



REGULATORY  
AUTHORITY

Field Audit of Radio  
Frequency Spectrum

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Request for Proposal

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**11<sup>th</sup> February 2013**

Regulatory Authority of Bermuda  
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## 1. Objectives

In the interest of promoting a robust infrastructure and sustainable competition for the long term benefits of telecommunications consumers in Bermuda, the Board of the Regulatory Authority resolved to issue this Request for Proposal (RFP) for the purposes awarding a contract for: (1) providing technical support in relation to the development of “efficient use” criteria for spectrum assignments; and (2) conducting a field audit of select Radio Frequency Spectrum (hereinafter: “Spectrum Audit”) in Bermuda.

## 2. Purpose of Spectrum Audit

The purpose of the Spectrum Audit is to determine the degree to which previously allocated and assigned spectrum is being used efficiently so that spectrum assignments which are either unused or not being used efficiently may be recovered by the Minister of Economic Development for potential reassignment.

While Part VII of the Electronic Communications Act 2011 (ECA)<sup>1</sup> addresses the use of radio spectrum and equipment for electronic communications generally Section 78 (Transitional spectrum investigation) specifically requires that:

The Authority shall conduct an investigation of the spectrum assignments reflected in the spectrum licences granted to Integrated Communications Operating Licence (ICOL) holders pursuant to section 73(2)(c) and any other COL holders pursuant to section 76 for the purpose of determining whether the frequencies assigned are being utilized efficiently, and the Authority may, upon expiry of the 18 month term—

- a) decline to renew the spectrum licence; or
- b) modify the spectrum licence to authorize the use of a reduced amount of spectrum,

if the licence holder fails to demonstrate a reasonable need for some or all of the spectrum assigned to it, and the Authority concludes that such measures are necessary to ensure the efficient use of spectrum.

Prior to moving forward with this investigation, the ECA provides for the Authority to determine what criteria should apply to establish whether the assigned frequencies are being used efficiently. Section 41 of the ECA provides that “[t]he Authority shall, by general determination, establish the criteria that shall be applied by the Authority to determine the circumstances in which such measures are appropriate and proportionate.”

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<http://www.bermulaws.bm/Laws/Annual%20Laws/2011/Acts/Electronic%20Communications%20Act%202011.pdf>

The Minister anticipates that spectrum licenses will be granted to ICOL and COL holders on or before 28th April 2013. The draft frequency licences that will be awarded to current spectrum assignees contains a provision (cl. 7.4) that requires the assignee to submit to the Authority, no later than 6 months after the licence is issued, a report approved by the assignee's Board of Directors, in a format to be prescribed by the Authority and which includes a detailed analysis of its spectrum utilisation.

### **3. Scope and Timing of Technical Support and Spectrum Audit**

Given legislative requirements and expected procedural timelines the RA anticipates that the Technical Support phase will begin on or about April 2013 and that the Spectrum Audit must be conducted as expediently as possible. Duration of the audit will be one of the adjudicating factors.

In the Technical Support phase the Applicant will be required to complete the following tasks:

- (1) Prepare proposals for efficient spectrum usage criteria to be consulted on by the Authority;
- (2) Review comments and assist the Authority with final decision on definition of efficient usage;
- (3) Assist the Authority with the framework and contents of the efficiency self-assessments to be prepared by current spectrum assignees;
- (4) Review and comment on self-assessments provided by spectrum assignees; and
- (5) Assist with any preparation of information requests to spectrum assignees and other parties in respect of current utilisation, unlawful use, etc.

The Spectrum Audit shall address the High Value Spectrum identified in the following tables. At a minimum, the Spectrum Audit shall determine the Assignee in each band, the percentage utilization of each assigned band, and the actual services being provided in each band. It should also be understood that all equipment required to fulfil the requirements of this RFP, must be provided by the successful bidder.

Applicants are requested to provide a workplan, timeline, cost estimates and travel expenses for the work described above. The RA also requests that Applicants provide separate workplans, timelines, cost estimates and travel expenses for including the Backhaul and Satellite spectrum shown in the following table so that this additional work may be included in the Spectrum Audit if the RA determines that it is cost effective to do so.

Additionally, because the RA has become concerned about unauthorized spectrum usage by both telecommunications licensees and unlicensed entities the RA requests that Applicants also propose a methodology where the source of unauthorized radio frequency transmissions can be determined so that the Authority may consider appropriate enforcement measures under Sections 42 and 59 of the ECA. As above, The RA requests

that Applicants provide separate workplans, timelines, cost estimates and travel expenses for including this additional work in the Spectrum Audit if the RA determines that it is cost effective to do so.

<b>Bermuda Frequency Allocation Table Key</b>
High Value Spectrum
Backhaul
Satellite

<b>Selection of Bermuda Frequency Allocation Table as of 2012</b>		
<b>Frequency Band</b>	<b>Allocation</b>	<b>Remarks</b>
698.000 - 764.000 MHz	Fixed Mobile BROADCASTING	Broadcasting
764.000 - 776.000 MHz	Fixed Mobile BROADCASTING	Broadcasting
776.000 - 794.000 MHz	Fixed Mobile BROADCASTING	Broadcasting
794.000 - 806.000 MHz	Fixed Mobile BROADCASTING	Broadcasting
824.000 - 849.000 MHz	Fixed Land Mobile	AMPS
AMPS	AMPS	AMPS
1710.000 - 1755.000 MHz	Fixed Mobile	Advanced Wireless Services (AWS)
1850.000 - 2000.000 MHz	Fixed Mobile	GSM 1900
2110.000 - 2120.000 MHz	Fixed Mobile	Advanced Wireless Services (AWS)
2120.000 - 2180.000 MHz	Fixed Mobile	Advanced Wireless Services (AWS)
2305.000 - 2310.000 MHz	Fixed Mobile except aeronautical mobile RADIOLOCATION AMATEUR	Backhaul
2320.000 - 2345.000 MHz	BROADCASTING- SATELLITE	Backhaul

