The IEEE Electromagnetic Compatibility Society Singapore and Rohde & Schwarz Presents:

Digital Circuit Radiation through PCB: Radiation Mechanism and Suppression Techniques

Dr See Kye Yak

Senior Member of IEEE and Chairman of the IEEE EMC Society Singapore Chapter

Location: Rohde & Schwarz Support Centre Asia Pte Ltd,
No.1 Kaki Bukit View, TECHVIEW Building, #04-01/07, S(415941)

Date: May 14, 2002

Time: 6:00 to 8:00 pm

Admission: Free of Charge for IEEE members
$15 for Non-IEEE members

Please fill in the registration form. Limited seats are available.

Pre Registration Form Fax: 64671730 Attn:Tim Foo , Secretary of EMCS Singapore

Please print/write clearly in black for fax transmission

1 Mr/Ms/ _____ (EMCS / IEEE / others) E-mail_____

2 Mr/Ms/ _____ (EMCS / IEEE / others) E-mail_____

3 Mr/Ms/ _____ (EMCS / IEEE / others) E-mail_____

Company:_____

Address:_____

Contact-Person: Mr/Ms_____ Fax_____ E-mail_____

Chapter meeting of the EMC Society, Singapore

The Singapore IEEE EMC Society in conjunction with Rohde & Schwarz is presenting our chapter meeting with Dr. See Kye Yak to speak on the subject of digital circuit radiation through the PCB. This is a topic that focuses on the radiation mechanism of PCB and the EMI suppression techniques. This is an opportunity for chapter members to meet and get together. The technical talk will be useful for engineers dealing with PCB design to meet the international EMC regulatory requirements. The purpose of this event is to offer some fundamental background on EMC and PCB layout.

Outline:

Due to rapid progress of high-speed devices, special attention should be paid at the layouts of digital circuits on PCBs. If PCB layouts are not properly addressed and handled at the design phase, significant levels of radiated electromagnetic fields from the PCBs would be expected. Any EMI non-compliance products are barred from entering countries that enforce EMI regulations, such as USA, Canada, European Community, Korean, Australia, etc.

Due to the lack of understanding of radiation mechanism of digital circuit through PCB, the subject of EMI radiation is perceived with a sort of mysticism. The conventional methods to suppress EMI radiation are to add shields and filters. These techniques not only increase product cost, but also difficult to implement due to the trend of product miniaturization.

In order to develop cost-effective products complying with EMC regulations, design engineers must reconsider their design approach, so as to tackle EMI problems during the early phase of design, such as good PCB layout. This technical talk covers radiation mechanism of digital circuit through PCB and basic principles of good PCB layout for radiation suppression. A practical case study will be shown to illustrate the effectiveness of good PCB layout in the suppression of EMI radiation.

The fee includes light refreshments and technical materials.

About the speaker:

Dr See Kye Yak received his B. Eng. Degree with first class honours from the National University of Singapore, in 1986 and his Ph. D degree from Imperial College of Science, Technology and Medicine, University of London, England, in 1997.

He joined the School of Electrical and Electronic Engineering, Nanyang Technological University, in 1994. He is currently an Associate Professor of the university. His research interests include application of numerical methods in EMC problems, EMI reduction techniques for electronic products, development of numerical electromagnetic codes, and electromagnetic scattering studies. Prior to joining the university, he worked as Project Engineer/Senior Project Engineer in Singapore Technologies Electronic Ltd (1986-1991), Lead EMC Design Engineer in ASTEC Custom Power Pte Ltd (1991-1993), and Lecturer in Singapore Polytechnic (1993-1994).

He is the Chairman of the IEEE EMC Society Singapore Chapter, a Senior Member of IEEE, Technical Assessor for SAC-SINGLAS, and member of Technical Committee of EMC and Radio Interference.