



**Spectrum Newsletter 06/2015**

---

## **Rio 2016 - Spectrum Application Guide**

**Version 5.1 | April 2015**

**Spectrum Management - FA -Telecom**



# CONTENTS

1   INTRODUCTION .....	3
1.1 FILLING IN THE REQUEST FORMS .....	3
2   OVERVIEW .....	4
3   HOW TO USE THE TOOL .....	5
3.1 SPECTRUM REQUEST .....	5
3.2 REQUEST SUMMARY .....	5
3.3 ORDERING PERIODS .....	6
3.4 LOCATION .....	7
3.5 SPECTRUM SERVICES .....	8
3.6 SUBMITTING THE ORDER .....	15
3.7 VIEWING EXISTING REQUESTS .....	16
3.8 SPECTRUM REQUEST STATUS .....	17
4   SPECTRUM APPROVAL / LICENCE DOWNLOADS .....	18
5   SPECTRUM REQUEST FOR BULKY SUBMISSIONS .....	19
5.1 FILLING IN THE APPLICATION FORM .....	19

# 1 | INTRODUCTION

All wireless equipment must be registered prior to its use in Brazil, even for temporary use at major events. Temporary authorisation can be obtained through the procedures found in this newsletter, either by applying directly via the Rio 2016 Spectrum Order Portal (SOP) or via an Excel spreadsheet form in the case of bulky submissions or test events. Both procedures are explained in these pages.

The procedure applies for wireless devices normally used in Olympic and Paralympic Games, such as wireless cameras and microphones, telemetry and telecommand devices, handheld radios, fixed and mobile microwave links, talkback (INT), in-ear-monitors (IEM)/(IFB), private WI-FI networks, satellite up-links, etc. All two-way radios, including equipment that is classified as licence exempt, must be registered to be applied at Rio 2016 venues and facilities.

ANATEL, the Brazilian Telecommunications Regulatory Agency, in partnership with the Rio 2016 Organising Committee, will collaborate, organise and assign the appropriate frequency in response to the spectrum requests. After scheduling and upon arrival at the venues, users should seek pre-defined Spectrum Desks, where ANATEL will conduct a technical inspection of the wireless equipment to insure compliance with the imposed specifications. Devices will be marked with a conformity label (tag). Please note that radiofrequency devices must be programmed by the user themselves before reporting to Spectrum Desks.

Any user wishing to establish a private Wi-Fi network must coordinate with Rio 2016 Spectrum Management (see Spectrum Newsletter 5/2015 - Version 5.1 - April 2015).

Users do not need to register mobile phones, tablets, computers, bluetooth headsets and other similar devices.

## 1.1 FILLING IN THE REQUEST FORMS

Any user wishing to use wireless equipment must apply for radiofrequency coordination by submitting their equipment specifications. There will be mandatory and optional fields to be filled out. Incomplete documents will be returned.



Complete forms and accurate information will help expedite the coordination process.

A field for general comments and additional explanations in the request forms has not been specified. However, Spectrum Management has made available a corporate email account, [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com), which will be the main communication channel between users and Rio 2016 for radiofrequency request purposes.

Extra content regarding spectrum management and requests can be found in Rio 2016 politics and procedures documents, among them: PO.TEL.002 (Approval and use of wireless devices), PO.TEL.005 (Managing radiofrequency interference and enforcement), PO.TEL.009 (Request spectrum) and PR.TEL.004 (Espectro - Requisição -(in Portuguese))

For general questions and comments, please e-mail to [spectrum@rio2016.com](mailto:spectrum@rio2016.com).

## 2 | OVERVIEW

Registered Rio 2016 Rate Card users will be able to apply for radio frequency coordination through the Spectrum Order Portal (SOP). SOP is accessed from the “Spectrum” menu tab at [www.ratecard.rio2016.com](http://www.ratecard.rio2016.com).

If you require access, refer to [ratecard@rio2016.com](mailto:ratecard@rio2016.com).

The system software of client workstations should meet at least Internet Explorer 8 to 11 or Fire Fox 30.0.1 or its penultimate version.

The Spectrum Order Portal will be used to:

- Create a spectrum request
- View/search for a spectrum request
- Edit a spectrum request
- Delete a spectrum request
- Submit a spectrum request
- Cancel a spectrum request
- View authorisation from ANATEL
- View spectrum request status

## 3 | HOW TO USE THE TOOL

The following items describe the main fields and displays for the Spectrum Request Tool found at the address [www.ratecard.rio2016.com](http://www.ratecard.rio2016.com) under the **Spectrum** menu.

The tool is to be used to request frequencies.

### 3.1 SPECTRUM REQUEST

There are three main options for spectrum request procedure:

- **New Spectrum:** allows the user to create a new spectrum request.
- **Status:** allows the user to view their existing radio frequency requests.
- **Action - Copy order:** allows the user to create a new spectrum request by copying a previous order.

