

# JWG DD

Activity is in response to EC letter of 13 February 2013 and is the first formal joint working group in Mode 5

# Phase 1

- Focussed on improving the EMC characteristics of cable tv networks and equipment containing DVB-C and DVB-T tuners by revising the harmonised standards resulting in:
  - EN 50083-2:2012
  - EN 55020:2007 and EN 55020:2007/A11:2011
  - However, no solution found to problem of 40 dB variation in screening effectiveness of ready made co-axial cables with connectors.

## Going into Phase 2

- The deployment of LTE revealed unanticipated interference to tv tuners due to the time varying characteristics of LTE signals.
- There remain problems with identification of the type(s) of LTE signal most likely to cause interference.
- The “Idle Mode” of base stations turned out not to be the mode causing problems.

# TV tuners

- The industry specifications for TV tuner in the Nordig, E-Book, etc. have been revised. The new requirements give a 20 db improvement in TV receiver performance as regards immunity to disturbance signals in adjacent channels.
- These requirements are being used in ETSI ERM TG 17 as the basis for requirements to be introduced into a new draft harmonised standard to be cited under the RED.

# SRD performance

- SRD standard under revision to remove Category 3 receivers from 863-870 MHz band.
- Requirements for Category 2 receivers under consideration to improve performance. Movement to Category 1.5.
- Additional standard for better reliability of SRD alarms.

# RFID & GSM-R

- RFID standards specify improved adjacent channel and blocking characteristics for receivers.
- GSM-R receiver standards already improved.

# Improvement in LTE OoB

- Improvement in LTE OoB emissions under consideration to improve conditions for adjacent bands.
- A reduction of 3 dB in the limits specified in the user equipment standard possible.
- A new specification reflecting typical use OoB emissions is now under consideration.

# Chipsets are the key

- The design of chipsets are the key to improving immunity and performance.
- This is equally valid for the chipsets which may disturb as is for the chipsets which are susceptible to interference.



# Remaining problems

- No fly lead classification system available to consumers.
- Problem with lack of standards for antennas and distribution amplifiers – niche manufacturers not participating in standardisation.
- Improvements to TV receivers will be lost if poor cables and passive or active components used in private installations.

# Looking to the 700 MHz decision

- Need for comprehensive compatibility studies based on realistic assumptions before the 700 MHz Decision is finalised.
- (The analysis that was used for the 800 MHz Decision neglected a range of important issues.)
- The R&TTE and RE Directives do not make exceptions from the requirement not to cause harmful interference for “unimportant services”. License exempted use is protected by the Directives.

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