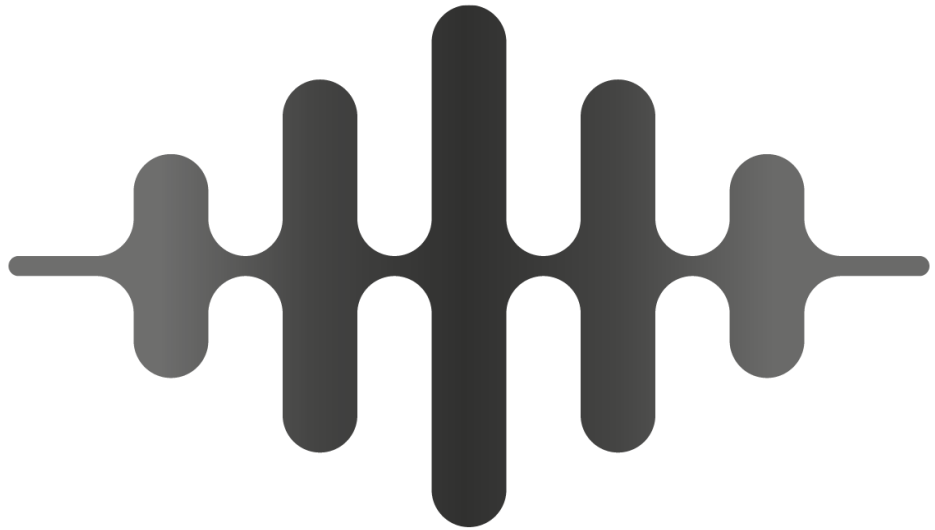

ITUWRS GENEVA2024

2–6 December 2024
Geneva, Switzerland

Special cases related to the notification of frequency assignments for fixed and mobile services

ITU World Radiocommunication Seminar

Fixed and Mobile Services
Division

BR/TSD/FMD

2-6 December 2024, Geneva, Switzerland

Contents

Introduction

Multiple provisions of the Radio Regulations are to be considered in the process of the notification and recording of frequency assignments in the Master International Frequency Register (MIFR)

To record assignments in the MIFR, administrations must comply with different procedures depending on the frequency band, geographical area, as well as other specific conditions.

BR is checking whether those conditions as well as other applicable regulations are met.

This presentation considers specific cases of regulatory and technical nature, applicable to the notification of frequency assignments to the BR.

Applicable Regulations

- Provisions of the Radio Regulations
- Other regulations to be considered

Regulations applicable to notification

Provisions of the Radio Regulations

- Article **11** “Notification and recording of frequency assignments” – the Article regulating the notification process;

- Other articles of the RR, having an impact on notified data;

- WRC Resolutions incorporated to the RR by Reference

Other regulations to be considered:

- Notification procedures for World or Regional frequency Plans are described in one of the Articles of the Plan;

Provisions of the Radio Regulations to be considered in notification

- ***Article 1 of the RR*** (definitions)

- ***Article 4 of the RR*** (No. **4.5**)

- ***Article 5 of the RR:***
  - allocations in the Table of Frequency allocation (sometimes with restrictions)
  - allocation by footnotes (either specify further conditions on the use of that frequency band or allocate it to a service other than to which it is allocated in the Table).

- ***Article 9 of the RR*** (No. **9.21** to be considered in the application of No. **11.31**)

➢ Other provisions of the Radio Regulations to be considered:

- ***Article 21 of the RR*** (for shared bands)
- ***Article 24 of the RR*** (for fixed service)
- ***Articles 19, 51, 52 of the RR*** (for maritime services)
  - ***Appendix 1 to the RR:***
    - classification of emissions and necessary bandwidths
  - ***Appendix 4 to the RR:***
    - detailed specification of data items to be provided for the specific case of notified station;
  - ***Appendixes 17 and 25 of the RR*** (for maritime services);

Etc..

