|  |  |
| --- | --- |
| **Radiocommunication Study Groups** |  |
|  |  |

Annex xx to Working Party 1B Chairman’s Report

working document towards draft CPM text on  
WRC-19 agenda item 9.1, issue 9.1.7 – Res. 958 (WRC-15)  
Annex item 2

[Editorial note: It is recommended to avoid quotations from the RR. Hence the text should be revised accordingly. *Text in some of the sections is a mere compilation of contributions of some administration, reflects the views of such administrations and has not been yet discussed*]

CHAPTER 6

General issues

(Agenda items 2, 4, 9.1 (issues 9.1.6, 9.1.7), 10)

Agenda Item 9.1

*9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:*

*9.1 on the activities of the Radiocommunication Sector since WRC-15;*

# 6/9.1.7 Issue 2) in the Annex to Resolution 958 (WRC-15)

*Urgent studies required in preparation for the 2019 World Radiocommunication Conference*

*2) Studies to examine:*

*a) whether there is a need for possible additional measures in order to limit uplink transmissions of terminals to those authorized terminals in accordance with No.* ***18.1****;*

*b) the possible methods that will assist administrations in managing the unauthorized operation of earth station terminals deployed within its territory, as a tool to guide their national spectrum management programme, in accordance with Resolution ITU-R 64 (RA-15).*

(**WP 1B** / **WP 1C**, **WP 4A**)

# 6/9.1.7/1 Executive summary

*[TBD]*

# 6/9.1.7/2 Background

Fixed-satellite services designed to meet the demand for global communication services are characterized by flexible, rapid and ubiquitous deployment of large numbers of cost-optimized earth stations employing small antennas and having common technical characteristics.

The issue under study is ubiquitous uplink transmissions from satellite terminals not adhering to international regulations or national service rules: i.e. an earth station operating in the territory of a country without any authorisation obtained from that country.

Unauthorized ubiquitous uplink satellite transmissions may cause interference to legitimate users as well as raise other difficulties for administration spectrum managers.

For these reasons, the Radiocommunication Assembly (RA-15) approved Resolution ITU-R 64, titled “Guidelines for the management of unauthorized operation of earth station terminals”. The resolves of this resolution invited ITU-R study groups concerned:

1 to conduct studies to examine whether there is a need for possible additional measures in order to limit uplink transmissions of terminals to those terminals authorized in accordance with No. **18.1**;

2 to study the possible methods that will assist administrations in managing the unauthorized operation of earth station terminals deployed within their territory, as a tool to guide their national spectrum-management program.

In addition, WRC-15 also considered this subject and approved Issue 2) in the Annex to Resolution **958 (WRC-15)** recognizing the urgency of these studies in preparation for, and to be reported to, WRC-19.

# 6/9.1.7/3 Summary and Analysis of the results of ITU-R studies

ITU-R studies focused on addressing *Resolves* 1 and *Resolves* 2 of Resolution 958 (**WRC-15**) in sections 6/9.1.7/3.1 and6/9.1.7/3.2 respectively.

To this effect, the ITU-R conducted work in the following three areas:

1) **ITU questionnaire to ITU administrations**

A Questionnaire for Administrations was prepared by ITU-R relating to the operation of ubiquitously deployed earth station terminals. Responses from administrations were sought about their experience regarding the management of any unauthorized operation of earth station terminals deployed within its territory.

Twenty-eight (28) responses were received from ITU Member States and compiled by the Rapporteur of the Correspondence Group as well as a summary are provided in Report ITU-R [Studies on WRC-19 Item 9.1, Issue 9.1.7].

It is worth to mention that 28 replies do not represent the views of the 193 Member States of the Union.

[27 out of 28 Member States who replied license satellite uplink transmission of ubiquitously deployed earth station terminals and 26 of these 27 include a revocation clause(s) (i.e. withdrawal of the authorization/licence) as their national choice.]

[15 out of 28 Member States who replied, when authorizing the uplink from ubiquitously deployed earth station terminals require that the assignment of the satellite networks, to which the authorized earth stations are associated, is recorded in the MIFR.]

