Commission Implementing Decision (EU) 2020/1426 of 7 October 2020 on the harmonised use of radio spectrum in the 5875-5935 MHz frequency band for safety-related applications of intelligent transport systems (ITS) and repealing Decision 2008/671/EC (notified under document C(2020) 6773) (Text with EEA relevance)

COMMISSION IMPLEMENTING DECISION (EU) 2020/1426

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision)[(1)], and in particular Article 4(3) thereof,

Whereas:

(1) Intelligent transport systems (ITS) encompass road ITS and urban rail ITS. Road ITS include cooperative systems based on real-time communications between the vehicle (including cars, trucks, bicycles, motor bicycles, tramways, construction equipment, agricultural equipment, as well as pedestrian and cycling equipment) and its environment (other vehicles, infrastructure, etc.). In certain cases, such road ITS equipment may also be used off-road (e.g. on industrial, agricultural, or construction sites). Urban rail ITS consist of public transport systems permanently guided by at least one control and management system, intended to operate local, urban and suburban passenger services separated from general road and pedestrian traffic. ITS have the potential to offer major improvements in transport system efficiency, in traffic safety and in comfort while travelling.

(2) Commission Decision 2008/671/EC[(2)] harmonised the use of radio spectrum in the 5 875-5 905 MHz (or 5,9 GHz) frequency band for safety-related applications of ITS. It recognised the role of ITS as being central to an integrated approach in road safety by adding information and communication technologies to transport infrastructure and vehicles to avoid potentially dangerous traffic situations and reduce the number of accidents.

(3) Directive 2010/40/EU of the European Parliament and of the Council[(3)] established a framework to deploy ITS in road transport and for interfaces with other modes of transport.

(4) On 14 September 2016, following the adoption of a set of measures for a European gigabit society[4] (including the 5G action plan[5]), the Commission stressed the link between the development and deployment of 5G in Europe and key application areas, in particular smart mobility (connected and automated mobility).

(5) On 30 November 2016, the Commission published the Communication — A European strategy on cooperative ITS[6]. On spectrum, the strategy proposes to keep the designation of spectrum used by European Telecommunications Standards Institute (ETSI) wireless short range communications (ITS-G5) for safety-related ITS services and to support measures to protect the 5,9 GHz frequency band from harmful interference. The strategy also proposes that cooperative intelligent transport systems deployment initiatives should implement the relevant mitigation techniques for co-existence according to ETSI standards and procedures.

(6) On 17 May 2018, the Commission adopted the third Mobility package[7], which integrated the strategy on road safety in a broader European sustainable mobility ecosystem focusing on safe, connected and clean mobility. In that package, driverless vehicles and advanced connectivity systems are expected to make vehicles safer and easier to share, and open up access to mobility services for more users.

(7) Under that evolving political and regulatory framework on road safety, the Member States and industry carried out various initiatives related to the use of the 5,9 GHz band, to develop and deploy road safety applications. Such initiatives include the Car-2-Car Communications Consortium[8], the C-Roads platform[9], the establishment of the 5G Automotive Association (5GAA)[10] and increased activities within the 3rd Generation Partnership Project (3GPP)[11] and standardisation bodies such as ETSI. Industry efforts resulted in the development of two competing technologies for short range communication of vehicles with their environment, namely the ITS-G5 and the long term evolution – vehicle-to-everything (LTE-V2X) technology.

(8) The urban rail community considers that at least 20 MHz of harmonised spectrum[12] is necessary in order to operate urban rail communication based train control (CBTC) systems. Such systems enable urban rail operations to be managed safely and efficiently, in particular by shortening intervals between successive trains, which increases throughput in public transportation infrastructures. Based on local authorisations, a number of metro lines in the Union already use parts of the 5 905–5 935 MHz frequency band or beyond. It is therefore important to harmonise spectrum for such use Union-wide in order to ensure a single market also in urban rail and to contribute to Europe's environmental objectives.

(9) Pursuant to Article 4(2) of Decision No 676/2002/EC, on 18 October 2017 the Commission issued a mandate to the European Conference of Postal and Telecommunications Administrations (CEPT) to study the possibility of extending the upper edge of the safety-related ITS band harmonised at Union level (5 875-5 905 MHz) by 20 MHz up to 5 925 MHz and admitting other means of transport, in addition to road transport, such as urban rail using CBTC in that band.

