



*Ministero dello Sviluppo Economico*



## **AGREEMENT**

**between the administrations of  
Italy and France**

**on frequency planning and frequency usage in border areas for terrestrial systems  
capable of providing electronic communication services in the frequency range  
703-3800 MHz**

## 1. Introduction

The Agreement between France and Italy covers frequency coordination for UMTS and LTE systems following the spectrum arrangements below:

Frequency Band	Base receive	Base transmit
FDD 700 MHz	703-733 MHz	758-788 MHz
FDD 800 MHz	832-862 MHz	791-821 MHz
FDD 900 MHz	880-915 MHz	925-960 MHz
SDL 1400 MHz	-	1427-1517 MHz
FDD 1800 MHz	1710-1785 MHz	1805-1880 MHz
FDD 2100 MHz	1920-1980 MHz	2110-2170 MHz
FDD 2600 MHz	2500-2570 MHz	2620-2690 MHz
TDD 2100 MHz	1900-1920 MHz	1900-1920 MHz
TDD 2600 MHz	2570-2620 MHz	2570-2620 MHz
TDD 3400 MHz	3400-3600 MHz	3400-3600 MHz
TDD 3800 MHz	3600-3800 MHz	3600-3800 MHz

These frequency bands are designated for terrestrial systems capable of providing pan-European electronic communication services (hereafter referred to as "communication system") according to:

- COMMISSION IMPLEMENTATION DECISION of 13 June 2008 on the harmonisation of the 2500-2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community
- EC Decision of 6 May 2010 on harmonized technical conditions of use in the 790-862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union is mandatory for EU and EFTA countries
- COMMISSION IMPLEMENTATION DECISION of 18 April 2011 amending Decision 2009/776/EC on the harmonization of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in Community (2011/251/EU)
- EC Decision 2012/688/EU: Harmonisation of the bands 1920-1980/2110-2170 MHz for terrestrial systems capable of providing electronic communications services
- COMMISSION IMPLEMENTING DECISION (EU) 2015/750 of 8 May 2015 on the harmonization 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*)
- COMMISSION IMPLEMENTING DECISION (EU) 2018/661 of 26 April 2018 amending Implementing Decision (EU) 2015/750 on the harmonisation of the 1 452-1 492 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
- Commission Implementation Decision (EU) 2016/687 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union

There are harmonization documents dealing with coexistence of different communication systems and frequency planning and frequency coordination for Land Mobile systems (CEPT recommendations).

These documents are dependent on radio technology and are regularly reviewed. But the development and roll-out of communication networks is a long-term process. For this reason, administrations of Italy and France have decided to conclude this Agreement technologically neutral in order to keep conditions of frequency utilization as stable as possible.

Both administrations are signatories of the agreement HCM Agreement, 2014. Point 1.3.7 of the agreement lays down that frequencies specified in arrangements between operators may be used without prior co-ordination, on the condition that there is an existing agreement signed by the Administrations concerned authorizing such arrangements. These arrangements between operators may also include the use of the codes.

This Agreement concluded between France and Italy specifies rules and field strength level in order to avoid harmful interference between stations of existing and planned communication systems. Operators of communication systems are encouraged to conclude arrangements in which they may agree techniques that can improve coverage and reduce harmful interference in the border areas with signals of communication systems.

In the light of the above considerations, the administrations agree that the operators lay down in their arrangements:

- Cross border interference resolution under which they agree on:
  - the procedure for informing and the procedure for resolving documented interference;
  - the procedure and scope for exchange of information regarding interfering base stations;
- The use of codes/ PCI codes.

## **2. Technical provisions**

### **2.1 Spectrum coordination for UMTS/LTE systems in the 700 MHz, 800 MHz, 900MHz, 1400 MHz, 2100 MHz, 2600 MHz, 3400 MHz, 3800 MHz frequency bands**

Base stations may be operated without coordination if the predicted mean field strength of each carrier produced by the base station does not exceed the following values at a height of 1.5 m above ground at the borders of the neighboring country.

Frequency Band	Field strength threshold at 1.5 m above ground at the border line or coastline of the neighbouring country	Field strength threshold at 1.5 m above ground at the border line of the neighbouring country
	Preferential codes/PCI	Non Preferential codes/PCI
FDD 700 MHz	55 dB $\mu$ V/m/5 MHz	37 dB $\mu$ V/m/5 MHz
FDD 800 MHz	55 dB $\mu$ V/m/5 MHz	37 dB $\mu$ V/m/5 MHz
FDD 900 MHz	55 dB $\mu$ V/m/5 MHz	37 dB $\mu$ V/m/5 MHz
SDL 1400 MHz	61 dB $\mu$ V/m/5 MHz	43 dB $\mu$ V/m/5 MHz
FDD 1800 MHz	61 dB $\mu$ V/m/5 MHz	43 dB $\mu$ V/m/5 MHz
FDD 2100 MHz	61 dB $\mu$ V/m/5 MHz	33 dB $\mu$ V/m/5 MHz
TDD 2100 MHz	33 dB $\mu$ V/m/5 MHz	
FDD 2600 MHz	61 dB $\mu$ V/m/5 MHz	45 dB $\mu$ V/m/5 MHz
TDD 2600 MHz Unsynchronised	33 dB $\mu$ V/m/5 MHz	
TDD 3400-3800 MHz Unsynchronised	28 dB $\mu$ V/m/5 MHz	
TDD 3400-3800 MHz Synchronised	63 dB $\mu$ V/m/5 MHz	45 dB $\mu$ V/m/5 MHz