[*Editorial note: is there any course of action required to make sure that the assignments for which licenses are issued must be in conformity with the Radio Regulations, taking into account that some Member States may issue licenses for the assignments which may be used in derogation of Radio Regulations in the condition that operation is limited inside their national territory*]

Eight (8) Member States from the 28 responses indicated issues with unauthorized earth stations and have problems in relation to the operation of unauthorized uplink transmission.

The difficulties encountered as reported by the responding Administrations, summarized as follows, include:

* There is a difficulty in monitoring and locating unauthorized deployed earth stations terminals, especially with irregular and short-term operation.
* There is no clear frame work in radio regulation (RR) for administration to apply their complaints regarding RR No. **18.1**.

[There is no clear provision in the RR to address unauthorised transmission of terminals operating within a given satellite network, taking into account difficulties outlined in the two bullet points above].

* [Alternatively there is a view reflected in the responses that no obligation in the RR identifies for the notifying administrations to deal with unauthorized terminal earth stations operating another administration.]

[*Editorial note: whether Article 18, provision 18.1 provides necessary obligation for the notifying administration to deal with these unauthorised terminals needs to be further discussed/clarified*]

Three are (3) Administrations out of the 8 Administrations who experienced issues with unauthorized earth stations where cases were not resolved.

12 out of 28 Member States who replied have the capability of monitoring and identifying the location of potential unauthorized uplink transmissions. 5 of these 12 don’t share monitoring information with other Administrations.

**2) Complexity of application of provision RR. 18.1**

On the issue of the complexity of application of No. 18.1 of the Radio Regulations in relation with any unauthorized uplink transmission from earth station terminals, the Bureau replied that it has reviewed all correspondences from administrations between November 2007 and April 2017 and has not found any administration request.

**3) Satellite monitoring capabilities**

There are no spectrum monitoring techniques and methods to identify emissions of unreported emission of unauthorised earth station terminals in FSS frequency bands, however, for reported cases of unauthorised uplink transmission geolocation methods are available, noting that only few Administrations (12 out of 28 responses received to the Questionnaire) have the necessary geolocation capabilities.

## 6/9.1.7/3.1 Whether there is a need for possible additional measures in order to limit uplink transmissions of terminals to those terminals authorized

[Editorial note: text to be developed expressing the two different views of some Administrations]

**6/9.1.7/3.1.1 Current measures applicable to limit uplink transmissions to authorized terminals**

*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[

[Option 1]

Article **18** of the Radio Regulations specifies the authorities for licensing the operation of stations within any given territory. No. **18.1** provides that no transmitting station may be established or operated by a private person or by any enterprise without a license issued in an appropriate form and in conformity with the provisions of the Radio Regulations by or on behalf of the government of the country to which the station in question is subject.

The phrase “to which the station in question is subject” covers many different situations, including those of transmitters moving over territories of different countries. Therefore, all cases including mobile, fixed or FSS are covered.

However, for the cases addressed in application of Article **18** mentioned in section 6/9.1.7/3.1, the only applicable measure is the notifying administration covenants based on subject provisions in Radio Regulations, and in case of violating such provision it could be considered as an infringement to Radio Regulations.

In this regard, the Radio Regulations, at this stage, doesn’t address any mechanism of cooperation between related and involved entities.

1. **Application of Article 18 in Administrative Radio Regulation**

Chapter 5 of the Radio Regulations No. **18.1** states that “No transmitting station may be established or operated by a private person or by any enterprise without a license issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject “. This implies that any transmitting earth station communicating with a fixed-satellite network not in compliance with the license regime of the country where it is being deployed in is infringement of the Radio Regulations.

RR No. **18.1** is applied in several parts of Radio Regulations as below:

a) Resolution 25 (REV.WRC-03)

Resolution 25 “Operation of global satellite systems for personal communications”, was adopted and revised by WRC-03, stats in *resolves*)

“that administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having authorized such service and stations in compliance with Articles **17** and **18**, in particular No. **18.1***”*

, This implies that administrations licensing the satellite operator to provide GMPCS services must fully respect service provision in territories of member states authorize such services, which is in line with No. **18.1**.

