

EUROPEAN MICROWAVE WEEK 2015

SIX DAYS • THREE CONFERENCES • ONE EXHIBITION

PALAIS DES CONGRÈS, PARIS, FRANCE
SEPTEMBER 6 - 11, 2015

Exhibition Opening Hours:

- Tuesday 8th September: 9.30 – 18.00
- Wednesday 9th September: 9.30 – 17.30
- Thursday 10th September: 9.30 – 16.30

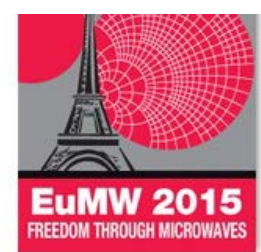
PMSE Standardisation within CEPT, ETSI, GRSC and ITU-R

Brian Copsey

ASP

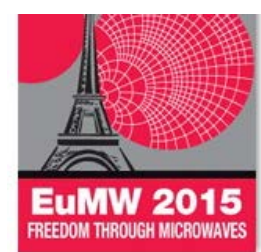
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WM08 - PMSE Workshop at EuMW2015



Why Bother?

- The original reason was whilst allocating independent PMSE spectrum and generating frequency plans in the UK from 1989 we found that radio microphone and video equipment had varying bandwidths and power output specifications dependant on which country it came from. **Extremely** difficult to calculate intermodulation for 20 channel systems with such varying parameters (and no computers).



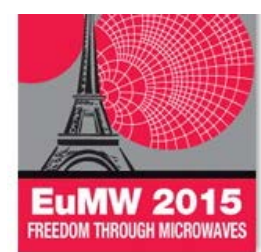
Why Bother?

- From this problem Standardisation of PMSE started it has been a long road which encompasses the UK Administration, ETSI, CEPT, GRSC and more recently ITU. It has seen the 46 separate standards and testing requirements in Europe (1989) reduced to a single standard thanks to ETSI. Work then expanded to include other forms of PMSE such as Wireless cameras and other domestic products including Assistive Listening Devices (ALD). I will be addressing what has been achieved and where we need to go in achieving suitable standards for PMSE in an increasingly hostile spectrum environment.



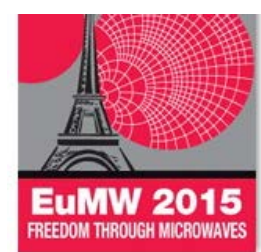
Current European interaction between Administrations EC & CEPT

- We now have a new Directive ;Radio Equipment Directive, this has resulted in a mandate to ETSI for Harmonised Standards to enable manufacturers to show compliance to the Directive
- Also a new EMC Directive



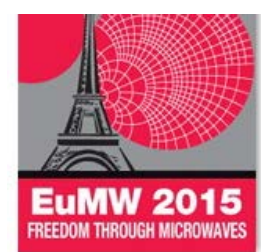
Next Steps

- ETSI ERM TG 17 is responsible for PMSE standards , it is currently revising standards for Radio Microphone, Cordless audio, Video links, and TV amplifiers
- Preparing new standards for Inductive loop systems (for hearing Aids) TV and Radio Broadcast receivers



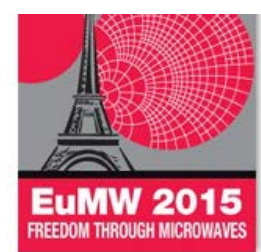
Time Scales

- Standards are required to go through the ETSI approval process about 6 months(now slightly reduced), then sent to the EC for inclusion in the Official Journal (OJ) this has taken up to 2 years in the past, the EC has said it will act in a very short time scale for RED standards
- Only after publication in the OJ is a standard Harmonised



CEPT

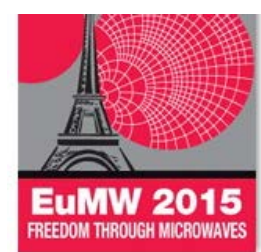
- The PMSE community has been extremely active in CEPT working in some six groups and the following slides give details of reports and work



CEPT Reports

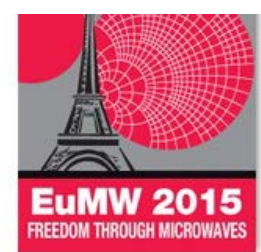
- ERC Report 42 HANDBOOK ON RADIO EQUIPMENT AND SYSTEMS RADIO MICROPHONES AND SIMPLE WIDE BAND AUDIO LINKS (started 1992 and still in use)
- ECC Report 002 SAP/SAB (INCL. ENG/OB)SPECTRUM USE AND FUTURE REQUIREMENTS(2002)
- ECC Report 204 Spectrum use and future requirements for PMSE

Many more reports on compatibility in various spectrum will be found at :<http://www.cept.org/ecc/deliverables>



Why Bother?

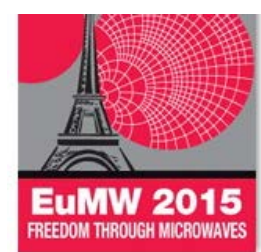
- CEPT carries out work to first identify possible spectrum for PMSE then carries out compatibility between the relevant users.
- Reports and ETSI standards are the base documents for compatibility studies and bad reports mean that there is less chance of PMSE sharing



GRSC

Global Standards Collaboration- Radio

- ETSI and ITU are members and it enables us to discuss PMSE standards with the member organisations from around the world. We produced a world standard a few years ago which attempted to standardise the test methods. We have the opportunity to update this document
- *(put in link and doc number)*



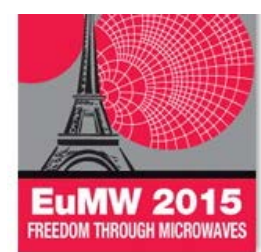
ITU

- ITU-R prepares Resolutions and reports plus the Radio Regulations which are the foundations of spectrum policy.
- The information available on PMSE(referred to as SAB/SAP in ITU) has been extremely thin on the ground, thanks initially APWPT members at WRC 12 we now have a much more active group which has prepared a number of documents which show the use and spectrum for PMSE



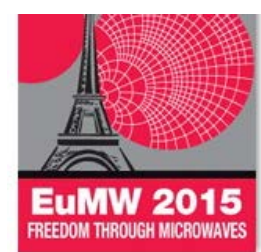
ITU Documents

- **Report ITU-R BT.2069-6 Tuning ranges and operational characteristics of terrestrial electronic news gathering (ENG), television outside broadcast (TVOB) and electronic field production (EFP) systems**
- **Report ITU-R BT.2344-0 Information on technical parameters, operational characteristics and deployment scenarios of SAB/SAP as utilized in broadcasting**
- LTE interference potential INTO SAB/SAP systems
- ANALOGUE VERSUS DIGITAL AUDIO SAB/SAP – NEW RESULTS
- **Report ITU-R BT.2338-0 Services ancillary to broadcasting/services ancillary to programme making spectrum use in Region 1 and the implication of a co-primary allocation for the mobile service in the frequency band 694-790 MHz**



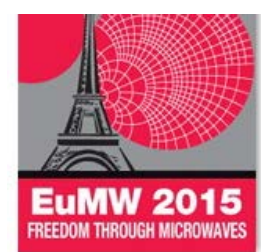
Education

- The major achievement of the work in the various organisations has been to inform and educate “outsiders” to the black magic which is PMSE.
- There is now a wide spectrum of information available to which we can now refer for future work and consultations and for use by industry players.



Why Bother ?

- I hope this presentation shows why we **must** bother, if we do not the spectrum and technical parameters of PMSE will be ignored to the great detriment of the entrainment industry



Thank you for Listening

- Further information available from:
- BC@Copsey-comms.com