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| Hilversum, The Netherlands, 27th - 30th November 2018 |
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| Summary:  |
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| Proposal: |
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1. The following pages are intended to be compiled in one CEPT Brief on AI 9

DRAFT CEPT BRIEF ON AGENDA ITEM 9.1 Issue 9.1.7 - Issue 2) in the Annex to Resolution 958 (WRC‑15)

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.

# ISSUE

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:

* 1. 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;
	2. 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 ITU-R Resolution 64 (RA‑15).

# Preliminary CEPT position

CEPT notes that this Agenda Item addresses the issue of enforcement of unauthorized ubiquitous earth stations and not the issue of earth stations in motion (ESIM) which is covered by Agenda item 1.5.

CEPT is of the view that the issue referred to in studies under 2a) is already addressed in Article 18. Thus CEPT does not see the need for any changes of the Radio Regulations, as portrayed in Option 1 of the draft CPM text.

CEPT supports, for the issues referred to in studies under 2b), possible ITU-R studies on best practices, related to national management of unauthorized operation of earth station terminals deployed within territory of concerned administration. Thus CEPT does not see the need for any changes of the Radio Regulations.

# Background

Article 18 of the RR already provides provisions that earth stations (ES) be operated only if duly authorized by the State in which the operation of such earth stations is expected. Such authorization should contain a license issued in the appropriate form and in conformity with the provisions of these Regulations by or on behalf of the Government of the State, within whose national territory, territorial waters or airspace the earth station is supposed to operate, or under the jurisdiction to which it is subject during the operation of the transmitter in international airspace or in international waters.

An analysis of the provisions of Article 18 and its applicability to this Agenda Item is contained in ANNEX 1.

The provisions of Article 18 contain requirements and conditions for the provision of legal operation of earth station terminals, but they do not define the requirements and/or measures that help preventing or reducing a number of causes of illegal (unauthorized) operation of transmitting earth station terminals.

The issue under study is uplink transmissions from ES 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.

These unauthorized uplink satellite transmissions from ES terminals may cause interference to legitimate users as well as raise other difficulties for administration spectrum managers.

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. Resolution 156 (WRC-15) enabling mobile terminals in this band requires that 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.

The International Telecommunication Regulations “recognize the right of any Member, subject to national law and should it decide to do so, to require that administrations and private operating agencies, which operate in its territory and provide an international telecommunication service to the public, be authorized by that Member”, and specify that “within the framework of the present Regulations, the provision and operation of international telecommunication services in each relation is pursuant to mutual agreement between administrations”.

Working Party (WP) 1B, the responsible group for the studies on this issue of Agenda item 9.1, held four meetings and liaised with WP 4A with regard to studies on managing uplink transmissions of terminals to be limited to authorized terminals carried out by WP 1B. At its March 2018 meeting, WP 4A sent a reply to the liaison statement it received from WP 1B requesting comment on the draft CPM text on AI 9.1, Issue 9.1.7. The liaison statement noted that with regard to Issue 2a: “reducing the coverage area to align with the service area of a satellite may not be a technically feasible solution to this issue.” In addition, WP 4A noted that “that issues affecting satellite coordination are under the responsibility of WP 4A and are not within the scope of WRC-19 agenda item 9.1, issue 9.1.7.”

A similar issue is being studied under WRC-19 AI 1.5 and the results of these studies may be noted in further development of the CEPT position on this issue. It is expected that the concern about unauthorized usage of ESIM will be addressed under AI 1.5 in a manner similar to the way it was addressed under Resolution 156 (WRC-15); namely, by requiring ESIM networks to “Have the capability to limit operations of such earth stations to the territory or territories of administrations having authorized those earth stations.” (doc. PTB(17)18).

WP 1B has received comments to a Questionnaire which had been sent to administrations to gather information on current situation though the circular letter 1/LCCE/99. WP 1B is examining the responses to this Questionnaire. Current version of the working document towards Preliminary Draft New Report ITU-R [WRC-19 AI 9.1.7] contains two summary texts of the Questionnaire as consensus hasn’t been reached in June 2017. During November 2017 meeting, WP 1B didn’t progress on the Draft New Report but focused their work on the draft CPM text. Draft CPM text was amended with the summary of the statistics extracted from the Questionnaire.

