RADIO EQUIPMENT DIRECTIVE

Standardisation to support significant changes since RTTED

Presented by Michael Sharpe for “53 shades of RE-D workshop”

- RED applied from 13 June 2016 (+ 1 year for manufacturers to comply)
- Covers equipment which intentionally transmits or receives radio waves for communications or radiodetermination, regardless of primary function
  - Operating up to 3000 GHz (NB: no lower frequency limit)
  - LVD & EMCD will no longer apply to RED equipment
  - Many products under the scope of RED: e.g. anything with a GPS, Bluetooth, RFID, RLAN, NFC....
Radio Equipment Directive
Significant changes since RTTED

Definition of “radio product”

• “product, or relevant component thereof, capable of communication by means of the emission and/or reception of radio waves utilising the spectrum allocated to terrestrial/space radiocommunication” (RTTED)

• “electrical or electronic product, which intentionally emits and/or receives radio waves for the purpose of radio communication and/or radiodetermination, or an electrical or electronic product which must be completed with an accessory, such as antenna, so as to intentionally emit and/or receive radio waves for the purpose of radio communication and/or radiodetermination ” (RED)
Equipment shall be so constructed that it:

• “it effectively uses the spectrum allocated to terrestrial/space radio communication and orbital resources so as to avoid harmful interference” (RTTED art 3(2))

• “both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference” (RED art 3(2))

Explained in recitals (“Whereas:”):

• “(10) ...in the case of a receiver, it has a level of performance that ... protects it against the risk of harmful interference ...”

• “(11) Although receivers do not themselves cause harmful interference, reception capabilities are an increasingly important factor ...” (RED)
Radio Equipment Directive

Significant changes since RTTED

Broadcast receivers:

- Suppression of specific inclusion of broadcast receivers in annex 1 of RTTED

Definition of “radio waves”

- “electromagnetic waves of frequencies from 9 kHz to 3 000 GHz ...” (RTTED)
- “electromagnetic waves of frequencies lower than 3 000 GHz ...” (RED)

Radiodetermination

- “determination of the position, velocity and/or other characteristics of an object ...”
Art 7: “Member States shall allow the putting into service and use of radio equipment if it complies with this Directive ...”

Art 9: “Member States shall not impede... the making available on the market if radio equipment which complies...”

Art 16: “Radio equipment which is in conformity with harmonised standards ... shall be presumed to be in conformity with the essential requirements...”

Art 17.3 allows the manufacturer to self-declare conformity (“Internal production control”) if he has applied harmonised standards.

Alternatives are available: “EU-type examination” or “conformity based on full quality assurance” both require use of a Notified Body.
Standardisation requests

Issued under EP/Council Regulation 1025/2012 (“Standardisation Regulation”)

• “The European legislator must be highly vigilant and precise when defining the essential requirements in regulation”
• “the Commission must clearly and accurately define the objectives of the standardisation work in the mandates”
• “the role of standardisers should be limited to defining the technical means of reaching the goals set by the legislator as well as ensuring a high level of protection”
“Vademecum on European Standardisation” 27.10.2015

• Aims to ensure a common understanding of the role of Commission’s standardisation requests (‘mandates’) to the European standardisations organisation (ESOs) and the role and responsibilities of the various actors.

• The request sets out “requirements as to the content to be met by the requested document and a deadline for its adoption”.

• The Vademecum does not deal with formal objections against harmonised standards or publication of references of harmonised standards in the Official Journal of the European Union.
  • “These will be covered in other documents”
Harmonised Standards covering new areas:

- Sound and TV Broadcast Receivers and other receive-only and non-receive-only equipment regarding receiver characteristics and receiver performance parameters
- Radio equipment operating below 9 kHz
- Radio-determination equipment

Standards already cited under RTTE Directive

- To be reviewed & published under RED according to CENELEC & ETSI internal planning schedule

Standards under development under repealed mandates

- According to schedule of original mandates
Receiver requirements emphasised in the context of harmonised conditions for availability & effective use adopted under the Radio Spectrum Decision (676/2002/EC)

Harmonised Standards to include sharing mechanisms & interference-mitigation techniques

