

**REGISTRATION OF EARTH SYSTEMS OF THE FIXED-SATELLITE SERVICE**

The XXV Meeting of Permanent Consultative Committee II: Radiocommunications (PCC.II),

**CONSIDERING:**

- a) That the next ITU World Radiocommunication Conference (WRC-15) will examine and adopt suitable measures in relation to possible additional primary spectrum allocations for the mobile service and identify additional frequency bands for international mobile telecommunications (IMT), as well as associated transitory provisions, in accordance with item 1.1 of the agenda;
- b) That the potential frequency bands considered in ITU-R studies include the 3 400-4 200 MHz and 5 925-6 425 MHz bands;
- c) That the ITU-R report “Sharing studies between IMT-Advanced systems and geostationary-satellite networks in the fixed-satellite service in the 3400-4200 and 4500-4800 MHz frequency bands” determines minimum required separation distances for co-frequency and adjacent band operations;
- d) That in Region 2 of the ITU, the band 3 400-4 200 MHz is allocated on a primary basis to the fixed and fixed-satellite (space-to-Earth) services. The band 3 500-4 200 MHz is also allocated to the mobile service (mobile except aeronautical) on a co-primary basis. The band 5 925-6 425 MHz is allocated on a co-primary basis to fixed, mobile and fixed satellite services (Earth-to-space);
- e) That parts of the 3 400-4 200 MHz and 5 925-6 425 MHz bands are widely used by OAS/CITEL member countries for fixed-satellite service networks and national satellite systems;
- f) That Recommendation PCC.II/REC. 27 (XIV-09) “Notification of earth systems operating in the fixed-satellite service (FSS) (Space-to-Earth)” invites OAS/CITEL Administrations to follow the notification procedures of ITU’s Radiocommunication Bureau for the registration of FSS earth stations;
- g) That WRC-07 identified spectrum for IMT in the band 3 400-3 600 MHz in countries of region 1 and region 3 and included criteria for coordination of the mobile service with the FSS and criteria for the protection of earth stations in the FSS networks,

**RECOGNIZING:**

- a) The call of the Director of ITU’s Radiocommunication Bureau (reference number 09AT(SSD)O-2014-002925) to register earth stations operating in the frequency bands mentioned in considering 2;
- b) That it is of prime importance that suitable measures are taken so that earth stations of the fixed-satellite service are protected from harmful interference caused by terrestrial services and that they obtain international recognition and suitable protection in relation to future and existing services;
- c) The need to protect FSS services in frequency bands considered as candidates for IMT;

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<sup>1</sup> CCP.II-RADIO/doc. 3849/15 cor.1

- d) That, in adopting its decisions with regard to the 3400-4200 MHz and 5925-6425 MHz frequency bands, WRC-15 will take into account the actual use of this part of the spectrum;
- e) That, nonetheless, there is a significant administrative burden on countries to undertake the detailed coordination and notification process on an individual basis for each operating earth station in their countries, recognizing that there may be thousands of such earth stations;
- f) That, therefore, OAS/CITEL Administrations may need the assistance of ITU's Radiocommunication Bureau in how to accomplish coordination and notification of such large numbers of earth stations,

**RECOMMENDS:**

1. That OAS/CITEL Administrations send information on the identified earth stations operating in C-band in their country to ITU's Radiocommunication Bureau in order to initiate the co-ordination, notification and registration procedures recorded in Article 9 and 11 of the Radiocommunication Regulations, in the interest of ensuring the international protection and recognition thereof;
2. That, to the extent possible, OAS/CITEL Administrations send to the Radiocommunication Bureau the minimum information on earth stations indicated in the attachment to this Recommendation, and, if necessary, request assistance for the corresponding registration;
3. That, if appropriate, OAS/CITEL Administrations that have made the corresponding registration should send updated information on earth stations in order to be recognized by the Radiocommunication Bureau;
4. That OAS/CITEL Administrations inform the ITU's Radiocommunication Bureau the numbers, areas of operation, and technical parameters of earth stations in their territories that operate with GSO FSS space stations in the 3400-4200 MHz and 5925-6425 MHz bands without individual authorizations.

