Band overview   
1500 MHz frequency band



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1. Summary

The 1427-1518 MHz frequency band (hereinafter referred to as the 1500 MHz frequency band) is harmonised in the European Union for Mobile/Fixed Communications Networks (hereinafter: MFCN[[1]](#footnote-1)) capable of providing wireless broadband communications services. The relevant EU legislation was adopted in two steps. In the first step, a Commission Implementing Decision was adopted on the use for MFCN of the 1452-1492 MHz frequency band previously planned for digital audio broadcasting in European countries, followed by an amending Decision extending it to the adjacent 1427-1452 MHz and 1492-1518 MHz frequency bands. Member States should make either all or part of the harmonised frequency band available for MFCN purposes. How much of the 1500 MHz frequency band Member States make available depends largely on existing usage and market demands. The National Media and Infocommunications Authority (hereinafter: NMHH) already placed the issue of the 1500 MHz frequency band on the agenda of its public consultations in 2017 and 2019. Both public consultations ended with the same result. There was no concrete market demand and the views expressed in the NMHH’s preparatory documents were confirmed.

By holding a public consultation, the NMHH aims to find out about market needs.

According to EU legislation, the entire 1427-1518 MHz frequency band (including 1452-1492 MHz and the subsequently harmonised 1427-1452 MHz and 1492-1518 MHz frequency bands) can only be used for the provision of supplemental downlinks (hereinafter referred to as: SDL).

Taking into account current national use and relevant international specifications, Decree No. 7/2015 (XI.13.) NMHH on the national frequency allocation and the rules of using frequency bands (hereinafter: NFFF Decree) have designated the 1427-1492 MHz frequency sub-band for MFCN use, and the 1492-1525 MHz frequency sub-band for non-civil use, of which the upper 7 MHz sub-band is not affected by the EU Decision. Of the 90 MHz spectrum available in the 1500 MHz frequency band according to the European regulation, a maximum of 65 MHz spectrum can be distributed for MFCN SDL in Hungary. In the event of a market demand for the use of the frequency band, the entitlement to radio spectrum use for the 1427-1492 MHz frequency band is to be distributed for the provision of services for the purpose of MFCN SDL in a competitive procedure.

1. Introduction

The 1452-1492 MHz frequency band was designated for terrestrial and satellite digital audio broadcasting. In the 1427-1452 MHz and 1492-1518 MHz frequency bands, frequencies were primarily assigned for systems of the fixed service; besides this, typically equipment for Programme Making and Special Events (hereinafter: PMSE[[2]](#footnote-2)), and military equipment are in operation.

In the 1429-1518 MHz frequency band, the aeronautical telemetry systems of the aeronautical mobile service operate in some countries (e.g. Ukraine, Russia and the USA).

The majority of the 1452–1492 MHz frequency band (1452-1479.5 MHz) was earlier designated in the EU member states for terrestrial digital audio broadcasting (T-DAB) based on the Maastricht Special Arrangement (MA02revCO07), but the introduction of the T-DAB did not come into general use in this frequency band, leaving it unutilised.

In order to make more efficient use of the frequency band, in 2015 Union legislation was adopted which harmonised the 1452-1492 MHz frequency band for Supplemental Downlinks (SDL) of wireless broadband electronic communications services to be implemented with Mobile/Fixed Communications Networks (MFCN), while allowing Member States to adapt to national circumstances in parts of the frequency band (e.g. 1452-1479.5 MHz for terrestrial broadcasting).

The 2015 World Radiocommunication Conference (WRC-15[[3]](#footnote-3)) also identified the 1427-1452 MHz and 1492-1518 MHz frequency bands adjacent to the 1452-1492 MHz frequency band for IMT[[4]](#footnote-4) purposes, and harmonised technical conditions were developed at European level to ensure the use of these bands for mobile/fixed communications networks capable of providing wireless broadband communications services.

