### Consideration of request for assignment of spectrum in the 1785-1805 MHz band for telecommunications services in the Kingdom of Bahrain

Issued by the Telecommunications Regulatory Authority

4 April 2007

**Purpose:** Information collected through responses to this document will be used by TRA in its analysis of the telecommunications market and the demands for spectrum in the 1785 – 1805 MHz band.
REQUEST FOR COMMENT
Assignment of Spectrum in the 1785 – 1805 MHz band

1. **Background**

The Telecommunications Regulatory Authority (“TRA”) has received a number of proposals for the assignment of spectrum in the band 1785-1805 MHz. Assignments in this band were not specifically considered in TRA’s current spectrum management policy. TRA will respond to these proposals in the manner set out in its spectrum management policy.

2. **Legal Framework**

The Telecommunications Law of the Kingdom of Bahrain (issued under Legislative Decree No. 48 in October 2002) (the “Law”) is the basic law that regulates telecommunications markets. The Law established TRA as an independent regulatory authority that oversees the telecommunications sector.

Section 3 of the Law describes the duties and powers of TRA, including the promotion of effective and fair competition among new and existing licensed operators.


The Policy outlines the available spectrum in the Kingdom of Bahrain and the various award mechanisms. TRA and MoT set out the procedure for the introduction of new technologies and services in the Policy (see Sections 3.1.1, 3.1.2, 3.1.3, 3.2 and 3.5 of the Policy).

The process for considering a proposal to introduce new technologies and services requires TRA to evaluate the evidence provided to TRA in relation to the proposal, to publish the proposal and TRA’s evaluation, and then to invite comments from the public (see Section 3.1.3 and Exhibit 2 of the Policy).

This document sets out the proposals, presents TRA’s initial technical evaluation and invites comments, pursuant to Section 3.1.3 of the Policy. TRA considers that the responses it receives to this document can form an important input to the final evaluation of the proposals and, if appropriate, the method by which spectrum might be assigned (Sections 3.2 and 3.5 in the Policy).
This document considers only the evaluation of the proposals in relation to TRA’s spectrum policy. The issuance of service licenses is not considered in this document.

3. The Proposals

The technology advocated in the proposals is High Capacity - Spatial Division Multiple Access (HC-SDMA). It is proposed that it would be deployed to provide broadband wireless connectivity to subscribers. As HC-SDMA is a wireless technology, there is a spectrum requirement associated with this proposal. The frequency band suggested to support the deployment of such a technology is 1785 - 1805 MHz.

4. Initial Technical Evaluation

TRA has analysed the technical specifications of the proposed new technology and ascertained that it conforms to a published technical standard (ATIS-0700004.2005). This standard is recognised by the International Telecommunications Union (Document 8A/TEMP/212 (Rev.1)). TRA has also investigated the international approach to this technology and has evidence of existing deployment in more than 10 countries. A further 8 nations are in the process of assigning spectrum in this band and/or proceeding with some form of spectrum assignment and licensing process.

The spectrum of interest is the GSM 1800 guard band. TRA will need to satisfy itself that existing licensees would not experience interference from this new technology. TRA would need to specify technical parameters designed to ensure interference-free operation. Any licensed operators would be required to conform to any such technical requirements specified by TRA.

5. Issues for Comment

Comments are sought on the proposals and the initial technical evaluation made by TRA.

Some respondents may wish to express an interest in putting forward similar proposals. The submission of such proposals would provide important information to TRA in assessing the desirability and form of any assignment of spectrum in the 1785-1805 MHz
band. In addition, should there prove to be considerable interest in such assignments, this would be an important factor in determining the method by which any such assignment(s) were made (section 3.2 of the Policy). It would be helpful if any such expressions of interest could include the following information:

- the bandwidth required;
- technical specifications of the technology to be deployed, including interference mitigation techniques;
- proof that the technology conforms to international standards;
- details of the service(s) to be provided;
- quality of service associated with the proposed technology and services.

If such expressions of interest are received, they will be evaluated by TRA in the same manner as the present proposals and incorporated into TRA's overall conclusions on assignment, which will be put forward for public consultation.

By contrast, some respondents may feel that there could be difficulties in such assignments of spectrum in the 1785-1805 MHz band. It would similarly be helpful for such difficulties, either in relation to the use of the 1875-1805 MHz band, or in terms of the technologies to be employed, to be set out in detail. Such comments would be considered in the formulation of TRA's conclusions concerning the introduction of new technologies and services.

4. The Role of this Document

This invitation to comment on the proposals is solely to provide TRA with information required to carry out the requirements of its spectrum management policy. It does not constitute an offer or invitation to participate in the bidding for any licences, nor does it constitute the basis of any contract which may be concluded in relation to any bidding exercise or in respect of any assignment of spectrum. Further, this invitation does not represent any decision of TRA. Those issues remain subject to consideration. This invitation should not be construed as indicating that TRA has formed any opinion or decision on the said spectrum. This invitation shall not bind TRA to assign any spectrum, or to grant any licence.

Information received in response to the current document will be used by TRA in its analysis, and such analysis may be published in the future. The current proposals, any responses to this document,
and any implications for the licensing of services will be considered in the broader context of the Strategic Review currently being initiated by TRA.


Any confidential or commercially sensitive information should be clearly identified so that reasonable care can be taken when presenting the information in any future TRA publications. Individual responses (including expressions of interest in receiving an assignment of spectrum in the 1785-1805 MHz band) will not be disclosed to the public and the identities of the submitting parties/companies will also be kept confidential.

5. **Responses to this document**

Responses are invited on the above proposals.

The address for responses to this document is:

The General Director,
Telecommunications Regulatory Authority (TRA),
P.O. Box 10353,
Manama,
Kingdom of Bahrain.

Alternatively, e-mail responses may be sent to TRA’s email address at consult@tra.org.bh

The deadline for responses is 4.00 p.m. on 2 May 2007.