- For all frequency bands the field strength calculation the latest version of the HCM Agreement tool shall be used. Time probability in all calculations is 10%.
- For all frequency bands, the division of preferential codes FDD, TDD and codes PCIs is given in section 2.3.

If centre frequencies of UMTS/LTE signals are not aligned, mobile operators can use the field strength values defined for "*preferential codes/PCIs*" for all codes or PCIs.

## 2.2 Preferential codes or PCIs

In order to ensure the optimum network performance for UMTS and LTE systems deployed in the border areas, the administrations shall encourage operators to coordinate the use of other radio parameters, in accordance with CEPT Recommendation (01)01, (08)02, (11)04, (11)05 and (15)01 for UMTS and LTE signals.

The administrations of France and Italy agreed on the following sharing of scrambling codes for UMTS and PCI code groups for LTE.

UMTS:

For the FDD mode; 3GPP TS 25.213 defines 64 «scrambling code groups» in §5.2.3, numbered {0...63}, hereafter called «code groups»

CODE GROUPS	11-42	0-10+43-63
I	PREFERENTIAL	NON PREFERENTIAL
FRANCE	NON PREFERENTIAL	PREFERENTIAL

For the TDD mode; 3GPP TS 25.223 defines 32 «scrambling code groups» in §7.3, numbered {0...31}, hereafter called «code groups»

CODE GROUPS	5-20	0-4+21-31
I	PREFERENTIAL	NON PREFERENTIAL
FRANCE	NON PREFERENTIAL	PREFERENTIAL

LTE:

3GPP TS 36.211 defines 168 “unique physical-layer cell-identity groups” in § 6.11, numbered 0...167, hereafter called “PCI groups”. Within each PCI group there are three separate PCIs giving 504 PCIs in total. Each country can use all PCI groups away from the border areas.

PCI GROUPS	84-335	0-83 + 336-503
I	PREFERENTIAL	NON PREFERENTIAL
FRANCE	NON PREFERENTIAL	PREFERENTIAL

### 3. Operators arrangements

Arrangements between operators may be concluded with the aim to enhance the efficient use of spectrum, the coverage and to reduce interference in the border areas. Such arrangements shall respect:

- Field strength levels and codes or PCI codes (for UMTS/LTE) given by relevant harmonization documents for frequency bands:

Band	Recommendation
700 MHz:	ECC REC(15)01
800 MHz:	ECC REC(11)04
900 MHz:	ECC REC(08)02
1400 MHz:	ECC REC(15)01
1800 MHz:	ECC REC(08)02
2100 MHz:	ECC REC(01)01
2600 MHz:	ECC REC(11)05
3600-3800 MHz:	ECC/REC(15)01

- Protection of users of communication networks from non-wanted international roaming,
- Obligation to specify if the arrangement / agreed provisions are applied to individual sites or to the whole border.

For all frequency bands agreed in this Agreement for which no special agreement has been reached in arrangements between the operators regarding maximum field strength values at a certain distance from the border line, admissible values for maximum field strength and the distance inside the neighboring country shall be used as laid down in relevant ECC recommendations for an individual frequency band.

#### **4. Revision of the Agreement**

This Agreement may be modified at a request of any of the signatory administrations where such a modification becomes necessary in the light of administrative, regulatory or technical development. Modification of the Agreement shall be done by an amendment signed by both administrations concerned.

#### **5. Withdrawal from the Agreement**

Any administration may withdraw from this Agreement by the end of a calendar month by giving notice of its intention at least six months in advance.

#### **6. Language of the Agreement**

This Agreement has been concluded in English language.

#### **7. Agreement of 15 July 2012**

The agreement between the administrations of France and Italy of 15 July 2012 is no more valid only for the usage of UMTS and LTE and it remains usable only to define the technical conditions and preferential frequencies for GSM.

#### **8. Date of entry into force**

This Agreement will enter into force 1 January 2019.

#### **9. Signature**

This Agreement exists in 2 equally authentic copies signed by both parties.

For the Administration of Italy

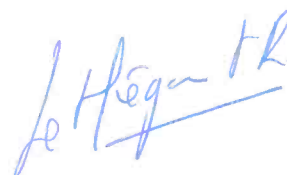
Rome, 21 DEC. 2018



Eva Spina

For the Administration of France

Maisons-Alfort, 14 DEC. 2018



Raphaël Le Hégarat