Validation and examination of frequency assignments

- Applicable regulation
- Difference

Validation and regulatory examination of frequency assignments

- For recording in the Master Register, the notified assignments must contain all the relevant data items listed in Appendix **4** to the RR with valid values (No. **11.15**).
- Each notice has to be examined

with respect to its conformity with the Table of Frequency Allocations and the other provisions of these Regulations (No.**11.31**)

with respect to its conformity with the procedures relating to coordination with other administrations **applicable** to the radiocommunication service and the frequency band concerned (No.**11.32**)

Please use BR software for validation of notices (eValidation) before their submission by WISFAT

Notification process

Administrations

- Preparation of frequency assignment notices taking into account related regulatory provisions /TerRaNotices/
- Validation of the notices using the online validation tool /eValidation/
- *Correction of the incomplete notices in accordance with recommendations of the BR*

Submission of notices by WISFAT

BR

- **Validation** of received notices taking into account the requirements of:
  - Resolution 1;
  - Appendix 4 of the RR
  - Article 1 of the RR – Definitions
  - Other (e.g. nature of service, etc.)

Result:

- Complete notices: publication in Part 1 of BR IFIC
- *Incomplete notices: returned via e-mail*

- **Examination** of notices (from Part 1) taking into account the requirements of:
  - Article 5 of the RR
  - Article 4 of the RR (No. 4.5)
  - Article 9 of the RR
  - Other (e.g. category of service, etc.)

Result:

Publication in Parts 2 or 3 of BR IFIC

Practical considerations

- Validation stage
- Examination and its challenges

Validation stage

The parameters of the notified assignment correspond to the definitions of Article **1** and Appendix **4** of the RR:

- ***1.161 equivalent isotropically radiated power (e.i.r.p.):*** 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).
- ***1.162 effective radiated power (e.r.p.)*** (in a given direction): The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.
- ***1.163 effective monopole radiated power (e.m.r.p.)*** (in a given direction): The product of the power supplied to the antenna and its gain relative to a short vertical antenna in a given direction.

Information in the data field t_pwr_eiv of every frequency assignment electronic notice corresponds to the definitions of Nos. 1.161 - 1.163 which is explained in Appendix 4 of the RR - field 8B

Validation stage

The parameters, provided for assignments notified in Shared bands*, correspond to the related requirements

Example: The type of antenna gain

- **I** - Isotropic gain in shared bands;
- **V** - gain relative to a short vertical antenna (for Regional Agreements GE85M and GE85N) ;
- **D** - gain relative to a half-wave dipole (in other cases)

➢ **1.160** *gain of an antenna:* The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power flux-density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. The gain may be considered for a specified polarization.

➢ Depending on the choice of the reference antenna a distinction is made between:

- a) absolute or isotropic gain (Gi), when the reference antenna is an isotropic antenna isolated in space;
- b) gain relative to a half-wave dipole (Gd), when the reference antenna is a half-wave dipole isolated in space whose equatorial plane contains the given direction;
- c) gain relative to a short vertical antenna (Gv), when the reference antenna is a linear conductor, much shorter than one quarter of the wavelength, normal to the surface of a perfectly conducting plane which contains the given direction.

Information in the data field **t_gain_type** of every frequency assignment correspond to the definitions of No. **1.160** which is explained in Appendix **4** of the RR **- field 9G**

* *Shared bands frequencies: Table 21-2 of Article **21** of the RR.*

Validation stage

For assignment notices, submitted for notification of IMT stations the requirements set by CR/467 are applicable:

If the IMT system is notified to the BR in view of its recording in the MIFR:

- In frequency bands, **identified for IMT -** the IMT system could be identified as such using "IM" symbol as "nature of service";

- In frequency bands, **not identified for IMT,** the IMT system could not be identified with the use of "IM" symbol as "nature of service.

Notices with t_nat_srv=IM are not receivable outside bands, identified for IMT in Article 5 of the RR.

They are returned without publication in Part 1 of the BRIFIC.

