Commission Implementing Regulation (EU) 2020/1070 of 20 July 2020 on specifying the characteristics of small-area wireless access points pursuant to Article 57 paragraph 2 of Directive (EU) 2018/1972 of the European Parliament and the Council establishing the European Electronic Communications Code (Text with EEA relevance)

COMMISSION IMPLEMENTING REGULATION (EU) 2020/1070

of 20 July 2020

on specifying the characteristics of small-area wireless access points pursuant to Article 57 paragraph 2 of Directive (EU) 2018/1972 of the European Parliament and the Council establishing the European Electronic Communications Code

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code[(1)], and in particular Article 57(2) thereof,

Whereas:

(1) As recognised by Directive (EU) 2018/1972, since low power small-area wireless access points are likely to have a positive impact on the use of radio spectrum and on the development of wireless communications in the Union, the deployment of small-area wireless access points should be facilitated through a permit-exempt deployment regime.

(2) A small-area wireless access point comprises different operational elements, such as a signal processing unit, a radiofrequency unit, an antenna system, cable connections and casing. In some cases, the antenna system or portions thereof could be installed separately from the other elements of a small-area wireless access point and connected by one or more dedicated cables. This concept is used for distributed antenna systems or a distributed radio system used by one or multiple operators. A small-area wireless access point may be designed to serve two or more radio spectrum users.

(3) In order to ensure public acceptance and sustainable deployment, small-area wireless access points subject to the second subparagraph of Article 57(1) of Directive (EU) 2018/1972 should have minimal visual impact. To achieve this, they should be either invisible to the general public or mounted in a visually non-obtrusive way onto their supporting structure. Their operation should also ensure a high level of protection of public health, as laid down in Council Recommendation 1999/519/EC[(2)].

(4) Directive 2014/53/EU of the European Parliament and of the Council[3] provides that radio equipment, including a small-area wireless access point, is to be constructed so as to ensure the protection of people's health and safety.

(5) The physical and technical characteristics of small-area wireless access points subject to the second subparagraph of Article 57(1) of Directive (EU) 2018/1972 should therefore be defined in terms of maximum volume, restrictions on weight and maximum emission power. The choice of maximum volume to delimit the visual impact of a small-area wireless access point should allow design flexibility and adaptability to the physical and technical characteristics of the supporting structure.

(6) The study for the Commission 'Light Deployment Regime for Small-Area Wireless Access Points (SAWAPs)[4]' demonstrates that a volume limit of 30 litres should be sufficient to contain the main elements of a small-area wireless access point, while ensuring its unobtrusive character. That maximum volume should apply to any deployment of a small-area wireless access point serving one or more radio spectrum users, as well as of multiple small-area wireless access points sharing an infrastructure site of small surface, such as a light pole, a traffic light, a billboard or a bus stop, which due to its physical dimensions or dense replication in a given area, or both, is likely to generate visual clutter.

(7) Small-area wireless access points should comply with the European standard EN 62232:2017[5]'Determination of RF field strength, power density and specific absorption rate (SAR) in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure'. That standard provides a methodology for the installation of base stations taking into account their emission power for the purpose of evaluating human exposure to the electro-magnetic fields ('EMF') and is in compliance with the limits set in Recommendation 1999/519/EC. That standard is also referenced in Section 6.1 of the European harmonised standard EN 50401:2017 'Product standard to demonstrate the compliance of base station equipment with radiofrequency electromagnetic field exposure limits (110 MHz–100 GHz), when put into service', in relation to the assessment of the compliance of wireless access point put into service in its operational environment with the EMF exposure limits set in Recommendation 1999/519/EC.

(8) Standard EN 62232:2017 applies to all type of base stations divided into five installation classes corresponding to different limits of their equivalent isotropical radiated power (EIRP) of a few milliwatt (Class E0), 2 Watt (Class E2), 10 Watt (Class E10), 100 Watt (Class E100) and above 100 Watt (Class E+) respectively. Out of those classes, considering the installation safety distances to be respected under that standard and since Directive (EU) 2018/1972 provides that small-area wireless access points should be low power equipment, this Regulation should only apply to the installation classes E0, E2 and E10. Table 2 of clause 6.2.4 of EN 62232:2017 requires that the lowest radiating part of the antenna of a Class E10 has a height of at least 2,2 metres above the general public walkway to ensure a distance of at least 20 cm between the main antenna lobe and the human body of a 2 m tall person[6].

