

29TH WORLD RADIOCOMMUNICATION SEMINAR

30 November - 11 December 2020

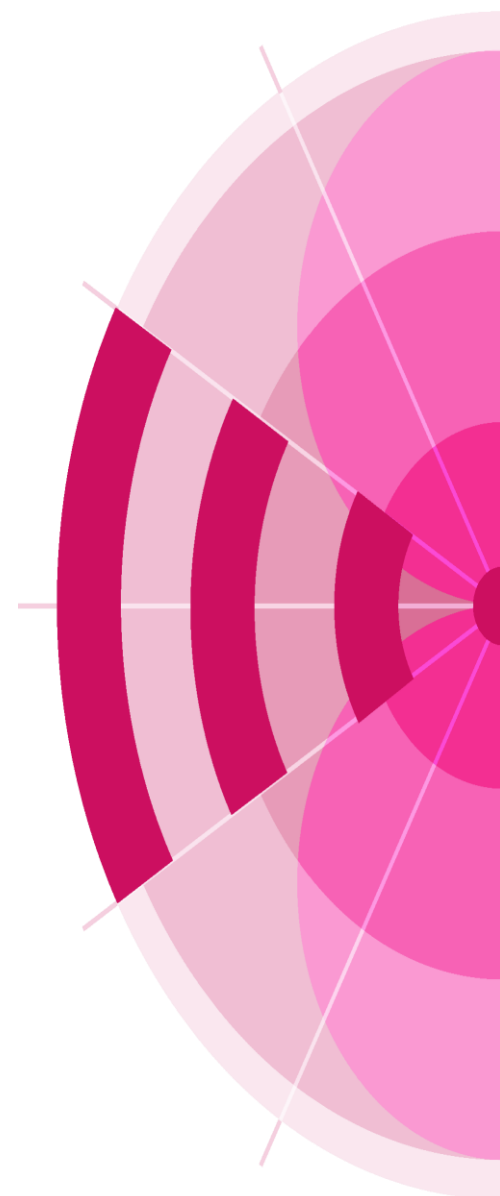
ITUWRS
ONLINE2020

COST RECOVERY FOR SATELLITE NETWORKS FILINGS

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Space Services Department
Radiocommunication Bureau

www.itu.int/go/wrs-20

#ITUWRS



Implementation of cost recovery

Council Decision 482

The ITU Council determines the cost recovery principles and fees for satellite network filings

Radio Regulations No.9.38.1 etc.

The WRC determines regulation covering satellite network filings, in particular, the penalty in the event of non-payment of cost recovery fee

Council Decision 482

Established a schedule of processing charge that relates to the complexity and size of a filing

Complexity is modeled with **categories**

Size is modeled by **units**

6 months to make payment

One free entitlement a year for each member state

What Filings are chargeable?

1/ API

- * API for NGSO not subject to coordination
 - * API of inter-satellite links of a GSO communicating with a NGSO not subject to coordination
-

2/ Coordination Requests

3/ Plans

- * Modifications of the Space Service Plans and Lists
 - * The use of guard bands
 - * Conversion of an allotment into assignment with modification beyond the envelop characteristics of the initial allotment
 - * Requests for implementation of the FSS plans
-

4/ **Notification** for recording space stations in the MIFR

5/ **Consolidation** for of different GSO at the same orbital position into a single satellite network

Filings

Which Filings are not chargeable?

