

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

A Report Issued by the Telecommunications Regulatory Authority on the consultation concerning the 2.4 and 5 GHz Frequency Licensing Regulation

30 July 2006

Purpose: Report on the Responses received to the Consultation on the 2.4 GHz and 5 GHz Frequency Licensing Regulation



هيئة
تنظيم
الاتصالات
Telecommunications
Regulatory
Authority

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

1 Introduction

This document has been issued following the 2.4 GHz and 5 GHz frequency licensing regulation consultation (the “Consultation”), issued by the Telecommunications Regulatory Authority (TRA) on 9 July 2006. The aim of the consultation was to gather the views of interested parties on the automated on-line application system for the grant of frequency licenses, as per the requirements of the Telecommunications Law (the “Law”). The TRA received 9 responses in total, addressing both the main question raised by the Consultation and related points.

This report sets out a summary of the responses received and sets out the TRA’s current views on the issues raised as a result of the input received. The 2.4 GHz and 5 GHz Frequency Licensing Regulation (the “Regulation”) shall be published separately.

As a report, this document has no legal status or purpose other than that of disseminating information.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

2 Summary of Responses

The TRA received 9 responses in total to the Consultation document from the following respondents:

- Gulf Broadcast & Professional Systems Co. SPC
- Ande Consultants
- Intel Corporation
- Amwaj Telecom
- Miracle Graphics Co.
- Bahrain Com
- Mena Telecom
- Kalaam Telecom
- A group of Bahraini citizens in association with Stichting Open Spectrum

The comments received are summarized below.

1. The automated on-line application system

The main question that the Consultation sought to address was the following:

- o *Does the automated on-line application system proposed by the draft Regulation meet the needs of the telecommunications industry for a simple and efficient frequency licence application process for the 2.4 GHz frequency spectrum and for the 5 GHz (Band A or Band C) frequency spectrum, taking into account the requirement of the Telecommunications Law as it currently stands?*

In response to this question, the majority of respondents questioned the need for any form of licensing process for the frequency bands discussed in the consultation document. Some parties even recommended a change in the Telecommunications Law on the basis that the great majority of regulatory authorities around the globe assign these frequencies on a licence-exempt basis.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

Four respondents agreed that the automated on-line application system was simple and efficient, though two of them questioned the future validity of such a licensing process in these frequency bands. Again this was based on the fact that most regulatory authorities assign these frequencies on a license-exempt basis.

One respondent raised concerns for applicants who did not have access to the internet, and another suggested that only licensed service providers should be allowed to apply for these frequencies.

TRA Response

The TRA understands and appreciates that the great majority of regulatory authorities operate a license-exempt regime for some or all of the frequency bands considered in this consultation, and that it may be more simple and convenient for users to operate on a license-exempt basis.

The Telecommunications Law of the Kingdom of Bahrain, however, as it currently stands is clear in requiring that a license be obtained prior to the use of these frequencies. Section 43 of the Law specifically provides that *“no Person shall operate a Telecommunications Network which uses radio frequency spectrum in the Kingdom, or operate or use any Radio-communications Equipment associated with such a network without obtaining a License therefore from the Authority.”*

As such, the Law is clear in requiring a license and therefore the TRA has to apply the Law as it currently stands in this respect.

The TRA also appreciates, however, that at some stage, the Law may be revised, and at such time the TRA may advocate so that the relevant changes be made to the Law to allow for certain parts of the spectrum to be used without the need to obtain a licence. However, this cannot be done at present, and unless and until a change in the Law is made, any and all frequency usage for telecommunications requires appropriate licensing.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

For the purpose, however, of following the Law but also taking into account the interests of operators and consumers and the particularities associated with this spectrum, the TRA has attempted through this light licensing regime to arrive at a solution that does not place an undue burden on users, whilst remaining compliant with the requirements of the Law.

The light licensing regime represents the nearest the TRA can get to a licence-exempt system, whilst upholding the Telecommunications Law. The on-line application system is also felt to be the least burdensome to the vast majority of potential applicants.

In respect of the request by one of the respondents for off-line application mechanisms to complement the on-line system, the TRA has taken note of this suggestion and will be accepting applications submitted in hard copy. Copies of the form are available at the TRA office. The TRA will also provide interested parties with the possibility of coming and filling in an application form on-line at the TRA premises.

As regards the request by one respondent to only allow licensed service providers to have access to the spectrum, the TRA considers that this would not be appropriate and would preclude the use of WLAN technologies in the domestic and commercial environment. This approach would also run counter to the international practice of allowing all citizens to have access to this spectrum, and would potentially hinder the technical and economic development of the Kingdom of Bahrain.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

The TRA also received other comments from interested parties that did not directly address the question posed in the Consultation, but that are relevant to the consultation. The most pertinent of these are summarized below.

2. Audit trail

One of the respondents raised concerns over the audit trail associated with the on-line license application process. Specifically they were concerned that the approval of license applications by acquiescence fourteen days after submission of the application, would lead to ambiguity as to whether a licence had indeed been issued.

TRA Response

The TRA has taken note of this concern. However, it should be noted that the applicant will be receiving a confirmation email upon the successful completion of the application form. This email will contain a unique submission number, which the applicant should retain. If the applicant receives no word from the TRA in the following 14 days, then the submission number will be the applicant's license number.

Those applicants who apply in person at the TRA's offices will receive a hard copy of the submission number. This submission number will also become the applicant's license number if nothing to the contrary is received from the TRA in the following 14 days.

If any applicant requires confirmation after the 14 days have elapsed, then they may ask the TRA, in writing, to provide him/her with confirmation that the licence has been granted.

