

Babcock International Group

Additional comments:

It is widely agreed that a mechanism is urgently required to protect the interests of satellite receive-only earth stations and RSA would appear to fulfil that role. However, much discussion has ensued over the cost implications of RSA to down-link operators in what is accepted as a 'license exempt' regime. The potential instigators of any 'harmful interference' are indeed required to be licensed and any perceived cost 'imbalance' between licensed band users and RSA is justified on the basis that the co-allocation of frequencies for terrestrial and satellite use immediately causes an 'imbalance' in respective operating signal levels. In particular the more sensitive equipment required for satellite reception is easily overwhelmed not just by co-channel TI but also adjacent channel TI from sources at any frequency within the same band. A ROES applying for RSA for a frequency and bandwidth will therefore not be fully protected from TI unless an application for almost the entire band is considered, at great expense.

The proposed pricing structure of RSA claims to promote the "efficient use of spectrum". However, a down-link frequency and its BW are not normally decided by the ROES but by the satellite service provider operating on a global platform. An RSA application will therefore merely reflect the parameters dictated by the service provider/s. At a multi-satellite ROES the aggregated received BW could be substantial but entirely beyond its control. On a commercial footing, the annual cost of RSA will in many instances be reverted back to the service providers which may in turn compromise the viability of a ROES in an already competitive market. A non-commercial ROES however will either remain unprotected by RSA or at substantial cost to itself.

The trading aspect of RSA may be of some benefit but the main requirement of a ROES is to be formally recognised during the process of terrestrial frequency allocation, at minimal cost.

Question 1: Do you agree with the list of proposed RSA parameters for assessing interference and for setting fees for receive-only earth stations? Are sufficient parameters defined for a grant of RSA? If you disagree, please give your reasons and suggest alternatives.:

It is noted that the calculations derived to assess interference levels are based on "typical" PES parameters using a 9m dish. (A6.8). A ROES using the FSS band will more likely be using dish sizes in the range 2 - 4m. The comparatively lower forward gain and wider aperture of these dishes will invariably make them more vulnerable to terrestrial based interference.

The calculations do not discriminate between co-channel and adjacent channel interference. Whilst co-channel interference is of prime consideration, the wideband sensitivity of satellite receive equipment makes it extremely important that adjacent channel interference is also taken into account. (4.6).

If in fact the current calculations are intended to take adjacent channel interference into account, the large front end bandwidth of most satellite receivers/LNB's would necessitate an exclusion zone across the whole band irrespective of how small a BW is applied for via RSA. It therefore suggests that the "acceptable interference signal level" should be adjusted to lower than the proposed 10dB below "the "typical" receiver noise". (4.11).

The use of Mitigation should also be extended to the use of front end Channel or NB filtering.

However the cost of implementing such measures may well outweigh the fee saving and could be impractical at a ROES receiving several channels/polarisations on a single antenna.

Question 2: Do you agree with the proposals for introducing fees for RSA for receive-only earth stations in the bands concerned on the basis of parity with existing PES fees (with a minimum fee of £500) and that the full fees be implemented from the date of grant of RSA? If you disagree, please give your reasons and suggest alternatives:

The fee calculations based on existing PES's are transmit sites using large dishes and a significant amount of associated infrastructure/investment. In these cases the fees may well be acceptable. Many FSS ROES attract significantly less investment due to the fact that the requirements for down-linking are generally less demanding and by virtue of the extensive TVRO market, lower cost. It therefore distorts the theory that a high RSA fee is acceptable to protect a significant "investment". Additionally, it is proposed that there should be cost equity between ROES and terrestrial operators using the same bands. Given the inequity of the relative signal levels used in each case and the high potential to cause interference, this is not realistic. (4.14).

There should be no minimum fee, the annual fee should be based solely on actual BW used at the appropriate rate/MHz. This would be more cost effective to sites receiving low BW's. Alternatively, given the potential for same band TI to cause front end overload, a realistic RSA fee for the whole of the band being used.

Question 3: Do you agree that grants of RSA in the bands should normally be on a rolling annual basis, with a 5-year revocation period?:

Yes

Question 4: Do you agree that grants of RSA in the bands should be tradable and that grants of RSA and WT licences should be inter-convertible? If so, do you agree with our proposal to model the process for trading and conversion on that for RSA for radio astronomy? :

Yes

Question 5: Do you agree with our proposed procedure for considering applications for the grant of RSA to receive-only earth stations. If you disagree, please give your reasons and suggest alternatives? :

The predicted interference level must take into account adjacent channel interference over the entire frequency band.

Question 6: Do you agree that RSA for receive-only earth stations could provide greater security against interference and help promote optimal use of the 1690 - 1710, 3600 - 4200 and 7750 - 7850 MHz bands? If not, please explain why and describe any alternative mechanism that you consider to be necessary.:

Security of interference - no, not unless RSA of an entire band is given to a ROES.

Optimal use - no, the frequency, BW etc. is dictated by the satellite service provider/s.