Filings

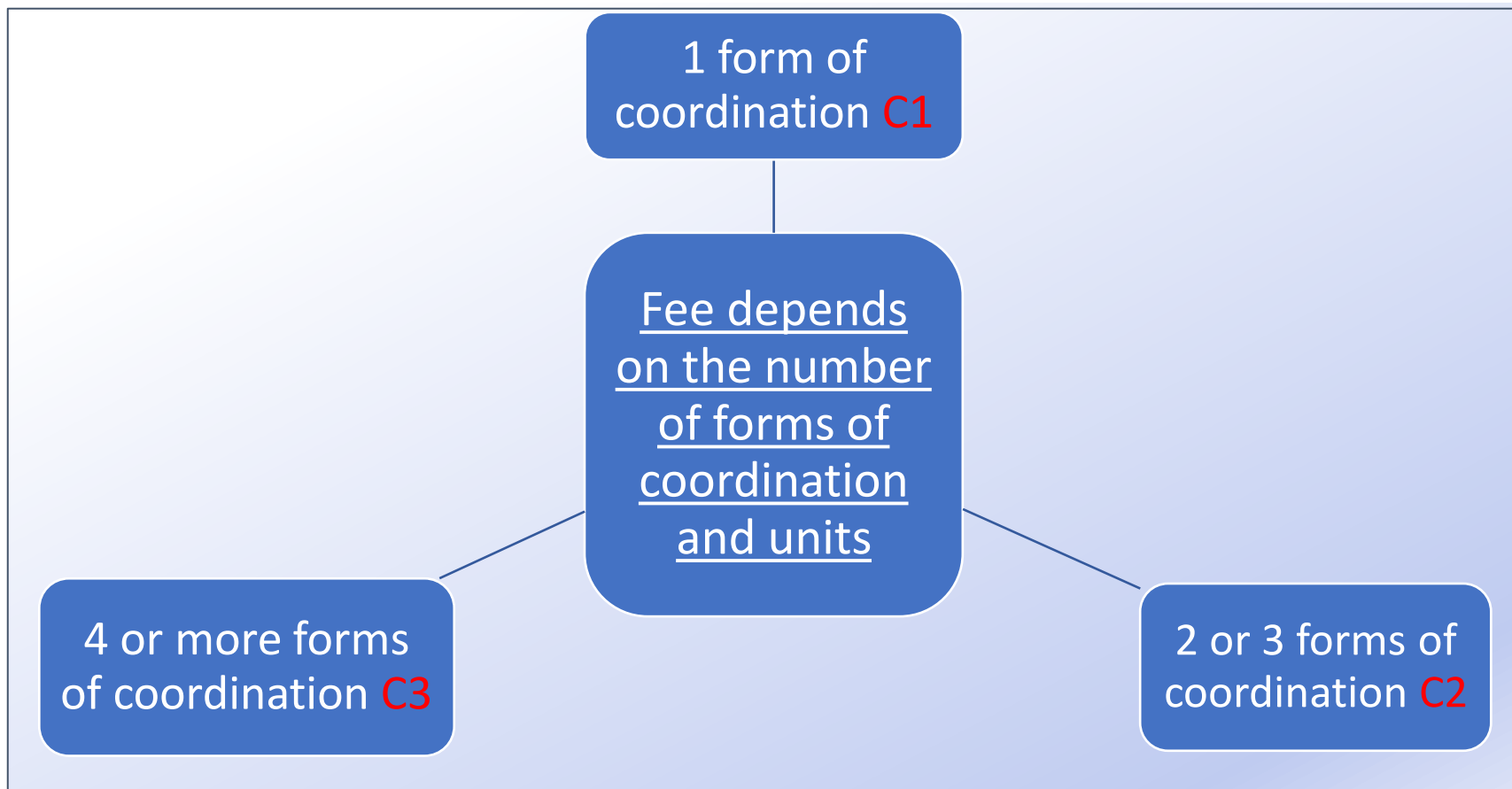
- 1/ Notification for recording earth stations in the MIFR
- 2/ Publication of special sections and Parts for the amateur-satellite service
- 3/ Conversion of an allotment into an assignment with modification which is not beyond the envelop characteristics of the initial allotment
- 4/ Addition of a new allotment to the plan for a new Member State of the Union in accordance with the procedure of Article 7 of Appendix 30B

Fees for API (Art. 9 – Section IA)

Flat fee
570 CHF

API for NGSO
(not subject
to
coordination)

Categorization of Coordination Requests (Art. 9 – Section II)



What are forms of coordination?

Cost recovery form of coordination

A

B

C

D

E

F

RR forms of coordination

No. 9.7, RS33.3

AP30 7.1, AP30A 7.1

No. 9.11, RS33 2.1, RS539

Nos. 9.7B, 9.11A, 9.12, 9.12A, 9.13, 9.14

No. 9.7A

No. 9.21

Example (Forms of coordination):



