

Radio equipment operating below 9 kHz

53 shades of RE-D
Sophia Antipolis, 4th November 2015

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Radio equipment operating below 9kHz? Just some examples...

→ Railway applications (500Hz – 2kHz)



→ Robotic lawnmowers (1kHz – 9kHz)



→ Animal fences (1kHz – 9kHz)



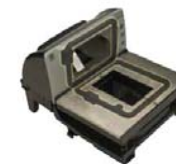
→ Metal detectors (3kHz – 20kHz)



→ Stud finder (<9kHz)



→ Electronic article surveillance – EAS (10Hz – 1kHz)



Topics for today

1. Current and future applicable legal framework
2. Potential regulatory challenges under RE-D
 - Standardization
 - Spectrum regulation
3. When can/shall I apply the new RE-D?
4. Summary – some ideas to take home



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Current and future applicable legal framework (1/2)

Situation today

- Not covered by the R&TTE-D – why?
 - “**radio equipment**” means a product [...] capable of communication by means of the emission and/or reception radio waves [...]
 - “**radio waves**” means electromagnetic waves of frequencies from 9 kHz to 3 000 GHz [...]
- Other pieces of EU legislation applicable



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Current and future applicable legal framework (2/2)

Situation in the (near) future

- Covered by the RE-D – why?
 - “**radio equipment**” means an electrical or electronic product, which intentionally emits and/or receives radio waves [...]
 - “**radio waves**” means electromagnetic waves of frequencies lower than 3 000 GHz [...]

CHALLENGES

- Awareness – do manufacturers know about the RE-D?
- Need to fulfill the RE-D essential requirements – are there enough RE-D HS to enjoy “presumption of conformity”?
- Consider EU/national spectrum regulation (*not that before there was no need* 😊)



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Challenges – Essential requirements and standardization (1/2)

- **Article 3.1a** – Safety (incl. EMF): CLC standards exist 😊
- **Article 3.1b** – EMC: ETSI EMC standards exist 😊
 - Generic standard EN 301 489-1 (ERM WGEMC)
- **Article 3.2** – Radio: ETSI radio standards being developed 😊
 - Generic standard: EN 303 660 (ERM TG28)
 - Inductive loop for hearing impaired in 0-20 kHz: EN 303 348 (ERM TG17)



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Challenges – Essential requirements and standardization (2/2)

→ **EN 303 660**: Current status

- Scope: Radio equipment operating below 9kHz
- Technical requirements:
 - Operating frequency range
 - Transmitter spurious emissions
 - Receiver spurious emissions
 - Receiver blocking / signal handling (still under discussion)
- Committee: ERM TG28
(https://portal.etsi.org/webapp/WorkProgram/Report_WorkItem.asp?WKI_ID=47215)
- Timeline: draft approval for ENAP at ERM February 2016
- Next drafting meetings (G2M):
 - 10th Nov, 14:30 – 16:30 CET
 - 25th Nov, 10:00 – 12:00 CET



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Challenges – Spectrum regulation (1/2)

- Potential conflict under R&TTE-D where a manufacturer could place a radio equipment in the EU market that actually could not be used...
- The RE-D solves this issue with Article 10.2:
 - *Manufacturers shall ensure that radio equipment shall be so constructed that it can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum*
- But... what happens if there is no spectrum regulation for a given band? Can that radio equipment be placed on the EU market?