#### My Spectrum Request

NEW SPECTRUM FILTER

16 Item(s) found

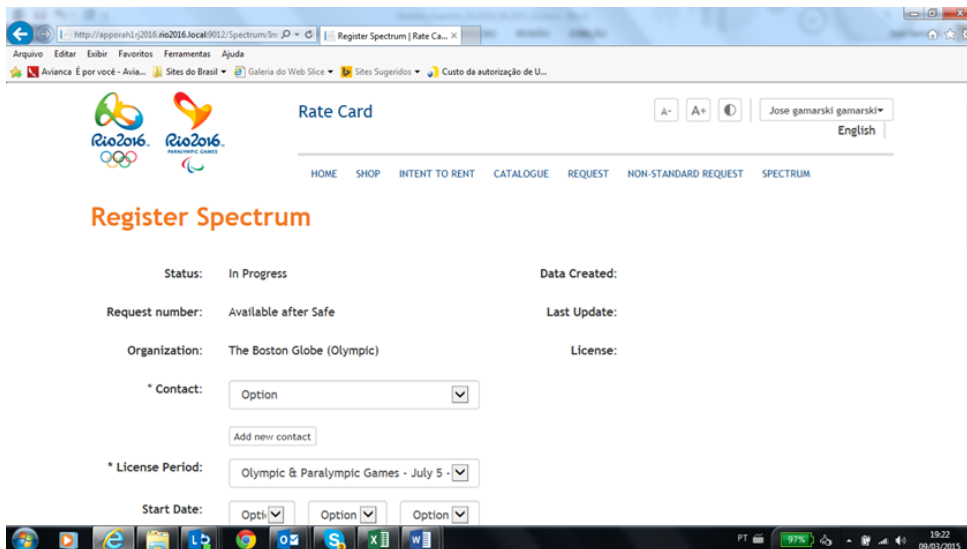
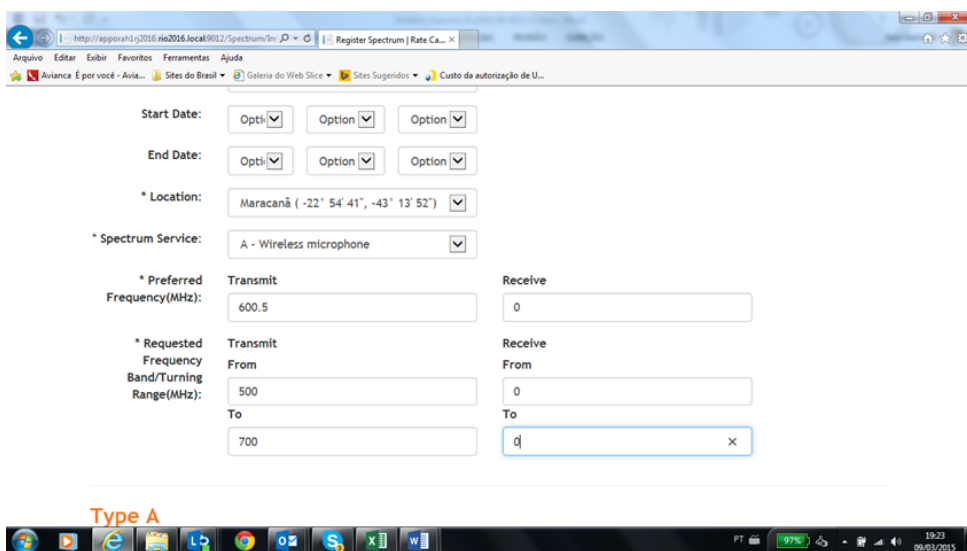
ACTIONS	REQUEST NUMBER	STATUS	LICENSE FILE	LOCATION	SERVICE	ORGANIZATION	L
 	23	Canceled		Barra Accommodation Village 3	A - Wireless microphone	The Boston Globe (Olympic)	16/03

### 3.2 REQUEST SUMMARY

After selecting “New Spectrum” from the “Spectrum” menu, the user is prompted to enter the administrative and radiofrequency equipment information, including:

- **Contact information:** enter contact information with name(s), phone number(s) and email address(es).
- **Licence period:** enter, from the list, the period for the frequency request.
- **Location:** enter, from the list, the venue where the spectrum is proposed to be used.
- **Spectrum service:** enter, from the list, the service type to be requested.
- **Preferred frequency (MHz):** enter preferred frequencies for operating devices for the selected spectrum service.

- **Requested frequency band (tuning range) (MHz):** enter the frequency range that your equipment can be tuned to. If this information is unknown, please contact the manufacturer of your equipment.

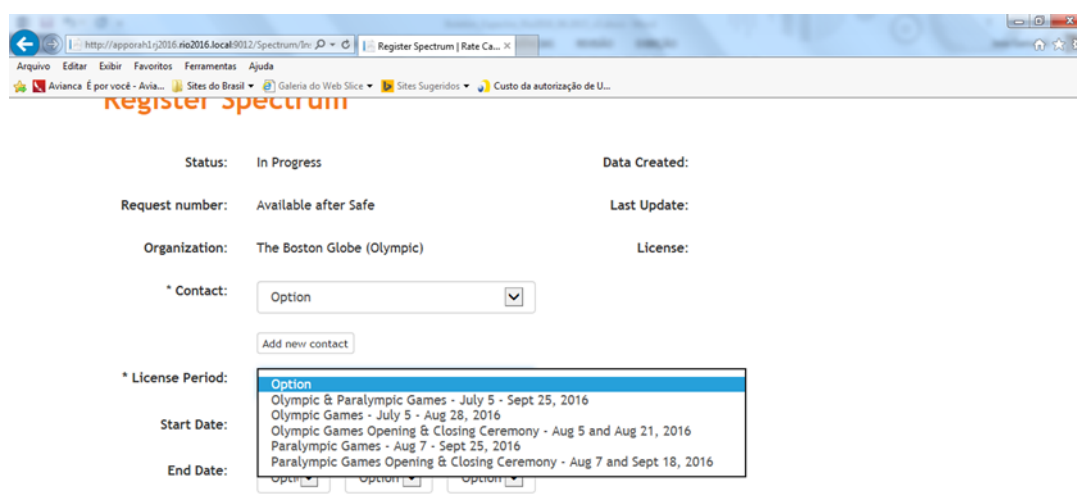



### 3.3 ORDERING PERIODS

The user is asked to choose, from the list, the following spectrum request periods:

- **Olympic and Paralympic Games:** authorisations valid from 5 July 2016 to 25 September 2016 (NOT VALID for ceremonies).
- **Olympic Games:** authorisations valid from 5 July 2016 to 28 August 2016 (NOT VALID for ceremonies).