Therefore, No. **18.1** is applicable on administrations that operate or aim to operate satellite networks either through network operator or any other mean, that provide GMPCS services, which also inferred that notifying administration for this type of network shall be fully liable to enforce and identify adequate means to enforce any entity operates its notified or registered or recognized frequency assignments used for this purposes, to not provide any services from a territory of any member states, unless this services is authorized by member state under its jurisdiction or to operate in compliance with regulatory provisions adopted by these member states.

b) Resolution **156 (WRC-15)**

Resolution 156 “Use of the frequency bands 19.7-20.2 GHz and 29.5-30.0 GHz by earth stations in motion communicating with geostationary space stations in the fixed-satellite service”, which was adopted by WRC-15, stats in 3)

“that the notifying administration for the satellite network within which the earth stations in motion operate by means of fixed, mobile or transportable terminals shall ensure that they have the capability to limit operations of such earth stations to the territory or territories of administrations having authorized those earth stations and to comply with Article **18***”*

The Aim of this *resolve* that, administrations licensing operator to provide services to Earth station in motion, in subject frequency bands and utilizing its notified, recognized or registered frequency assignments, shall take necessary means in order to ensure that services provision is only limited to those member states that authorize these types of services and earth stations, which is in same line with No. **18.1**.

Therefore, No. **18.1** is applicable on administrations that operate or aim to operate satellite networks either through network operator or any other mean, that provide services to ESIM, which also inferred that notifying administration for this type of networks shall be fully liable to enforce and identify adequate means to enforce any entity operates its notified or registered or recognized frequency assignments used for this purposes, to not provide any services from a territory of any member states, unless this services is authorized by member state under its jurisdiction or to operate in compliance with regulatory provisions adopted by these member states.

As a conclusion, in cases notifying administration for frequency assignments, in a position not to comply with No. **18.1** or Resolutions of the Radio Regulations, is also considered as an infringement to Radio Regulations.

### [Option 2]

### Provision 18.1 of the RR applies to all types of terminals in various radio services. In practice, 18.1 of the RR could be implemented by administrations in various ways – individual licensing, simplified licensing, voluntary registration of terminals, etc. However, for a number of cases, the way to implement 18.1 of the RR is determined by additional regulatory provisions. These additional provisions make it possible for specific cases of terminal deployment and usage to avoid unauthorized use and the occurrence of radio interference between radio services both within the country and between countries. For example, for GMPCS using fixed, mobile or transportable terminals, in addition to 18.1 of the RR, administrations licensing GMPCS shall ensure that GMPCS terminals operate in the territory or territories of countries that have authorized the GMPCS service (see Resolution 25 (REV.WRC -03)).

Another example is ES operating in motion in the bands 19.7-20.2 GHz and 29.5-30.0 GHz through the GSO FSS. For this case administration notifying GSO FSS network with such terminals during licensing process shall ensure that they have the capability to limit operations of such earth stations to the territory or territories of administrations having authorized those earth stations and to comply with Article 18 (see Resolution 156 (WRC-15)).

## 2) ITU Constitution and Convention Application with respect to infringement to Administrative Radio Regulations

In reference to, the ITU Constitution and Convention, Article **6** of CS as quoted below, further defines that only Member states are abide the by the Provisions of Radio Regulations, and also are bounded to take necessary steps to impose the observance of these provisions.

**37**

**PP-98**

1 The Member States are bound to abide by the provisions of this Constitution, the Convention and the Administrative Regulations in all telecommunication offices and stations established or operated by them which engage in international services or which are capable of causing harmful interference to radio services of other countries, except in regard to services exempted from these obligations in accordance with the provisions of Article **48** of this Constitution.

**38**

**PP-98**

2 The Member States are also bound to take the necessary steps to impose the observance of the provisions of this Constitution, the Convention and the Administrative Regulations upon operating agencies authorized by them to establish and operate telecommunications and which engage in international services or which operate stations capable of causing harmful interference to the radio services of other countries.

As a conclusion, ITU defines that only Member States are bounded with these provisions and regulations, and therefore any case may constitute violations to these regulations only Member States either affected by these violations or causing these violations, are mandated to resolve in proper manner.