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS BUREAU DES RADIOCOMMUNICATIONS		INTERNATIONAL TELECOMMUNICATION UNION RADIOCOMMUNICATION BUREAU		UNIÓN INTERNACIONAL DE TELECOMUNICACIONES OFICINA DE RADIOCOMUNICACIONES		© I.T.U.	
RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATELÍTE			LUX-G6-12		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º		CR/C/2245
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA			---		BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA		2632 / 11.11.2008
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE		LUX		LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL		43.5 E	
ADM. RESPONSABLE			LUX		NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN		108520161
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL						18.06.2008	
Cette demande de coordination, reçue par le Bureau des radiocommunications en vertu du numéro 9.30 du Règlement des radiocommunications, a été examinée au titre des numéros 9.35 et 9.36 et est publiée conformément au numéro 9.38. Elle est au bordonnée au type de coordination indiqué dans la colonne de gauche par un X dans la case pertinente.			This request for coordination, received by the Radiocommunication Bureau pursuant to No. 9.30 of the Radio Regulations, has been examined under Nos. 9.35 and 9.36 and is published in accordance with No. 9.38. It is subject to the form of coordination indicated in the left-hand column by an X in the relevant box.			Esta solicitud de coordinación, recibida por la Oficina de Radiocomunicaciones de conformidad con el punto N° 9.30 del Reglamento de Radiocomunicaciones, se ha examinado de conformidad con los N° 9.35 y 9.36 y se publica de conformidad con el N° 9.38. Está sujeta al formulario de coordinación indicado en la columna de la izquierda con una X en la casilla correspondiente.	
Type de coordination mentionné dans le Tableau I / Form of coordination referred to in Table I / Forma de coordinación mencionada en el cuadro I							
<input checked="" type="checkbox"/> 9.7							
<input type="checkbox"/> 9.7A							
<input type="checkbox"/> 9.7B							
<input type="checkbox"/> 9.42							
<input checked="" type="checkbox"/> AP30#7.1		Conformément aux numéros 9.50 à 9.52 du Règlement des radiocommunications, les Administrations identifiées dans le Tableau I ci-après sont priées de communiquer leur décision à l'Administration responsable et au Bureau avant la date limite indiquée ci-dessous.		In accordance with Nos. 9.50-9.52 of the Radio Regulations, the Administrations identified in Table I below are requested to communicate their decision to the Responsible administration and the Bureau by the deadline indicated below.		De conformidad con los N° 9.50-9.52 del Reglamento de Radiocomunicaciones, se solicita a las administraciones señaladas en el cuadro I a continuación que comuniquen su decisión a la administración responsable y a la Oficina antes del plazo indicado más abajo.	
<input checked="" type="checkbox"/> AP30A#7.1							
<input type="checkbox"/> RS77							
<input type="checkbox"/> RS84							
<input type="checkbox"/> RS539							
<input type="checkbox"/> RS33#3							
Type de coordination mentionné dans le Tableau II / Form of coordination referred to in Table II / Formulario de coordinación remitido al cuadro II							
<input checked="" type="checkbox"/> 9.11							
<input checked="" type="checkbox"/> 9.11A		Les Administrations, énumérées ou non énumérées dans le Tableau II ci-après, qui n'acceptent pas la demande de coordination au titre des numéros 9.11 à 9.14, 9.21 et RS33#2.1, sont priées de communiquer leurs observations à l'Administration responsable et au Bureau avant la date limite indiquée ci-dessous. Toute Administration qui ne réagira pas au titre du numéro 9.52 avant cette date limite sera considérée comme n'étant pas défavorablement influencée et, dans les cas couverts par les numéros 9.11 à 9.14 et RS33#2.1, les dispositions des numéros 9.48 et 9.49 s'appliqueront.		Administrations listed or not listed in Table II below, which do not agree to the request for coordination under Nos. 9.11 to 9.14, 9.21 and RS33#2.1 are requested to communicate their comments to the responsible administration and the Bureau by the deadline indicated below. Any administration not responding under No. 9.52 within this deadline shall be regarded as unaffected and, in the cases of Nos. 9.11 to 9.14 and RS33#2.1, the provisions of Nos. 9.48 and 9.49 shall apply.		Se invita a las administraciones, enumeradas o no en el cuadro II, que no estén de acuerdo con la solicitud de coordinación de conformidad con los N° 9.11 a 9.14, 9.21 y RS33#2.1 que comuniquen sus observaciones a la administración responsable y a la Oficina dentro del plazo indicado más abajo. Se considerará que toda administración que no responda de conformidad con el N° 9.52 dentro del plazo señalado, no está afectada y, en el caso de los N° 9.11 a 9.14 y RS33#2.1, se aplicarán las disposiciones de los N° 9.48 y 9.49.	
<input type="checkbox"/> 9.12							
<input type="checkbox"/> 9.12A							
<input checked="" type="checkbox"/> 9.13							
<input checked="" type="checkbox"/> 9.14							
<input checked="" type="checkbox"/> 9.21/A							
<input checked="" type="checkbox"/> 9.21/B							
<input type="checkbox"/> 9.21/C							
<input type="checkbox"/> RS33#2.1							
DATE LIMITE POUR LA DÉCISION / EXPIRY DATE FOR DECISION / FECHA LÍMITE PARA LA DECISIÓN						11.03.2009	



