

The legal frameworks and instruments related to radio frequencies

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Abstract:

The radio-frequency spectrum is a limited natural resource that many public and private actors are putting to a more intense use to develop wireless technology. Since radio frequencies leap over borders, tight international coordination is needed to avoid interference. These two characteristics account for the dominance of international law and the role of the International Telecommunication Union (ITU), in particular its Radio Regulations Board, which sets, at the planetary level, the principal rules for assigning bandwidths. European Union mainly seeks to harmonize systems for authorizing frequencies; and the French legal framework is founded on the principle that these frequencies belong to the public domain. The state thus regulates uses within the precise limits set by these international and European legal frameworks. The management of bandwidths lies in the hands of the Agence Nationale des Fréquences (ANFR), which coordinates uses by the parties who are assigned bandwidths.

The radio-frequency spectrum is a finite natural resource, scarce and limited, on which the economy depends.¹ This resource is managed within legal frameworks specific to each geographical level: global, regional, national. After presenting the ITU's Radio Regulations and the European institutional and regulatory authorities, this article describes the legal framework in France and the administrative instruments available to the ANFR (Agence Nationale des Fréquences: National Frequency Agency).²

Radio Regulations, the legal framework for access to radio frequencies

The International Telecommunication Union (ITU) is a body of the United Nations specialized in information and communication technology (ICT). It is divided into three major fields of activity. The Radio Communication Sector (ITU-R) has the duty of overseeing the rational, fair, efficient and economic use of the radio-frequency spectrum and of orbits for satellites by all users of radio frequencies. The intent is to avoid jamming and interference, which are harmful to ICT services.

¹ This article, including quotations from French sources, has been translated from French by Noal Mellott (Omaha Beach, France). The translation into English has, with the editor's approval, completed a few references. All websites were consulted in October 2020.

² <https://www.anfr.fr/>

The worldwide legal framework for managing frequencies has been set up under the 1992 Constitution and Convention of the ITU and by its administrative regulations that are international instruments with binding force (Constitution Article 54 §1), in particular the Radio Regulations (RR). These regulations are regularly modified to take account of changes in technology and uses. These modifications are approved at world radio communications conferences (WRCs), the last one held from 28 October to 22 November 2019 in Sharm el-Sheikh, Egypt.

Having the force of an international treaty, the Radio Regulations provide the legal framework for member states to use the radio-frequency spectrum.³ Article 5 of the RR provides for frequency allocations to “primary” and “secondary” radio communications services. Article 1 defines the terminology and lists these services, among them: fixed services, space operation services, land or maritime mobile services, satellite services and broadcasting services. Article 4.3 states that any new assignment of a frequency has to avoid causing harmful interference to stations that already use frequencies assigned in accordance with the RR’s table of frequency allocations. These assignments and their specifications figure in the Master International Frequency Register (MIFR). Under Article 5 Section 2, the stations of secondary services “shall not cause harmful interference to stations of primary services” and “cannot claim protection from harmful interference from stations of a primary service”. Finally, according to Article 18, the installation or operation of a transmitting station is subject to a license in due form delivered by the country’s competent administration or authority.

The European Union’s system of authorization and policy of spectrum management.

Since the liberalization of the ICT market in the EU in 1998, the principal legal grounds for the management of radio frequencies are the “Authorization Directive” and “Radio Spectrum Decision”.⁴

Directive 2002/20/CE of 7 March 2002 on the authorization of electronic networks and communication services simplified procedures by abolishing the previous system of individual licenses and instituting a system of authorization based on filing a declaration. Under Article 3 of the directive, actors are free to install and operate networks open to the public and to provide electronic communications services to the public under condition that a declaration has been filed or, if this is not the case, that specific rights have been granted for using scarce resources. In other words, a mere declaration is needed to provide electronic communication services or operate networks. For the use of scarce resources, such as radio frequencies, national governments in Europe retain the right to set up a general or an individual system of authorization restricted to cases where a high risk of interference would be harmful to other operators.