Pursuant to Commission Implementing Decisions adopted for the 1452-1492 MHz as well as 1427-1452 MHz and 1492-1518 MHz frequency bands[[5]](#footnote-5), the entire 1427-1518 MHz frequency band can be used for MFCN purposes, taking into account technology neutrality, but exclusively to provide the supplemental downlinks necessary for increased downlink traffic.

Hungary has implemented the EU legislation on the 1500 MHz frequency band by taking into account current national usage. Due to the use of the 1492-1518 MHz frequency sub-band for non-civil purposes, on the basis of the NFFF Decree only the 1427-1492 MHz frequency sub-band from the 1427-1518 MHz frequency band harmonised for MFCN purposes is designated for MFCN purposes and accordingly it contains detailed technical and band-use specifications enabling the frequency band to be distributed.

The necessary coordination agreements for the use of frequencies in the border area with Austria, Croatia, Romania, Slovakia and Slovenia are available for the 1452-1492 MHz frequency band; Serbia has not yet adopted a regulatory plan for the frequency band and has, therefore, not yet acceded to the Agreement. According to the amended EU legislation, agreements must also be concluded for the extended frequency band. Among the neighbouring countries, there are also aeronautical telemetry systems in Ukraine, so a coordination agreement was concluded with Ukraine to ensure the interference-free use of MFCN and aeronautical telemetry systems for the entire 1427-1518 MHz frequency band.

The public consultations of the NMHH held on 23 November 2017[[6]](#footnote-6) and on 13 December 2019[[7]](#footnote-7) also addressed issues related to the utilisation of the 1500 MHz frequency band. During the previous public consultations, no claim was made by the market players in connection with the use of this frequency band for SDL purposes.

1. Rules for the use of the 1500 MHz frequency band

Considering that the 1427-1518 MHz frequency band had been typically underutilised internationally, in Europe and in other regions, studies were carried out at European and global level to allow for the deployment of broadband mobile service applications and relevant international regulations were adopted.

* 1. International regulation

The global harmonisation of the 1452-1492 MHz frequency band and making it available for IMT was broadly supported by market players, therefore the establishment of appropriate regulatory frameworks was a key question in the international organisations concerned and the groups responsible for spectrum management (ITU[[8]](#footnote-8), CEPT[[9]](#footnote-9), European Union).

* + 1. ITU

The global identification of the 1452-1492 MHz frequency band for IMT purposes was only implemented partly in the Radio Regulations (hereinafter: RR), while the adjacent 1427-1452 MHz and 1492-1518 MHz frequency bands can be used globally for IMT, based on the amendment accepted at the WRC-15.

The RR allocation is set out in Annex 1 to the NFFF Decree.

In Region 1 of the RR that includes EU Member States, the 1427-1518 MHz frequency band is allocated to the fixed and mobile (except aeronautical mobile) services on a primary basis, and within that the 1452–1492 MHz frequency band is also allocated to the broadcasting and broadcasting-satellite services, and the 1427-1429 MHz frequency band is also allocated to the space operations.

The 1429-1535 MHz frequency band (and within that the 1452–1492 MHz frequency band) is also allocated to the aeronautical mobile service on a primary basis in a few countries, such as Ukraine, Hungary’s neighbour, according to footnote 5.342 of the Radio Regulations:

*5.342 Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Uzbekistan, Kyrgyzstan and Ukraine, the frequency band 1 429-1 535 MHz is also allocated to the aeronautical mobile service on a primary basis, exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the frequency band 1 452-1 492 MHz is subject to agreement between the administrations concerned. (WRC‑15)*

The ITU-R M.2324 Report[[10]](#footnote-10) contains the results of the compatibility studies between the aeronautical telemetry systems operating in the 1429-1535 MHz frequency band and the IMT systems.

For the 1427-1452 MHz and 1492-1518 MHz frequency bands, the WRC-15 made the use for IMT purposes possible, by adopting footnote 5.341A:

*5.341A*  *In Region 1, the frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are intended for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. (WRC‑15)*

The agenda of WRC-15 included the achievement of the global IMT identification of the entire 1427-1518 MHz frequency band, but in Region 1 eventually only the IMT identification of the 1427-1452 MHz and 1492-1518 MHz frequency bands was implemented. In European countries, introducing MFCN in the 1452-1492 MHz frequency band is only possible based on the European regulation.