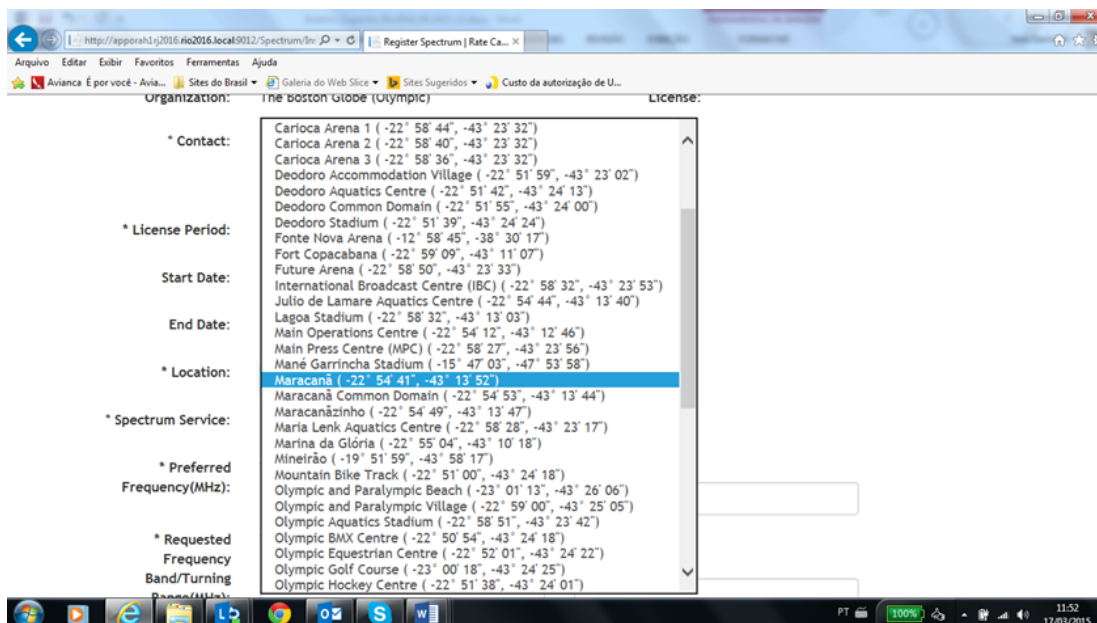
- **Olympic Games Opening and Closing Ceremonies:** authorisations valid for 5 August 2016 and for 21 August 2016.
- **Paralympic Games:** authorisations valid from 1 September 2016 to 25 September 2016 (NOT VALID for ceremonies).
- **Paralympic Games Opening and Closing Ceremonies:** authorisations valid for 7 September 2016 and for 18 September 2016.
- **Note 1:** for periods not listed, please enter start and end dates, provided that the new period is within the Games-time window.
- **Note 2:** authorisations for ceremonies are exclusive. That means if the user needs to apply for spectrum for Games and ceremonies, they **MUST** request twice.



### 3.4 LOCATION

The user must select the venue where the radiofrequency (RF) equipment will be used.

**Note:** considering the high spectrum use in the city of Rio de Janeiro, wide areas were not listed for applying it, since frequency availability would be very limited. Requests will be restricted to the listed venues, including their immediate surroundings, in this case limited to a distance of 100 metres from the venue security perimeters.



### 3.5 SPECTRUM SERVICES

Users can request radio frequencies through SOP, for the services outlined below.

Spectrum service	Application type
Handheld radios (walkie-talkies)	Application type A
LMR - Land mobile radio services	
Wireless cameras	
Telemetry & telecommand	
Talkback (intercom)	
Wireless microphones	
In-ear monitors (IFB)	
Mobile microwave link	Application type B
Fixed links	
Permanent earth stations (PES)	Application type C
Transportable earth stations (TES)	Application type D
Private Wi-Fi coordination	Application type E



* Spectrum Service:	<div style="border: 1px solid black; padding: 2px;"> <b>Option</b>  A - Wireless microphone  A - Wireless camera  A - Telemetry and telecommand  A - Talkback (intercom)  A - Land mobile radio  A - IEM / IFB in-ear monitor  A - Handheld radios (walkie-talkie)  B - Microwave mobile link  B - Microwave fixed link  C - Permanent earth stations  D - Transportable earth stations  E - Wireless LAN </div>	Receive <input type="text"/>
* Preferred Frequency(MHz):		Receive From <input type="text"/>
* Requested Frequency Band/Turning Range(MHz):		To <input type="text"/>

## a. APPLICATION TYPE A

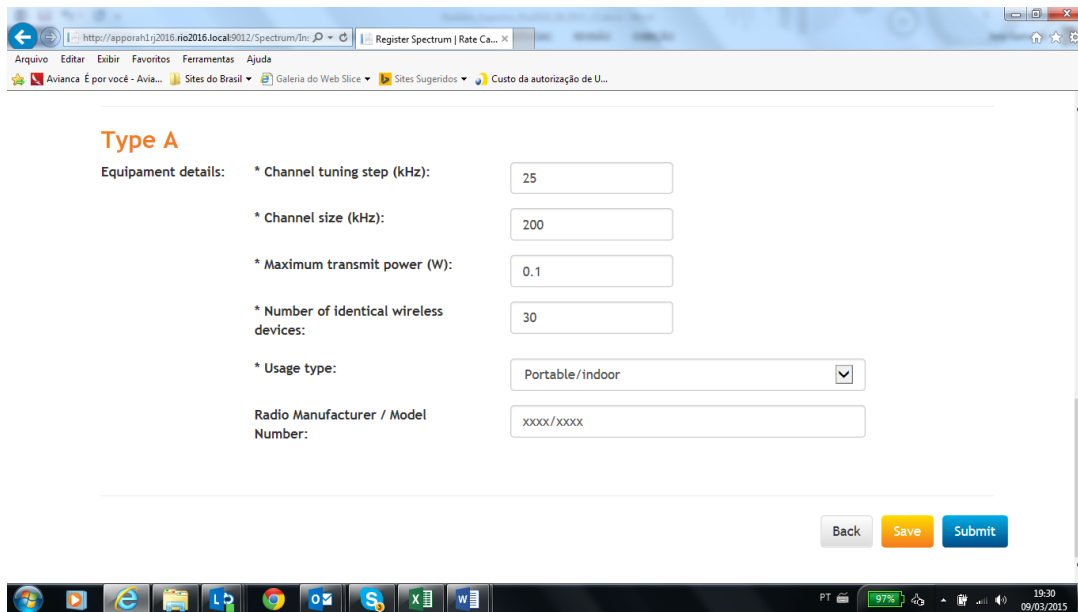
To be assigned a radiofrequency, the user must provide equipment specifications as shown below. Fields to be filled in order to register spectrum requests are:

Mandatory fields:

- **Channel tuning step (kHz):** enter in the channel tuning step (channel spacing) if known. For example, most handheld radios (walkie-talkies) use 12.5 kHz.
- **Channel size (kHz):** enter the channel size that your equipment uses. For example, most handheld radios (walkie-talkies) have a channel size of 12.5 kHz.
- **Maximum transmit power (W):** enter the maximum output power of your equipment in watts (W). Note that this parameter should match the value of output power for this type of service.
- **Number of identical pieces of equipment:** enter how many pieces of equipment you will be using with the assigned frequency.
- **Usage type:** choose how you wish to use your equipment.

Optional field:

- **Manufacturer/equipment model:** enter the equipment manufacturer and model.



## b. APPLICATION TYPE B

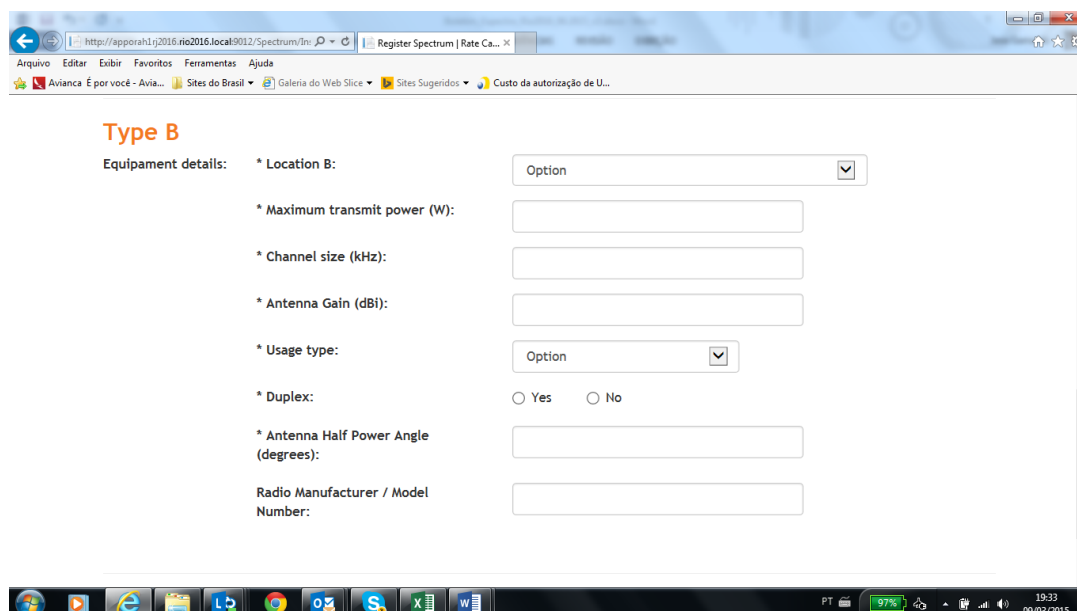
For microwave fixed and mobile links applications, the user must provide the following information:

Mandatory fields:

- **Location B:** enter, from the list, Rio 2016 venue, point B of the microwave link.
- **Maximum transmit power (W):** enter radio equipment maximum transmit power in watts (W).
- **Channel size (kHz)**
- **Antenna gain (dBi):** enter antenna gain in dBi.
- **Usage type**
- **Duplex:** enter transmission mode from the list.
- **Antenna half power angle:** enter antenna half power angle in degrees, according to manufacturer technical sheet.

Optional field:

- **Manufacturer/equipment model.**



**Type B**

Equipment details:

- \* Location B:
- \* Maximum transmit power (W):
- \* Channel size (kHz):
- \* Antenna Gain (dBi):
- \* Usage type:
- \* Duplex: ☐ Yes ☐ No
- \* Antenna Half Power Angle (degrees):
- Radio Manufacturer / Model Number:

### c. APPLICATION TYPE C

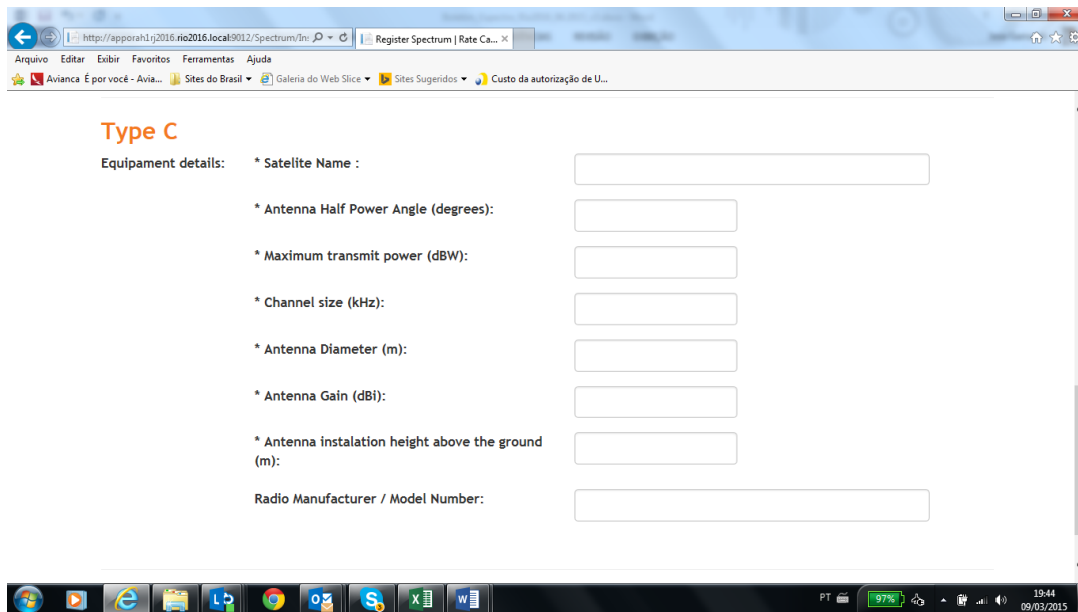
To apply for permanent earth stations (PES), all fields are required. Please input technical specification data and satellite service provider information.