Examples – notification of IMT stations

Notices with t_nat_srv=IM are not receivable outside bands, identified for IMT

Example 1:
Frequency band:
1710 – 1930 MHz
t_nat_srv=IM
(Worldwide)

5.384A The frequency bands 1 710-1 885 MHz, 2 300-2 400 MHz and 2 500-2 690 MHz, or portions thereof, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **223 (Rev.WRC-15)***. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15)

Example 2:
Frequency band:
4800 – 4900 MHz

t_nat_srv=IM

Not receivable for countries, that are not listed in Nos. 5.441A or 5.441B

5.441A In Brazil, Paraguay and Uruguay, the frequency band 4 800-4 900 MHz, or portions thereof, is identified for the implementation of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of this frequency band for the implementation of IMT is subject to agreement obtained with neighbouring countries, and IMT stations shall not claim protection from stations of other applications of the mobile service. Such use shall be in accordance with Resolution **223 (Rev.WRC-19)**. (WRC-19)

5.441B In Angola, Armenia, Azerbaijan, Benin, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, China, Côte d'Ivoire, Djibouti, Eswatini, Russian Federation, Gambia, Guinea, Iran (Islamic Republic of), Kazakhstan, Kenya, Lao P.D.R., Lesotho, Liberia, Malawi, Mauritius, Mongolia, Mozambique, Nigeria, Uganda, Uzbekistan, the Dem. Rep. of the Congo, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, South Africa, Tanzania, Togo, Viet Nam, Zambia and Zimbabwe, the frequency band 4 800-4 990 MHz, or portions thereof, is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band 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 concerned administrations, and IMT stations shall not claim protection from stations of other applications of the mobile service. In addition, before

Examination under 11.31 – Article 4

To comply with **No. 4.5 of the RR**:

> **4.5** The frequency assigned to a station of a given service shall be separated from the limits of the band allocated to this service in such a way that, taking account of the frequency band assigned to a station, no harmful interference is caused to services to which frequency bands immediately adjoining are allocated.

Example: notified frequency assignment of land mobile station (FB) with:

$F_{assigned}$ = 150.05 MHz;

bandwidth = 100 kHz

will spread to the adjacent band, allocated to MSS

by 50 kHz (1/2 of notified bandwidth)

Allocation to services		
Region 1	**Region 2**	**Region 3**
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221	**148-149.9** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221	
149.9-150.05	MOBILE-SATELLITE (Earth-to-space) 5.209 5.220	
150.05-153 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	**150.05-154** FIXED MOBILE	
153-154 FIXED MOBILE except aeronautical mobile (R) Meteorological aids	5.225	

Examination under 11.31 – Article 5

Examination with respect to conformity with the Table of Frequency Allocations includes verification of particularities of the corresponding frequency allocation

Example:

Article **5** ***Table of Frequency Allocations*:**

7 450-13 360 kHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
7 450-8 100	FIXED MOBILE except aeronautical mobile (R) 5.144	
8 100-8 195	FIXED MARITIME MOBILE	
8 195-8 815	MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111	
8 815-8 965	AERONAUTICAL MOBILE (R)	
8 965-9 040	AERONAUTICAL MOBILE (OR)	

Classes of station (*in Preface to BRIFIC*) for Aeronautical mobile stations:

Transmission:

FA (Generic)

FD - AMS (**R**)

FG - AMS (**OR**)

Reception:

MA

Examination under 11.31 – Article 5 (2)

Check if the corresponding frequency allocation has some particularities to be taken into account:

Example:

Article **5** ***footnotes:***

21.4-22 **FIXED** MOBILE BROADCASTING-SATELLITE 5.208B **5.530A** 5.530B 5.530D	**21.4-22** FIXED MOBILE **5.530A**	**21.4-22** **FIXED** MOBILE BROADCASTING-SATELLITE 5.208B **5.530A** 5.530B 5.530D 5.531

5.530A Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of −120.4 dB(W/(m^2 · MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU-R P.452 (see also the most recent version of Recommendation ITU-R BO.1898). (WRC-15)

In Regions 1 and 3 for fixed station
Class of station: FX

Indicate in field 13C (notified remarks) of every frequency assignment notice the declaration about meeting the indicated limits:
complies with the pfd limit of No. 5.530A (WRC-15)

Examination under 11.31 – Article 5 (3)

Check if the coordination procedures are applicable:

Example: Article **5** ***footnotes, where No. 9.21 is applicable:***

5.430A The allocation of the frequency band 3 400-3 600 MHz to the mobile, except aeronautical mobile, service is subject to agreement obtained under No. **9.21**. This frequency band is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The provisions of Nos. **9.17** and **9.18** shall also apply in the coordination phase. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band, it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed -154.5 dB(W/(m^2 · 4 kHz)) for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station) and with the assistance of the Bureau if so requested. In case of disagreement, calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 400-3 600 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). (WRC-15)

Frequency band: 3400-3600 MHz

Class of station: FB, ML

Prior to notification under Article 11 of the RR, frequency assignment notices are to be submitted for application of No. **9.21**. Only after completion of that procedure notification under Article 11 is possible

Mandatory coordination procedure – Article 9

Application of No. 9.21 procedure stipulated in Article **9** of the RR

Sub-Section IIA – Requirement and request for coordination

9.6 Before an administration[15, 16, 17] notifies to the Bureau or brings into use a frequency assignment in any of the cases listed below, it shall effect coordination, as required, with other administrations identified under No. **9.27**: (WRC-03)

9.21 *p)* for any station of a service for which the requirement to seek the agreement of other administrations is included in a footnote to the Table of Frequency Allocations referring to this provision. (WRC-2000)

Frequency band: 3400-3600 MHz
Class of station: FB, ML

Step 1: submission of notices for publication of BRIFIC Special Sections RR9.21:

- Part C – the start of agreement-seeking process;
- Part D – results (4 months after Part C).

Step 2: notification under Article **11** of the RR, which would lead to an examination of whether all the applicable conditions are met

Examination under 11.31 – Article 5 – WRC-2023 decisions

Example: Article **5** **modification in allocation in the band 3600-3800 MHz*:***

MOD

3 600-4 800 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
3 600-3 800 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.433B 5.434A 5.434B 5.435A	**3 600-3 700** FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.434 Radiolocation 5.433	**3 600-3 700** FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation 5.435
3 800-4 200 FIXED FIXED-SATELLITE (space-to-Earth) Mobile	**3 700-4 200** FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.435B	

5.434A The use of the frequency band 3 600-3 800 MHz by the mobile, except aeronautical mobile, service on a primary basis in Region 1 is subject to agreement obtained under No. **9.21** if the power flux-density (pfd) limit below is exceeded. The provisions of Nos. **9.17** and **9.18** shall also apply in the coordination phase. Before an administration in Region 1 brings into use a station in the mobile service in the frequency band 3 600-3 800 MHz, for the protection of stations in the fixed and fixed-satellite services, it shall ensure that the pfd produced at 3 m above ground does not exceed -154.5 dB(W/(m^2 · 4 kHz)) for more than 20% of the time at the border of the territory of any other administration. Stations in the mobile service operating in the frequency band 3 600-3 800 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations. (WRC-23)

Frequency band: 3600-3800 MHz
Class of station: FB, ML

Notification of frequency assignments under Article 11 of the RR could be possible without the application of No. **9.21**, if the conditions of No. **5.434A** are met.

Examination under 11.31– Article 5 - Resolutions

Take into account the “resolves” part of Resolutions (Volume 3 of the RR)

Example: Resolution 229 (Rev.WRC-23).

5.446A The use of the frequency bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution **229 (Rev.WRC-23)**. (WRC-23)

RES 229: Use of the frequency bands 5 150-5 250 MHz, 5 250-5 350 MHz and 5 470-5 725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks

resolves

5. that, in the frequency band 5 250-5 350 MHz, stations in the mobile service shall be limited to a maximum mean e.i.r.p. of 200 mW and a maximum mean e.i.r.p. density of 10 mW/MHz in any 1 MHz band…;

7. that, in the frequency band 5 470-5 725 MHz, stations in the mobile service shall be restricted to a maximum transmitter power of 250 mW with a maximum mean e.i.r.p. of 1 W and a maximum mean e.i.r.p. density of 50 mW/MHz in any 1 MHz band;

Frequency bands: 5 250-5 350 MHz and
5 470-5 725 MHz
Mobile stations exceeding the levels

→ X/RS229

Practical considerations - Resolution 229 (rev. WRC-23)

