



The Analog

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IEEE CONSULTANTS' NETWORK SOCIETY MEETING

Thursday, May 1, 1997

Time: Social & Networking: 6:30 PM
Program: 7:00 to 9:00 PM
Place: IC2 Facilities
2815 San Gabriel
Austin, TX

Mr. Harvey R. Corn, managing partner of Harvey Corn & Co. will speak on "IRS Rulings and Interpretations into Context."

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

CENTRAL TEXAS SECTION MEETING

Thursday, May 8, 1997

Time: Social 6:00 PM
Dinner: 6:30 PM (\$10 for members, \$5 for students)
Student Presentations: 7:30 PM
Recognition & Awards: 8:30 PM
Place: Peppers by the Falls
San Marcos, Texas
Program: Student Branch Presentations and Section Recognition and Appreciation

Last summer our four student branches submitted proposals for projects that they wished to carry out with assistance from the Section. All of their projects have been successful and they will give brief presentations on what they have accomplished with the grants we provided. They will also present plans for the projects they are planning for next year.

The success of the Section (and IEEE itself) depends greatly on the efforts of volunteers. At the meeting, Chairman Bruce Williams will recognize the section officers, society chairmen, student branch officers, committee members and others who have contributed to our success this past year. Also, recent Fellows and IEEE award winners will be recognized.

Directions: From Austin, take I-35 South to San Marcos. From San Antonio, take I-35 North to San Marcos. Take the Aquarena Springs Drive exit. Go west past the SWTSU Stadium. After crossing the San Marcos River, turn right on Ses-

son Road. Peppers at the Falls will be on the right.

Reservations: Reservations are required by NOON on Tuesday, May 6th.
Austin.....Kelly Butler (512) 452-2811
kbutler@ccst.com
SA.....M. Abdolsalami (210) 431-2047
m.abdolsalami@ieccc.org

IEEE POWER ENGINEERING SOCIETY MEETING

Thursday, May 15

Time: Social: 6:30 PM
Dinner: 7:00 PM
Program: 8:00 PM
Place: Peppers at the Falls
Downstairs Meeting Room
San Marcos, TX
Speaker: Sam Jones
Director, ERCOT - ISO
Program: The ERCOT-ISO

The presentation will include a discussion of the history, current status and future activities of the newly created Electric Reliability Council of Texas (ERCOT) Independent System Operator (ISO). The ERCOT ISO was mandated by Public Utility Commission of Texas rule made in February 1996 and created by a joint industry filing by representatives of all entities now involved in the wholesale bulk electric marketplace. The ISO was charged by the PUCT with responsibility for bulk electric system reliability, market facilitation including operation of an Open Access Same time Information System (OASIS), and coordination of future bulk transmission system planning in ERCOT. ISOs are now being created in various regions of North America to provide for the reliability of the bulk electric grid in an open access environment. The ERCOT ISO has been in operation since late 1996 and is the only ISO currently approved and operating in North America.

Biography: Sam R. Jones is the Director of the newly created Electric Reliability Council of Texas (ERCOT) Independent System Operator (ISO). Prior to assuming this responsibility at the ERCOT ISO, Mr. Jones was employed by the City of Austin, Texas Electric Utility for over 35 years. During his career with the City of Austin, he held engineering and manage-

ment positions in the areas of distribution, transmission, substation, generation and system operations. He was responsible for the development of Austin's first energy control center. He retired from the City of Austin as Director of Generation and Energy Control. He has been active in inter-utility reliability for over 15 years. He is a two time past chair of the ERCOT Operating Subcommittee, an eight-year member of the North American Electric Reliability Council (NERC) Operating Committee, and a past chair or member of numerous NERC and ERCOT subcommittees and task forces. Mr. Jones has a BS in Electrical Engineering from the University of Texas at Austin and is a registered professional engineer.

Directions: From Austin take I-35 South to San Marcos. From San Antonio take I-35 North to San Marcos. Take the Aquarena Springs Drive exit. Go west past the SWTSU Stadium. Cross the San Marcos River, turn right on Sesson Road. Peppers at the Falls will be on the right.

Reservations: Call David Aldrich at 1-800-257-2883 or Doug Evans at (512) 248-3137 by Wednesday, May 14.