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Challenges – Spectrum regulation (2/2)

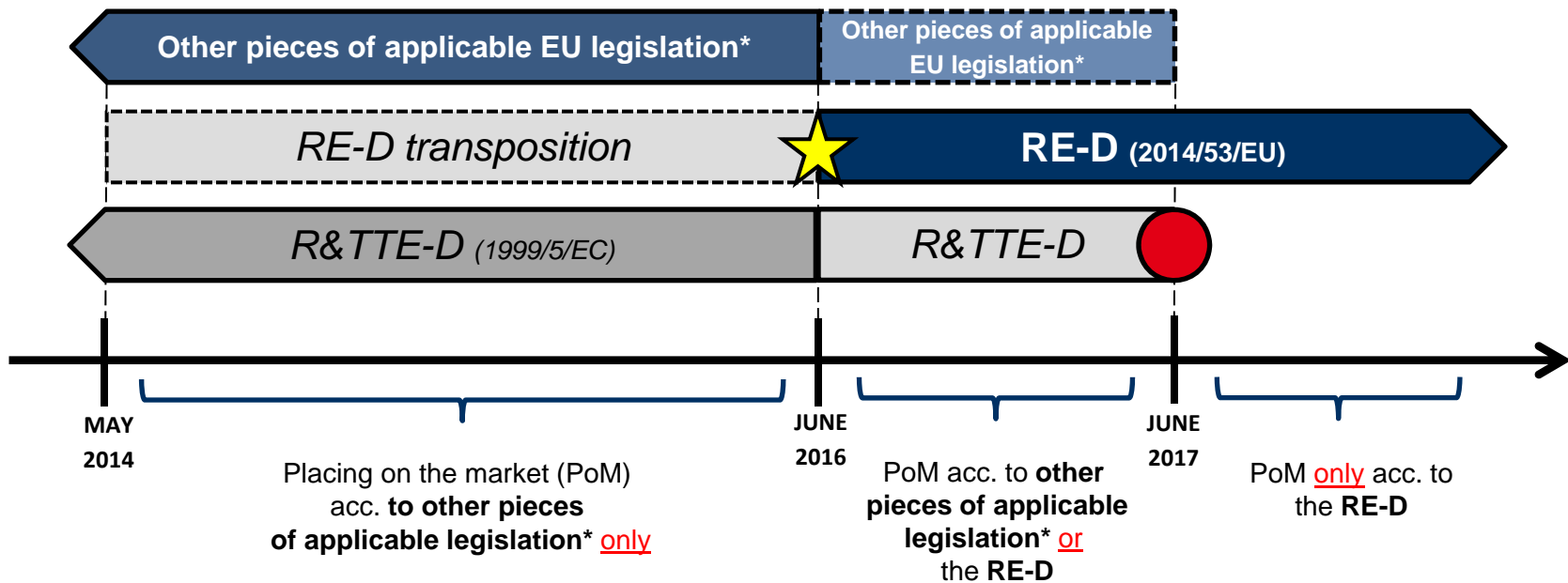
→ ETSI presented its view at the joint TCAM/RSC meeting (8th October) with no objections:

- **Article 10.2:** radio equipment can be operated in at least one Member State
- **Article 7:** Member States (MS) shall allow the putting into service and use of radio equipment if it complies with the RE-D. MS may introduce additional restrictions on certain grounds, including the effective and efficient use of the radio spectrum.
- As the **Radio Spectrum Decision** (676/2002/EC) does not provide for Community harmonisation measures below 9 kHz, restrictions in these bands can only be introduced by individual MS.
- ETSI therefore assumes that radio equipment operating below 9 kHz may be:
 - **placed on the market** throughout the Community unless all MS have introduced National restrictions, and
 - **operated** in MS that have not introduced such National restrictions.



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When can/shall I apply the new RE-D?



* Other pieces of EU legislation applicable before 13.06.2016 to radio equipment operating below 9kHz (see RE-D, Art.48)



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Summary – some ideas to take home

- Regulatory framework changes: radio equipment operating below 9kHz fall under the RE-D scope
- Potential challenges?
 - Awareness
 - Availability of Harmonised Standards
 - Article 10.2 and spectrum regulation
- Manufacturers need time to adapt their conformity processes to the new requirements... but time is limited!
 - RE-D enforcement: June 2016
 - RE-D mandatory: June 2017



Thanks for your attention!

Questions?



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