The assessment of the ITU questionnaire on A.I. 9.1.7 WRC-19 showed that not all of the administrations co-operate and exchange information on this issue. In addition, there are unresolved cases of cross-border interferences from ES terminals, operating in motion. Specifically, of the 23 responses received by the Bureau, 8 administrations reported cases of unauthorized operation of earth stations, with 3 cases being classified as “unresolved”. The preliminary results of the Questionnaire might suggest that the above-mentioned cases exist because of the lack of enforcement in countries reporting such operation.

The draft CPM text contains the following options:

Option 1, proposed by CEPT, states that current regulatory framework of Article 18 sufficiently addresses the required regulatory measures.

Option 2 proposes to develop a new WRC Resolution to introduce additional measures in order to address the issue of unauthorised uplink transmission of ES terminals (see Resolution [9.1.7] WRC-19 ‘Prevention of unauthorized transmission for ES terminals’).

Conclusions

The current provisions of Article 18 contain a clear and unambiguous requirement to operate a satellite earth station only if duly authorized.

Thus, if any problems are experienced by administrations with unauthorized operation of satellite earth stations this is a problem of enforcement, not of inadequate regulation. The Radio Regulations already mandate that earth stations be operated only if duly authorized, so the addition of new provisions in the Radio Regulations will not help address unlawfully operated earth stations. Instead, such operation can only be addressed through additional monitoring and enforcement, which must occur at a national level.

Issues related to individual satellite service applications – such as those involving mobility – are best addressed in the specific provisions enabling those applications, rather than in general provisions in Article 18 or other parts of the Radio Regulations. For example, concerns regarding possible unauthorized operation of ESIM under Agenda Item 1.5 should be addressed by insertion of provisions in any WRC-19 Resolution addressing this AI that are similar to those adopted in Resolution 156 (WRC-15). This approach of incorporating a reference to Article 18 in any Recommendation or Resolution enabling new satellite services has been used effectively for many years in dealing with satellite services involving mobility. [[1]](#footnote-2)

# List of relevant documents

ITU-Documentation:

* Annex 06 to Document 1B/237 – Working document towards draft CPM text on WRC-19 Agenda item 9.1, issue 9.1.7 – Res. 958 (WRC-15) Annex item 2
* Annex 07 to Document 1B/237 – Work plan for WRC-19 Agenda item 9.1, issue 9.1.7 – Res. 958 (WRC-15) annex item 2
* Annex 08 to Document 1B/237 – Working document towards a preliminary draft new Report on studies for WRC-19 Agenda item 9.1, issue 9.1.7
* Resolution ITU‑R 64 – Guidelines for the management of unauthorized operation of earth station terminals
* 1/LCCE/99 – Questionnaire prepared by ITU-R Working Party 1B relating to the operation of ubiquitously deployed earth station terminals in the context of studies under WRC-19 Agenda item 9.1, issue 9.1.7
* Document 1B/148 - Correspondence received- Questionnaire relating to the operation of ubiquitously deployed earth station terminals in the context of studies under WRC-19 agenda item 9.1, issue 9.1.7
* Document 1B/240 - Liaison statement to Working Party 1B (copy for information to Working Party 1C) - WRC-19 agenda item 9.1, issue 9.1.7

CEPT and/or ECC Documentation

# Actions to be taken

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (March 2018)

APT Preliminary View

APT Members are of the view that earth station licensing and related issues including unauthorized transmissions are national matters and no changes to the Radio Regulations are necessary as Article 18 sufficiently addresses the required international regulatory measures.

APT Members support the studies for the development of ITU-R texts (Recommendations, Reports and Handbooks etc.) to assist administrations in managing (identifying and geo-locating) the unauthorized operation of earth station terminals deployed within their territory.

Other View

Some APT Members support continuation of ITU-R studies on this issue.

Some APT Members are of the view that regulatory changes, if any, should not impose unnecessary constraints on administrations and satellite networks.

