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General Notice

COMMUNICATIONS REGULATORY AUTHORITY OF NAMIBIA

No. 293

2014

STUDY TO ESTABLISH THE FEASIBILITY OF THE UTILISATION OF TV WHITE SPACES FOR TELECOMMUNICATIONS SERVICES ON A SECONDARY BASIS IN THE 470 MHZ TO 694 MHZ SPECTRUM BAND ALLOCATED TO BROADCASTING SERVICES IN THE REPUBLIC OF NAMIBIA

The Communications Regulatory Authority, in terms of Section 100(2)(d) and (e) of the Communications Act, 2009 (Act. No. 8 of 2009) herewith publishes the study as set out in the Schedule.

L.N. JACOBS
CHAIR PERSON OF THE BOARD
COMMUNICATIONS REGULATORY AUTHORITY

SCHEDULE

1. PARTIES TO THIS STUDY

The parties to the study are –

- 1.1 **MyDigitalBridge Foundation Namibia (MDB)**, an association incorporated not for Gain duly registered in terms of the laws of the Republic of Namibia, (Registration number 21/2012/0593), with its registered office at Unit 3, Block B, Nujoma Office Park, 1205 Luther Street, Windhoek, Namibia; the main project manager for the Study;
- 1.2 **Communications Regulatory Authority of Namibia (The Authority)** a juristic person established in terms of section 4 of the Communications Act (Act No. 8 of 2009) with its principal office at the Communications House, 56 Robert Mugabe Avenue, Windhoek, Namibia;
- 1.3 **Telecom Namibia Limited** a juristic person established in terms of section 2(1)(a) of the Post and Telecommunications Companies Establishment Act (No. 17 of 1992), with its principal place of business at No. 9 Luderitz Street, Windhoek; as the back haul infrastructure provider to this study.
- 1.4 **Microsoft East Africa Limited**, a corporation duly registered in the terms of the Laws of the Republic of Kenya, with its registered offices at Seventh Floor, I & M Bank House, P. O. Box 64736 Ngong Rd, Nairobi, Kenya; the supplier of the TVWS database and the supplier (to be hosted in Namibia) as well as design and implementation of a monitoring and evaluation solution for the Project, to validate whether the objectives of the Project are met;
- 1.5 **Millennium Challenge Account Namibia (MCA-N)**, an organisation unit established within the National Planning Commission by the Government of Namibia on 18th March 2009 pursuant to Cabinet Decision Number 5/ 18.03.08/004 with its offices at Atlas House, Room 16, 117 Sam Nujoma Drive, Windhoek, Namibia; being the funding partner to the project, whose funding commitment to the project will expire in September 2014; and
- 1.7 **Ministry of Education (MoE)** as the initial beneficiary of the study.

2. BASIS OF CO-OPERATION

- 2.1 The mission of MDB is to aid the “bridging” of the digital divide in order to redress the social and economic imbalance in our society. As such MDB has established “**The Citizen Connect Project.**”
- 2.2 The preamble of the Communications Act (No 8 of 2009) mandates the Authority to regulate telecommunication services and networks, broadcasting services, postal services and the use and allocation of radio spectrum.

3. OBJECTS OF THE STUDY

The objects of this Study are –

- 1.1 to conduct a study on the utilisation of TV White Spaces (Hereinafter referred to as “TVWS”) technologies;
- 1.2 to establish working committees consisting of members from MDB, the Authority and all other parties listed in clause 1 above;

- 1.3 to set up a "public" TVWS database independent from the spectrum database of the Authority for the purpose of this study;
- 1.4 to identify the cost associated with the implementation of TVWS technologies;
- 1.5 to identify the type of broadband services (such as fixed data, fixed voice, mobility etc) to be offered, bandwidth requirements and data speed attained by the utilisation of TVWS technologies;
- 1.6 to establish an understanding of the interface between TVWS backhaul solutions and equipment installed at customer premises; and
- 1.7 to gain insight into the requirements for the management of an open access centralised TVWS spectrum database.

4. DURATION OF THE STUDY

- 1.1 The study shall commence from date of publication of this notice in the *Government Gazette*.
- 1.2 The study shall terminate automatically after the expiration of a period of twelve (12) months, from date of publication of this notice in the *Gazette*, without one party giving any notice to the other party whatsoever, or otherwise in accordance with the provisions of this study document.