Mandatory fields:

- **Satellite name:** enter satellite name.
- **Antenna half power angle.**
- **Maximum transmit power (EIRP) (dBW):** enter maximum transmit power in dBW.
- **Channel size (kHz).**
- **Antenna diameter (metres):** enter manufacturer technical sheet specification.
- **Antenna gain (dBi).**
- **Antenna height above ground (metres):** enter antenna eight metres above ground.

Optional field:

- **Manufacturer/equipment model.**



#### d. APPLICATION TYPE D

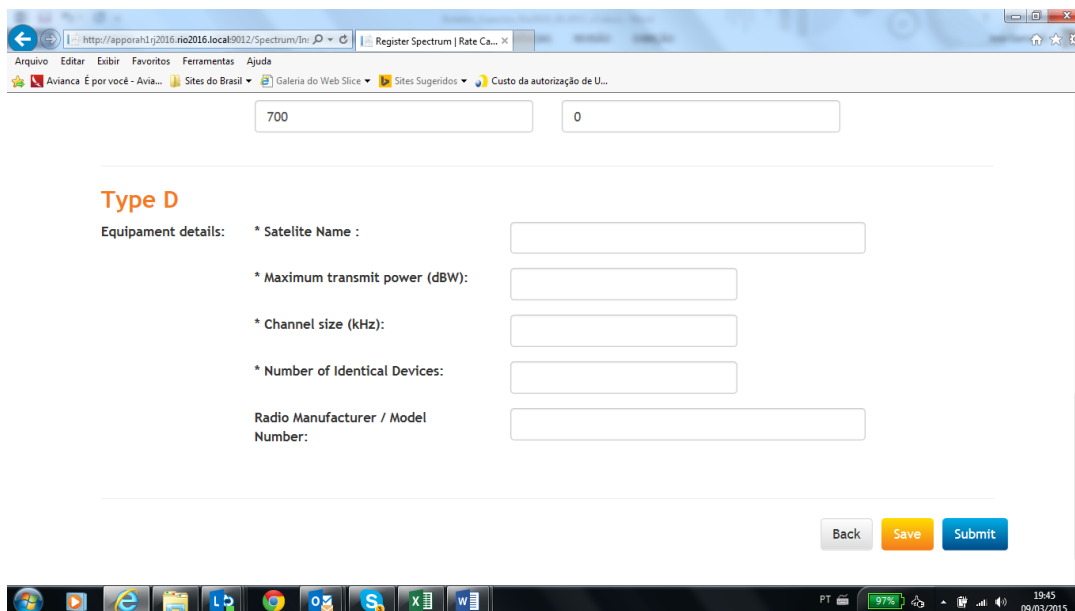
To apply for transportable earth stations (TES), the following fields are required. Please input technical specification data and satellite service provider information.

Mandatory fields:

- **Satellite name.**
- **Maximum transmit power (EIRP) (dBW).**
- **Channel size (kHz).**
- **Number of identical pieces of equipment.**

Optional field:

- **Manufacturer/equipment model.**



The screenshot shows a web browser window with the URL <http://apporah1j2016.rio2016.local:9012/Spectrum/In/>. The page is titled "Type D" and contains a form for "Equipment details". The form fields are:

- \* Satellite Name :
- \* Maximum transmit power (dBW):
- \* Channel size (kHz):
- \* Number of Identical Devices:
- Radio Manufacturer / Model Number:

At the bottom right of the form are three buttons: "Back", "Save", and "Submit". The browser's address bar shows the URL, and the taskbar at the bottom displays various application icons and the system clock showing 19:45 on 09/03/2015.

**Note 1:** to comply with ANATEL Resolution number 635, for spectrum applications type C and D, users must submit an additional letter to the corporate Rio 2016 email [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com) indicating spectrum request number, giving evidence that the spatial capacity will be contracted with the legal representative in Brazil of the exploiting foreign satellite, or with the Brazilian satellite exploratory. Evidence is provided through a signed letter by the legal representative in the country or by the Brazilian satellite explorer. Both are aware of the letter's content.

The letter should be sent in Portuguese. The content suggested translation in note 2 is for clarification purposes only.

**Note 2:** content suggestion:

*"Subject: Declaration for contracting satellite capacity in Brazil by a foreign company to broadcast the Rio 2016 Olympic and Paralympic Games:*

*For the purpose of complying with ANATEL Resolution number 457 of 19 January 2007, we declare that company (\_\_\_\_) based in (\_\_\_\_) will use capacity of the satellite (\_\_\_\_) located in the geostationary orbit (\_\_\_\_ degrees W/E) to transmit the signals generated during the Rio 2016 Games in the period of (xx/yy/zz to ww/ss/zz), starting from (Transmission site).*



*Contracting capacity for transmission from Brazil will be effected through company (\_\_\_) the legal representative in Brazil for the company (\_\_\_), the satellite (\_\_\_) operator.*

*The satellite (\_\_\_) is duly authorised by ANATEL. The right to operate the satellite (\_\_\_) was set out by the ANATEL Act number (\_\_\_) of xx/yy/xx*

*During the period mentioned above, there will be a transmission of one carrier with technical specifications in compliance with the Rio 2016 spectrum request number (\_\_\_) , satellite (\_\_\_), frequency (\_\_\_MHz DL and \_\_\_ MHz UL), bandwidth (\_\_\_KHz) , transponder (\_\_\_) EIRP (\_\_\_ dBW).”*

**Note 3:** please submit the signed digital copy via email for the attention of Rio 2016 to [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com).

