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HON. GAMALIEL A. CORDOBA

Commissioner
National Telecommunications Commission
Agham Road, Quezon City
Philippines

Re: Allowing Use of the Unused TV Channels (TV White Space) on a Secondary and Non-Interfering Basis

Dear Commissioner Cordoba:

On behalf of the Dynamic Spectrum Alliance (DSA),¹ I am writing in further support of the National Telecommunications Commission's (NTC's) draft Memorandum Circular that would allow the use of unused TV channels (TV white space) on a secondary and non-interfering basis. I am also writing to thank you for allowing DSA's comments to be placed in the record at your recent public hearing on the draft Memorandum Circular. In light of Industry Canada's and UK Ofcom's decisions in the last two weeks to implement TV white space regulations,² NTC's consideration of this issue is particularly timely.

The DSA welcomes the NTC's adoption of an interim framework that enables the Information and Communications Technology Office of the Department of Science and Technology (DOST-ICTO) to use TV white spaces to serve public elementary schools, public high schools, public health centers, and government agencies and units. By allowing access to TV white space spectrum, the NTC will enable more efficient utilization of finite spectrum resources and support key policy priorities such as digital inclusion and economic development.

At the same time, I reiterate DSA's support for two important changes to the draft Memorandum Circular. First, the NTC should permit deployments throughout the Philippines. Specifically, deployments should be permitted in the Manila metropolitan area and should not be limited to underserved and unserved areas. Second, the NTC should allow TV white space technologies to be used without limitation to customer classes, applications, and services.

As we explained in more detail in our December 17, 2014, submission, these changes are supported by provisions in the Public Telecommunications Policy Act requiring the Philippine Government to "promote a fair, efficient and responsive market to stimulate the growth and development of the telecommunications facilities and services" and to promote efficient and effective use of limited

¹ The Dynamic Spectrum Alliance's over forty members span multinational companies, small- and medium-sized enterprises, academia, research, and other organizations from around the world, all working to create innovative solutions that will increase the utilization of available spectrum to the benefit of consumers and businesses alike. A full list of members is available at www.dynamicspectrumalliance.org/members.html.

² See <http://news.gc.ca/web/article-en.do?nid=928659> (publication of technical standards and operational requirements for TV white spaces in Canada); <http://stakeholders.ofcom.org.uk/consultations/white-space-coexistence/statement> (release of decision implementing TV white space regulations in the United Kingdom).

spectrum resources and “avail of new and cost effective technologies in the use of the methods for its utilization”.³

NTC should allow TV white space deployments in the Manila metropolitan area so long as they do not interfere with authorized incumbent operations

While TV white space technologies are well-suited for deployments in unserved and underserved rural areas, technical and regulatory experience also supports deployment of TV white space technologies in major metropolitan areas. TV white space projects have been or are being deployed in major metropolitan areas, such as Accra, Cape Town, Dar es Salaam, Glasgow, London, and Singapore. In each of these locations, TV white space transmissions have increased access to wireless services without causing interference to digital television reception.

None of the national rulemakings adopted or under consideration seek to exclude urban areas from the scope of TV white space rules. For example, in the case of Singapore, IDA has decided to allow access to over 180 MHz of TV white space spectrum. Regulations now in place the United States, the United Kingdom, and Canada provide nationwide access to the TV white spaces.

I understand that during the public hearing, two arguments were raised in support of limiting white space deployments in metropolitan Manila. First, it was alleged that there are no available white space channels in the Manila metropolitan area. Even if this is true, channel assignment is not static, and future use may change. As a result, any current lack of availability does not justify a regulatory carve-out. Second, one participant argued that broadcast signals coming from Baguio, over 250 kilometers away, can still reach metropolitan Manila. Under regulations adopted in other jurisdictions, UHF and VHF frequencies not assigned for licensing in a particular area are available for TV white space access. This includes, for example, areas which are outside the protected contours of a broadcast license. Assuming a broadcaster transmitting from Baguio would not be entitled to interference protection in Manila itself, the Baguio channel should be available for use in the Manila metropolitan area.