(10) In response to the mandate, CEPT published a report on 11 March 2019 (CEPT Report 71 – ITS at 5,9 GHz) reviewing the technical conditions and extension of the 5,9 GHz band. The proposals in the report include broadening the definition of ITS, harmonising the frequency band 5 875-5 925 MHz for safety-related ITS applications and harmonising the frequency band 5 925-5 935 MHz for safety-related urban rail ITS applications, subject to national coordination with fixed service and/or studies to determine the sharing conditions. The report also proposes giving priority to road ITS applications below 5 915 MHz and to urban rail ITS applications above 5 915 MHz. In the frequency band 5 915-5 925 MHz use by road ITS applications is proposed to be limited to infrastructure to vehicle (I2V) until road ITS applications are able to protect urban rail ITS applications. In the frequency band 5 915-5 935 MHz use by urban rail ITS is proposed to be on a shared basis and subject to national circumstances and stakeholder demand for urban rail ITS. Individual authorisations for urban rail ITS (5 915-5 935 MHz), road ITS infrastructure (5 915-5 925 MHz) and fixed service (above 5 925 MHz) should enable national coordination, where appropriate.

(11) When making the frequency band 5 915-5 935 MHz available for urban rail ITS as soon as reasonably practicable after its designation in accordance with this Decision, Member States should give due consideration to existing urban rail systems operating in the band (or part of it) with different technical conditions, in order to allow for a sufficient time frame to adapt the existing train and network equipment to the harmonised technical conditions.

(12) The results of the work carried out by CEPT in cooperation with ETSI constitute the technical basis for this Decision.

(13) ITS and radio local area network (RLAN) are both supported by Union policies. CEPT is defining technical conditions for RLAN operating above 5 935 MHz to address the protection of safety-related urban rail ITS applications below 5 935 MHz and safety-related road ITS below 5 925 MHz (e.g. out-of-band emission limit requirements and blocking scenario).

(14) Standardised solutions for ensuring co-channel sharing mechanisms and implementation of priority rules between road ITS and urban rail ITS applications are being defined by ETSI.

(15) ETSI is currently working on two technical reports dealing with the definition and evaluation of co-channel and adjacent-channel co-existence methods between ITS G5 and LTE-V2X. Relevant standards may be available at the earliest by mid-2021 and could take until mid-2022.

(16) Taking into account the developments in ETSI, this Decision may need to be reviewed in the future.

(17) This Decision should build upon and develop the rules set out in Decision 2008/671/EC. In the interest of legal clarity, Decision 2008/671/EC should be repealed.

(18) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee established by Decision No 676/2002/EC,

Changes to legislation: *There are currently no known outstanding effects for the Commission Implementing Decision (EU) 2020/1426. (See end of Document for details)*

HAS ADOPTED THIS DECISION:

Article 1

The purpose of this Decision is to harmonise the conditions for the availability and efficient use of frequency band 5 875-5 935 MHz for safety-related applications of Intelligent Transport Systems (ITS).

Article 2

For the purposes of this Decision, the following definitions shall apply:

(1) 'intelligent Transport Systems' or 'ITS' means a range of systems and services, based on information and communications technologies, including processing, control, positioning, communication and electronics, that are applied to a road transportation system or an urban rail transportation system, or both;

(2) 'road intelligent transport systems' or 'road ITS' means intelligent transport systems applied to any kind of road-based transport (including in off-road use cases) that enable safety communications between vehicles (V2V) and between infrastructure and vehicles (I2V). ITS applied to railway lines not separated from road or pedestrian traffic (such as tramways and light rail) are also considered a part of road ITS;

(3) 'urban rail intelligent transport systems' or 'urban rail ITS' means intelligent transport systems applied to urban or suburban railway lines permanently guided by at least one control and management system, separated from road and pedestrian traffic;

(4) 'mean equivalent isotropically radiated power' or 'mean e.i.r.p' means e.i.r.p. during the transmission burst which corresponds to the highest power.

Article 3

1 Member States shall, no later than 30 June 2021, designate the frequency band 5 875-5 935 MHz for intelligent transport systems and limit it to urban rail ITS in 5 925-5 935 MHz. Following that designation, Member States shall, as soon as reasonably practicable, make that frequency band available on a non-exclusive basis.

Such designation shall comply with the parameters set out in the Annex.

2 Road ITS applications shall have priority below 5 915 MHz and urban rail ITS applications shall have priority above 5 915 MHz, so that protection is afforded to the application having priority.

3 Access by road ITS to the frequency range 5 915-5 925 MHz shall be limited to applications involving infrastructure-to-vehicle (I2V) connectivity only, coordinated, where appropriate, with urban rail ITS.

4 Access by urban rail ITS to the frequency range 5 925-5 935 MHz shall be on a shared basis and subject to national circumstances and demand for urban rail ITS including coordination with fixed service.

Article 4

The scope and means of application of this Decision shall be reviewed as soon as market developments and evolution of standards and technology justify such a review or at the latest by 30 September 2023.