#### **e. APPLICATION TYPE E**

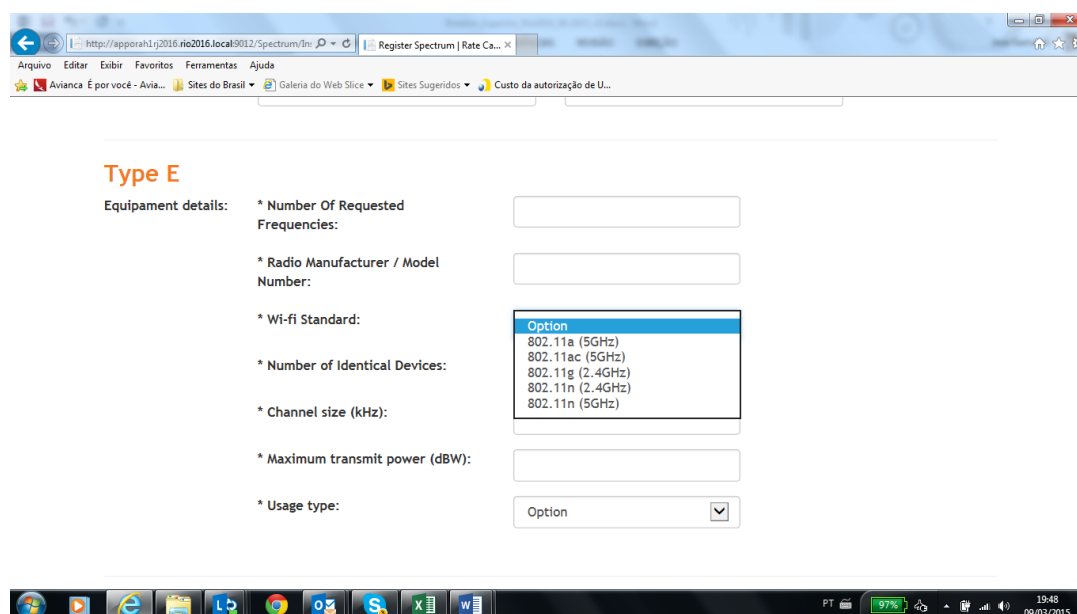
Rio 2016 Spectrum Management will coordinate all private Wi-Fi networks and respective wireless access points. Users intending to deploy their own wireless routers must apply for coordination and authorisation via the Spectrum Order Portal.

For more details on coordination of temporary Wi-Fi networks inside Rio 2016 venues, please refer to the Spectrum Newsletter number 5/2015 - Rio 2016 Games Time Policy for Private Wi-Fi - Version 5.1 - April 2015.

Mandatory fields:

- **Number of requested frequencies:** enter number of necessary frequencies to design your private network. The maximum number of channels to be shared by all users in one single coverage area is four. (Chanel 64: 5320 MHz; Chanel 132: 5660 MHz; Chanel 136: 5680 MHz; Chanel 140: 5700 MHz).
- **Wi-Fi standard:** select, from the list, the wireless networking standard your wireless router uses, which will be one of the following:
  - 802.11a (5GHz)
  - 802.11n (2.4GHz) - only for very special requirements
  - 802.11n (5GHz)
  - 802.11ac (5GHz)

- **Number of identical devices:** enter the number of pieces of the same equipment that will be deployed in the same radiofrequency(ies).
- **Channel size (kHz).**
- **Maximum transmit power (dBW) (EIRP).**
- **Usage type:** select indoor or outdoor in the menu.



**Note 1:** routers operating exclusively in the 2.4 GHz band will not be allowed to enter Rio 2016 venues and facilities for private networks.

**Note 2:** if authorised by Rio 2016 Spectrum Management, Wi-Fi private network specific SSID and channel(s) will be informed to the user via email: [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com).

### 3.6 SUBMITTING THE ORDER

Once the above fields are complete, the user must first save and then submit the order.

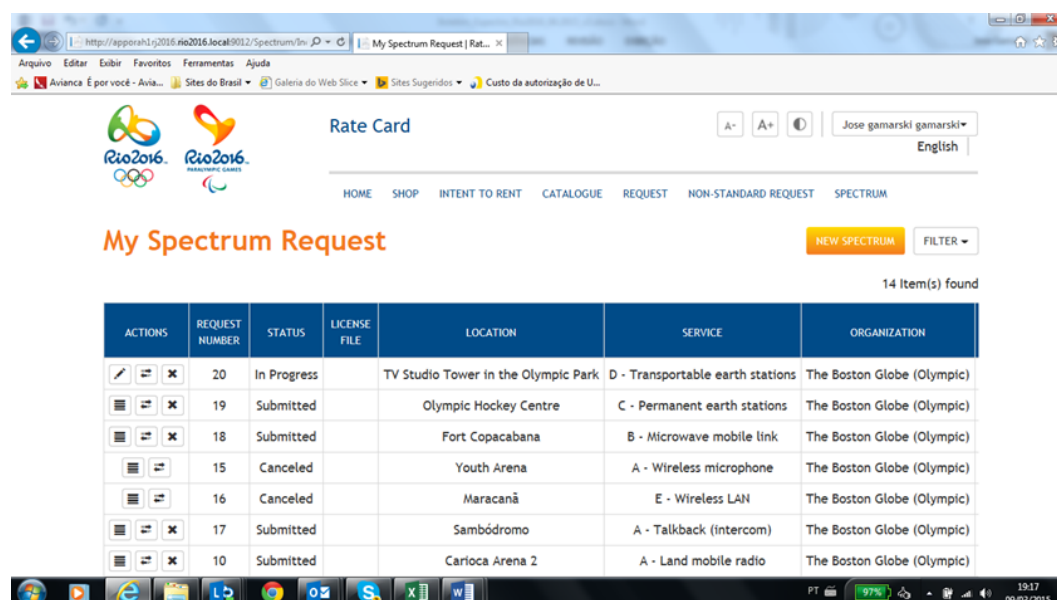
Once the order has been submitted, only Rio 2016 Spectrum Management may modify it.