Example of calculations for implementation of conditions in “resolves” 5 and 7 using notified parameters

Freq. range	5310-5350 MHz
Bdwdth.	40M0
maximum mean e.i.r.p. of 200 mW (**resolves 5 of RES229**) max e.i.r.p (Y) limit value is **-6.99 dBW** (10*log(0.2) = - 6.99 dBW)	e.r.p (E) = 10.34 dBW e.i.r.p (Y) = **12.49 dBW** (EIRP (dBW) = ERP (dBW) + 2.15))
maximum mean e.i.r.p. density of 10 mW/MHz in any 1 MHz band (**resolves 5 of RS229**) max e.i.r.p (Y) density limit value is **-20 dB(W/MHz)** (10*log(0.01) = - 20 dB(W/MHz))	e.i.r.p (Y) density = **-3.53 dB(W/MHz)** (EIRP density (dB(W/MHz)) = EIRP (dBW) + 10*log(10^6/notified bandwidth (Hz)))
if maximum mean e.i.r.p. is up to 1 W, a maximum mean e.i.r.p. density limit value is 50 mW/MHz in any 1 MHz band (**resolves 5 of RS229**) applies if max e.i.r.p (Y) limit value is between **-6.99 dBW and 0 dBW;** max e.i.r.p (Y) density limit value is **-13.01 dB(W/MHz)** (10*log(0.05) = - 13.01 dB(W/MHz))	not applicable (e.i.r.p (Y) = **12.49 dBW**)
Results	**Unfavorable** (max e.i.r.p (Y) and max e.i.r.p (Y) density limits are not met)

Freq. range	5490-5530 MHz
ADM	not in RR5.451
Bdwdth.	40M0
maximum transmitter power of 250 mW (**resolves 7 of RES229**) power to antenna limit value is **-6.02 dBW** (10*log(0.25) = - 6.02 dBW)	pwr_ant = **-2,01 dBW**
maximum mean e.i.r.p. of 1 W (**resolves 7 of RES229**) max e.i.r.p (Y) limit value is **0 dBW** (10*log(1) = 0 dBW)	e.r.p (E) = 10.34 dBW e.i.r.p (Y) = **12.49 dBW** (EIRP (dBW) = ERP (dBW) + 2.15))
maximum mean e.i.r.p. density of 50 mW/MHz in any 1 MHz band (**resolves 7 of RES229**) max e.i.r.p (Y) density limit value is **-13.01 dB(W/MHz)** (10*log(0.05) = - 13.01 dB(W/MHz))	e.i.r.p (Y) density = **-3.53 dB(W/MHz)** (EIRP density (dB(W/MHz)) = EIRP (dBW) + 10*log(10^6/notified bandwidth (Hz)))
Results	**Unfavorable** (max P_{ant}, max e.i.r.p (Y) and max e.i.r.p (Y) density limits are not met)

Examination under 11.32 – Article 21

*Shared bands frequencies: Table 21-2 of Article **21** of the RR*

Applicable examination: No. **11.32**

Coordination under No. **9.18**:

for any transmitting station of a terrestrial service in the bands above 100 MHz **allocated with equal rights** to space and terrestrial services **within the coordination area of an earth station**, in respect of this earth station

Notice forms: T11, T12

<COORD>

t_adm=KAZ

</COORD>

TABLE **21-2** (Rev.WRC-19)