Radio Regulations and national regulations.

]

#### 6/9.1.7/3.1.1.1 ITU role and framework

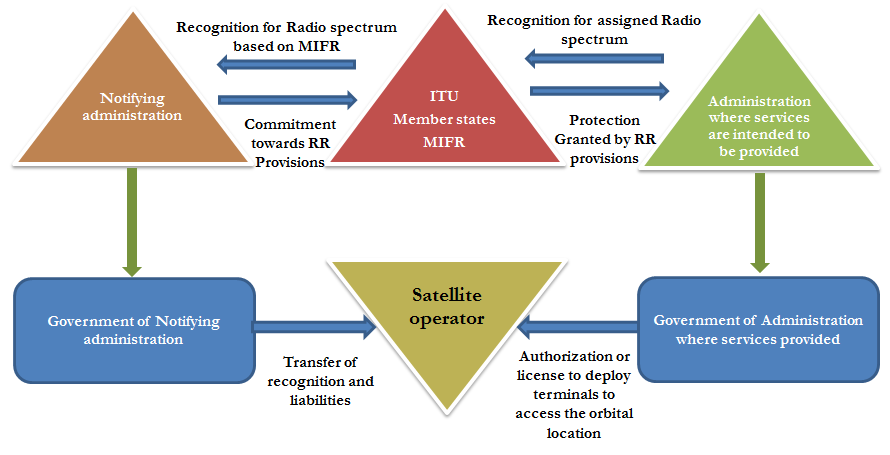
*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[In general, as a conceptual frame work of Radio Regulations, it is essential to define clearly the parties whom involved in ITU processes regarding networks recording and responsibility of each party with respect to either other party or towards Administrative Radio Regulations.

The figure below tries to capture the relation between Notifying administration for a frequency assignment, administrative RR and administrations where the frequency assignment could be used from its territories.

In relation to the understudy, notifying administration for a frequency assignment has commitments towards administrative Radio Regulations, meanwhile, Administrative Radio Regulations provides protection for these frequency assignments esteemed or gained from other member states recognition to this frequency assignments.

Based on RR No. **18.1**, notifying administration has to respect not to allow services to earth station had not acquire authorization from administrations where frequency assignments have the potential to be used from their territory, i.e. these liabilities are transferred inherently to the satellite operator assigned to utilize the recorded and recognized frequency assignment by the notifying administration. Therefore, Recognized operator agency (ROA) by the ITU is committed by the administrative Radio Regulations including RR No. **18.1**.



If there is a cross-border interference case caused by the unauthorized use of spectrum, procedures already exist in the Radio Regulations to handle these cases. The ITU can provide assistance to an administration either with technical or administrative advice or help in reaching out to other sources of assistance. The use of unauthorized ubiquitous uplink satellite terminals inside an administration’s territory is a domestic issue, consequently, unless there is a specific difficulty experienced by multiple administrations and only a modification to the Radio Regulations can resolve those difficulties, there is no reason to modify the Radio Regulations for national-level issues.

The ITU, in accordance with the Constitution and Convention, does not proscribe national rules or procedures. If there is a cross-border interference case caused by the unauthorized use of spectrum, procedures already exist in the Radio Regulations to handle these cases. The ITU can provide assistance to an administration either with technical or administrative advice or help in reaching out to other sources of assistance. The use of unauthorized ubiquitous uplink satellite terminals inside an administration’s territory is a domestic issue, unless there is a specific difficulty experienced by multiple administrations, and the ITU can provide assistance, if requested.

ITU's  [Radiocommunication Sector (ITU-R)](http://www.itu.int/itu-r) coordinates this vast and growing range of radiocommunication services, as well as the international management of the radio-frequency spectrum and satellite orbits.

ITU role is to coordinate telecommunication operations and services throughout the world.

ITU is committed to connecting the entire world's people. Through their work, they protect and support everyone's fundamental right to communicate, however ITU never works against the sovereignty of countries.

If there is a cross-border interference case caused by the unauthorized use of spectrum, procedures already exist in the Radio Regulations to handle this cases.