Cost recovery summary in CR/C

SECTION SPECIALE / SPECIAL SECTION / SECCIÓN ESPECIAL / 特节 / СПЕЦИАЛЬНАЯ СЕКЦИЯ / القسم الخاص										CR/C/2245
A	A1a Sat. Network	LUX-G6-12	A1f1 Notifying adm.	LUX	A1f3 Inter. sat. org.		BR1 Date of receipt	18.06.2008	BR20/BR21 BR IFIC no./part	2632/
	BR6a/BR6b Id. no.	108520161	BR3a/BR3b Provision reference	9.6	C		BR2 Adm. serial no.			

B1a Beam designation	B2 Emi-Rcp	BR8 Action code	BR7a Group id.	BR9 Action code	13A Conformity with RR	C3a Assigned freq. band	BR47 Frequency band (MHz)			BR15 Provision reference	BR53 Nb of freq.	C4a Class of station	BR54 Nb of emiss.	BR55 Nb of units
TUHR	E		108627556		A-----	77000	235	-	312	9.21, 9.7	1	EI	2	2
			108627557		A-----	7000	315	-	322	9.21, 9.7	1	EI	2	2
			108627558		A-----	64500	335.4	-	399.9	9.13, 9.21, 9.7	1	EI	2	2
TV1R	E		108627559		A-----	2000000	37500	-	42500	9.7	2	EC	1	2
			108627560		A-----	1000000	39500	-	40500	9.7	1	EC	1	1
			108627561		A-----	1000000	39500	-	40500	9.7	1	EI	1	1
			108627562		A-----	1000000	41000	-	42000	9.7	1	EV	1	1
TV2R	E		108627563		A-----	2000000	37500	-	42500	9.7	2	EC	1	2
			108627564		A-----	1000000	39500	-	40500	9.7	1	EC	1	1
			108627565		A-----	1000000	39500	-	40500	9.7	1	EI	1	1
			108627566		A-----	2000000	40500	-	42500	9.7	1	EV	1	1
TVR	E		108627757		A-----	30000	2170	-	2200	9.13, 9.14, 9.7	1	EI	6	6
TX1R	E		108627567		A-----	125000	7250	-	7375	9.7	1	EC	1	1
			108627568		A-----	125000	7250	-	7375	9.7	1	EC	1	1
			108627569		A-----	125000	7250	-	7375	9.7	1	EC	1	1
			108627570		A-----	375000	7375	-	7750	9.7	1	EC	1	1
			108627571		A-----	375000	7375	-	7750	9.7	1	EC	1	1
			108627572		A-----	375000	7375	-	7750	9.7	1	EC	1	1
			108627573		A-----	125000	7250	-	7375	9.21, 9.7	1	EI	1	1
			108627574		A-----	125000	7250	-	7375	9.21, 9.7	1	EI	1	1
			108627575		A-----	125000	7250	-	7375	9.21, 9.7	1	EI	1	1

BR57 Category		C3
BR56 Total number of units		398

What are the Units?

X

- The number of frequency assignments

X

- Number of classes of station

=

- Number of emissions

Units

- Summed up for all frequency-assignment groups
- Only applicable for categories C1, C2, C3, N1, N2, N3
- For these categories, flat fee applies for units > 100

Example of units calculation

Nb. of Freq x

Class of station x

Nb. of emiss.

= Number of units

SECTION SPECIALE / SPECIAL SECTION / SECCIÓN ESPECIAL / 特节 / СПЕЦИАЛЬНАЯ СЕКЦИЯ / القسم الخاص CR/C/2222

A A1a Sat. Network A1f1 Notifying adm. A1f3 Inter. set. org. BR1 Date of receipt BR20/BR21 BR IFFIC no./part

BR6a/BR6b Id. no. BR3a/BR3b Provision reference BR2 Adm. serial no.

