



The Analog

A Newsletter of the Central Texas Section of the Institute of Electrical and Electronics Engineers Inc.

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IEEE CONSULTANTS' NETWORK SOCIETY MEETING Thursday, March 6, 1997

Time: Social & Networking: 6:00 PM
Program: 6:30 PM
Place: Red Lion Inn (Restaurant)
Austin, TX

Speakers are frequently business administration specialists in areas of interest to small businesses and consultants. Representatives from central Texas businesses are also invited to network or participate in general discussions of their specific technical problems.

Directions: North of 290E on the East I-35 access road in Austin

For more information please call:
Georgetown.....B. Thorpe (512) 863-8621
SA.....Paul Alesu (210) 558-7270

CENTRAL TEXAS ELECTRONICS ASSOCIATION (CTEA) MEETING Wednesday, March 12, 1997

Time: Social: 6:00 PM
Program: 7:00 PM
Place: Holiday Inn North West
Austin, TX
Speaker: Kermit Aguayo
XeTel Corporation
Austin, TX

Program: Case Study: The Effects of Chipbonder Voids on PWA Electrical Testing

Electronic assemblies have become very complex with the advent of Surface Mount Technology. As the electronic components have decreased in size, circuits are designed to expand the functionality of the assembly. These more complicated designs call out for many more components assembled to the boards than ever before. As a result, the potential for electrical failure at test increases exponentially. The failure root causes generate from either component failures and/or process failures. The more common of electrical failures emanates from process failures, wrong components, parts not polarized properly, missing part, parts not properly soldered, ironically contaminated boards. This presentation describes the investigation work done on effects at electrical testing relating to

voids in Chipbonder Adhesive application on passive components for wave solder attachment.

Biography: Kermit Aguayo, Process Engineering Manager/Senior Engineer R&D, has been with XeTel since 1987. He is a long-time member of CTEA, ISHM, and SMTA and has contributed many times to those organizations. He has presented technical papers at Nepcon West and SMI relating to nitrogen use in reflow environments, published articles in trade magazines relating to Statistical Process Control and the use of No Clean soldering chemistry, and participated in panel discussions relating to Clean and No Clean chemistry technology at the CTEA technical symposium. Mr. Aguayo received the second annual 1995 Founders Award at XeTel Corporation for meritorious achievements and contributions.

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ASSP SOCIETY MEETING Thursday, March 27, 1997

Time: Social: 6:30 PM
Dinner: 7:00 PM
Program: 8:00 PM
Place: Tree Tops Restaurant
New Braunfels, TX

Speaker: Dave Runnels, Sprint
Program: SONET Deployment in National Networks

National Carriers are upgrading their networks to SONET. This presentation will discuss SONET in general, as well as show Sprint's local, national and international SONET network deployment plans.

Biography: Dave Runnels is a Senior Network Engineer with Sprint. Working in the Business Services Group, Mr. Runnels helps solve business telecommunications needs using Sprint's products and services. His expertise is in Data Communications. Mr. Runnels has a BS in Computer Science from the University of Texas at San Antonio and a MS in Telecommunications from SMU. He has been an IEEE member since 1992.

Directions: From I-35, take the McQueeney exit (FM 725) and proceed west on Seguin Street toward downtown New Braunfels. Enter the circle downtown and take the first right onto San Antonio Street. Tree Tops is on the right just before you reach the bridge.

Reservations:

Austin Les Johnson (512) 331-7125
New Braunfels/San
Marcos W. Rogers (210) 885-4411
SA Scott Atkinson (210) 545-4228

CENTRAL TEXAS CHAPTER IEEE COMPUTER SOCIETY MEETING Thursday, March 27, 1997

Time: Social: 7:30 PM
Program: 8:00 PM
Place: UT Applied Research Lab
Auditorium (UT ARL)
10000 Burnet Rd.
Austin, TX

Speaker: Dr. Gary W. Cobb
Dell Computer Corporation
Program: Software Error Estimation Program: A Stopping Condition for Software Testing

For several decades of software developments, managers made the decision of when to ship the software. There have been many criteria put forth to help managers to better understand the signs of a product that is not ready for shipment, but there are few tools that can forecast when to stop testing and ship the product. Customers and salespersons often conspire to hurry up the software shipping date, only later to discover that its stability is poor or that there are errors among its outputs. Today, there's a software metrics tool that enables a software development team to make accurate forecasts of when a software product will be ready to ship.

Bibliography: Dr. Gary W. Cobb has been a member of Lockheed Martin's Software Engineering Process Group (SEPG) for five years. He established process standards, defined and improved processes for software development and maintenance, and identified software technology needs. He was the chairman of Lockheed Martin's Software Metrics Advisory Council, in which he collected and

analyzed the company's software metrics. Currently, Dr. Cobb is an Information System Manager at Dell Computer Corporation. He heads the group assigned the task of improving the organization's software development processes and product quality and performance.

