

APPENDIX D

RESOLUTION 154 (REV.WRC-15)

Consideration of technical and regulatory actions in order to support existing and future operation of fixed-satellite service earth stations within the band 3 400-4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some countries in Region 1

The World Radiocommunication Conference (Geneva, 2015),

Considering

- a) that the band 3 400-4 200 MHz is allocated worldwide to the fixed-satellite service (FSS) in the space-to-Earth direction and to the fixed service on a primary basis;
- b) that the band 3 400-3 600 MHz is allocated on a primary basis to the mobile, except aeronautical mobile, service in the countries in Region 1 specified in No. **5.430A** and identified for International Mobile Telecommunications (IMT) in those countries;
- c) that in Region 1 the allocation to the mobile, except aeronautical mobile, service in the band 3 400-3 600 MHz is subject to the technical and regulatory conditions listed in No. **5.430A**, aimed at ensuring compatibility with co-primary services of neighbouring countries;
- d) that a number of developing countries rely, to a great extent, on FSS systems using very small aperture terminals (VSAT) in the band 3 400-4 200 MHz for provision of communications as an aid to safe operation of aircraft and reliable distribution of meteorological information;
- e) that, in some cases where an adequate terrestrial communication infrastructure is not available, VSAT networks referred to in *considering d)* above are the only viable option to augment the communication infrastructure in order to satisfy the overall communications infrastructure requirements of the International Civil Aviation Organization (ICAO) and to ensure distribution of meteorological information under the auspices of the World Meteorological Organization (WMO);
- f) that the relevant ITU-R studies showed a potential for interference from fixed wireless access and IMT stations into FSS receiving earth stations at distances from less than one kilometre up to hundreds of kilometres, depending on the parameters and deployment of stations of these services;
- g) that WRC-12, taking into account the studies mentioned in *considering f)* above decided to study technical and regulatory measures to support the FSS earth stations referred to in *considering e)* above,

noting

- a) that by the date of WRC-15 several cases of harmful interference to the FSS VSATs used for aeronautical safety communications from fixed wireless access or IMT stations of the same administration were reported;
- b) that these reported cases of interference revealed some national difficulties in the coordination of frequencies between the respective national telecommunication regulators responsible for licensing fixed wireless access or IMT systems and national aviation authorities responsible for the management of frequencies for aeronautical purposes, including assignments for VSATs;
- c) that in many countries FSS VSAT earth stations are not subject to individual licencing and not registered as specific stations in national frequency databases and in the ITU Master International Frequency Register (MIFR) due to considerable administrative work;

d) that the knowledge of the location and operational frequencies of VSAT stations used for communications to aid the safe operation of aircraft and/or distribution of meteorological information is critically important for ensuring compatibility with applications of other services,

recognizing

a) that ITU-R conducted comprehensive studies of compatibility between the FSS on the one hand and the fixed wireless access systems and IMT applications on the other hand in the band 3 400-4 200 MHz and summarized the results of the studies in Recommendation ITU-R SF.1486 as well as Reports ITU-R S.2199, ITU-R M.2109 and draft new Report ITU-R [FSS-IMT C-BAND DOWNLINK];

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b) that the Recommendation and Reports identified in *recognizing a)* offer a set of mitigation techniques that could be employed for international coordination and at a national level and to facilitate coexistence of FSS, fixed service and mobile service systems;

c) that Recommendation ITU-R S.1856 contains methodologies for verification of the power flux-density (pfd) limit set forth in No. **5.430A**,

resolves

1 that administrations listed in No. **5.430A** shall ensure the compliance of the IMT stations with the pfd limit set forth therein and apply the relevant coordination procedures before bringing these applications into use;

2 to urge administrations, when planning and licensing fixed point-to-point, fixed wireless access, and IMT systems in bands referred to in *considering b)* above, to take into account the protection needs of existing and planned FSS VSAT earth stations by coordinating the deployment of the systems mentioned above with the respective aviation and meteorological authorities at a national level;

3 to invite administrations, taking into account the number of earth stations involved for this particular type of usage, to consider the possibility of licensing the FSS VSAT earth stations used for communications as an aid to the safe operation of aircraft and/or distribution of meteorological information on an individual basis and registering them in the MIFR as specific earth stations;

4 to encourage administrations to employ the appropriate mitigation techniques described in the ITU-R publications referred to in *recognizing a)* above;

5 to invite administrations to ensure that the application of these technical and regulatory measures to the FSS and mobile service does not limit the use of the band 3 400-4 200 MHz by other existing and planned systems and services in other countries,

instructs the Secretary-General

to bring this Resolution to the attention of ICAO and WMO.