B1a Beam designation	B2 Emi-Rcp	BR8 Action code	BR7a Group id.	BR9 Action code	13A Conformity with RR	C3a Assigned freq. band	BR47 Frequency band (MHz)		BR15 Provision reference	BR53 Nb of freq.	C4a Class of station	BR54 Nb of emiss.	BR55 Nb of units
			108617349	A-----	A-----	3000000	71000	- 74000	9.7	1	EC	3	3
			108617350	A-----	A-----	3000000	71000	- 74000	9.7	1	EC	3	3
			108617351	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617352	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617353	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617354	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
			108617355	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
			108617356	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
WD2	E		108617357	A-----	A-----	3000000	71000	- 76000	9.7	2	EC	3	6
			108617358	A-----	A-----	3000000	71000	- 76000	9.7	2	EC	3	6
			108617359	A-----	A-----	3000000	71000	- 76000	9.7	2	EC	3	6
			108617360	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617361	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617362	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617363	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
			108617364	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
			108617365	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
WD3	E		108617378	A-----	A-----	3000000	71000	- 76000	9.7	2	EC	3	6
			108617379	A-----	A-----	3000000	71000	- 76000	9.7	2	EC	3	6
			108617380	A-----	A-----	3000000	71000	- 76000	9.7	2	EC	3	6
			108617381	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617382	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617383	A-----	A-----	3000000	71000	- 74000	9.7	1	EI	3	3
			108617384	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
			108617385	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6
			108617386	A-----	A-----	2000000	74000	- 76000	9.7	1	EB, EV	3	6

BR57 Category BR56 Total number of units C1

Fees for Coordination Requests (FOR GSO)

Category	Number of cost recovery forms of coordination	Fees
C1	1	5 560 + 150 x Units (max 20 560)
C2	2 or 3	9 620 + 150 x Units (max 24 620)
C3	4 or more	18 467+ 150 x Units (max 33 467)

Fees for Coordination Requests (**FOR NGSO, for units less than 25000**)

Category	Number of cost recovery forms of coordination	Fees
C1	1	5 560 + 150 x Units (max 20 560)
C2	2 or 3	9 620 + 150 x Units (max 24 620)
C3	4 or more	18 467+ 150 x Units (max 33 467)

Fees for Coordination Requests

(FOR NGSO, for units more than 25000)

Category	Number of cost recovery forms of coordination	Fees
C1	1	$20560 + (U - 25000) \times 20560 / 50000$ (max 2x20 560)
C2	2 or 3	$24620 + (U - 25000) \times 24620 / 50000$ (max 2x24620)
C3	4 or more	$33467 + (U - 25000) \times 33467 / 50000$ (max 2x33467)

**Fees for Coordination Requests of a non-GSO with mutually exclusive sets
(Council Decision 482, Modified in 2018)**

For coordination requests of a non-geostationary satellite network with different sub-sets of orbital characteristics mutually exclusive, the processing charges are separately computed for each of the sub-sets and thereafter added to produce the processing charge of the satellite network

Article 11 Notifications

Date of receipt: **on or after 1/1/2006**

API date of receipt: **after 19/10/2002**

Conditions

For N1, N2, N3 only:

If application of **No.11.32A** has been requested, invoice will be issued for **100% of the fee**.

Otherwise, only **70% of the fee** will be invoiced and the **remaining 30%** will be invoiced if and when **No.11.32A** will be requested by the Administration.

Categorization of Notifications

1 form of coordination

N1

NGSO not subject to coordination or
subject to No. 9.21 only/
Inter-satellite links of GSO to NGSO not subject
to coord (Council Decision 482 (Modified in 20

N4

2 or 3 forms of coordination

N2

4 or more forms of coordination

N3

Fees for Notification (Art 11) (for all GSOs and NGSO not subject to coordination)

Category	Number of cost recovery forms of coordination	Fees
N1	1	15 910 + 150 x Units (max 30 910)
N2	2 or 3	42 920 + 150 x Units (max 57 920)
N3	4 or more	42 920+ 150 x Units (max 57 920)
N4		7030

Fees for Notification (Art 11)

(For NGSO subject to coordination with units less than 25000)

Category	Number of cost recovery forms of coordination	Fees
N1	1	15 910 + 150 x Units (max 30 910)
N2	2 or 3	42 920 + 150 x Units (max 57 920)
N3	4 or more	42 920+ 150 x Units (max 57 920)
	—	

Fees for Notification (Art 11)

(For NGSO subject to coordination with units more than 25000)

