

UK GTEM User Group

Minutes of the meeting held at Measurement Technology Ltd on 6th July 2005

Present

Roger Dixon (RD)	Aeroflex Ltd [Chairman]
Ian Alderman (IA)	[Secretary]
John Wombwell (JW)	EMC Hire
Howard Chetwin (HC)	MTL
Richard Neyton (RN)	Apollo
Martin Alexander (MA)	NPL
Eddie Veater (EV)	UKAS
Stuart Bright (SB)	Echelon
Farquhar Galbraith (FG)	EMC Centre (Paisley) Ltd
Joe Wilkinson (JWi)	EMC Centre (Paisley) Ltd
Angela Nothofer (AN)	Nottingham University
Ivan Yallup (IY)	Ampy Automation Digilog Ltd

Apologies received

Tim Harrington	FCC
Colin Howes	Doro UK Ltd
Graham Blissett	AWE
Tin Hague	EMV
Neil Coote	Nokia
Andy Perkins	Schaffner EMC
Harbinder Bharj	BRE
Tim Williams	Elmac Services
Sean Saint	MTL

Chairman opens meeting

The Chairman (RD) opened the meeting and welcomed all attending members.

Minutes Of The Last Meeting

The minutes of the May meeting had been circulated and were accepted.

Matters arising were:-

- GTEM Website: It was reported that the web site has been taken down recently. The general feelings of the meeting were that the web site was still a good idea with potentially a lot of benefit to members and new users. RN was urged to discuss with Alan Hutley as soon as possible.
- FG & JWi have new facilities 'EMC Centre (Paisley) Ltd, 35 Porterfield Rd, Paisley, Renfrewshire PA4 8DJ. Facilities include a GTEM, FAR and OATS. Phone line now installed and expect to be on email at the site in the near future.
- RadiSense EM Probe – caution about useage. When handling the fibre optic cables do not get get hand print contamination onto the end of the cable as the 0.5 W laser will burn this onto the end of the cable.
- 5311 GTEM complete with immunity system is available from a company who no longer need it members to contact John Wombwell for further details.

Election of Chairman & Secretary

As a preamble to the part of the proceedings the chairman opened a discussion on the future of the GTEM User Group.

- Does the group still fulfill a useful purpose?
- With the introduction of an international standard for GTEM's hasn't one of the primary aims of the group been achieved and therefore this might be a time when the group could be wound up?

The meeting were unanimously of the view that the GTEM User Group should not be wound up. There was still on-going support needed for the work of international committees and for continuing support of GTEM users.

The chairman stated that he is facing redundancy from his company at the moment and if proposed for re-election would not be able to continue in the role of chairman without some funding. The idea of subscriptions was then discussed and felt to be worthwhile in order to ensure the group continued. The suggestion was then made that the chairman's company could be approached for sponsorship of him and members could be asked to consider contributing a membership subscription (per company represented). The chairman and secretary agreed to stay on until the next meeting to give time for members to consider the options.

- IEC61000-4-20 is now in its 'Maintenance Cycle' and further work is planned. AN is to meet Prof Andy Marvin who is the new convener of the JTF next week to consider the new agenda. The proposed work program was distributed to members and emphasis was given to the importance of point 1.14 regarding the defining and harmonising of the use of terms eg., validation, verification, calibration, etc. The general complexity of the standard was mentioned. Also the timescales were considered to be very long. The group is particularly interested in Work Package 2 and the cabling issue mentioned at point 2.3.
- The chairman brought the CISPR A JTF paper by Shinobu Ishigami et al., 'Theoretical evaluation of the condition of EUT installation in a GTEM cell' This is an interesting paper where the authors carried out a FT-TD calculation on the effects of the electric field intensity on varying sizes of EUT when installed within a GTEM. It was pointed out that between the two plates where the field is created the relevant issue is the cross sectional area of the EUT - the larger the csa then the greater will be the effect on the field. MA mentioned the fact that testing rod antennas in the GTEM has almost no effect on the field. Figure 7 shows that the front/back differences at the higher frequencies diverge and this may be relevant to test plans!
- IEC61000-4-3 'Other methods'
John Flood secretary of the -4-3 committee stated that as FARs, Reverberation chambers and GTEMs now have their own standards then interested parties should pursue issues relevant to their appropriate standard.
- Power Amplifiers -4-3 CDV rewording of harmonics to be 6dB below the fundamental instead of -15dB. Stuart Bright agreed to find out who is on the committee to discuss.
- Martin Alexander mentioned that Tian Loh at NPL will be working on intercomparison measurements between FARs, Reverbs and GTEMs using both small and large EUTs. MA also invited interested parties particularly with cables to help shape the forthcoming tests. The DTI is being more strict with NPL and will only fund research which is of interest to industry and requested from other parties rather than NPL.

There are plans to involve Richard Marshall in the NPL work. MA also mentioned Pierre Beckman CISPR 16-4 work on uncertainties.

- MA also spoke about the concept of cable lengths and clamping-off after 1m or 0.8+0.8m. Ferrite clamps in themselves make a very abrupt change in the impedance whereas Richard Marshall's approach is more gradual.

- IEC61326 2nd edition draft is out as FDIS. Main points..
 1. Testing upto 2.7GHz
 2. Defined acceptance levels for each test
 3. Emissions limits as set in basic standards

- Physical Agents Directive – ERA have a publication on this (£150)

The Chairman thanked Howard Chetwin and Measurement Technology Ltd for hosting the meeting.

Next Meeting is to be on the 15th November 2005

Advance notice was given of an IEE EMC meeting 'EMC above 1GHz' to be held at NPL on 29th November.