PCC.II/REC. 27 (XIV-09) [1]

NOTIFICATION OF EARTH STATIONS OPERATING IN THE FIXED-SATELLITE SERVICE (FSS) (SPACE-TO-EARTH)

The XIV Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

CONSIDERING:

a) That there is extensive use of Fixed Satellite Service (FSS) satellite networks in the Americas;

b) That FSS networks are being implemented in the C-band, Ku-band, and Ka-band FSS allocations in the Americas and worldwide;

c) That some bands used by the FSS are shared with systems in the fixed and mobile services;

d) That receive only earth stations associated with FSS satellite networks in the Americas are becoming more and more numerous, and may receive interference from various sources, including other services operating in the same band; and

e) That existing and future FSS earth stations need to be protected,

NOTING:

a) That the World Radiocommunication Conference of 2007 (WRC-07) adopted footnote **5.431A** to the Table of Frequency Allocations in which the band 3 400-3 500 MHz was allocated to the mobile, except aeronautical mobile, service on a co-primary basis, in certain Region 2 countries subject to agreement obtained under No. **9.21**;

b) That WRC-07 also adopted footnotes **5.430A, 5.432A, 5.432B, 5.433A** to the Table of Frequency Allocations to identify certain parts of the 3 400-3 600 MHz band for use by the International Mobile Telecommunication (IMT) services in Regions 1 and 3;

c) That the fixed and mobile services have a co-primary allocation with the fixed-satellite service in 3 500-4200 MHz in Region 2;

d) That when identifying any administration with which coordination may be required under No. **9.21**, the Radiocommunication Bureau (BR) of the International Telecommunication Union (ITU) will only be able to carry out such identification if a specific FSS earth station has been filed with the BR;

e) That Articles **9** and **11** of the Radio Regulations contain the procedures for effecting coordination or obtaining agreement and notification and recording of frequency assignments, including those applicable to specific FSS earth stations;

f) That Appendix **7** of the Radio Regulations establishes coordination distances of terrestrial stations from specific FSS earth stations;

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[1] CCP.II-RADIO/doc. 2131/09 rev.3

g) That the Radio Regulations Nos. **9.17**, **9.17A**, **9.27**, and **9.29** provide for the coordination of specific earth stations that will lead to notification of FSS earth stations;

h) That it is necessary to provide the appropriate information as listed in Appendix **4** to the Radio Regulations for notification of earth stations,

RECOGNIZING:

a) That registration of FSS Earth Stations at the ITU can provide a basis for protection of earth stations close to international borders;

b) That Administrations and other organizations are seeking information on how to best implement and improve the protection of FSS earth stations;

c) That it is advantageous to share information among CITEL's Member States , Associate Members and Permanent Observers to the OAS about the interference events which may occur to receive only FSS Earth Stations; and

d) That ITU-R Reports and Recommendations exist which can provide guidance on how to provide protection for FSS earth stations; for example, Recommendation ITU-R SF.1006[2] and Report ITU-R M.2109[3],

RECOMMENDS:

1. That Administrations in the Americas follow the notification procedures of the ITU-BR for FSS earth stations which are located, or planned to be located, within their territory and are operated in the fixed-satellite service (space-to-Earth) in bands that are shared with other services, and which could receive interference from transmitters located within the territory of other Administrations.

2. That to accomplish *recommends* 1, the steps that may be followed are set forth in Annex 1 to this Recommendation.

3. That Administrations develop bi-lateral agreements with neighboring Administrations when implementing mobile or other terrestrial services and fixed-satellite services in neighboring countries.

4. That Administrations use the information referred to in Annex 2, which describes appropriate ITU regulations to be used to notify FSS Earth Stations near international borders.

5. That FSS satellite operators may use the form in Annex 3 for collecting and sharing information among themselves on interference events occurring to FSS receive Earth Stations as a basis for developing activities which result in the future protection of the stations.

RESOLVES:

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[2] Recommendation ITU-R SF.1006 *Determination of the interference potential between earth stations of the fixed-satellite service and stations in the fixed service*

[3] Report ITU-R M.2109 *Sharing studies between IMT Advanced systems and geostationary satellite networks in the fixed-satellite service in the 3 400-4 200 and 4 500-4 800 MHz frequency bands*

To revoke Recommendation PCC.II/REC. 23 (XI-08).

ANNEX 1 TO RECOMMENDATION PCC.II/REC. 27 (XIV-09)

NOTIFYING FSS EARTH STATIONS WITH THE ITU

1. Obtain the receive characteristics of FSS earth stations operating or planned to operate as part of an existing or planned satellite network;

2. Determine if these characteristics are already included in satellite network filings made to the ITU as typical earth stations;

3. Determine the locations of the existing or planned receive earth stations to be notified. Ensure that the FSS earth station locations which are or may be located close to the boundaries of other countries are taken into account;

4. Make electronic filings to the ITU-BR which are in accordance with the provisions of the radio regulations using the BR software. Assignments to specific earth stations may reach the BR not more than three years before the assignments are brought into use and may be recorded in the master register only after the associated space station is recorded. Appendix 4 identifies what information must be filed to obtain notification under Article 11;

5. Once an earth station is registered with the ITU, it will be taken into account in the coordination and notification processes.

ANNEX 2 TO RECOMMENDATION PCC.II/REC. 27 (XIV-09)

NOTIFICATION AND RECORDING OF FREQUENCY ASSIGNMENTS

The ITU-R recently held a Seminar at which it provided a briefing of how to effectively carry out the type of registration required. This briefing may be found at the following web location:

http://www.itu.int/ITU-R/space/support/workshop/doc_document_en/Notification_and_recording.pdf

ANNEX 3 TO RECOMMENDATION PCC.II/REC. 27 (XIV-09)

FORM FOR REPORTING INTERFERENCE EVENTS

GENERAL INFORMATION

Q.1. Location of Earth Station (latitude and longitude coordinates)

Answer: _____

Q.1.a. Name of city and country where Earth Station is located

Answer: _____

Q.2. Dish size of Earth Station

Answer: _____

Q.2.a. Antenna Type (Manufacturer /Model No.)

Answer: _____

Q.3. Satellite the dish is pointed at

Answer: _____

Q.4. Date interference began

Answer: _____

Q.5. Exact frequency of the interference (MHz)

Answer: _____

Q.6. Type of LNB used (Manufacturer /Model No.)

Answer: _____

Q.6.a. Does the LNB use standard or standard plus extended frequencies?

Answer: _____

Q.7. Does the Earth station receive one carrier or multiple carriers?

Answer: _____

Q.7.a. If multiple carriers, then is it only one carrier that is affected or more than one?

Answer: _____

Q.8. Earth station license information, if available
Answer: _____

MEASUREMENTS

Q.9. Direction of interference path (bearing from due North)

Answer: _____

Q.10. Spectral plot of interference signal

Answer: _____

Q.11. Approx power measured at the output of LNA/LNB

Answer: _____

INFORMATION ABOUT THE SOURCE OF THE INTERFERENCE

Q.12. Characteristics of interfering signal (modulation type – continuous or intermittent)

Answer: _____

Q.13. Location of any new visible radio towers or installations around the earth station location

Answer: _____

Q.13.a. Line-of-sight distance from Earth Station to radio towers/installations

Answer: _____

<u>Additional Information</u>

Q.14. Please provide additional comments and/or observations, if any

Answer: _____

_____

_____

Prepared by:

Name: _____

Title: _____

Company: _____

Tel. No.: _____

Fax. No.: _____

E-mail: _____

Address: _____