



New EMC Chamber at UTHM Soon!

Electromagnetic Compatibility (EMC) is to ensure electrical and electronic products do not emit excessive electromagnetic fields and still function well even when there is an external electromagnetic interference. Local manufacturers often face extra challenges when it comes to the enforcement of EMC regulations on electrical and electronic products marketed in the US, EC, Japan and many major countries.

To avoid non compliance of finished products, EMC requirements should be considered at all development stages. The EMC center at UTHM has been set up to provide compliance and pre-compliance EMC testing facilities for manufacturers to test their products throughout the design and production phases. This will not only reduce the costs of testing failed products but also enhance the development and production capabilities of a company. The center also offers consultancy and troubleshooting for failed products.

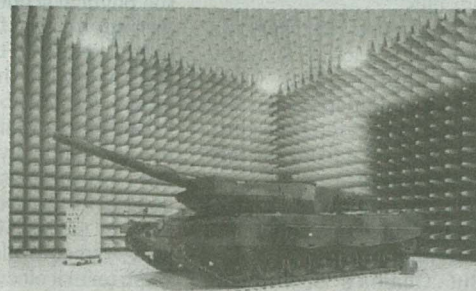
Sound theoretical and practical exposures in EMC and related areas are crucial for local engineers to develop electrical and electronic products which comply with the EMC requirements. The center also organises courses, workshops and seminars to enhance the level of understanding and competence in EMC testing and design among the participants.

The recent increase in understanding and consciousness in electromagnetic compatibility (EMC) and related fields has created a need for a new EMC chamber with FCC and CE listings. Apart from that, it is also important to facilitate better understandings of EMC measurements, architectures, algorithms and protocols, environment and also applications. The 3m Semi Anechoic Chamber is a vast project for the center and is expected to be completed in early 2009. Upon completion, UTHM will be among the first public/private universities in Malaysia having such facility. With the state-of-the-art equipment and testing systems, it will sufficiently cater for the

EMC compliance tests for both local and foreign industries in this region.

An anechoic chamber is a shielded room designed to attenuate waves internally and externally. Anechoic chambers were originally used in the context of acoustic (sound) echoes caused by reflections from the internal surfaces of the room, but more recently anechoic chambers have been used to provide a shielded environment for radio frequencies (RF) and microwaves. An RF anechoic chamber is designed to suppress the electromagnetic wave analogy of echoes: reflected electromagnetic waves, from the internal surfaces. Furthermore, the shielding of the chamber limits interference from equipment located outside the chamber.

The centre also provides information to organizations that develop EMC guidelines and host annual forums to discuss EMC issues and research. The center can perform emission and immunity tests using facilities like reverberation cham-



ber and GTEM Cell. Other equipment used in EMC testing are EMC analyzer, Digital Oscilloscope, LCR meter, Line Impedance Stabilization Network, Transient Limiter, Antennas and cables, Electric and Magnetic Field Probe and Vector Network Analyzer. The centre's research areas include emission and immunity measurements, enclosure design and modeling, EMI reduction techniques, effects of Electromagnetic Emission on medical equipment, printed circuit board design and modeling, grounding, filtering and shielding, mode stirred chamber and numerical modeling of EMC problems.

The centre is headed by Prof. Dr. Mohd Zazar Mohd Jenu and assisted by engineers, technicians and research students. For info visit www.uthm.edu.my/pc/emc.