Back Save Submit

### 3.7 VIEWING EXISTING REQUESTS

Users can check the status and details of their spectrum requests by selecting the menu “Spectrum” in the URL [www.ratecard.rio2016.com](http://www.ratecard.rio2016.com) as shown below.

- **Request number:** unique identifier for each spectrum request and will be used as a reference in the complete radiofrequency assignment management process.
- **Status:** indicates the stage each request has reached in the order process.
- **Licence:** indicates the licence was issued. Click to download and view. The requesting organisation’s name will also appear on the licence.
- **Actions - view/edit request:** allows the user to review or edit an order that has not been submitted.
- **Actions - copy request:** creates a new spectrum request by copying the data from the previous order.
























**Rate Card**

HOME SHOP INTENT TO RENT CATALOGUE REQUEST NON-STANDARD REQUEST SPECTRUM

**My Spectrum Request** NEW SPECTRUM FILTER

14 Item(s) found

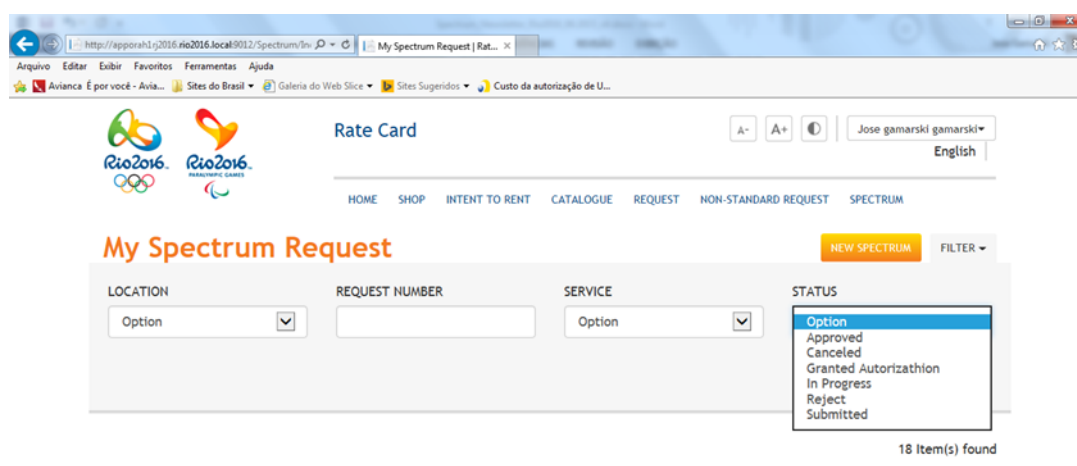
ACTIONS	REQUEST NUMBER	STATUS	LICENSE FILE	LOCATION	SERVICE	ORGANIZATION
  	20	In Progress		TV Studio Tower in the Olympic Park	D - Transportable earth stations	The Boston Globe (Olympic)
  	19	Submitted		Olympic Hockey Centre	C - Permanent earth stations	The Boston Globe (Olympic)
  	18	Submitted		Fort Copacabana	B - Microwave mobile link	The Boston Globe (Olympic)
  	15	Canceled		Youth Arena	A - Wireless microphone	The Boston Globe (Olympic)
  	16	Canceled		Maracanã	E - Wireless LAN	The Boston Globe (Olympic)
  	17	Submitted		Sambódromo	A - Talkback (intercom)	The Boston Globe (Olympic)
  	10	Submitted		Carloca Arena 2	A - Land mobile radio	The Boston Globe (Olympic)



### 3.8 SPECTRUM REQUEST STATUS

Throughout the spectrum application the status of the order will change based on the following options:

- **In progress:** status of all new orders that have not been submitted to Rio 2016 Spectrum Management. The user can make modifications to the order at this time.
- **Submitted:** status of orders that have been submitted to Rio 2016 Spectrum Management. If any modifications to the order are necessary, the applicant will need to contact Rio 2016 Spectrum Management, at [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com).
- **Approved - pending frequency assignment:** indicates that Rio 2016 Spectrum Management has validated the order and it has been submitted to ANATEL for frequency assignment.
- **Granted authorisation:** indicates that spectrum assignment has been made and a temporary frequency authorisation has been granted.
- **Rejected:** indicates that there was no technical availability to assign a licence. The spectrum applicant will also be advised by Rio 2016 Spectrum Management via [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com).
- **Cancelled:** indicates that the order has been cancelled by Rio 2016 or ANATEL.



## 4 | SPECTRUM APPROVAL / LICENCE DOWNLOADS

Rio 2016 Spectrum Management will review and validate all spectrum requests. Once validated, the request is submitted to the ANATEL Spectrum Management System (MOSAICO), which will analyse and assign the appropriate frequency.

- ANATEL will be assigning the frequencies in accordance with the timetable below (for Games time).
- Spectrum authorisations will be posted in the user interface of SOP or, in case of any unexpected issue, delivered to the user via email at [spectrumoperations@rio2016.com](mailto:spectrumoperations@rio2016.com).
- For any other questions and/or comments, please contact [spectrum@rio2016.com](mailto:spectrum@rio2016.com).