**ATTACHMENT TO RECOMMENDATION PCC.II/REC. 48 (XXV-15)**

Minimum information on earth stations in order for the RB to begin providing

assistance for the purposes of creating co-ordination outlines

<i>AP4 Item No.</i>	<i>SpaceCap Item No.</i>	<b>Descripción</b>
A.1.e.2	Earth station name	Name of earth station
A.1.f.2	<i>Adm</i>	Symbol of notifying Administration country
A.1.e.3.a	Ctry	Symbol of country or geographical area in which the earth station is situated
A.1.e.3.b	lat_deg	Latitude coordinate of the station in degrees, minutes and seconds
A.1.e.3.b	lat_min	Minutes of the station's latitude coordinate expressed in degrees, minutes and seconds
A.1.e.3.b	lat_ns	Indicator of the latitude direction: North [N] or South [S]
A.1.e.3.b	lat_sec	Second part of the station's latitude coordinate in degrees, minutes and seconds
A.1.e.3.b	long_deg	Degrees of the station's longitude coordinate in degrees, minutes and seconds
A.1.e.3.b	long_ew	Indicator of the longitude direction: East [E] or West [W]
A.1.e.3.b	long_min	Minutes of the station's longitude coordinate expressed in degrees, minutes and seconds
A.1.e.3.b	long_sec	Second part of the station's longitude coordinate in degrees, minutes and seconds
A.4.c.1	Satellite name	Name of associated space station
A.4.a.1	Long_nom	Orbital position of the associated space station
	<i>E</i>	<b><i>Transmission characteristics of the transmitting earth station antenna</i></b>
B.5.a	Gain	Maximum isotropic gain of the earth station antenna
C.2.a.1	Min freq_MHz	Minimum allocated transmission frequency in MHz
C.2.a.1	Max freq_MHz	Maximum allocated transmission frequency in MHz
B.5.c.2.a	Antenna pattern	Pattern of transmitting antenna
	<i>R</i>	<b><i>Characteristics of the receiving earth station antenna</i></b>
B.5.a	Gain	Maximum isotropic gain of the earth station antenna
C.2.a.1	Min freq_MHz	Minimum allocated transmission frequency in MHz
C.2.a.1	Max freq_MHz	Maximum allocated transmission frequency in MHz
C.5.b	noise_Temp	Noise temperature of receiving system
B.5.c.2.a	Antenna pattern	Pattern of receiving antenna

**Note 1:** If an earth station is situated in front of an elevated obstacle (mountain, cliff or building), it is also necessary to submit the elevation angle of the horizon, measured to said obstacles. Otherwise, it is assumed that all angles are 0 degrees for the conservative concept of the coordination.

**Note 2:** The earth station type is presumed as TC (earth station in the fixed-satellite service)

**Note 3:** If there are any difficulties in providing the information mentioned above, please contact the RB.

**Note 4:** In the case of GSO FSS earth stations that are authorized by CITEL member states without individual authorizations, the information above should include, in lieu of specific station data for items 1-13 of the table, information describing the area of operations of the earth stations (by latitude and longitude, where feasible), the names/orbital ranges of associated space stations, and the approximate number of such earth stations that are in operation or planned for operation.

**Additional characteristics required to complete a form for the coordination and notification of an earth station**

<i>SpaceCap and AP4 Item No.</i>	<i>Characteristics to be provided for each earth station</i>
A.3.a	Name of earth station operator
A.7.d	Antenna height, in meters above mean sea level
C.4.b	Nature of service (e.g. PC – Public Correspondence, CO – Official Correspondence)
C.8.b.2 C.8.b.3.a	Maximum mean power density in dB (W/Hz) applied to the antenna input