* + 1. CEPT

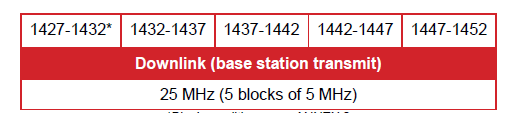
For the use of the 1427-1518 MHz frequency band, the following documents have been adopted in the responsible CEPT working groups:

* CEPT Report 54[[11]](#footnote-11), which proposed, in response to the Commission’s mandate to the CEPT, the harmonisation of the 1452–1492 MHz frequency band for wireless broadband supplemental downlink, while allowing Member States to adapt to national circumstances in parts of the frequency band (e.g. 1452-1479.5 MHz for terrestrial broadcasting). CEPT Report 54 for the Commission determines the technical conditions and fundamental principles required for cross-border coordination – including the borders of the European Union – between wireless broadband electronic communications services and T-DAB, and aeronautical telemetry services in the 1452–1492 MHz frequency band.
* Decision ECC/DEC/13(03)[[12]](#footnote-12) contains the harmonised technical conditions for the use of the 1452–1492 MHz frequency band for MFCN purposes, the recommended channel arrangement and the maximum radiated power levels to ensure the coexistence of different radio services;
* ECC Recommendation (15)01[[13]](#footnote-13): regarding the cross-border coordination of the mobile/fixed communications networks (MFCN) in the frequency bands 1452–1492 MHz, 3400–3600 MHz and 3600–3800 MHz;
* ECC Report 202[[14]](#footnote-14) containing the out-of-band emission requirements for mobile/fixed communications networks (MFCN) supplemental downlink (SDL) operating in the 1452–1492 MHz frequency band;
* ECC Report 227[[15]](#footnote-15): includes compatibility studies between Mobile/Fixed Communication Networks (MFCN) Supplemental Downlink (SDL) operating in the 1452-1492 MHz frequency band and other relevant services (broadcasting, aeronautical telemetry);
* Decision ECC/DEC/(17)06[[16]](#footnote-16): includes the technical requirements and recommended channel arrangement for the harmonised use of the frequency bands 1427-1452 MHz and 1492-1518 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL);
* ECC Report 295[[17]](#footnote-17): provides guidance for the countries included in footnote 5.342 of the RR and neighbouring countries on the cross-border coordination of mobile/fixed communications networks (MFCN) and aeronautical telemetry in the frequency band 1429-1518 MHz. Ukraine is also included in the footnote, so Hungary is also affected.

Figures 3.1.2.a and b illustrate the appropriate frequency arrangement for harmonised spectrum use according to Decisions ECC/DEC/(13)03 and ECC/DEC/(17)06 in the frequency ranges 1452-1492 MHz, 1427-1452 MHz and 1492-1518 MHz.



Figure 3.1.2.a: Channel arrangement of the 1452-1492 MHz frequency sub-band (1500 MHz “core band”)



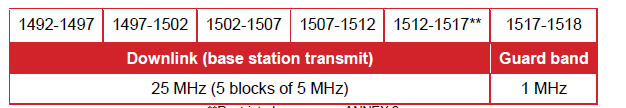


Figure 3.1.2.b: Channel arrangement of the 1427-1452 MHz and 1492-1518 MHz frequency sub-bands (1500 MHz “extension”)

In the 1500 MHz frequency band harmonised at CEPT level for MFCN purposes, military systems are still in operation in several countries. Pursuant to technical Recommendation T/R 13-01[[18]](#footnote-18), the frequency bands 1427-1452 MHz and 1492-1518 MHz may also be designated for low-capacity fixed links within the CEPT. In the 1492-1518 MHz frequency band, Recommendation ERC/REC 70-03[[19]](#footnote-19) allows SRD[[20]](#footnote-20) applications to operate.

CEPT studies also had to take into account 5G compliance aspects, and according to the EU mandate[[21]](#footnote-21), it was an important condition to ensure 5G compliance throughout the 1427-1518 MHz frequency band.