5. COSTS AND CHARGING

- 5.1 The parties acknowledge that this study provides mutual benefit on the basis that it entitles MDB to receive a right to test the feasibility of the utilisation of TV white spaces for telecommunication services and enables the Authority to test the proposed framework for the use of TV white spaces in preparation for the World Radio Conference 2015.
- 5.2 The utilisation of spectrum will not attract a spectrum use licence fee for the duration of the study and it should therefore, not be construed that any such spectrum use licence or telecommunications service licence has been duly considered and awarded to MDB.
- 5.3 Save as expressly provided in this study, each party shall bear all its own costs under this study and neither party is entitled to levy any charges on the other party.

6. TERMS AND CONDITIONS OF THE STUDY

The study will be conducted subject to the following terms and conditions-

- 6.1 The Authority herewith grants MDB, for the duration of this study only, a non-exclusive, non-assignable, non-transferable, revocable and a fee-free right to utilise the UHF band of 470 MHz to 690 MHz solely for purposes of this study.
- 6.2 The TVWS must only be deployed as per ITU Region 1 guidelines and approvals inclusive of equipment type approval and "weightless" standards.
- 6.3 During the study period, MDB is only authorised to utilise spectrum referred to in clause 6.1 above, and on a secondary basis.
- 6.4 The secondary use of spectrum must not cause interference to the primary users and must also be designed to operate in the presence of interference from other primary and or secondary users. The Authority reserves the right to cancel the study by giving seven (7) days written

notice, should the primary users complain about interference and MDB fails to rectify the complaint within forty eight (48) hours from date on which the complaint is received by MDB from the primary user.

7. OBLIGATIONS OF MDB

The obligations of MDB are -

- 7.1 To be the main project co-ordinator of this study and liaise with all parties listed in clause 1 of this document, in as far as the implementation of the study is concerned;
- 7.2 To take all steps necessary to put itself in a position to be able to fully and properly provide the services throughout the study and at all times be responsible for ensuring that its database, facilities and systems are suitable for the delivery of such services;
- 7.3 Save for the co-operation set out in this study document, MDB shall be solely responsible for performing its obligations under this study. No requirements to liaise or otherwise communicate between the parties or between MDB and any third party (including any of its agents) and no act or omission of the Authority shall release MDB from having to perform those obligations;
- 7.4 Subject to the provisions of clause 6.1 above, MDB may utilise the vacant frequencies within the spectrum band 470 MHz to 694 MHz only;
- 7.5 MDB shall be required to submit to the Authority lease agreements, interconnection and service agreements, as well as network diagrams of implementation concluded with other parties within fourteen (14) days prior to commencement of the study period as stated in point 4.1 above.
- 7.6 To conduct pre- and post-implementation scanning of the spectrum band (470 MHz to 690 MHz) specifically and limited thereto, without any exception during the period of study;
- 7.7 Subject to the provisions of clause 7.5 above, MDB must ensure that the equipment to be utilised is limited to scan the frequency band between 470 MHz to 690 MHz only. Any scanning and utilisation of spectrum outside this band is herewith expressly prohibited and MDB may be liable for a criminal offence in terms of the provisions of the Communications Act, Act No.8 of 2009;
- 7.8 MDB shall be required to submit detailed reports to the Authority on a monthly basis regarding this study and on the progress made to conclude type approval of the TVWS equipment utilised for the study by the Office of Communications in the United Kingdom (OFCOM) or the European Testing Standards Institute (ETSI);
- 7.9 MDB shall provide the Authority with a monthly written report during the duration study for the purposes of evaluating the study and its outcomes, on or before the 25th of each month. The report shall address the following issues, but not limited thereto, and any other reasonably relevant matters in the opinion of the Authority:
 - i. The costs associated with the implementation of TV White Space technologies;
 - ii. The interfaces between backhaul solutions and user equipment;
 - iii. The type of services offered and the speed at which the services are actually offered to all parties;
 - iv. The progress of the roll out to the sites identified in "Annexure A" hereto;
 - v. Any interferences and the performance of the equipment in the aforesaid spectrum band;