As a sample of Goodwill cooperation in interference cases as defined by Article 15, ITU role is to promote cooperation between member states. Article **15** of the Radio Regulations addresses cases of interference to recognized frequency assignments and provides clear mechanism and procedures for addressing and mitigating these cases.

In case administration recognize harmful interference to its frequency assignment recognized by either Radio Regulation (allocation table) or by the MIFR (registered frequency assignment),



]

#### 6/9.1.7/3.1.1.2 Notifying administration of satellite network

*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[It is generally the case that a satellite operator is responsible for obtaining the approvals / licenses / permissions necessary to:

* launch and operate the satellite (this is normally obtained through a space licence from the notifying administration);
* carry out the ITU frequency coordination process for the relevant satellite network filing to the ITU used to enable the satellite operations (this is the responsibility of the notifying Administration for the filing and coordination of the relevant ITU satellite network);
* where necessary, obtain landing rights to offer space segment capacity. In some countries this may be a simple notification step; in other countries a formal application might be needed;
* operate and license the necessary gateway earth stations associated with the satellite for telemetry, tracking and command (this is normally obtained through the relevant NRA

There are administrations experiencing difficulties in managing their national spectrum because of the use of unauthorized ubiquitous uplink satellite terminals. There could be several reasons for this, for example, but not limited to, satellite service providers not understanding the authorization process within an administration or, ignorance of an authorization process.

Guidance and support may be needed in this regard to ensure that the authorisation process is correctly followed.

New international regulations will not solve the problem of wilful intent of a service-provider or individual actor to violate an administration’s rules. Instead the solution may be swift enforcement. The regulatory regimes of those administrations experiencing difficulties can be reviewed and compared with those administrations deploying ubiquitous uplink satellite terminals and not experiencing any issues with unauthorized uplink transmissions. Understanding that administrations manage their national spectrum differently the administration experiencing difficulties can determine rules or procedures that will work best for their administration.

It is generally the case that a notifying administration is responsible for obtaining the approvals / licenses / permissions necessary to:

* bound to abide by the provisions of this Constitution, the Convention and the Administrative Regulations (see CS);
* impose the observance of the provisions of this Constitution, the Convention and the Administrative Regulations upon operating agencies authorized by them (see CS);
* launch and operate the satellite (this is normally obtained through a space licence);
* carry out the ITU frequency coordination process for the relevant satellite network filing to the ITU used to enable the satellite operations]

#### 6/9.1.7/3.1.1.3 Administration on whose territory services are provided

*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[It is generally the case that in most countries the satellite service provider (the ISP which intends to provide services; often different entity from the satellite operator) would need to obtain from the relevant National Regulatory Authority (NRA) the following typical types of licences or approvals:

* required authorisations to offer satellite services via the satellite system;
* spectrum licence or network licence for the operation of the earth stations.

The satellite service provider interacts with the relevant NRA to meet the precise regulatory and licensing requirements to offer satellite services, without international involvement. Furthermore, the satellite service provider should also determine whether or not other legislation or regulation applies in respect of inter-alia data protection, legal interception, planning rules or Electromagnetic Field Exposure (EMF), taking due account of the national legislation and regulations.

In general, Administrations which the recognized frequency assignments could be utilized under its jurisdiction is liable but not limited to the following:

- provide protection to recognized and recorded frequency assignment and associated orbital locations;

- eliminating any inference may occur from its territory under its jurisdiction towards these recorded assignments;

- provide assistance, if possible, to assist BR and affected administration in cases interference sources couldn’t be located.]

### 6/9.1.7/3.1.2 Potential difficulties in relation to current measures

*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[The demand increasing steadily for global broadband communication services throughout the world will bring about ubiquitous deployment of FSS earth stations. This situation will lead some potential difficulties into current measures of satellite network management;

* According to RR Articles **9** and **11**, the coordination of ubiquitous deployment of large numbers of earth stations with co-primary service stations on an individual site-by-site basis between Administrations may lead to a difficult and long process.
* Some administrations in authorizing the uplink from ubiquitously deployed earth station terminals do not require that the assignment of the satellite networks, to which the authorized earth stations are associated, is recorded in the MIFR.
* Administrations are difficult to ensure that the satellite operators are complying with the applicable provisions of the Radio Regulations.
* The unauthorized uses of uplink of earth station terminals are existing and difficult to locate.