In the 1500 MHz frequency band, the decisions adopted require CEPT administrations to decide on the introduction of the MFCN taking into account national usage characteristics and market needs.

The possibility of using 5G NR[[22]](#footnote-22) in the 1500 MHz frequency band was also studied at CEPT level. Based on international studies, no 5G NR with active antenna system is planned to be introduced in the 1500 MHz frequency band.

* + 1. EU

The harmonised use of the 1500 MHz frequency band for MFCN purposes is required by the following Union documents:

* Commission Implementing Decision (EU) 2015/750[[23]](#footnote-23) of 8 May 2015 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union
* Commission Implementing Decision (EU) 2018/661[[24]](#footnote-24) of 26 April 2018 amending Implementing Decision (EU) 2015/750 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union as regards its extension in the harmonised 1427-1452 MHz and 1492-1517 MHz frequency bands.

Pursuant to Union legislation, Member States are to ensure, on a non-exclusive basis, the designation and availability of the 1427–1452 MHz and 1492–1517 MHz frequency bands or parts of them for terrestrial systems capable of providing wireless broadband electronic communications services, in accordance with the parameters set out in the Annex to the amending Decision.

Should Member States designate and make available only part of the 1427–1452 MHz or 1492–1517 MHz frequency bands, they must ensure that the part of the spectrum made available, together with the 1452–1492 MHz frequency band, constitutes a coherent frequency band.

In the absence of a national demand for wireless broadband electronic communications services, these frequency bands may continue to be used for other existing applications that cannot share these frequency bands with wireless broadband electronic communications services.

* 1. National regulation

National regulations for the 1500 MHz frequency band are included in the NFFF Decree in force.

In accordance with the Radio Regulations, in Hungary the 1427-1429 MHz frequency band is allocated to the space operations (Earth-to-space), fixed and mobile (except aeronautical mobile) services on a primary basis. The 1429-1452 MHz and 1492-1518 MHz bands are allocated to the fixed and mobile (except aeronautical mobile) services on a primary basis. The 1452-1492 MHz frequency band is allocated to the fixed service, the mobile service (except aeronautical mobile), the broadcasting service and the broadcasting-satellite service on a primary basis.

According to Annex 2 of the NFFF Decree, frequencies may be assigned on a primary basis for terrestrial systems capable of providing electronic communications services (MFCN SDL) in the 1427-1492 MHz frequency band. Likewise on a primary basis, passive research of intentional emissions of extraterrestrial origin may also be conducted, based on footnote 5.341. On a tertiary basis, civil and non-civil SRD radiodetermination applications may also operate in the frequency band. The 1427-1429 MHz frequency band is also planned for space operations (Earth-to-space) applications[[25]](#footnote-25).

In the 1492-1518 MHz frequency range (within the 1492-1525 MHz non-civil frequency band), non-civil point-to-point, point-to-multipoint, military fixed service and general multipoint as well as single- and two-frequency mobile systems may be operated, and civil passive research of intentional emissions of extraterrestrial origin may also be conducted on a primary basis.

On a tertiary basis, civil and non-civil SRD radiodetermination applications may operate in the 1427-1525 MHz frequency band. The 1492–1525 MHz frequency band is also designated on a tertiary basis for radio microphone applications and wireless audio and multimedia streaming applications, and the 1492-1518 MHz sub-band is also designated for non-civil purposes for low power wireless data and video transmission.

Decisions and studies on the use of the 1452-1492 MHz frequency band and the extended 1427-1518 MHz frequency band for MFCN have been completed at international level, and the relevant EU legislation has been implemented into the Hungarian regulations. The frequency band usage conditions and radio spectrum management requirements for terrestrial systems capable of providing electronic communications services in the 1427-1492 MHz frequency band are set out in Section 3.7 of Annex 3 to the NFFF Decree.