3. Licensing of other devices using frequencies in the 2.4 GHz and 5 GHz bands

Three respondents raised concerns over the licensing of other devices using frequencies in the 2.4 GHz and 5 GHz bands.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

TRA Response

The TRA is well aware that not all radio frequencies are used for telecommunications. Section 43 of the Law only requires that radio frequencies used for telecommunications must be licensed. Any device using 2.4 GHz and 5 GHz not classed as telecommunications equipment (i.e. not used or intended to be used for telecommunications purposes and not part of or connected to or comprising a telecommunications network) does not require approval from the TRA but may require other approvals and/or permits from the relevant authorities in Bahrain. Such is the case, for example, with remote controls, which do not require telecommunications approval and/or licensing, though they may require other types of approval from other authorities in Bahrain.

With regard to the licensing under the Regulation, and by means of clarification, only persons operating a Telecommunications Network which uses radio frequency spectrum in the Kingdom, or operating or using any Radio communications equipment associated with such a network should obtain a frequency license from the TRA.

4. Interference disputes

Certain respondents have expressed concern about the TRA's role and involvement in the resolution of interference disputes.

TRA Response

Under the Law, the TRA is required to include such terms in the license as are *reasonably necessary* to ensure the efficient use of radio frequency spectrum. As per Condition 3 of the relevant license, users/licensees are required to take all necessary steps to ensure that the use of the Radio Frequency is safe and does not cause harmful interference, and that they co-operate in dealing with interference. The TRA does not consider that interference between users of spectrum in the 2.4 GHz or 5 GHz bands will, for the most part, reasonably require TRA involvement, and as such

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

the Authority shall have no responsibility for managing, or liability in connection with harmful interference caused by lawful users of the Assigned Radio Frequency Spectrum.

In any event, the TRA has reserve powers under the Law to deal with interference where and as may be appropriate.

5. Extension of license

One of the respondents suggested that the duration of the license should be extended from 5 years to 10 years, to enable licensees to recoup their investment.

TRA Response

The TRA wishes to clarify that there will be no license fee in respect of Frequency Licenses. As such, there is no investment in this respect to recoup. Having considered the appropriateness of any possible extension to 10 years, the TRA considers that in view of the rapidly changing technological, legal or other environment, the 5 years period represents a more appropriate duration.

6. Frequency assignment

One respondent expressed concern over whether the licensee would have knowledge of which frequencies had been assigned and whether the licensee would know whether the frequency was in use or not.

TRA response

The TRA would like to make it clear that licensees will be issued with a single licence granting them access to all 3 frequency bands, and every frequency within those bands. As such, the TRA will not be allocating specific parts of the frequency in question to individual licensees, but rather use of the whole of it will be made available to all licensees on a non-exclusive basis, as per the License conditions.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

7. Licensed operator preclusion

One respondent suggested that the TRA should not preclude licensed operators from having access to the frequency bands considered in the consultation.

TRA response

The TRA would like to confirm that the Regulation concerning 2.4 GHz and 5 GHz licensing does not preclude licensed operators from being granted licenses.

8. Regulatory flexibility to encourage innovation

One respondent stressed that regulatory flexibility should be encouraged to promote technological innovation.

TRA response

The TRA has proposed a technology-neutral regulatory approach for the frequency bands considered in this consultation. Article 3 of the Regulation specifies the minimum technical criteria for equipment operating in the 2.4 GHz and 5 GHz frequency bands. These consist of spectral bandwidth limitations and maximum power limits, along with electronic mitigation techniques to minimise interference to other users of the bands, and automatic transmitter power control. The TRA only precludes the deployment of systems that support mobile operation. The TRA has no other views on the technologies deployed in these bands outside the scope of Article 3 of the Regulation, and the preclusion of mobile systems. The TRA feels that this technology-neutral approach encourages innovation, whilst the technical criteria specified assist in the minimisation of interference to, and from, other licensees and shared users of the same spectrum.

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

The TRA has also received certain other comments which are not in direct response to the Consultation, and therefore the TRA does not consider it appropriate to address these comments here. In particular, the TRA has received certain comments in relation to the technical specifications, which were specifically excluded from the scope of the Consultation. However, the TRA has chosen to clarify the situation regarding the response, detailed below.

9. EIRP and transmitter output power

Three respondents questioned the EIRP limitations specified by the TRA in Article 3 of the consultation document. Two of the respondents wondered why the TRA was not following the same policy as other regulatory bodies in respect of the above, and requested the TRA to explain its rationale for EIRP limitations.

TRA Response

The TRA in carrying out its duties attempts to follow international technical recommendations as far as possible and to the extent permissible under the Law of the Kingdom of Bahrain.

The International Telecommunications Union-Radio Sector (ITU-R) is responsible for worldwide spectrum usage allocation. Bahrain falls into what is known as Region 1 for such allocation purposes.

As such the TRA relies on the recommendations of the European Conference of Postal and Telecommunications Administrations (CEPT), being the lead body for regulatory technical recommendations in Region 1.

ERC Recommendation 70-03 – Relating to the use of Short Range Devices(SRD),Annex 3 – Wideband Data Transmission systems sets out the

Report

2.4 GHz and 5 GHz Frequency Licensing Regulation

recommended EIRP limits for the 2.4 GHz band as 100mW EIRP, and for the 5 GHz band A 200mW, being the same as the TRA has specified.

3. Draft ECC Recommendation (06)04 – Use of the Band 5,725 – 5,875 MHz for Broadband Fixed Wireless Access (BFWA) which recommends a maximum EIRP of 4 Watts for the band is still a draft out for discussion. It recommends to National regulatory bodies, once they assure themselves that an increased EIRP limit will not create undue interference, that the maximum EIRP limit in this band may be increased from 2 Watts to 4 Watts. The TRA will consider this once the Recommendation is adopted, provided it is appropriate for Bahrain.