In relation to an enquiry from WP 1B on requests of application of No. **18.1** of the Radio Regulations with respect to any unauthorized uplink from earth station terminals, the Bureau reviewed all correspondences from administrations between November 2007 and April 2017 and has not found any administration request (input Document [1B/147](https://www.itu.int/md/R15-WP1B-C-0147/en)).

Difficulties reported by some administrations in their responses to the ITU questionnaire are either due to a lack of monitoring capability, a need for guidance on applying No.18.1, or irregular and short term events.

The main obstacle for some administrations in resolving this issue is a lack of monitoring equipment and expertise to actively monitor the satellite bands. This capability can be cost-prohibitive for smaller or developing administrations. Additionally, the ability of the unauthorized terminal to move to another location quickly and transmit further complicates detection of the uplink signal.

### In cases of interference from ES terminals to stations of the neighbouring State, existing RR provisions are ineffective because of the specifics of ES terminal operation (short time of transmission and/or moving speed of the ES terminal do not allow to identify the violation by means of standard radio monitoring facilities). Only few Administrations have in the territory of its jurisdiction the necessary geolocation capabilities for monitoring and location detection of unauthorized uplink transmissions from ubiquitously deployed ES terminals (see liaison statement from WP 1C).]

**6/9.1.7/3.1.3 Potential additional measures to address these difficulties**

*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[Considering studies conducted and the responses to the ITU questionnaire, it is appropriate to address these limited issues that fall within the scope of Issue 9.1.7 on a case by case basis at national level, and that there is no need for regulatory measures at international level.

Rather, guidance and support in the form of ITU-R reports, handbooks or training, may be needed in some areas, for example to ensure that the authorisation process at national level is correctly followed or to assist in locating the unauthorised transmissions.

One of the possible methods to address the issue is an inclusion to the license, issued to the ES performing the functions of Network Control and Monitoring Centre (NCMC) or equivalent facility, the special condition on the operation of the ES terminals only within the territory or territories of administrations that have authorized their operation in accordance with Articles **17** and **18** of the RR.

This measure can be included into a new Resolution WRC-19.

The proposed method will not eliminate all unauthorized ES terminal transmissions, however, it will reduce the number of such cases.

It should also be noted that, unlike WRC-19 AI 1.5 considering ES in motion in FSS bands 17.7‑19.7 GHz and 27.5-29.5 GHz, AI 9.1 (issue 9.1.7) considers all the ES terminals in any frequency band operating within any satellite service. Therefore, regulatory provisions that will be adopted under AI 1.5, shall not contradict to those adopted for ESIMs within the framework of AI 9.1 (issue 9.1.7). The draft text of the WRC Resolution is given below. ]

## 6/9.1.7/3.2 Possible Methods for managing the unauthorized operation of earth station terminals, as a tool to guide national spectrum-management programme

*[Editorial note: text in this section reflects the views of some administrations and has not been yet discussed]*

[It is generally the case that in most countries the satellite service provider (i.e. the ISP which intends to provide services; often different entity from the satellite operator) would need to obtain from the relevant National Regulatory Authority (NRA) the following typical types of licences or approvals:

• Required authorisations to offer satellite services via the satellite system. In some countries this may be a simple notification step; in other countries a formal application might be needed. However, in most if not all countries, this should be a relatively straightforward process;

• Spectrum licence or network licence for the operation of the earth stations.

Spectrum management training and internal spectrum monitoring to identify unauthorized uplink transmissions are useful tools to enable administrations to regulate and enforce regulations associated with transmissions originating in their territory. The development of ITU-R reports or handbooks may assist administrations in the management of their satellite spectrum resources to prevent or limit the unauthorized use of uplink terminals and enable the administration to locate and terminate the unauthorized transmissions.]

# 6/9.1.7/4 Conclusions

**6/9.1.7/4.1 [Resolves 1) of [Res xx]]**

Option 1: No changes to the Radio Regulations.

Earth station licensing is the responsibility of the administration and no changes to the Radio Regulations are necessary as Article **18** sufficiently addresses the required regulatory measures.