(9) For aesthetic reasons, the indoor installation of small-area wireless access points of Class E10, which are likely to utilise the maximum volume limit of 30 litres, should be allowed only in large indoor spaces with a ceiling height of at least 4 metres, such as museums, stadiums, convention centres, airports, metro-transport stations, railway stations, or shopping centres.

(10) A small-area wireless access point should not endanger the stability of the whole support structure it is installed on, and therefore not impose, due to its weight or shape, any structural reinforcement of the support structure used.

(11) In order to allow supervision and monitoring by the competent authorities, in particular in cases of multiple adjacent or co-located small-area wireless access points, any operator which deploys small-area wireless access points of Classes E2 or E10 in compliance with the characteristics laid down in this Regulation, should inform the competent authority about the installation in a timely manner. To this end, the operator should submit, no later than two weeks after the installation, a notification to the competent authority about the installation, which includes the location and the technical characteristics of those access points as well as a statement of compliance of the installation with the provisions of this Regulation. In order to ensure an easy process in all Member States, this notification should be submitted to a single information point, such as the one established pursuant to Directive 2014/61/EU of the European Parliament and of the Council[7].

(12) This Regulation should be without prejudice to the powers of the Member States to determine the aggregate levels of EMF resulting from the colocation or the aggregation in a local area of small-area wireless access points covered by the second subparagraph of Article 57(1) of Directive (EU) 2018/1972, as well as other types of base stations, in order to ensure their compliance with applicable aggregate exposure limits in accordance with Union law by means other than individual permits related to the deployment of small-area wireless access points.

(13) As further development of the relevant standards is foreseen, if they are to cover small-area wireless access points employing active antenna systems, such access points should not fall in the scope of the permit-exempt deployment regime at this stage.

(14) The application of this Regulation should be regularly monitored in order to facilitate its review taking into account any update of the European standard EN 62232 or other relevant developments in standardisation, in particular with regard to the use of active antenna systems, the technological evolution with regard to the state-of-the-art technology of the small-area wireless access points, the needs to support multiple bands and shared (multi-operator) solutions, as well as any update of Recommendation 1999/519/EC.

(15) This Regulation should be without prejudice to national measures regarding safety, utility supply, respect of private property including the right of owners to determine the use of their property, as well as regarding the rights of way related to the connection of the small-area wireless access point with wide-area network in compliance with Union law.

(16) This Regulation should be without prejudice to the application of any less restrictive regimes at national level for the deployment of small-area wireless access points.

(17) As Directive (EU) 2018/1972 becomes applicable from 21 December 2020, this Regulation should apply from the same date.

(18) The measures provided for in this Regulation are in accordance with the opinion of the Communications Committee,

HAS ADOPTED THIS REGULATION:

Article 1

This Regulation lays down the physical and technical characteristics of small-area wireless access points referred to in the second subparagraph of Article 57(1) of Directive (EU) 2018/1972.

This Regulation shall not apply to small-area wireless access points with an active antenna system.

Article 2

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

(1) 'equivalent isotropicalally radiated power (EIRP)' means the product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain);

(2) 'antenna system' means a hardware part of a small-area wireless access point that radiates radio frequency energy for the purpose of providing wireless connectivity to end users;

(3) 'active antenna system (AAS)' means an antenna system where the amplitude or phase, or both, between antenna elements is continually adjusted resulting in an antenna pattern that varies in response to short term changes in the radio environment; this excludes long-term beam shaping such as fixed electrical down tilt; in a small-area wireless access point equipped with an AAS, the latter is integrated as part of the small-area wireless access point;

(4) 'indoor' means any space, including transportation vehicles, that has a ceiling or roof or any fixed or moveable structure or device which is capable of covering all that space, and except for doors, windows and passageways, is wholly enclosed by walls or sides, either permanently or temporarily, regardless of the type of material used for the roof, wall or sides, and regardless of whether the structure is permanent or temporary;

(5) 'outdoor' means any space which is not indoor.