Category	Number of cost recovery forms of coordination	Fees
N1	1	$30910 + (U - 25000) \times 30910 / 50000$ (max 2x30910)
N2	2 or 3	$57920 + (U - 25000) \times 57920 / 50000$ (max 2x57920)
N3	4 or more	$57920 + (U - 25000) \times 57920 / 50000$ (max 2x57920)
	—	

Categorization of Plans

Art 4 & 5 of AP 30/30A

P1, P2

Flat fee for
each
category

Art 2A of AP 30/30A

P3

Art 6 & 8 of AP30B

P4, P5

Fees for Plans (AP30/30A/30B)

Category	Description	Flat fee CHF
P1	AP30/E, AP30A/E, AP30-30E/ (Part A or Part B) - Part B chargeable only if that Part A received after 7/11/98	28 870
P2	Notification under Article 5 of AP30/30A - Notification chargeable only if Part A received on or after 19/10/2002	11 550
P3	Coordination request under Article 2A of AP30/30A	12 000
P4	Procedures under Article 6 of AP30B	25 350
P5	Notification under Article 8 of AP30B	20 280

Fees for Consolidation of frequency assignments in the MIFR of different GSO networks (WRC-12)

Category

Description

Flat fee CHF

N1

Networks submitted under Article 11

15 910
+150xUnits
(max 30 910)

P3

Networks submitted under Appendices 30 or 30A

11550

P5

Networks submitted under Appendix 30B

20 280

Invoicing

Upfront Stage:

Upon receipt of filing, the BR examines receivability

Invoice will be issued based on the category and units of the filing at that time (see SpaceCap)

Invoicing process

Publication Stage (IFIC):

Following the detailed examination of the notice, if the category or units of the filing is found to be different, any resulting excess fee (or refund) will be invoiced after the publication of the notice

SpaceCap

SpaceCapture V9 - [Set Notice Template]

File Edit Tools Template Window Help

CR/NOTIF API RAST PLAN RS49/552

SpaceCap

Start Page

Notice Explorer

Open Notice

New Notice

Search


Notice Explorer - AP4/II and AP4/III

Notice id	Type	Adm./Org.	Orb. Pos.	Station name	Date rcv.	Status
List of notices Count=1						
117500028 [M]	N	SUI/			05.02.2019	50

Control Box

Show

- Open Notice
- Show Selected Entity
- View History
- Print Notice
- Export Notice(s)
- Clone
- Delete
- Assign Notice Id
- Re-number Notice Id
- Modify Notice Action Code
- Modify Date of Receipt
- Paginate Groups
- Sort Frequencies
- Structure Groups
- Delete Notice and Grp Links
- Create Notice Links
- Create Grp Links
- Create Regulatory Dates
- Cost recovery fee estimation (Council D482)**



SpaceCap Cost Analysis Results

Cost Recovery Cat/Unit Calculator

SNS Source: C:\Users\marinram\Desktop\WRS 2020\FIRST-NGSO.mdb @ MDB

Space RefDB: C:\ProgramData\ITU\BR_Space_v9.0\RefData\SpaceRefdb.mdb

Log Output Dir.: C:\Users\marinram\AppData\Local\Temp\autodelete_costrec_u215znh5_0ew

Notice Id: 117500028

Use Findings:

Calculate Category & Units

RunTime: 00:00:00.8

NOTICE: 117500028
- Provn:9.21
- Cat:N4
- Unit:42
- CatFee:0

Total number of groups processed: 3

- GROUP: 117615451, freq:[2200.3335-2207.1665]
- StrCls:EH, ET
- BeamName:DN1S
- BeamActCode:
- GroupActCode:

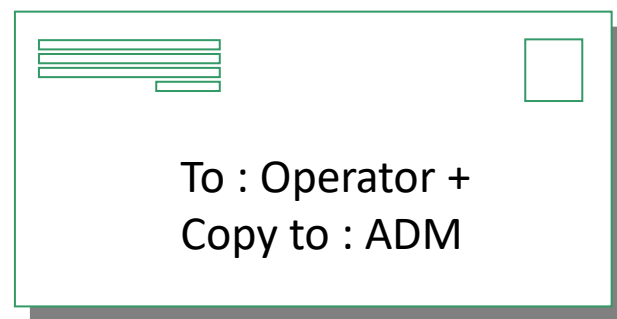
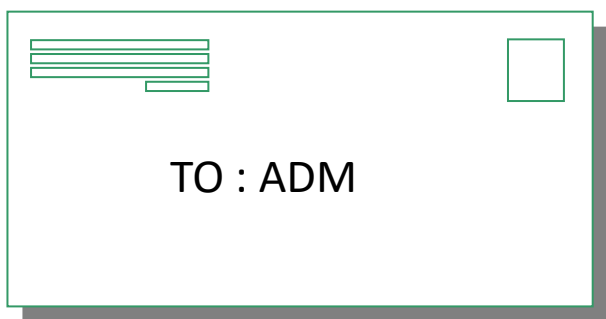
- GROUP: 117615451, freq:[400.174-400.976]
- Provn:
- StrCls:ET
- BeamName:DN1U
- BeamActCode:
- GroupActCode:

- GROUP: 119620064, freq:[148.2885-148.5365]
- Provn:9.21
- StrCls:ET
- BeamName:UP1V
- BeamActCode:
- GroupActCode:

Address field on the invoice

Invoice will be issued to the **Administration**

Only if an Administration requests in writing, the invoice can be issued **directly to the operator**, with a **copy** to the Administration



Invoice example



UNION INTERNATIONALE DES TELECOMMUNICATIONS
INTERNATIONAL TELECOMMUNICATION UNION
UNIÓN INTERNACIONAL DE TELECOMUNICACIONES



Place des Nations | Telephone National (022) 730 51 11 | Tg. BUREAU INTERNATIONAL GENEVE | TELEFAX | TELETYPE
CH 1211 Genève 20 | International +41 22 730 51 11 | Téléc. +421 000 UIT/CH | +41 22 730 71 56 | 238-46815100-uit

Invoice

Invoice number	6100015063
Invoice date	13 Nov 2014
Due date	13 May 2015
Customer Number	2115
Reference	G LD101

To:
OFCOM
Riverside House
2a Southwark Bridge Road
LONDON
SE1 9HA
ROYAUME-UNI

On behalf of:
Avanti Communications Ltd.
74 Rivington Street
LONDON
ECA4 3AY
ROYAUME-UNI

Currency CHF

Description			
Space Station	UKDIGISAT-4A		
Date of Receipt	05.11.2014		
Responsible Administration	G		
Administration's reference	SSU 1706		
Administration's ref. date	05.11.2014		
Category	Plans (P1)		
Notice ID	107552002		
Items total:			28,870.00
Price Type		Unit	Value
Sat Network Filing	Flat fee		28,870.00
Final amount:			28,870.00

Note that any additional charges will be invoiced after the publication of the above notice.

Please quote invoice number 6100015063 with your payment.

For the payment status for this invoice, please contact
Claire Evangelisti, Financial Resources Management Department
E-mail: claire.evangelisti@itu.int
telephone: +41 22 730 5651

Les paiements sont à effectuer en francs suisses à l'ordre du Secrétariat général de l'UIT.
Payments should be made in Swiss Francs to the General Secretariat of the I.T.U.
Los pagos deben efectuarse en francos suizos a la orden de la Secretaría General de la U.I.T.
Banque - Bank - Banco: UBS SA, PO Box 2600, 1211 Genève, Account No CH9360240240C876556550, Swift No : UBSWCH2H80A

Cancellation of a filing due to non-payment

- The Bureau shall send a reminder 60 days before the due date for payment
- If **payment is not received** by the due date (which is 6 months from the date of the invoice), the Bureau **shall cancel the publication** (See Nos 9.2B.1, 9.38.1, A.11.6 and Appendices)

Withdrawal or suppression of a filing by the Administration

Condition

Upon submission of a filing, an Administration can withdraw a filing within 15 days with no charge

After that, the filing is chargeable even if it was withdrawn before its publication

Annual Free entitlement

Each member state shall be entitled to the publication of special sections or parts of the BR IFIC for one satellite network **each year** without charge

Nomination of free entitlement

To be made by the **member state** in its role as the notifying administration

Conditions

Should correspond to the **year of receipt** of the filing

To be made **by the end of the period for payment of the invoice**

References

- Council Decision 482 (modified C2020)
- BR Circular letter CR/245
- BR web site

<http://www.itu.int/ITU-R/go/space-cost-recovery/en>

Thank you!

ITU – Radiocommunication Bureau

Questions to brmail@itu.int or akim.falou-dine@itu.int