Option 2: Develop a new WRC Resolution to introduce additional measures in order to address the issue of unauthorized uplink transmissions of ES terminals (see example of new WRC Resolution below).

**Option 2A:** Introduce the following additional measure: that for the connection of any earth station terminals to operate within a FSS network from any administration through a gateway earth station, the notifying administration for the gateway earth station needs to ensure that the earth station terminals have obtained the required authorisation as referred to in No. 18.1 of the RR, from the administrations on whose territory the earth station terminals intend to operate.

**Option 2B:** Introduce the following additional measure: that any administration may decide at any moment, even after the operation of the assignments to a FSS satellite network, to request that its territory be excluded from the service area of certain FSS satellite network(s). This request shall be immediately communicated to the notifying administration of the satellite network with a copy to the BR. As a result the administration which has requested the exclusion shall no longer authorise the operation of any earth station terminals that were subject to the request for exclusion.

**Option 2C:** Combination of Option 2A and Option 2B.

**Option 3:** WRC-19 may decide to strengthen the current procedures as currently contained in Appendix 4 of the RR to limit Global beams service areas, unless explicit agreement is obtained from administrations, the territory of which is intended to be included in the service area and that country would no longer be receiving the signal by the satellite.

*[Editorial note:*

*Some administrations are of the view that the issue of limiting the global beam (which may involve adjustment of coverage area to service area) is currently under consideration in ITU-R (WP4A, under A.I.7). Also, exclusion of the territory of one administration from the service area of a given satellite network does not eliminate the operation of unauthorized transmission from earth station terminals*

*Some other administrations are of the view that the issue of matching the satellite coverage area to the service area is outside the scope of issue A.I. 9.1/issue 9.1.7.*]

**6/9.1.7/4.2 [Resolves 2) of [Res xx]]**

To further assist administrations in managing (identifying and geo-locating) the unauthorized operation of earth station terminals deployed within their territory, the ITU-R needs to provide necessary guidelines on satellite monitoring capabilities, along with possible revision and further development of ITU-R reports or handbooks in this regard.

RESOLUTION [9.1.7] (WRC-19)

Prevention of unauthorized transmissions from ES terminals

The World Radiocommunication Conference (2019),

considering

*a)* that in accordance with Resolution **958 (WRC-15)** and Resolution ITU-R 64 (RA-15) the following issues were studied:

- whether there is a need for possible additional measures in order to limit uplink transmissions of terminals to those authorized terminals in accordance with No. **18.1**;

- possible methods that will assist administrations in managing the unauthorized operation of earth station terminals deployed within its territory, as a tool to guide their national spectrum management programme.

*b)* [that in accordance with Resolution **25 (WRC-03)** administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having accordingly authorized such service and stations;]

*c)* [that in accordance with Resolution **156 (WRC-15)** that earth stations in motion be subject to permanent monitoring and control by a Network Control and Monitoring Centre (NCMC) or equivalent facility;]

d) that there is a Rules of Procedure relating to RR [xx] *[editorial note: to be confirmed with the counsellor]* for dealing with a request related to the exclusion of a territory of an administration from the service area of a given satellite network

recognizing

1. [that successful coordination does not in any way imply licensing authorization to provide a service within the territory of a Member State,]
2. that the operation of a connection with earth stations terminals to a satellite network will normally be executed/done through one or several Gateway Earth Stations established within the corresponding satellite network in certain country or countries Members of the Union.

resolves

1. that for the connection of any earth station terminals to operate within a FSS network from any administration through a gateway earth station, the notifying administration for the gateway earth station needs to ensure that the earth station terminals have obtained the required authorisation as referred to in No. 18.1 of the RR, from the administrations on whose territory the earth station terminals intend to operate.
2. that any administration may decide at any moment, even after the operation of the assignments to a FSS satellite network, to request that its territory be excluded from the service area of certain FSS satellite network(s). This request shall be immediately communicated to the notifying administration of the satellite network with a copy to the BR. As a result the administration which has requested the exclusion shall no longer authorise the operation of any earth station terminals that were subject to the request for exclusion.