Frequency band	Service	Limit as specified in Nos.
1 427-1 429 MHz 1 610-1 645.5 MHz (No. **5.359**) 1 646.5-1 660 MHz (No. **5.359**) 1 980-2 010 MHz 2 010-2 025 MHz (Region 2) 2 025-2 110 MHz 2 200-2 290 MHz 2 655-2 670 MHz [5] (Regions 2 and 3) 2 670-2 690 MHz [5] (Regions 2 and 3) 5 670-5 725 MHz (Nos. **5.453** and **5.455**) 5 725-5 755 MHz [5] (Region 1 countries listed in Nos. **5.453** and **5.455**) 5 755-5 850 MHz [5] (Region 1 countries listed in Nos. **5.453** and **5.455**) 5 850-7 075 MHz 7 145-7 235 MHz* 7 900-8 400 MHz	Fixed-satellite Meteorological-satellite Space research Space operation Earth exploration-satellite Mobile-satellite	**21.2**, **21.3**, **21.4** and **21.5**
10.7-11.7 GHz [5] (Region 1) 12.5-12.75 GHz [5] (Nos. **5.494** and **5.496**) 12.7-12.75 GHz [5] (Region 2) 12.75-13.25 GHz 13.75-14 GHz (Nos. **5.499** and **5.500**) 14.0-14.25 GHz (No. **5.505**) 14.25-14.3 GHz (Nos. **5.505** and **5.508**) 14.3-14.4 GHz [5] (Regions 1 and 3) 14.4-14.5 GHz 14.5-14.8 GHz 51.4-52.4 GHz	Fixed-satellite	**21.2**, **21.3** and **21.5**
17.7-18.4 GHz 18.6-18.8 GHz 19.3-19.7 GIIz 22.55-23.55 GHz 24.45-24.75 GHz (Regions 1 and 3) 24.75-25.25 GHz (Region 3) 25.25-29.5 GHz	Fixed-satellite Earth exploration-satellite Space research Inter-satellite	**21.2**, **21.3**, **21.5** and **21.5A**

Fixed service stations – Article 24

ARTICLE 24

Fixed service

24.1 Administrations are urged to discontinue, in the fixed service, the use of double-sideband radiotelephone (class A3E) transmissions.

24.2 Class F3E or G3E emissions are prohibited in the fixed service in the bands below 30 MHz.

Frequency band: below 30 MHz

Class of station: FX

Notice form: T11

t_emi_cls=~~F3E~~

or

t_emi_cls=~~G3E~~

Appendix 1

First symbol:* *No 1.3.1- 1.3.2

F - Frequency modulation

G - Phase modulation

Second symbol:* *No 2.4

3 - A single channel containing analogue information

Third symbol:* *No 3.6

E - Telephony (including sound broadcasting)

Maritime mobile stations

- Take into account the special arrangements for maritime or aeronautical services

Example:

Maritime mobile stations (FC, MS) in the frequency bands, between 4 000 kHz and 27 500 kHz, allocated exclusively to maritime mobile service are subject to application of conditions of Articles **51, 52** and Appendix **17** of the RR, specifying:

– Frequencies and channeling arrangements in the high-frequency bands for the maritime mobile service;
– Sub-division of the exclusive frequency bands;
– Bandwidth;
– Basic characteristics of transmitting and receiving equipment (maximum allowed power levels e.g. RR **52.104**, etc.)

Exercises

Exercise 1

1. Which class of station is correct if a base station is notified in the frequency band 1675 – 1690 MHz (using T12 notice):

Please note the information notified in the following fields:

- 1A (assigned frequency)
- 6A (class of station)

The list of classes of stations is available in Section 6 of Preface to BR IFIC

FL - transmitting station in the mobile service

FB - transmitting station in the land mobile service

1 675-1 690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341

Exercise 2

2. Notification of stations in the frequency bands, subject to coordination procedure of 9.21 of the RR:

Please note the information notified in the following fields:

- 1A (assigned frequency)
- Provision

2.1 Is the notified provision (No.9.21) appropriate for a mobile station taking into account that No. 5.430A of the RR is applicable?

2.2 On what condition another provision (No.11.2) is appropriate?

t_notice_type=T12
t_fragment=Req_agrt
t_action=ADD
t_freq_assgn=3550
t_prov=RR9.21

t_notice_type=T12
t_fragment=NTFD_RR
t_action=ADD
t_freq_assgn=3550
t_prov=RR11.2

3 400-3 600 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.430A Radiolocation 5.431	**3 400-3 500** FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.431A 5.431B Amateur Radiolocation 5.433 5.282	**3 400-3 500** FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile 5.432 5.432B Radiolocation 5.433 5.282 5.432A
	3 500-3 600 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.431B Radiolocation 5.433	**3 500-3 600** FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.433A Radiolocation 5.433

Exercise 3

3.1 Using TerRaQ in FXM-domain open recorded assignment notice 121126954 (from IRN):

- **Query settings: FXM**
- **Administrative data: BR assigned ID(s): 121126954**

In loaded assignment please note information, provided in “remarks”

The notified remarks cover the conditions of No. 5.530A of the RR, the corresponding assignment was published in Part 2 of BRIFIC with favorable finding and recorded in MIFR.

