

THE LOG PERIODIC

www.scvemc.org Santa Clara Valley Chapter of IEEE Electromagnetic Compatibility Society

IEEE SCV EMC Society Meeting: Tuesday, December 13, 2011

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Time: Social 5:30 p.m. Presentation 6:30 p.m.

Place: Applied Materials Bowers Cafeteria
3090 Bowers Ave., Santa Clara, CA 95051-0804

Subject: Narrowband and Broadband Discrimination with a Spectrum Analyzer or EMI Receiver

Speaker: Werner Schaefer, Principal Engineer, Schaefer Associates

Abstract:

Spectrum analyzers and scanning receivers are widely used in EMI laboratories today. Their use for measuring both narrowband and broadband signals requires specific understanding of certain instrument and signal characteristics in order to correctly interpret the displayed results. Since both signal categories require a different interpretation of the result measured with a spectrum analyzer or EMI receiver, it is essential to know the characteristics of a signal in order to correctly determine its' frequency and amplitude. In some cases, the characteristics must be known, in order to select the correct limit for the determination of EUT compliance. The measurement results displayed on these instruments are also dependent on some control settings, such as the sweep time and resolution bandwidth. Their impact on the measurement of signal parameters, like frequency and pulse width, must be understood to avoid erroneous interpretations of measurement results

The presentation will discuss methods for the discrimination between narrowband and broadband signals and will provide guidance for the proper operation of test instrumentation.

Speaker Bio:

Werner Schaefer is the owner and principal engineer of Schaefer Associates, a consulting and training firm. He was previously with Cisco Systems (compliance quality manager and technical leader for EMC and internal calibration) and with Hewlett-Packard / Agilent Technologies (product marketing, technical support and R&D functions). He has 28 years of EMC experience, including EMI test system and software design, EMI test method development and EMI standards development. He was secretary of CISPR/A, is currently chairman of CISPR/A/WG1 and a member of CISPR/A/WG2, ANSI C63, SC1/3/5/6/8, and serves as an A2LA and NVLAP lead assessor for EMI and wireless testing and RF/microwave calibration laboratories. He is also a NARTE certified EMC engineer and a RAB certified quality systems lead auditor.

He published over 50 papers on EMC and RF/uvwave topics and co-authored a book on RF/uvwave measurements in Germany.

Refreshments:

Full dinner and beverages will be served in celebration of this holiday season.

$$\nabla \times \vec{E} = - \frac{\partial \vec{B}}{\partial t}$$

$$\nabla \times \vec{H} = \frac{\partial \vec{D}}{\partial t} + \vec{J}$$

$$\nabla \cdot \vec{D} = \rho$$

$$\nabla \cdot \vec{B} = 0$$



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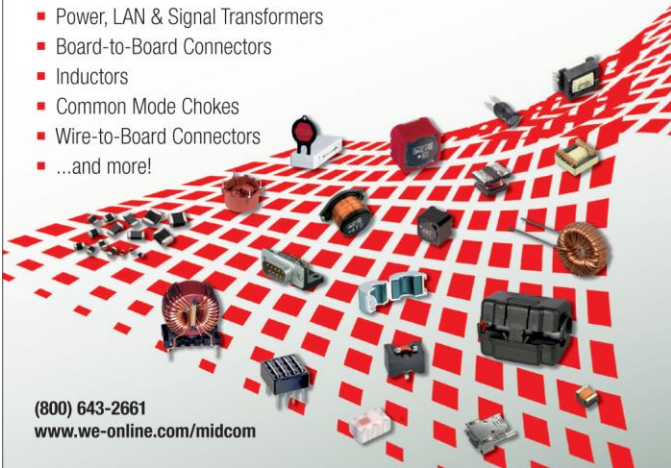
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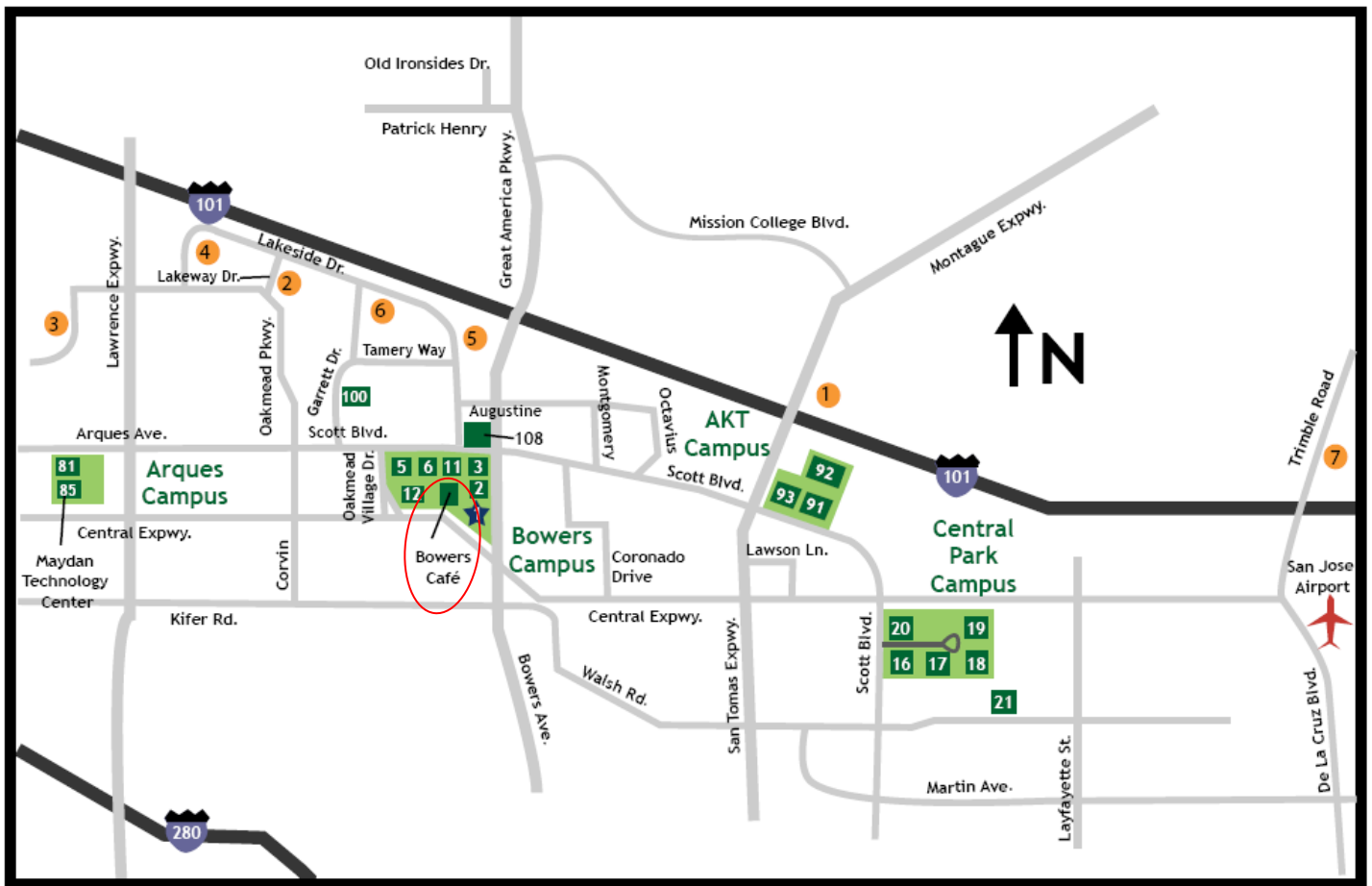
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