In addition, there is no reason to wait until the completion of the digital television transition (DTT) prior to permitting dynamic access to the TV white space frequencies. Dynamic access to the TV white spaces is controlled by TV white space databases, which preclude TV white space devices from using frequencies that have been assigned to broadcasters and other licensees. By providing TV white space devices with daily (or even more frequent) updates on licensed operations, TV white space databases ensure that incumbent licensees are always protected from interference. Because of the database managed interference protection regime, TV white space access can occur before, during, and after the transition from analog to digital broadcast transmissions. This is not simply theory. The TV white space trial in Cambridge, England occurred before, during, and after the City of Cambridge’s DTT. In that case, the trial participants were able to demonstrate a seamless, interference-free transition from analog to digital transmissions. Many projects currently underway around the world, including in major cities, like Dar es Salaam, Tanzania, and Cape Town, South Africa, launched prior to the DTT.

³ See Section 4(b)-(c) of RA 7925 (the Public Telecommunications Policy Act).

One important by-product of the DTT is that more frequencies will be opened up for reallocation and/or unlicensed access – the so-called Digital Dividend. So, while there might be a limited amount of TV white spaces in Metro Manila today under analog broadcast transmissions, the DTT will undoubtedly reveal more TV white spaces. Once the DTT occurs, the TV white space database(s) will be able to seamlessly make this adjustment and provide greater access for TV white space devices. This is another reason not to exclude Metro Manila from TV white space access today.

The NTC’s proposal to limit TV white space deployments to “underserved and unserved areas” also raises some definitional challenges. There is no clear definition of what constitutes an unserved or underserved area. Nor is there an obvious way to confirm whether an area reached by a TV white space signal is unserved or underserved by broadband/Internet access. It is also not clear what level of geographic granularity would be relevant in determining whether an area is unserved or underserved. Moreover, broadband/Internet access might be available in a particular geographic area, but that availability is neither ubiquitous nor affordable for many citizens. In addition, the very presence of a TV white space deployment in a heretofore unserved or underserved area might motivate other competitors to serve a particular area. Would such market entry mean that TV white spaces is no longer allowed in that location? Such a risk would discourage companies from making the initial investment to deploy TV white space infrastructure. Ultimately, market forces should determine which technology would best be suited to service various locations in the Philippines. We, therefore, recommend that the underserved and unserved areas limitation be removed from the Memorandum Circular.

Based on experiences around the globe, it is clear that unlicensed devices can use the vacant television bands without causing harmful interference to incumbent users, and that such use provides valuable public interest benefits. These public interest benefits include increasing digital and social inclusion and increasing the resiliency of the Philippines’ broadband infrastructure in the event of natural and manmade disasters. The Dynamic Spectrum Alliances urges the NTC to move expeditiously to allow DOST-ICTO to use TV white space, but we respectfully reiterate our request that the NTC allow greater flexibility for project deployments to encompass the Manila metropolitan area, not limit deployments to unserved and underserved areas, and allow TV white spaces technologies to be used without limitation to customer classes, applications, and services. Moreover, we urge NTC to begin the process of adopting a permanent regulatory framework enabling operation of unlicensed wireless devices in TV white space. The Dynamic Spectrum Alliance has developed [Model Rules](#) which could serve as the basis for regulations enabling unlicensed access to the TV white spaces in the Philippines. The Model Rules are based on regulations already adopted in the United States, the United Kingdom, Canada, and Singapore, as well as experience gained in various other countries’ pilot projects.

Please do not hesitate to contact me if you or your staff would like to meet to further discuss any of the points raised in this letter. Moreover, the Dynamic Spectrum Alliance membership would be happy to meet with you and/or your staff on the side of the upcoming annual Global Summit, which will take place in Manila, Philippines from 6-8 May 2015. On behalf of the Dynamic Spectrum Alliance, I am looking forward to joining you in Manila at the annual [Global Summit](#).

Respectfully submitted,



H. Sama Nwana
Executive Director
Dynamic Spectrum Alliance