In coherence with the harmonised European legislation, the mode of operation within the 1427-1492 MHz frequency band is limited to supplemental downlink transmission (SDL) of land stations. The division of the frequency band into basic blocks is included in Table 3.2.a:

|  |  |
| --- | --- |
| **Basic block ID** | **Frequency range [MHz]** |
| 1 | 1427-1432 |
| 2 | 1432-1437 |
| 3 | 1437-1442 |
| 4 | 1442-1447 |
| 5 | 1447-1452 |
| 6 | 1452–1457 |
| 7 | 1457–1462 |
| 8 | 1462–1467 |
| 9 | 1467–1472 |
| 10 | 1472–1477 |
| 11 | 1477–1482 |
| 12 | 1482–1487 |
| 13 | 1487–1492 |

Table 3.2.a: Division of the sub-bands designated for MFCN of the 1500 MHz frequency band into basic blocks

There is no restriction on services, as technology and service neutrality must be ensured in the frequency band. However, taking into account the requirement for technology neutrality, the frequency band may be used in SDL mode only, on condition that the harmonised technical conditions defined in Commission Implementing Decisions (EU) 2015/750 and (EU) 2018/661 are met.

Transmissions from the base station in the 1452-1492 MHz frequency band must comply with the conditions specified in the Annex to Decisions (EU) 2015/750 and (EU) 2018/661 respectively. The BEM required for the base station contains in-block and out-of-block power limits. The in-block power limit corresponds to a block assigned to an operator. The out-of-block power limits apply to the part of the spectrum outside the block assigned to the specific operator either inside or outside the 1427-1492 MHz frequency band.

Conditions for obtaining right of radio spectrum use and conditions of using the frequency band are given in Table 3.2.b (Section 3.7.4 of Annex 3 of the NFFF Decree):

|  |  |
| --- | --- |
| **Subject of condition** | **Requirement** |
| Purpose of use | providing electronic communications services |
| Method of frequency distribution | competitive procedure |
| Amount of obtainable frequency range | the amount of basic blocks that can be obtained by the participant in the competitive procedure and the size of the user blocks are determined by the documentation of the competitive procedure |
| Duration of right of radio spectrum use | 15 years, which may be extended once by 5 years; the detailed rules and conditions of the extension shall be determined by the documentation of the competitive procedure and the decision or administrative contract closing the competitive procedure |
| Territorial coverage of entitlement to radio spectrum use | nationwide in case of obtainment of entitlement to radio spectrum use, as a result of a competitive procedure, in case of transfer, smaller geographical unit is also permitted |
| Method of management | block management |
| Secondary trading | entitlement to and right of radio spectrum use may be transferred or leased in whole or in part;  partial transfer in respect of frequencies shall occur per basic block |

 Table 3.2.b: Conditions for obtaining right of radio spectrum use and conditions of using the frequency band

1. Actual national use

Currently there is no licensed use on a primary basis in the 1427-1492 MHz frequency band in Hungary. Non-civil point-to-point, point-to-multipoint and general multipoint (single- and two-frequency) systems may operate in the 1492-1518 MHz frequency band. Non-civil use is still in demand, so this sub-band is not currently planned for MFCN. The SRDs for use on a tertiary basis are exempted from individual licensing; we have no information about their operation.

1. National regulatory plans

Based on the NFFF Decree in force, the 1427-1492 MHz frequency range is designated for MFCN, and the introduction of MFCN does not require any modification of the national regulation.

1. Frequency use in border areas and international coordination

In border areas, spectrum use is permitted only for stations which meet the requirements laid down in the currently applicable international coordination documents.

The technical conditions for international coordination for the 1452-1492 MHz frequency band are set out in[[26]](#footnote-26) Recommendation ECC/REC/(15)01. As a result of the amendment to ECC/REC/(15)01, the Recommendation has been extended to the entire 1427-1518 MHz frequency band and includes requirements for LTE and 5G NR systems. In February 2018, Hungary concluded an international multilateral coordination agreement for the 1452-1492 MHz frequency sub-band with Austria, Croatia, Romania, Slovakia and Slovenia. Serbia has not yet adopted national legislation and has, therefore, not been able to accede to the agreement. The agreement is based on the limitations of the field strength level that can be used in the border area and the use of the preferred codes; accordingly, if the countries concerned comply with the values set out in the agreement, no coordination procedure is required.