ATU views (September 2017)

1. Support the ITU-R studies on best practices in training and monitoring capabilities, along with ITU developed reports and handbooks as well as capacity building, to assist national administrations in inhibiting the use of unauthorized uplink earth terminals and to enable national administrations to locate and terminate the unauthorized transmissions.
2. Request WP 1B to explore a possibility of a monitoring tool for developing countries as part of the studies.
3. Note the concerns of several administrations affected by unauthorized operation of earth stations terminals and observed that there is need to find a lasting sustainable solution to addressing the issue considering its potential impact on compromising the security and economies of the affected countries. These administrations requested the meeting to support additional measures needed to limit the unauthorized uplink transmission.
4. Task WG6 to carefully consider this important issue, which was supported by both ATU and ASMG at WRC-15, and develop a draft ATU common proposal for the work of WP1B, taking into account the relevant timelines.
5. Note the pledge by ECOWAS to share the results at APM19-3 of their ongoing study related to this issue. The meeting welcomed this initiative.

Arab Group (April 2017)

* Support the current studies in order to assist administrations to manage the unauthorized operation of earth station terminals.
* Support introducing any possible additional measures in order to limit uplink transmission of terminals to those authorized terminals.

CITEL (December 2017)

Preliminary Proposal

USA

NOC USA/9.1/9.1.7/1

Radio Regulations (WRC-15) Volumes 1,&2

USA

SUP USA/9/1/9.1.7/2

ANNEX TO RESOLUTION 958 (WRC-15) No. 2

Urgent studies required in preparation for the 2019 World Radiocommunication Conference

Reasons: Earth station licensing and related issues are national matters and no changes to the Radio Regulations are necessary as Article 18 sufficiently addresses the required international regulatory measures. Instead, better training and monitoring capability, along with ITU developed reports and handbooks, can assist administrations in inhibiting the use of unauthorized uplink earth terminals and can enable administrations to locate and terminate the unauthorized transmissions.

RCC (March 2018)

The RCC Administrations support the development and inclusion into the Radio Regulations additional provisions binding the Administrations to ensure during licensing the implementation of appropriate technical measures in the satellite networks, such as measures that are specified in Resolution 156 (WRC-15) (ESIM shall be subject to permanent monitoring and control by the Network Control and Monitoring Centre (NCMC), be capable of receiving and acting upon at least “enable transmission” and “disable transmission” commands from the NCMC depending on their geographical position). Such measures would facilitate elimination of unauthorized operation of earth station terminals in global/regional satellite networks, when these terminals are outside the territory of States which administrations granted the appropriate authorization (the license).

The RCC Administrations consider that no one transmitting mobile earth station or earth station in motion shall be operated in the territory of any State without the appropriate license (authorization) from the State, issued by the government of that State or on behalf of that government in appropriate form and according with the provisions of the Radio Regulations.

The RCC Administrations consider that the issue of preventing the unauthorized operation of transmitting earth stations terminals is considered both under the WRC-19 Agenda item 9.1 issue 9.1.7, which covers all frequency bands and all types of ubiquitous FSS earth stations, and WRC-19 Agenda item 1.5 relating only to operation of ESIM in the frequency band 27.5–29.5 GHz (Earth-to-space).

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

NATO (December 2017)

NATO Military Assessment

From a military perspective, it is important to safeguard the current conditions for military use of mobile satellite uplink transmissions and that decisions under this issue will not negatively impact NATO military operations or expand to address message content or cybersecurity issues. Moreover, any measures taken to inhibit the use of unauthorized uplink earth terminals are national level measures and not international level measures requiring modification to the Radio Regulations.

NATO Position

NATO supports no change to the Radio Regulations.

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. Observations about current practice specified in Article 18.1

‘Article 18.1 - 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 (however, see No. 18.2, 18.8 and 18.11)’.

The phrase “to which the station in question is subject” is a legal term meant to cover many different situations, including those of transmitters moving over territories of different countries. The drafters of this article could have chosen to have this obligation apply “for the country in which the station in question is located”, but did not. The most likely reason for this is that stations in motion at some point in time will be located in international waters. Since no nation has jurisdiction over international waters, a terminal would be subject to the jurisdiction of the country where the aircraft or vessel was registered. Therefore, by saying “to which the station in question is subject” the authors covered all cases – mobile or fixed, national airspace or international waters. The language chosen is flexible enough to cover both the cases of jurisdiction based on aircraft/vessel registration as well as jurisdiction based on location.

