

Recognised Spectrum Access for Radio Astronomy Clarification on Spectrum Quality Benchmark

In reference to *“Notice of Ofcom’s
proposal to make regulations in connection
with Recognised Spectrum Access (RSA)
for radio astronomy”*

Foreword

- 1.1 This document responds to a request for clarification arising from the Statutory Notice that Ofcom published on 10 November 2006 in connection with RSA for radio astronomy. The Statutory Notice can be found at <http://www.ofcom.org.uk/consult/condocs/rsa/rsa.pdf>.
- 1.2 While Ofcom would not normally respond to such requests individually and usually responds to requests at the conclusion of the consultation period, it considers that it might be helpful to do so in this case in order to clarify specific points in relation to how Spectrum Quality Benchmarks (SQBs) will be set for radio astronomy under the proposed regulations.
- 1.3 This document is not a substitute for the formal Ofcom public statement due after the consultation period.
- 1.4 The closing date for responses to the Statutory Notice published on 10 November 2006 will remain as **5 pm on 18 December 2006**.

Specific issues

- 2.1 A stakeholder has asked Ofcom to clarify the process for setting SQBs and, in particular, whether other spectrum users will be involved.
- 2.2 Ofcom's Statement¹ following the consultation made clear Ofcom's intention that the initial values of the RSA parameters, including SQBs, will reflect the status quo and will be no more stringent with respect to constraints on other services. Accordingly, Ofcom sees no need to consult other spectrum users as the grant of the RSA will impose no additional restrictions on other existing services in the bands in question.
- 2.3 Paragraph 6.10 of the Statutory Notice further explains that Ofcom envisages that the SQB for initial grants of RSA will be set to reflect Ofcom's current planning assumptions and criteria that it applies in making assignments for fixed and mobile use in bands shared with radio astronomers within specified distances of radio astronomy sites as referenced in Annex D to the current UK Frequency Allocation Table. Paragraphs 6.16 and 6.17 further state that these coordination and planning criteria will apply only to in-band emissions.
- 2.4 The current planning assumptions and criteria referred to in paragraph 6.10 collectively constitute the degree of consideration given to radio astronomy in Ofcom's spectrum planning. RSA will formalise this.
- 2.5 The SQB effectively represents the interference threshold required to ensure that the quality of radio spectrum is maintained at a level that permits radio astronomy measurements at the site and in the frequency bands in question and corresponds to levels of consideration of radio astronomy that are no more restrictive of sharing services than ITU recommendation RA 769.

¹ Recognised Spectrum Access as applied to Radio Astronomy, A statement on proposals for applying RSA to Radio Astronomy, 17 October 2005

- 2.6 The radius of the coordination or exclusion zone can be derived from the SQB value using typical technical and operational parameters of the service(s) sharing the frequency band. As different radio astronomy stations are currently used for different measurement activities, RSA grants at each site will be tailored to the nature of the measurements undertaken and will also take into consideration site-specific factors such as local terrain, equipment sensitivity and site shielding.
- 2.7 The decision to employ coordination or restricted zones within a frequency band shared with fixed services will reflect the assignment procedure that is currently applied at each existing site listed in the UK FAT.