By extending Recommendation ECC/REC/(15)01, internationally agreed technical conditions for reviewing and extending agreements with neighbouring countries to the extended 1500 MHz frequency band are available for the entire 1427-1518 MHz frequency band.

On the basis of the footnote 5.342 of the RR, aeronautical telemetry systems are operated in Ukraine in the 1429-1535 MHz frequency band; therefore, a special agreement had to be concluded with Ukraine for the 1500 MHz frequency band. The issues of compatibility and coordination between MFCN and aeronautical telemetry have been studied by the CEPT PT1 working group, the findings of which are included in ECC/REP/295[[27]](#footnote-27). Taking into account international studies, in November 2019 we also concluded an international coordination agreement with Ukraine for the 1500 MHz frequency band, which includes the conditions related to the protection of aeronautical telemetry, as well as the rules of coordination between MFCN and aeronautical telemetry in the entire 1427-1518 MHz frequency band.

Among the neighbouring countries, the competitive procedure for the 1500 MHz frequency band has already been completed in Slovenia and Austria. A competitive procedure covering the 1500 MHz frequency band is expected to take place in Slovakia in the first half of 2022 and in Romania in the third quarter of 2022.

1. Radio spectrum fees

The method of calculation for regular radio spectrum fees is prescribed by Decree 1/2011 (III.31.) NMHH on frequency reservation and usage fees (hereinafter: Fees Decree). Pursuant to the NFFF Decree, the right holder acquiring entitlements to radio spectrum use shall pay a monthly band fee, in the case of radio spectrum for service purposes acquired as a result of a competitive procedure, as a result of the extension of the entitlement to radio spectrum use, or as a result of the renewal of the entitlement to radio spectrum use, and resold after acquisition, during the term of the entitlement to radio spectrum use, starting from the earliest date of the validity of the radio licence determined in Section 22(3) of Decree 4/2011 (X. 6.) NMHH on the Rules of Auctioning and Tendering to Acquire Entitlements to Frequency Usage.

In order to determine the band fee payable for the use of the 1500 MHz frequency band, the Fees Decree needs to be amended, as this frequency band is not included in Section 20 entitled “Fees payable for bands within the scope of block management” and Annex 9 of the Fees Decree.