Decision 676/2002/CE of 7 March 2002 on regulating the radio-frequency spectrum applies to all frequencies between 9 KHz et 3000 GHz. Article 3 provides for setting up a Radio Spectrum Committee (RSCOM) to assist the European Commission (EC) in coordinating policies in this sector. Made up of representatives from EU member states and presided by the Commission, RSCOM examines the Commission’s proposals about the technical implementary measures for harmonizing conditions about the “availability and efficient use” of the spectrum (Art. 4). It pronounces its opinion on the mandates that the EC issues to the European Conference of Postal and Telecommunications Administrations (CEPT) about the harmonization of radio-frequency allocations and the availability of information. Furthermore, Article 5 states that “member states ensure that their national radio frequency allocation table and information on rights, conditions, procedures, charges and fees concerning the use of radio spectrum, shall be published”.

³ ITU (2016) *Radio Regulations*, 4 volumes (Geneva, CH: ITU) available at <http://www.itu.int/pub/R-REG-RR-2016>.

⁴ Respectively: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32002L0020&from=en> and <https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX:32002D0676>.

RSCOM is different from the Radio Spectrum Policy Group (RSPG) created in 2002.⁵ This group — made up of one high-level governmental expert per member state and a representative of the Commission — has the assignment of assisting and advising the EC on matters related to spectrum policy, among them: the availability, use, harmonization and allocation of frequencies, the granting of use rights, and the setting of rate schedules.

In France, radio frequencies are in the public domain; their uses, subject to authorization.

French law declares that radio frequencies belong to the public domain under state control (Art. L.2111-17 of the CGPPP)⁶ and that their use is subject to authorization (Art. L.2122-1). Article L.2124-26 reasserts these principles: *“the use by authorized parties of radio frequencies available on the territory of the Republic is a form of private occupation of the state’s public domain.”*⁷

An individual administrative authorization for the private occupation of this public domain corresponds to the concept of *“assignment”* under RR Art 1.18. Individual authorizations are granted by the competent authority, usually ARCEP for services related to electronic communications but the CSA for audiovisual services.⁵ The CSA may authorize an electronic communication service to use frequencies assigned to audiovisual services only following ARCEP’s assent (Act n°86-1067, art. 23). Installations receiving radio signals for national defense or public security are subject to an authorization (CPCE L.41-1) delivered by the ministers in charge of Defense or the Interior (CPCE R.20-44-5).

The national frequency table, the reference for spectrum management in France

Prepared by the ANFR and published in the *Journal officiel*, the national table of frequencies (TNRBF) figures in the appendix of an order from the Prime Minister, who approves it after opinions from the CSA (Act n°86-1067, art. 21) and ARCEP (CPCE L.41). This table undergoes a major revision after each WRC and minor adjustments between conferences.⁶

The TNRBF lists the allotment of bands to beneficiaries: on the one hand, governmental services (in particular the ministries in charge of the armed forces, the police, maritime transportation, aeronautics, meteorology, research, outer space and radio astronomy) for unlimited duration and in pursuit of their duties; and on the other hand, the independent authorities, the CSA and ARCEP. In turn, these two authorities issue the general or individual authorizations of frequency assignments to third-party services of, respectively, audiovisual or electronic communications. The TNRBF stipulates for each band the service(s) assigned in France and the parties with access. It lays down the rights and obligations of assignees and the major rules to be applied to coordinate and record frequency assignments.

⁵ The group was established under the EC Decision of 26 July 2002 (2002/622/EC) available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2002.198.01.0049.01.ENG&toc=OJ:L:2002:198:TOC.

⁶ CGPPP (Code Général de la Propriété des Personnes Publiques): General Code on Public Property.

⁷ They are also reasserted in Article 22 of Act n°86-1067 of 30 September 1986 and in Article L41-1 of the Postal and Electronic Communications Code (CPCE: Code des Postes et des Communications Électroniques).

⁵ Respectively: Autorité de Régulation des Communications Électroniques et des Postes (ARCEP, Regulatory Authority of Electronic Communications & Posts) and Council Supérieur de l’Audiovisuel (CSA, High Audiovisual Council).

