Question ITU-R 268/4

Development of methodologies for the assessment of
satellite unwanted emission levels before launch

(2003)

The ITU Radiocommunication Assembly,

considering

*a)* that Appendix 3 of the Radio Regulations (RR) specifies the maximum permitted levels of spurious emissions, in terms of the mean power level of any spurious component supplied by a transmitter to the antenna transmission line;

*b)* that the principal objective of RR Appendix 3 is to specify the maximum permitted levels of spurious emissions that, while being achievable, provide protection against harmful interference;

*c)* that excessive levels of unwanted emissions may give rise to harmful interference;

*d)* that while out-of-band emissions can also give rise to harmful interference, the RR do not provide general limits for these emissions;

*e)* that while RR Appendix 3 applies generally to the mean power of a transmitter and its spurious emissions, it also takes account of a variety of emissions where interpretation of the term “mean power”, and thus its measurement, would be difficult, particularly in the cases of digital modulation broadband systems, pulsed modulation and narrow-band high-power transmitters;

*f)* that unwanted emissions from transmitters operating in space stations may cause harmful interference, particularly emissions from wideband amplifiers which cannot be adjusted after launch;

*g)* that unwanted emissions may cause harmful interference to safety services and radio astronomy and space services using passive sensors;

*h)* that the level of unwanted emissions can in most cases not be modified once a spacecraft is launched;

*j)* that levels of unwanted emissions are generally not measured prior to launch,

decides that the following Question should be studied

How should unwanted emission levels from spacecraft be measured or otherwise estimated before launch to ensure that passive service receivers are not adversely impacted?

further decides

1 that the results of the above studies should be included in appropriate Recommendations and/or Reports;

2 that the above studies should be completed by 2027.

Category: S3