1. MFCN: Mobile/Fixed Communications Networks (In the context of convergence of fixed and mobile wireless communications services, the CEPT regulation introduced the umbrella term MFCN (Mobile/Fixed Communications Networks). This includes IMT (International Mobile Telecommunication) systems as used by the ITU.) [↑](#footnote-ref-1)
2. PMSE: Programme Making and Special Events [↑](#footnote-ref-2)
3. World Radiocommunication Conference 2015, Geneva, 2-27 November 2015 [↑](#footnote-ref-3)
4. IMT - International Mobile Telecommunications [↑](#footnote-ref-4)
5. Commission Implementing Decision (EU) 2015/750 of 8 May 2015 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union and Commission Implementing Decision (EU) 2018/661 of 26 April 2018 amending Implementing Decision (EU) 2015/750 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union as regards its extension in the harmonised 1427-1452 MHz and 1492-1517 MHz frequency bands [↑](#footnote-ref-5)
6. <http://nmhh.hu/esemeny/207926/Nyilvanos_meghallgatas_a_mobil_halozatok_uzemeltetesere_alkalmas_frekvenciasavok_hasznositasaval_kapcsolatos_szakmai_kerdesekre> [↑](#footnote-ref-6)
7. <https://nmhh.hu/esemeny/207926/Nyilvanos_meghallgatas_a_mobil_halozatok_uzemeltetesere_alkalmas_frekvenciasavok_hasznositasaval_kapcsolatos_szakmai_kerdesekre> [↑](#footnote-ref-7)
8. ITU: International Telecommunication Union [↑](#footnote-ref-8)
9. CEPT: Conférence européenne des Administrations des postes et des télécommunications - European Conference of Postal and Telecommunications Administrations [↑](#footnote-ref-9)
10. Report ITU-R M.2324: Sharing studies between potential International Mobile Telecommunication systems and aeronautical mobile telemetry systems in the frequency band 1429-1535 MHz [↑](#footnote-ref-10)
11. CEPT REPORT 54 approved 28 November 2014 Report from CEPT to the European Commission in response to the Mandate “To develop harmonised technical conditions in the 1452-1492 MHz frequency band for wireless broadband electronic communications services in the EU” [↑](#footnote-ref-11)
12. ECC DECISION (ECC/DEC/(13)03) approved 08 November 2013 The harmonised use of the frequency band 1452-1492 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL) (amended 2 March 2018) [↑](#footnote-ref-12)
13. ECC Recommendation (15)01 Cross-border coordination for mobile / fixed communications networks (MFCN) in the frequency bands:694-790 MHz, 1452-1492 MHz, 3400-3600 MHz and 3600-3800 MHz Approved 13 February 2015 (amendment on 14 February 2020) [↑](#footnote-ref-13)
14. ECC REPORT 202 Out-of-Band emission limits for Mobile/Fixed Communication Networks (MFCN) Supplemental Downlink (SDL) operating in the 1452-1492 MHz band (approved September 2013) [↑](#footnote-ref-14)
15. ECC REPORT 227: Compatibility Studies for Mobile/Fixed Communication Networks (MFCN) Supplemental Downlink (SDL) operating in the 1452-1492 MHz band (approved January 2015) [↑](#footnote-ref-15)
16. ECC/DEC/(17)06: The harmonised use of the frequency bands 1427-1452 MHz and 1492-1518 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL) approved 17 November 2017, corrected 2 March 2018 [↑](#footnote-ref-16)
17. ECC Report 295 Guidance on Cross-border coordination between MFCN and Aeronautical Telemetry Systems in the 1429-1518 MHz, band. Approved 8 March 2019 [↑](#footnote-ref-17)
18. Recommendation T/R 13-01 E (Montreux 1993, Revised Rottach-Egern, February 2010) PREFERRED CHANNEL ARRANGEMENTS FOR FIXED SERVICE SYSTEMS OPERATING IN THE FREQUENCY RANGE 1 - 2.3 GHz [↑](#footnote-ref-18)
19. ERC Recommendation 70-03 Relating to the use of Short Range Devices (SRD) (http://www.erodocdb.dk/Docs/doc98/official/pdf/REC7003E.PDF) [↑](#footnote-ref-19)
20. Short Range Device (SRD) [↑](#footnote-ref-20)
21. Mandate to CEPT to develop harmonised technical conditions in additional frequency bands in the 1.5 GHz range for their use for terrestrial wireless broadband electronic communications services in the Union [↑](#footnote-ref-21)
22. 5G NR – Fifth Generation New Radio [↑](#footnote-ref-22)
23. COMMISSION IMPLEMENTING DECISION (EU) 2015/750 of 8 May 2015 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union (notified under document C(2015) 3061) [↑](#footnote-ref-23)
24. Commission Implementing Decision (EU) 2018/661 of 26 April 2018 amending Implementing Decision (EU) 2015/750 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union as regards its extension in the harmonised 1427-1452 MHz and 1492-1517 MHz frequency bands. [↑](#footnote-ref-24)
25. On the basis of a draft decree currently under EU technical notification procedure. [↑](#footnote-ref-25)
26. ECC Recommendation (15)01 Cross-border coordination for mobile / fixed communications networks (MFCN) in the frequency bands:694-790 MHz, 1452-1492 MHz, 3400-3600 MHz and 3600-3800 MHz Approved 13 February 2015 (amendment 14 February 2020) [↑](#footnote-ref-26)
27. ECC Report 295 Guidance on Cross-border coordination between MFCN and Aeronautical Telemetry Systems in the 1429-1518 MHz, band. Approved 8 March 2019 [↑](#footnote-ref-27)