Antenna performance emphasised for mobile terminals and communication equipment used in safety of life applications
Review of Standards cited under the RTTE Directive

A: RTTE Standards which already include receiver requirements
   • To control the transmitter, e.g. Cellular systems, “Listen before Talk”, “Detect & Avoid”
B: RTTE Standards where the receiver requirements were included in a non-harmonised part
C: RTTE Standards with no receiver requirements
D: Areas where new standards were required under RED
E: RTTE Standards that were not longer required under RED

Initial work programme submitted to Commission on 16 November 2016 containing 163 work items
Commission Implementing Decisions under Radio Spectrum Decision (676/2002/EC) (examples)

- Decision 2016/687 (28.4.2016) technical conditions for Mobile & Fixed Communications Networks (MFCN) in 700 MHz
- Decision 2016/339 (8.3.2016) on video PMSE in the upper 2 GHz “unpaired band”
- Decision 2015/750 (8.5.2015) on MFCN in L-band (1452 to 1492 MHz)
- Decision 2014/702/EU (7.10.2014) on Ultra-Wide Band
- Decision 2014/641/EU (1.8.2014) on audio PMSE in the 900 MHz & 1800 MHz duplex gaps
- Decision 2014/276/EU (2.5.2014) on MFCN on 3400 to 3800 MHz
- Decision 2013/752/EU (11.12.2013) “5th update” of Short-Range Device Decision
Mandates to CEPT under the Radio Spectrum Decision (676/2002/EC) (examples)

7.10.2015: Possible optional use of the Network Control Unit on board MCA-enabled aircraft

7.10.2015: Second mandate on Mobile Comms on Vessels (MCV)

19.3.2014: WBB in “L-band” (1452 to 1492 MHz)

17.3.2014: WBB in 2.3 to 2.4 GHz

25.9.2013: 5 GHz RLAN “extension bands”

5.7.2006: Permanent mandate for technical studies to update the Decision on on Short-Range Devices
Standardisation request M/536 of 4.8.2015 under 2014/53/EU (RED)

Work programme underway: 223 (originally 163) Work Items for Harmonised Standards

23 Harmonised Standards cited in the OJEU (11.11.2016)

87 Harmonised Standards published awaiting citation in the OJEU

45 in Public Approval / Resolution of comments

18 Approved by TB – awaiting start of ENAP

4 Scheduled for TB Approval before end December 2016

36 Scheduled for TB Approval January to June 2017
  - 9 after June 2017
Necessary for a Harmonised Standard to confer Presumption of Conformity

“the Commission together with the European standardisation organisation shall assess the compliance of the documents drafted by the European standardisation organisation with its initial request” (Standardisation Regulation, art 10(5))

Previously standards were assessed on a “by exception” basis, and throughout the development of the Harmonised Standards
If standards are not cited in the OJEU in time...

Published standards or draft standards on ENAP can be used by manufacturers a sound basis of a technical file

Requires Type Examination by a Notified Body

EG 203 336: 2015-08 (Guide to selection of technical parameters for Harmonised Standards) can be used by Notified Bodies (art 3.2) if no public draft exists

EG 203 367:2016-06 (EMC for Combined Equipment) provides an agreed technical basis, and is being used as the basis for Harmonised Standards under development

Can also be used by a Notified Body or enforcement authorities as a technical basis for assessment.
Impact on co-operation with other bodies - no substantial change

- CEPT-ETSI MoU referred specifically to 1999/5/EC
  - Editorially updated: no substantial change necessary
- CEN-CENELEC-ETSI co-operation
  - (art 3.1 (a)): Safety standards are developed by CENELEC
    - Unless CENELEC do not wish to
  - (art 3.1(b)): EMC for communications network equipment and other radio equipment by ETSI;
    EMC Standards for broadcast receivers and non-radio EMC standards by CENELEC
  - (art 3.2 & art 3.3) : Radio spectrum standards by ETSI
- Continuing need for close co-operation with:
  - RTTE Compliance Association (renamed for RED)
  - Administrations Co-operation group (ADCO)
  - European Commission (TCAM & RSCOM)
  - Radio Spectrum Policy Group (RSPG)
Thank you for listening

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Thank you!

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