2360.000 - 2390.000 MHz	MOBILE	Backhaul
2395.000 - 2400.000 MHz	AMATEUR	Backhaul
2400.000 - 2417.000 MHz	AMATEUR	Backhaul
2417.000 - 2450.000 MHz	AMATEUR	Backhaul
2450.000 - 2483.500 MHz	Fixed Mobile RADIOLOCATION	Backhaul
2500.000 - 2655.000 MHz	Fixed Mobile except aeronautical mobile	MMDS
2655.000 - 2690.000 MHz	Fixed Mobile except aeronautical mobile Earth exploration- satellite (passive) Radio Astronomy Space Research (passive)	
3.300 - 3.500 GHz	AMATEUR RADIOLOCATION FIXED <sup>2</sup>	WiMAX
3.500 - 3.600 GHz	RADIOLOCATION FIXED <sup>3</sup>	WiMAX
6.525 - 6.700 GHz	FIXED FIXED-SATELLITE (Earth to Space)	Backhaul
6.700 - 6.875 GHz	FIXED FIXED-SATELLITE (Earth to Space) (Space to Earth)	Backhaul
7.125 - 7.145 GHz	FIXED	Backhaul
7.300 - 7.450 GHz	FIXED FIXED-SATELLITE (Earth to Space) MOBILE-SATELLITE (Space to Earth)	Backhaul
7.550 - 7.750 GHz	FIXED FIXED-SATELLITE (Space to Earth) MOBILE-SATELLITE (Space to Earth)	Backhaul
7.850 - 7.900 GHz	FIXED	Backhaul
10.700 - 12.200 GHz	FIXED-SATELLITE (Space to Earth)	Backhaul
12.750 - 13.250 GHz	FIXED FIXED-SATELLITE (Earth to Space) MOBILE	Backhaul

<sup>2</sup> Fixed WiMax deployments allowed from 3.3 – 3.4 GHz.

<sup>3</sup> Fixed WiMax deployments allowed from 3.4 – 3.6 GHz.

17.700 - 17.800 GHz	FIXED FIXED-SATELLITE (Earth-to-space)	Backhaul
17.800 - 18.300 GHz	FIXED	Backhaul
18.300 - 18.600 GHz	FIXED-SATELLITE (space-to-Earth)	Backhaul
27.500 - 29.500 GHz	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	LMDS

## 4. Evaluation Criteria

The comparative evaluation for the award of the contract will be carried out by assessing the application(s) against the criteria specified in the table below.

Applications not including details of proposals to satisfy the criteria will obtain a low score on such criteria. The relative importance of each criterion is indicated by the weights shown below.

<u>Evaluation criteria</u>	<u>Weighting</u>
Qualifications <sup>4</sup>	25%
Services Provided <sup>5</sup>	25%
Timing of Services <sup>6</sup>	15%
Cost of Services <sup>7</sup>	25%
Bermudian Ownership and Employment <sup>8</sup>	10%
	<b>100 %</b>

## 5. Bermudian Ownership and Employment

Applicants should provide and document the degree to which their firm is currently owned by and/or employs Bermudians. Similarly, applicants should indicate the degree to which they will use Bermudian labour to complete the Technical Support phase and Spectrum Audit.

## 6. Submission of Applications

Applications shall be submitted no later than 4 PM Atlantic Standard Time on Monday 4<sup>th</sup> March 2013 by email to Michael Wells at [mwells@rab.bm](mailto:mwells@rab.bm) and copied to [nsmith@rab.bm](mailto:nsmith@rab.bm) with the following subject line:

<sup>4</sup> The professional qualifications and relevant experience of the Applicant.

<sup>5</sup> The scope and scale of the services the Applicant proposes to provide.

<sup>6</sup> The ability of the Applicant to provide the services within the schedule established by the Minister and/or Authority and to do so in a timely manner.

<sup>7</sup> The total compensation to be provided to the chosen Applicant.

<sup>8</sup> The degree to which an Applicant is Bermudian owned and operated.

“APPLICATION: FIELD AUDIT OF RADIO FREQUENCY SPECTRUM”.

Applications received after the deadline shall not be accepted. Any requests by the Applicant for an extension to the time period allowed for the preparation of an Application will not be considered. It is the responsibility of the Applicant to ensure that Applications are submitted by this deadline.

## **7. Requests for Clarification**

The RA reserves the right to request an Applicant to submit further material and documentation, within such time and in such format as the RA may stipulate. The provision of further material is intended for clarification purposes only. The Applicant will not be permitted to use this option for enhancing or adding supplementary information to its Application.

## **8. Additional Information**

The RA reserves the right to postpone or cancel this Request for Proposal for any reason without any liability to any Applicant.

Any interpretation of, additions to, deletions from, or any other corrections to this RFP will be issued as written addenda. Each Applicant shall ensure that all available information has been received prior to submitting an Application.

All Applications submitted pursuant to this RFP must be valid for at least 90 days. Additionally, all Applications shall remain confidential upon submission. No Application materials will be returned to the Applicant.

No Applicant shall be entitled to reimbursement of any costs or have any claim for compensation of any kind whatsoever, as a result of participating in this RFP.