Kimmel (Kimmel & Gerke Associates) presented "EMC Systems Engineering." In his talk, Mr. Kimmel emphasized the aspects of Electromagnetic Compatibility that go far beyond mere achieving the legal standards and move into the realm of improving the quality of product design. The Chapter will be the first to try out the Webinar tech-

nology for an EMC technical presentation. On October 9, we will have EMC Society Distinguished Lecturer Dr. Jun Fan (University of Missouri Rolla) speak to the Chapter on "Power Distribution Network Design for High-Speed Printed Circuit Boards" via Webinar. Our membership will provide the EMC Society with the first surveys evaluating Webinar technology for future EMC Society Distinguished Lecturer technical presentations.



Dr. Vince Rodriguez of ETS-Lindgren speaks to a crowd of some 100 Chapter members in SE Michigan.



Riad Ghabra of Lear (left) questions speaker Vince Rodriguez following his presentation on full vehicle EMC testing.



Speaker Lee Hill (left) of SILENT' chats with SE Michigan Chapter Chair Scott Lytle of Yazaki North America prior to the start of the Tech Tour seminar.

SE Michigan

Some 100 SE Michigan EMC Chapter members and friends gathered on September 25 at the Fairlane Center on the University of Michigan - Dearborn campus to hear several speakers in town as part of the second annual "Tech Tour." Sponsored by Rohde & Schwarz, SILENT, Conformity and ETS-Lindgren, three speakers spent one afternoon covering important EMC topics. After a warm welcome



Tony Seccia of Rohde & Schwarz (left) and Robert Bratschi of EM Test show off new EMC test equipment during the SE Michigan's September Tech Tour.



Scott Scherbaty (left) of Yazaki North America stops by the tabletop display promoting the 2008 IEEE International Symposium on EMC in Detroit and visits with Bob Neff.



Larry Banansky (left) of GM caught up with Keith Frazier of Ford during the SE Michigan Tech Tour.



Jim Teune of Gentex enjoyed relaxing with Michele Hobbs of Toyota during the reception following the three presentations.



Chad Blueber, Brian Hoff, Larry Sheridan of Delta Technology Solutions in Dayton, and Bill Imbierowicz, (from left) drove several hours to Dearborn to hear the great Tech Tour presentations. Chad, Brian and Bill are with Delphi in Kokomo, Indiana.



Kevin Baldwin of ETS-Lindgren, Rob Kado of Chrysler, Phil Dew of Delta Technology Solutions and Vic Hudson of Robde & Schwarz (from left) talked EMC during the reception.

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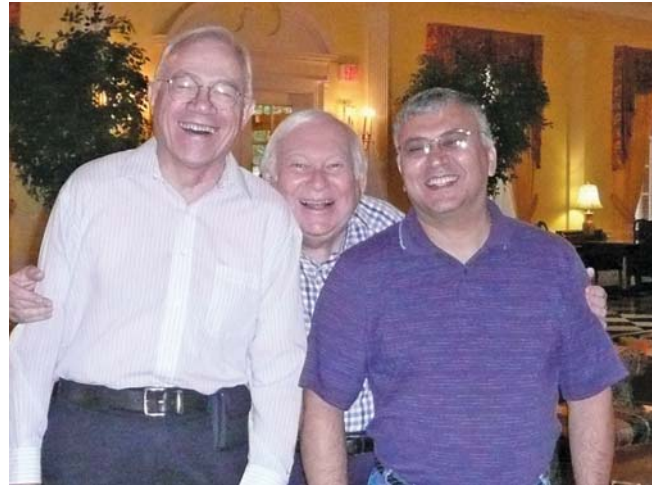
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Concluding the Tech Tour, Dr. Shridhar (left) of the University of Michigan – Dearborn drew the winning raffle ticket for Andrew Krochmal of Visteon as Tammy Hojat of ETS-Lindgren looks on.



SE Michigan Chapter members Terry North, formerly of Chrysler, Bill Sperber, formerly of GM, and Jim Muccioli of X2Y Attenuators (from left) gather in the lobby of the historic Dearborn Inn. Astute readers will recognize Bill (and his car!) in the chamber photo shown in the EMC 2008 Symposium brochure.

from Dr. Shridhar, Associate Provost at the University of Michigan - Dearborn, and remarks from Scott Lytle of Yazaki, SE Michigan Chapter Chair, Robert Bratschi of EM Test presented "Automotive Pulse Testing Standards." Lee Hill of SILENT presented "Characterize EMI Lab RF Cables, Connectors and Accessories Using E-Bay and a Test Receiver" and Vince Rodriguez of ETS-Lindgren presented "Full Vehicle Testing: Making CISPR 25 and ISO 11451 Measurements in a Single Chamber." During the breaks and at the reception following the presentations, Chapter members networked and caught up on the latest EMC activity in the area, or spent time one-on-one questioning the speakers following their respective presentations. Bob Neff of the 2008 IEEE International Symposium on EMC coming this August 18-22 in

Detroit set up a tabletop display to promote the symposium and cheerfully handed out brochures. After a summer break and time off from Chapter meetings, everyone enjoyed reconnecting at the Chapter's kick off event in September. Many Chapter members are also members of the EMC 2008 Symposium steering committee and are getting ready for this summer's Symposium. This will be a very busy year for them!

Twin Cities

The EMC Chapter of the Twin Cities Section has had three meetings so far in 2007. The first meeting was held on May 10 at Nonin Incorporated in Plymouth, Minnesota. It was hosted by Brodie Pedersen and attended by about 25 people. Harold Rudnick spoke about transient immunity test-

ing and the updates that have occurred to the 61000-4-x series this past year. The meeting included a tour of Nonin's EMC lab. The second meeting was a lunch meeting held on August 14 at the Mermaid Entertainment and Event Center in Mounds View, Minnesota. The featured speaker was Jason Smith from Amplifier Research who spoke on "IEC 61000-4-3: 2006 - Edition 3 - Standard Update and How to Select the Correct Amplifier." 16 people attended this meeting; twelve of who were IEEE members. The third meeting of the year was a "technical download" session held in the Wigwam room of the Ramada Mall of America (formerly the Thunderbird Hotel) in Bloomington, Minnesota. It was held on September 14th, immediately after the 2007 Minnesota EMC Event. About 12 people, ten of who were IEEE members,



Jason Smith of AR Worldwide opening his presentation to the Twin Cities Chapter.



Joel Peltier of Medtronic (Twin Cities EMC Chapter Chair seated left) listening closely to Jason Smith's presentation.



The audience at the Twin Cities meeting listened intently to Jason Smith. Pictured at the first table, from left to right, Bob Schlentz (EMC consultant), Terrence Brown (Lockheed Martin), and Wes Clement (Medtronic). At the rear table, from left to right, Dave Zimmerman (TUV SUD America), Robert Bebringer (TUV SUD America), and David Schaefer (TUV SUD America).

attended the “technical download” session. The topics covered in the “technical download” session included

MIL-STD-461E, broadband power line communications, RTCA DO-160E and 160F, immunity testing for

commercial electronics, EMC for pace-makers and ICDs, and the new EU EMC directive. EMC