EMC SOCIETY MEETING

Wednesday, May 21, 1997

Time: Social: 6:30 PM
Dinner: 7:00 PM
Program: 8:00 PM
Place: Molly Joe's Restaurant
1153 Oasis
New Braunfels, TX
Speaker: Franz Gisin
Silicon Graphics, Inc.
Program: Fun With the Fourier Series

Randomly pick up any EMC book or article that covers Fourier Series and chances are the relationship between the time and frequency domains is explained in terms of either a symmetrical rectangular or trapezoidal waveform centered about the t=0 axis. While they may serve as excellent introductory examples, they cannot be used to analyze more complex waveforms having unequal rise and fall times, overshoots, and undershoots. Nor can these simple waveforms be used to model more complex scenarios such as the spectral analysis of digital differential

drives, where the concept of "cancellation" also requires phase information. This presentation develops a simple but effective way of obtaining the Fourier Series of complex waveforms, and then analyzes several common problems normally encountered in the EMC field. Topics that will be covered include:

- Conceptual development of the Fourier Series for a piecewise linear periodic waveform;
- An analysis of rectangular pulses that shows how decreasing the pulse width often results in increasing harmonic levels;
- An analysis of symmetrical trapezoidal waveforms that shows how a 10 MHz clock can actually have lower harmonic levels than a 1 MHz clock;
- An analysis of nonsymmetrical rise/fall time trapezoidal waveforms that shows the reduction in harmonic levels one can obtain if only the rise (or fall) time is increased;
- An analysis of trapezoidal waveforms having overshoots and ringing and how much overshoot and ringing can be tolerated;
- An analysis of digital differential drivers and how the common perception that differential driven signals are "somehow" less prone to cause emission problems are not always true.

Biography: Franz Gisin has a BS in Electrical Engineering from the University of Idaho and an MS in Applied Mathematics from the University of Santa Clark. He is currently EMC Manager at Silicon Graphics, Inc. He is a senior member of the EMC Society, a Distinguished Lecturer, Chair of the Santa Clark Valley Chapter, and a member of the EMC Society Board of Directors.

Directions: From I-35, take the Sequin-Borne exit (46 - No. 187). Molly Joe's is approximately 1/4 mile west on the left.

Reservations: None necessary.

SIGNAL COMMUNICATIONS SOCIETY MEETING

Thursday, May 22, 1997

Time: *Social:* 6:30 PM
Dinner: 7:00 PM (\$12 members and guests; \$5 students)

Program: 8:00 PM

Place: Tree Tops
New Braunfels, TX

Speaker: Brian Barton
Cabletron Systems

Program: Virtual Remote Access: Policy-Based Connectivity for on-Demand Networking

The networking industry is seeing a tremendous growth in the demand for remote access. This is driven by a need for corporations to extend the reach of their intranets, as well as by a desire for individuals to access the Internet. Some vendors attempt to satisfy this growth by simply scaling up traditional dial-up servers. Although this philosophy can provide the necessary dial-in ports, it does not address the two most significant issues related to managing a modern remote access deployment: providing individualized access privileges and managing overall WAN costs. Cabletron's SecureFast Virtual Remote Access (SF-VRA) was designed to provide precisely this type of manageability for large-scale on-demand networks.

Biography: Brian Barton is Remote Access Program Director for Cabletron Systems. Mr. Barton came to Cabletron as a result of the acquisition of Network Express where he was Vice President of Marketing. Before joining Network Express, Mr. Barton spent two years as director of Marketing for Cimage Corporation, a supplier of document management and imaging systems. Prior to that, he spent 15 years in various senior engineering and marketing capacities at Applicon. Mr. Barton has a BSEE and an MBA from the University of Michigan.

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: Please call one of the following by Tuesday, May 20th:
Austin Les Johnson (512) 250-4228
New Braunfels-San
Marcos W. Rogers (210) 885-4411
SA S. Atkinson (201) 456-2101

SPECIAL MEETING OF THE CENTRAL TEXAS SECTION

Thursday, May 29, 1997

Time: *Social:* 6:00 PM
Dinner: 6:30 PM (\$10, Students \$5)

Program: 7:00 PM

Place: Peppers at the Falls
Downstairs Meeting Room
San Marcos, TX

Speaker: Robert D. Hunter, Past Chairman, Central Texas Section

Program: Round Table Discussion of the New IEEE Standards Assoc.

The formational IEEE Standards Association apparently plans to "globalize" IEEE standards via this new organization. The implications of this process will be discussed. The Central Texas Section may draft a comment to IEEE HQ in order to express its views on this proposal. All members of the Section Executive Committee and all Chapter Chairmen are requested to attend this meeting.

Directions: From Austin, continue southbound on I-35 to San Marcos. Take Aquarena Springs Drive west past the SWTSU Stadium. After crossing the San Marcos River, turn right on to Sesson Road. Peppers at the Falls will be on the right.

Reservations: Call by NOON Tuesday, May 27, 1997.

Austin Kelly Butler (512) 452-2811
SA M. Abdolsalami (210) 431-2047