⁶ TNRBF, available at <https://www.anfr.fr/gestion-des-frequences-sites/tnrbf/>.

The regulations make a distinction between primary and secondary assignments.

The access rights of the assignees in PRIMARY SERVICES depend on their status: exclusive, priority or equal. An assignee with “exclusive” status is the only party for the primary service(s) on a frequency band; but other parties may be authorized either by dispensation or for a secondary service. When several assignees share the same frequency band, the one with “priority” status is the coordinator of the band whose right to protection on the band overrides the rights of any other assignees. Assignees with a priority or exclusive status are thus enabled to implement long-term policies, as in audiovisual services, broadband mobile uses or public security. In contrast, the assignees on a band with “equal” status have equal rights for sharing the band under a coordination procedure. The legal grounds for this “equal” access is the “first come, first served” principle.

The assignees in SECONDARY SERVICES must not detrimentally interfere with the stations offering a primary service for which frequencies have already been assigned or might be later assigned. They may not claim protection against harmful interference caused by primary service stations. However they are entitled to protection against interference caused by new-comer stations of secondary services.

The ANFR is responsible for managing radio frequencies in France.

Created on 1 January 1997 as a “*public establishment of an administrative type*”, the ANFR’s role is to plan, manage and control the use of radio frequencies in conjunction with the assignees of bands registered in the TNRBF (CPCE Art. L.43).

First of all, the ANFR authorizes the installation of radio stations of any sort and coordinates them to ensure the best use of available locations and prevent interference that would be harmful to other users. It also oversees the thresholds set for public exposure to electromagnetic fields. It thus records and monitors “*atypical points*”, *i.e.*, places where this exposure substantially exceeds what is usually observed nationally. In the case of the stations of audiovisual services authorized by the CSA, the latter organization consults the ANFR. However the ANFR’s opinion is binding only if exposure limits have been exceeded (CPCE Art. L.43). An individual authorization is not necessary for radio installations that enjoy a general authorization or have fewer than five watts of power. The latter are, however, subject to filing a declaration with the ANFR.

These authorizations and opinions usually proceed from an “implied decision” — when, after consultations with all concerned parties and assignees, the ANFR has not replied by the end of a period of two months (following the request). These authorizations and opinions become null and void if the operations in questions have not started within twelve months of their notification or (if it is later) of the effective date of the authorization to use the frequency.

Secondly, the ANFR updates the national list of frequencies and notifies national assignments to the ITU’s Master International Frequency Register (MIFR) (CPCE Art. R.20-44-11, 4°). An assignment is an individual authorization of a station to use a frequency in compliance with technical specifications. The registration of the authorization makes it legally effective and bestows a right to protection against interference. Registration may be refused if the assignment does not abide by the specifications for it in the TNRBF or if consultations with the other stakeholders bring up a difficulty.

Thirdly, the ANFR controls how frequencies are used by inspecting radio stations on location. It also investigates reported disturbances (CPCE Art. L.43 I, R.20-44-11, 10°) and formulates recommendations for putting an end to them. It may also, following hearings of both parties, suspend the authorization for the installation of the station causing interference. For violations of a suspension, the station’s operator will be held liable under civil and penal law (CPCE Art. L.43 I, R.20-44-11, 5°bis).

Finally, the ANFR monitors transfers of bands between assignees and, for this purpose, manages the FRS (Fonds de Réaménagement du Spectrum).

Bibliography

ACHILLEAS P. (2011) “Droit international des télécommunications”, JurisClasseur, Fasc. 7350.

ACHILLEAS P. (2011) “Droit communautaire communications électroniques”, JurisClasseur, Fasc. 4650.

AUTIN J.L. & IDOUX P. (2011) “Droit national des communications électroniques”, JurisClasseur, Fasc. 4600.

PEZ T. (2011) *Le Domaine public hertzien*, LGDJ, Systèmes.

RANCY F. (2019) “Standardization and the radio-frequency spectrum”, *Enjeux numériques* n°5, available via http://www.annales.org/enjeux-numeriques/DG/2019/DG-2019-03/EniNum19a_11Rancy.pdf.