Article 3

1 Small-area wireless access points referred to in the second subparagraph of Article 57(1) of Directive (EU) 2018/1972 shall comply with the requirements of the European standard laid down in point B of the Annex to this Regulation and shall either:

a be fully and safely integrated in their supporting structure and therefore invisible to the general public; or

b meet the conditions set out in point A of the Annex to this Regulation.

2 Paragraph 1 is without prejudice to powers of the Member States to determine the aggregate levels of electro-magnetic fields resulting from the colocation or the aggregation in a local area of small-area wireless access points, and to ensure compliance with applicable aggregate electro-magnetic fields exposure limits in accordance with Union law by means other than individual permits related to the deployment of small-area wireless access points.

3 Operators which have deployed small-area wireless access points of Classes E2 or E10 complying with the conditions laid down in paragraph 1, shall notify the national competent authority within two weeks from the deployment of each such point about the installation and location of those access points as well as the requirements they meet in accordance with that paragraph.

Article 4

Member States shall regularly monitor and report to the Commission, the first time by 31 December 2021, and each year thereafter, on the application of this Regulation, in particular on the application of Article 3(1), including on the technologies used by the small-area wireless access points deployed.

Article 5

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union.*

It shall apply from 21 December 2020.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 20 July 2020.

For the Commission

The President

Ursula VON DER LEYEN

ANNEX

A. **Conditions referred to in point (b) of Article 3(1)**

1. The total volume of the part visible to the general public of a small-area wireless access point serving one or more radio spectrum users shall not exceed 30 litres.

2. The total volume of the parts visible to the general public of multiple separate small-area wireless access points sharing the same infrastructure site of an individual delimited surface such as a light pole, a traffic light, a billboard or a bus stop, shall not exceed 30 litres.

3. In the cases where the antenna system and other elements, such as a radiofrequency unit, a digital processor, a storage unit, a cooling system, power supply, cabling connections, backhaul elements or elements for earthing and fixation, of the small-area wireless access point are installed separately, any portion thereof in excess of 30 litres shall be invisible to the general public.

4. The small-area wireless access point shall have visual consistency with the supporting structure and have a proportionate size relative to the overall size of the supporting structure, coherent shape, neutral colours to match or to blend with the supporting structure, and concealed cables, and shall not, together with other small-area wireless access points that are already installed in the same site or in adjacent sites, create aggregate visual clutter.

5. The weight of a small-area wireless access point and its shape shall not impose a structural reinforcement of the supporting structure.

6. A small-area wireless access point of the installation class E10 shall be only deployed in outdoor or in large indoor spaces, which have a ceiling height of at least 4 m.

B. **Requirements of European standard referred to in Article 3(1)**

1. Deployment of small-area wireless access points shall be in accordance with the installation classes E0, E2 and E10 of Table 2 of clause 6.2.4 of the European standard EN 62232:2017 ‘Determination of RF field strength, power density and specific absorption rate (SAR) in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure’.

2. In the case of multiple co-located antenna systems (or portions thereof) of one or more small-area wireless access points subject to this Regulation, the criteria for the EIRP contained in the standard referred to in point 1 shall apply to the sum of EIRP of all co-located antenna systems (or portions thereof).

(**1**) OJ L 321, 17.12.2018, p. 36.

(**2**) Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (OJ L 199, 30.7.1999, p. 59).

(**3**) Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (OJ L 153, 22.5.2014, p. 62).

(**4**) Smart 2018/0017, https://op.europa.eu/en/publication-detail/-/publication/463e2d3d-1d8f-11ea-95ab-01aa75ed71a1/language-en/format-PDF/source-112125706

(**5**) Applicable to the frequency range 110 MHz–100 GHz.

(**6**) Annex C.3 to EN 62232:2017.

(**7**) Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks (OJ L 155, 23.5.2014, p. 1).

Status:
Point in time view as at 20/07/2020.

Changes to legislation:
There are currently no known outstanding effects for the Commission Implementing Regulation (EU) 2020/1070.