Period	Description	Publishing	Remarks
March 10th, 2015	Spectrum Portal launching		
March 1st, 2015 to July 31st, 2015	Regular requesting period for the Olympic and Paralympic Games.	Licences will be published on Spectrum Portal website until December 30th, 2015.	The users that request frequencies within this period have higher chances to have their requests met.
August 1st, 2015 until the end of Paralympic Games	Late request period to Olympic and Paralympic Games.	Licences will be published on Spectrum Portal website within two months from January 1st, 2016.	All requests submitted within this period will be considered late requests. Users submitting their requests on this period have lower chances to get the requested frequencies. There is no guarantee that late requests are going to be processed. Is strongly recommended to all users to request the necessary frequencies as soon as possible.

## 5 | SPECTRUM REQUEST FOR BULKY SUBMISSIONS

Users that need to request higher volumes of frequencies must use the document “Rio 2016 - Radio Frequency Application Form - V3.0” available on the Rio 2016 extranet.

Please refer to <http://www.rio2016.com/en/transparency/documents> to download the updated version of the Excel spreadsheet form.

**Applications for spectrum temporary use at test events or any other similar event should be submitted exclusively through this form. The Spectrum Order Portal (SOP) will be operational for Games time requests only.**

### 5.1 FILLING THE APPLICATION FORM

Any Rio 2016 accredited organisation user wishing to use wireless equipment in this condition must apply for radiofrequency coordination by submitting their equipment specifications via the application spreadsheet.

All fields marked with \* must be filled out and incomplete documents will be returned.

Complete forms and accurate information will help expedite the coordination process.

After filling out the form, it should be sent to [spectrum@rio2016.com](mailto:spectrum@rio2016.com).

Data to be filled in the excel spreadsheet form is fundamentally the same as that of the Spectrum Order Portal (SOP).

## a. Rio 2016 - Radio frequency Request (Contact Information)

### Rio 2016 - Radio Frequency Application (Contact Information) Rio 2016 - Requisição de Rádio Frequência (Informações de Contato)

Company* Empresa*		
Contact name* Nome de contato*		
Email *		
Phone number* Telefone*		

Please enter your organisation's main contact information to be reached regarding spectrum coordination  
Informar a principal pessoa de contato de sua empresa para assuntos de coordenação de espectro.

Licence period* Período de requisição*		
---	--	--

	From - De	To - Até
In case of test event, please select the date Em caso de evento teste, informar a data	dd/mm/yyyy	dd/mm/yyyy

## b. Applications type A

Used for the following services:

- In-ear monitors system (IFB)
- Handheld radio (walkie-talkie) (HRS)
- Land mobile radio (LMR)
- Talkback (intercom) (INT)
- Telemetry and telecommand (TC)
- Wireless microphone (MIC)
- Wireless camera (WC)

Location *	Preferred frequency (MHz) *		Spectrum service*	Request frequency band/ Tuning range (MHz) *		Channel size (KHz) *	Maximum transmit power (W) *	Usage type *	Number of identical devices *	Radio manufacturer name / Radio model number	Channel tuning step (KHz)	Frequency to be pre-assigned (MHz) RESTRICTED TO Rio 2016	
	TX	RX		From	To							TX	RX
1	2	3	4	5	6	7	8	9	10	11	12	13	14

## c. Applications type B

Used for the following services:

- Microwave mobile link (MML)
- Microwave fixed link (FL)

Location *	Location B	Spectrum service*	Preferred frequency (MHz)		Request frequency band/ Tuning range (MHz) *		Channel size (KHz) *	Maximum transmit power (W) *	Duplex (MHz) *	Antenna half power angle (degrees) *	Antenna gain (dB) *	Usage type *	Radio manufacturer/Radio model number
			TX	RX	From	To							
1	2	3	4	5	6	7	8	9	10	11	12	13	14

#### d. Applications type C

Used for the following service:

- Permanent earth stations (PES)

Location <sup>a</sup>	Spectrum service <sup>a</sup>	Preferred frequency (MHz) <sup>a</sup>	Satellite name <sup>a</sup>	Antenna half power angle (degrees) <sup>a</sup>	Maximum transmit power (dBW) <sup>a</sup>	Channel size (KHz) <sup>a</sup>	Antenna diameter (m) <sup>a</sup>	Antenna gain (dB) <sup>a</sup>	Antenna installation height above the ground (m) <sup>a</sup>	Equipment manufacturer name / Equipment model number
1	2	3	4	5	6	7	8	9	10	11

#### e. Applications type D

Used for the following service:

- Transportable earth stations (TES)

Location <sup>a</sup>	Spectrum service <sup>a</sup>	Preferred frequency (MHz) <sup>a</sup>	Satellite name <sup>a</sup>	Maximum transmit power (dBW) <sup>a</sup>	Channel size (KHz) <sup>a</sup>	Number of identical devices <sup>a</sup>	Equipment manufacturer name / Equipment model number
1	2	3	4	5	6	7	8

#### f. Applications type E

Used for the following service:

- Wireless LAN (Wi-Fi)

Tuning range (MHz) <sup>a</sup>		Spectrum service <sup>a</sup>	Location <sup>a</sup>	Number of requested frequencies <sup>a</sup>	Equipment manufacturer name / Equipment model number	Wi-Fi standard <sup>a</sup>	Number of identical devices <sup>a</sup>	Preferred frequency (MHz) <sup>a</sup>	Channel size (KHz) <sup>a</sup>	Maximum transmit power (W) <sup>a</sup>	Type of use <sup>a</sup>
From	To										
1	2	3	4	5	6	7	8	9	10	11	12

04.2015

This material shall not be duplicated by any means, except with prior and express consent (in writing) from the Organizing Committee for the Rio 2016 Olympic and Paralympic Games. Authorizations for copy should be submitted by mail to [brandprotection@rio2016.com](mailto:brandprotection@rio2016.com)

Rio 2016 Organising Committee for the  
Olympic and Paralympic Games

[rio2016.com](http://rio2016.com)