- vi. The methodologies used in the study;
 - vii. The preliminary and final results of the study and relevant recommendations and conclusions regarding the objects of this study and the regulation of TVWS;
 - viii. Submission of any relevant documents, databases that are relevant for the purposes of the study and that are created as part of this study by the parties;
 - ix. Reporting on the experience of customers using the services, addressing issues of quality of service in line with the principles contained in the draft Regulations Prescribing Quality of Service Standards Applicable to Service Licensees and thereafter the final regulations once made, electromagnetic fields and public health, environmental impact assessment regarding the equipment deployed and utilisation of the services, cyber security risk associated with the equipment and services deployed any;
 - x. Conclusions regarding the continuation or termination of this study based on the results of the study and
 - xi. Any other matters incidental to the implementation of the study.
- 7.10 MDB shall be required to schedule a monthly meeting with all parties listed in clause 1 of this document, where the report referred in clause 7.8 above will be tabled and discussed, failing which the Authority may call such meetings. The meetings shall be held at the premises of the Authority.
- 7.11 MDB must obtain and submit to the Authority an environmental clearance certificate, prior to the commencement of building a new base station site should a new site be required.
- 7.12 MDB shall be required to establish and host the TVWS spectrum management database in Namibia, granting the Authority full-unencumbered access to the database and any other relevant records and documents. Upon completion of the study, possession of the database shall be handed over to the Authority and the data be deleted from MDB's server, within a period of thirty (30) days.
- 7.13 MDB shall be required to submit to the Authority, terms and conditions subject to which services will be provided to the beneficiaries at the sites listed in "Annexure A", for approval by the Authority, upon the commencement of the study, as an explicit resolute condition of this study. The submission must contain consumer protection measures and complaints handling and adjudication procedures.
- 1.14 In addition to the report in terms of clause 7.8 above, MDB shall be required to submit a report to the Authority one (1) month prior to the completion of the study period addressing;
- i. The closure of the study period;
 - ii. Discontinuation of services pending the publication of regulations to be published in line with the ITU regulations for spectrum utilisation;
 - iii. Indicating the dismantling of equipment and discontinuation of TVWS services;
 - iv. Dismantle the prototype site in Brakwater in the district of Windhoek; and
 - v. Ensure that all services offered during the study at all sites listed in "Annexure A" hereto are handed over to a licenced entity or substituted by telecommunications services already offered by such licensed entity after the completion of the study to ensure continuation of these services after the study.

8. OBLIGATIONS OF THE AUTHORITY

The obligations of the Authority are-

- 8.1 To publish the final notice in the *Gazette* to commence the study period after consideration of public comments received;

- 8.2 To carry out the responsibility of spectrum planning and providing information on spectrum utilised to date by broadcasting service licensee in terms of their spectrum use licences as well as any new spectrum use licenses that may be awarded by the Authority during the study period;
- 8.3 To Provide the Regulations Setting Out the Frequency Channelling for Digital Terrestrial Television as published in Government Gazette No. 5201, General Notice No. 166 dated 29 May 2013 listing all frequencies utilised and reserved for digital terrestrial television services specifically for and limited to the 470 MHz to 694 MHz spectrum band to allow for the preparation of an independent TVWS spectrum database by MDB;
- 8.4 Oversee activities undertaken by the parties listed in clause 1 above during the duration of study period and will play no operational role therein;
- 8.5 Based on the reports submitted by MDB referred to in clause 7 above, the Authority will make a final determination on whether the utilisation of TVWS technologies will be allowed within the 470 MHz to 690 MHz spectrum band on a secondary basis (where licensees are licensed and allowed to utilise the spectrum at a fee but have no protection) or on an opportunistic basis (where no licensing or fees are involved and no protection at all exists) in future.
- 8.6 The recommendation referred to in clause 8.6 above is subject to the outcome of the International Telecommunications Union (ITU) World Radio Conference to be held in 2015 and publication of regulations by the Authority in this regard.

9. GOOD FAITH

- 9.1 All activities will be carried out with transparency to all other participants and the Authority.

