



20th International Zurich Symposium on Electromagnetic Compatibility

WS-1 on Monday, 12 January, 8:30-12:30

Title workshop	Alternative & reference test methods in EMC applications
Organizer's name	P.A. Beeckman
Organizer's affiliation	Philips Applied Technologies, Eindhoven, The Netherlands

Abstract

During the past decades numerous EMC test and measurement methods have been developed for various applications and products. For instance, in the early days of EMC testing, the 10 m Open Area Test Site (OATS) was de-facto a practical widely used reference method for radiated emission measurements between 30 MHz and 1000 MHz. Nowadays, new technologies provide alternatives like SAR-, FAR-, RVC- & TEM-cell methods in the same frequency range, sometimes to be used at different measurement distances. Within CISPR standardization SC A, the equivalence and correlation of these methods and their limits has been on the agenda for several years. Recently, the EMC standardization community became aware of the fact that many EMC standards seem violating the basic ISO/IEC Directives and the CEN/CENELEC Internal Regulations, which require identification of a 'reference method', if a standard offers more than one test method. This led to various positions and fundamental questions related to the level of equivalence of alternative test and measurement methods that serve the same purpose, e.g. protection of radio services. In this workshop it is intended to address the issue of alternative test methods. Amongst others, the following questions will be addressed:

- What are the physical differences (measurands) of the various alternative methods and what is their relation with the underlying purpose of the test?
- How do uncertainties affect the demonstration of equivalence of alternative methods?
- What is the position of the stakeholders (regulatory agencies, industry, standardisation bodies) if different methods (with different results) may be applied for compliance demonstration?
- What are practical methods to convert limits/or test results of different alternative methods?

Program

Time slot	Subject	Speaker	Affiliation
8.30-8.40	Introduction of the WS program	Pierre Beeckman	Philips
8.40-9.20	Some fundamental questions related to alternative test method	Pierre Beeckman	Philips
9.20-10.00	Practical methods to convert limits or test results of different measurement methods	Werner Schaefer	CISCO
10.00-10.40	Review of modelling methods to correlate limits of different emission test facilities.	Perry Wilson	NIST
10.40-11.10	Coffee break		
11.10-11.50	Modelling and experimental investigations of the alternative CDN-emission measurement method in CISPR 15	Stef Worm	Philips
11.50–12.30	Alternative IC emission measurements for system-level modelling	Todd Hubing	Clemson University