

## **Summary of the TCAM 26 decision on Sub -class 22**

Sub-class 22 in the 2400-2454 MHz band is constituted by Short Range Devices (SRDs) using appropriate mitigation techniques that are therefore allowed to operate at 100 mW e.i.r.p., whatever type of application they implement (RLAN access, inter-device communication, control of model airplanes, microphones, etc.). A mitigation technique is considered as appropriate if:

- it provides the same level of protection as the medium access protocols of current applications in this band, such as those specified in IEEE 802.11 standards for WiFi, in Bluetooth specifications or in IEEE802.15.4 for Zigbee, etc.:
- it ensures an equal spectrum sharing with other devices, i.e. congestion, if any, occurs in a gradual way impacting equally the service of all types of devices.

### **Detailed TCAM 26 decision on Sub -class 22**

(See also [TCAM 26 \(08\) 44](#))

The 2400-2483.5 MHz band for non -specific SRDs ("2.4 GHz ISM band") is currently harmonised in the EU by Decision 2008/432/EC. Inside this band, SRDs can operate at 10 mW and their recommended harmonised standard is EN 300 440. This standard does not require SRDs to implement mitigation techniques.

Inside the above band, CEPT defined a 2400 -2454 MHz sub-band within which certain types of equipment constitute Sub -class 22 of Class 1 (as defined by Decision 2000/299/EC). Sub-class 22 SRDs are allowed to operate at a higher power level than 10 mW and up to 100 mW because they implement adequate mitigation techniques. The mitigation must be equivalent to that currently implemented by one type of Sub -class 22 applications, namely wideband transmission systems. Mitigation techniques for such wideband systems are standardised by an organisation (IEEE) which is not associated with the EU. Section 4.3.5 of the current version of the ETSI harmonised standard for wideband systems, EN 301 328 V1.7.1<sup>1</sup>, requires a medium access protocol, but it does not include the IEEE mechanisms nor any other precise or verifiable mechanism (see point 6 below).

Furthermore, TCAM agreed that the scope of EN 300 328 V1.7.1 is drafted in too restrictive a way and that the standard should cover any type of radio application.

Therefore, TCAM 26 concluded the following:

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<sup>1</sup> Version 1.6.1 was superseded on 30.06.2008

1. In order to belong to Sub-class 22 and to comply with EN 300 328 V1.7.1, devices must implement adequate sharing techniques
2. The scope of EN 300 328 should be rendered generic by ETSI so as to allow all devices that comply with it to benefit from a presumption of conformity.
3. EN 300 328 is not sufficient to guarantee a presumption of conformity. Its section 4.3.5 on a medium access protocol is too vague to ensure that equipment is fit to operate within Sub-class 22.
4. The scope of Sub-class 22 should not be interpreted so as to exclude devices other than wideband transmission systems.
5. This matter should be addressed in the next revision of the Short-Range Device Decision following 2008/432/EC.
6. ETSI should develop a new version of EN 300 328 including:
  - Verifiable mechanisms to mitigate interference, notably by specifying the requirements for a medium access protocol in greater detail;
  - An assurance that, in case of congestion, users of the spectrum will be granted equal access (and, as a consequence, a gradual degradation of service to all users).
7. Notified bodies should, when giving opinions on devices that do not comply with harmonised standards, ensure that the objectives referred to in paragraph 6 are fulfilled.
8. Pending inclusion of Sub-class 22 in the next Short-Range-Device Decision, Member States that currently have a restrictive approach are advised to change their policy. Based on this, the Commission will propose an adaptation of Sub-class 22.

#### **Additional information on conformity subsequent to TCAM 26 discussions**

After TCAM 26, the question was raised as to whether national authorities could require that, for equipment declared to comply with EN 300 328 V1.7.1 and belonging to Sub-class 22, the manufacturer must consult a Notified Body (Technical construction file procedure according to Annex IV of the Directive).

The Commission recalls that this Annex IV procedure is mandatory only where the relevant harmonised standard(s) have not been fully applied. In the present situation, a manufacturer who implements a medium access protocol he deems to be appropriate is entitled to consider that he has applied EN 300 328 V1.7.1 in full. This would not be the case if a formal Art. 5.3 procedure had led to the publication of guidelines in the Official Journal interpreting the medium access protocol requirement of Section 4.3.5 of EN 300 328 V1.7.1. However, no such formal procedure has taken place.

Nevertheless, after placing on the market and on a case-by-case basis, Member States may still request details of the technical construction file, such as the medium access protocol which has been applied.