This interpretation is consistent with other areas of international law. Jurisdiction of a country is usually based on the “nexus” or connection a country has with a given activity. For instance, countries do not tax duty-free sales which take place on aircraft flying over its territory since the connection to the country overflown is insignificant. In contrast, the use of spectrum involves use of a sovereign national resource, as well as a possibility of interference received from transmitters operating by another administration. Administrations therefore have jurisdiction over any transmitter operated in their territory, even those flying over its airspace.

This requirement is followed in practice by aeronautical and maritime satellite service network operators, as well as by the international regulations applying to AMSS and ESIMs. Airlines typically require AMSS and ESIM vendors to show proof of authorisations in the countries they fly over. Satellite network operators spend significant effort in securing authorisations in countries where their terminals operate.

Other provisions of Article 18 (please see some of them listed below) do refer to either mobile stations or aircraft/ships. These provisions, however, apply to specific cases and do not reduce or alter the broad requirement of Art. 18.1 to operate transmitters only if authorised by the country that has jurisdiction over the transmitter.

‘Article 18.3 – Mobile stations which are registered in a territory or group of territories which does not have full responsibility for its international relations may be considered, in so far as the issue of licences is concerned, as subject to the authority of that territory or group of territories’.

This provision applies to the specific case of mobile stations licensed in territories which are not fully responsible for their international relations. It does not affect the requirement of Art. 18.1.

‘Article 18.5 – To facilitate the verification of licences issued to mobile stations and mobile earth stations, a translation of the text in one of the working languages of the Union shall be added, when necessary, to the text written in the national language’.

‘Article 18.6 – The government which issues a licence to a mobile station or a mobile earth station shall indicate therein in clear form the particulars of the station, including its name, call sign and, where appropriate, the public correspondence category, as well as the general characteristics of the installation’.

These provisions deal only with the form and content of licenses for mobile and mobile earth stations and do not affect the requirement of Art. 18.1.

‘Article 18.7 – For land mobile stations, including stations consisting only of one or more receivers, a clause shall be included in the licence, specifically or by reference, under which the operation of these stations shall be forbidden in countries other than the country in which the licence is issued, except as may be provided by special agreement between the governments of the countries concerned’.

One may see that this provision reinforces the requirement of Art. 18.1. for land mobile stations.

The specific provisions covering mobile stations may have been deemed necessary to include in Art. 18 since no ITU-R Recommendations exist covering the free circulation and use of mobile terminals. The ITU-R Recommendation covering ESIMs require compliance with Art. 18. Any future ITU-R recommendation should follow this precedent and clearly require ESIMs to operate only if duly authorized as required by Art. 18.

‘Article 18.8 – 1) In the case of a new registration of a ship or aircraft in circumstances where delay is likely to occur in the issue of a licence by the country in which it is to be registered, the administration of the country from which the mobile station or mobile earth station wishes to make its voyage or flight may, at the request of the operating company, issue a certificate to the effect that the station complies with these Regulations. This certificate, drawn up in a form determined by the issuing administration, shall give the particulars mentioned in No. 18.6 and shall be valid only for the duration of the voyage or flight to the country in which the registration of the ship or aircraft will be effected, or for a period of three months, whichever is less’.

This provision covers the case of delivery of new aircraft and vessels (movement from country of manufacture to country of ownership). Aircraft and ships are manufactured in a relatively limited number of countries, but are delivered to customers with radio equipment already installed on board. This radio equipment cannot be licensed in the country of the customer (e.g. airline) until that customer takes possession of the aircraft or vessel. This provision covers the very limited case of temporary authorizations to accommodate delivery of aircraft and vessels.

‘Article 18.11 – In the case of hire, lease or interchange of aircraft, the administration having authority over the aircraft operator receiving an aircraft under such an arrangement may, by agreement with the administration of the country in which the aircraft is registered, issue a licence in conformity with that specified in No. 18.6 as a temporary substitute for the original licence’.

This provision covers the case of leased, hired or loaned aircraft or vessels. It does not affect the requirement of Art. 18.1.

1. Examples of this are: Res. 902 (WRC-03) addressing Earth Stations on Vessels; Res. 25 (WRC-03) on Operation of global satellite systems for personal communications; Rec. M.1643 (WRC-03) on Ku-band Aeronautical Earth Stations of the Aeronautical Mobile Satellite Service. [↑](#footnote-ref-2)