Dr. Cobb holds a bachelor's, master's, and doctor's degrees from The University of Texas at Austin. He is the Director of the Multimedia Laboratory at Southwest Texas State University where he teaches classes on Multimedia Systems Design. Dr. Cobb is also on the faculty of the Software Quality Institute, a board member of the Software Process Improvement Network, and an examiner for the Greater Austin Quality Award.

Directions:

From IH 35 - Take the 183 North exit. Take the Burnet Road exit and go right on Burnet. UT ARL will be on the left across from the Sonic Drive-in.

From MoPac - Take the Braker exit, cross over Mopac, and turn right on Burnet. UT ARL will be on the right across from the Sonic.

Reservations are not required but helpful. Attendees need not be IEEE members. Please reserve by e-mail if possible.

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Secondary Contact:

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SECTION MEETING

Joint with

**POWER ENGINEERING SOCIETY
and EMC SOCIETY**

Thursday, March 27, 1997

Time: *Social:* 6:30 PM
Dinner: 7:00 PM (Catered
Bar-B-Q) \$10.00
(\$5.00 students)

Program: 8:00 PM

Place: Thermon Facility
100 Thermon Drive
Training Room, Building 3
San Marcos, TX

Speaker: Ben C. Johnson (F)
VP of North American Sales
Thermon

Program: Future Directions in IEEE
Standards

The IEEE has taken the first steps to establish a new entity, the IEEE Standards Association. Draft Bylaws for the new organization state in the scope: "As a global organization, IEEE generates standards publications that will have the broadest potential international acceptance." Mr. Johnson has been active in

all of this and will tell us more about the new entity and its planned activities.

Biography: Mr. Johnson is a newly elected Fellow of the Institute. His career covers a broad range of industrial experience, including 26 years with Thermon and 8 years in the petrochemical industry with the Ethyl Corp. and the Diamond Shamrock Corp. He was Thermon's VP of Engineering for 16 years, responsible for product application design, field and construction services. He has been a member of IEEE for 16 years and is a member of the IEEE Standards Board. He is past chairman of the Petroleum and Chemical Industry Committee

(PCIC) of the IEEE Industry Applications Society. He is Chairman of IEC TC 31 (Electrical Apparatus for Explosive Atmospheres) Work Group 5 Committee.

Reservations: Please call by Tuesday, March 25:

SAJim Polonis (210) 522-2283
AustinBob Hunter (512) 345-8132

Directions: From I-35 in San Marcos, take Exit 202. The Thermon facility is located on the west frontage road, south of the east-west road at that point. Building 3 is the second building on the right.

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1997-98 NOMINATIONS FOR IEEE SECTION OFFICERS

Elections for 1997-98 Central Texas Section Officers will be held during our April Meeting. The Nominations Committee has nominated the following:

Chairman**Ernest A. Franke**
Ernest Franke is a senior member of IEEE and also a member of the Computer Society, the Systems, Man and Cybernetics (SMC) Society, and the Robotics and Automation Society. Ernest has been active in the Society of Manufacturing Engineers, holding offices in the San Antonio Chapter, serving on the Board of Advisors of Robotics International of SME, and organizing several conferences on robotics in the aerospace industry. He is currently an Institute Engineer at Southwest Research Institute and a Registered Professional Engineer in the State of Texas.

Vice Chairman.....**Larry M. Deuser**
Larry is currently Principal Scientist and Director of the Signal and Image Processing Department at Tracor, Inc. in Austin. At Tracor, he has worked on innovative ap-

proaches to signal and image processing applied to the underwater acoustical and optical domains. Techniques have involved artificial neural networks, parametric and nonparametric classification, optimal feature extraction and selection, environmental adaptivity, and adaptive processing. Larry is a Registered Professional Engineering in the State of Texas.

Secretary**Farzan Abdolsalami**
Dr. Abdolsalami, a Registered Professional Engineer in the State of Texas, is an Associate Professor in the Department of Engineering Science at Trinity University in San Antonio. Dr. Farzan has co-authored numerous papers in his research interest area. His students have received national recognition for projects under his tutelage and he has received the IEEE distinguished service award during both the '92-'93 and '93-'94 academic year.

Treasurer**Nomination Open**
The Section is currently taking nominations for the office of Treasurer.

CALENDAR OF MEETINGS FOR MARCH 1997

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
3	4	5	6 CONSULTANTS' NETWORK MTG (Austin)	7
10	11	12 CTEA MTG (Austin)	13	14
17	18	19	20	21
24	25	26 ASSP MTG 27 (New Braunfels) COMPUTER MTG (Austin) SECTION, POWER ENG. & EMC MTG (San Marcos)	28	