Exercises 4

4.1 What is the lowest value of assigned frequency (field 1A) satisfying the conditions of No 4.5 of the RR for a station in the land mobile service with bandwidth of 50 kHz notified in the frequency band 150.05 - 153 MHz?

Allocation to services		
Region 1	**Region 2**	**Region 3**
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221	**148-149.9** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221	
149.9-150.05	MOBILE-SATELLITE (Earth-to-space) 5.209 5.220	
150.05-153 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	**150.05-154** FIXED MOBILE	
153-154 FIXED MOBILE except aeronautical mobile (R) Meteorological aids	5.225	

150.025 MHz

(as far as 150.025 MHz + 0.025 MHz = 150.05 MHz - the lowest limit of the band)

Understanding of information in findings

- Findings as the result of the examination
- Exercises

Parts 2 and 3 of BR IFIC: information in findings

Information of **SECTION 12** of Preface to BRIFIC:
https://www.itu.int/en/ITU-R/terrestrial/brific/BRIFIC/Preface/PREFACE_EN.pdf

Finding reference (column 13B1):
Reference to a provision of the Radio Regulations or an Appendix thereto or a Resolution of a World Radio Conference or a Regional Agreement

Explanation of symbols:

Example:
X/----
This frequency assignment has been examined with respect to its conformity with a provision or Article of the Radio Regulations or an Appendix thereto or with a Resolution or a Regional Agreement and **an unfavourable** Finding was formulated. The provision, Article, Appendix, Resolution or Regional Agreement concerned **is indicated following this symbol**.

13A (REX)	13A (PEX/CEX)	13A (TEX)	13B1 (Finding reference)	13B2 Observation	13B3 (Action)	13C (Finding remarks)
UNFAVORABLE	-	-	X/RR4.5	-	-	X/RR11.31, SFF/X/RR11.36, Return to ADM

Parts 2 and 3 of BR IFIC: information in findings (cont.)

Findings observation (column 13B2):

Explanation of symbols:

Example:

R

In accordance with the provisions of the Table of Frequency Allocations, the Appendix or the Resolution indicated in “finding reference”, the present assignment is to be operated subject to not causing harmful interference or, in the case of No. 5.316B, subject to not causing unacceptable interference to stations of (a) particular service(s) in the Region(s) or countries to which the finding reference applies.

S

The service indicated in class of station being secondary (RR5.28), this assignment is not taken into account when examining, with respect to the provisions of Article 11, an assignment pertaining to a primary service.

13A (REX)	13A (PEX/CEX)	13A (TEX)	13B1 (Finding reference)	13B2 Observation	13B3 (Action)	13C (Finding remarks)
FAVORABLE	-	-	-	S	-	-
FAVORABLE	-	-	RR5.143	R	-	-

Information in findings - Exercises

Exercises:

1. Note formulation of favorable and unfavorable findings in the following Table
2. What is the reason of unfavorable finding in case 2?
3. Note the difference between findings in cases 4 and 5. What could be the difference in information, provided from the Administrations?

Case	13A1 (REX)	13B1 (Finding reference)	13B2 Observation	13B3 (Action)	13C (Finding remarks)
1	FAVORABLE	-	-	-	
2	UNFAVORABLE	X/RR4.5	-	-	X/RR11.31, SFF/X/RR11.36, Return to ADM
3	UNFAVORABLE	-	-	-	X/RR11.31, SFF/X/RR11.36, Return to ADM
4	FAVORABLE	RR5.530A	-	-	
5	UNFAVORABLE	X/RR5.530A	-	-	X/RR11.31, SFF/X/RR11.36, Return to ADM
6	FAVORABLE	-	S	-	

Thank you!

Questions to  brmail@itu.int or brfmd@itu.int