10. GENERAL

- 10.1 Any dispute between the parties concerning this study shall be settled amicably between the parties through consultation.
- 10.2 If the parties fail to reach an agreement within (30) days, or within such other period as the parties may agree, the dispute shall be referred to Arbitration under the Arbitration Act (Act 42 of 1965).
- 10.3 The Parties shall be equally liable for the costs of the arbitration proceedings.
- 10.4 The Authority may on its own motion or on a petition filed by any party to this study reconsider any order or decision that it has made in respect of this study, within 90 days from date of making the order or decision.

11. SPECIFIC EXCLUSIONS, WARRANTY AND INDEMNITY

- 11.1 Parties to the study shall not be liable for any act or omission on the part of the other party (whether negligent or otherwise, including gross negligence), which causes injury, loss or damage to any third party (whether direct, indirect or consequential) and the parties hereby indemnify each other in respect thereof, during and after the study period agreed to herein.
- 11.2 This study shall not be considered to be a spectrum use license or a telecommunications service license issued or granted, impliedly or otherwise to MDB, directly or indirectly. MDB specifically indemnifies the Authority with regards to any liability that may arise as a result of this study.

- 11.3 The Parties warrant that they have the qualifications, ability, skill and experience to properly render the services and to perform all related functions as contained in the study.
- 11.4 This study shall not be considered to be an amendment of the Namibian National spectrum band plan or to allow for the utilisation of broadcasting spectrum for telecommunication services by other persons, except as set out in this study document.

"ANNEXURE A"

Site	Latitude	Longitude	Site	Latitude	Longitude
Etsapa CS	17°51'31"S	16°31'29"E	Oshikulufitu CS	17°33'05"S	15°08'22"E
Ikelo CS	17°52'43"S	16°24'01"E	Etayi CO	17°33'18.72"S	15°31'39.68"E
Nanghonda CS	17°37'06"S	15°55'39"E	Okalongo CO	17°26'12.94"S	15°19'34.97"E
Omakondo CS	17°34'59"S	16°11'08"E	Ongongo CO	17°41'53.45"S	15°17'1.22"E
Onamukulo CS	17°40'55"S	16°03'25"E	Ekwafo SS	17°46'09"S	15°45'58"E
Onanghulo CS	17°33'00"S	15°47'24"E	Hashiyana CS	17°46'08"S	15°45'56"E
Onankali North CS	17°46'19"S	16°13'48"E	Hashiyana PS	17°46'08"S	15°45'56"E
Oupili CS	17°37'00"S	16°58'59"E	Olukolo JS	17°55'23"S	15°57'38"E
Shikudele CS	17°34'29"S	15°53'49"E	Onamutai CS	17°43'53"S	15°50'20"E
Tulihongeni CS	17°38'32"S	15°39'16"E	Ondjora CS	17°50'58"S	15°43'28"E
Okongo CO	17°34'30.67"S	17°13'13.59"E	Eguwantale CS	17°59'16"S	15°41'33"E
Ohakafiya CO	17°34'44.93"S	16°41'14.40"E	Oluno CO	17°54'27.48"S	15°58'18.14"E
Ondobe CO	17°31'14.12"S	16°3'20.21"E	Onamutai CO	17°43'51.92"S	15°50'16.75"E
Ongha CO	17°38'42.21"S	15°55'23.16"E	Ompundja CO	17°55'43.05"S	15°41'38.41"E
Ekangolinene CS	17°28'13"S	15°29'58"E	Olupandu PS	17°34'19.992"	15°35'40.992"
Ekundu CS	17°25'13"S	15°20'21"E	Oneeya CS	17°36'33.00"S	15°14'8.00"E
Etayi CS	17°33'21"S	15°31'21"E	Oshawapala CS	17°35'39.00"S	15°49'18.98"E
John Shekudja CS	17°28'03"S	15°17'13"E	Epoli CS	17°38'6.25"S	15°58'40.69"E
Kampelo CS	17°52'05"S	15°16'31"E	Onamahoka CS	17°35'19.00"S	15°59'55.00"E
Oneeya CS	17°36'33"S	15°14'08"E	Uukelo CS	17°35'35.99"S	16°6'29.98"E
Brakwater North	22°23'11"S	17°2'1.29"E			