

## **DSA Response to the ANE consultation on TV White Spaces rules for Colombia**

### **Introduction**

The Dynamic Spectrum Alliance (DSA) is a global organization advocating for laws and regulations that will lead to more efficient and effective spectrum utilization.<sup>1</sup> The DSA's three goals are closing the digital divide globally, enabling the Internet of Things and alleviating the "spectrum crunch". The DSA held its annual Global Summit in Bogotá in April 2016 and is pleased to file a submission in this consultation on modifications to Resolution 711 of 2016 through the adoption of the conditions of use of devices of whitespaces.

The DSA applauds the ANE's leadership in developing rules for license-exempt access to vacant television channels, also known as white spaces. Demand for wireless services continues to skyrocket, and enabling shared access to spectrum will be increasingly important in meeting growing demand. We therefore welcome attempts to enable technologies which can make more efficient use of the valuable spectrum in the TV bands in Colombia.

As demonstrated by the 2016 pilot project which successfully connected schools in the village of Rio Arriba, Aguadas, to the Internet for the first time, white spaces access can be deployed quickly and takes advantage of otherwise unused spectrum. Because enabling spectrum access for white spaces devices does not require relocating incumbents and because the rules protect those incumbents, a license-exempt framework for access to TV white spaces can be adopted and put into use without disruption to incumbent operations.

However, the success of white space access depends on the regulatory framework governing it and we are deeply concerned that elements of the draft rules proposed by the ANE would severely limit the potential benefits of white space access.

We are therefore providing recommendations for four ways in which the rules should be amended to enable TV white spaces to successfully contribute to greater broadband connectivity for the citizens and businesses of Colombia.

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<sup>1</sup> Our membership spans multinationals, small-and medium-sized enterprises, and academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the amount of available spectrum to the benefit of consumers and businesses alike. A full list of DSA members is available on the DSA's website at [www.dynamicspectrumalliance.org/members/](http://www.dynamicspectrumalliance.org/members/).

**The rules should enable use of white spaces across Colombia because restricting them to less densely-populated areas will not allow a sustainable market to develop**

The proposed rules would restrict use of white spaces to rural areas and municipalities below 100,000 people. The rules should be amended to ensure that the sharing can happen in both rural and urban areas. This is because nationwide markets are needed for these new technologies to enable the economies of scale which will provide necessary commercial incentives for companies to invest and to drive down the costs of devices.

**The rules should enable use of both fixed and mobile devices to ensure innovation and diversity in white space devices**

The draft rules only allow for fixed operations and do not permit mobile devices. This needlessly stymies the development of a rich white space ecosystem in Colombia making it less equipped to respond to the variety of needs these technologies could address in Colombia.

Recognizing fixed and portable devices as distinct permitted categories would give the ANE the flexibility to establish different rules for each class if it decides such an approach would be beneficial.

**Out-of-band emissions requirements should conform to existing standards to ensure access to affordable, pre-existing equipment**

The out-of-band emissions in the draft rules are more stringent than in existing rules in the US and UK. If this was the case in the final rules, companies using white spaces in Colombia would not have access to the equipment already produced to comply with the standards in one or both of these rules. Consequently, development of the white space ecosystem in Colombia would be delayed until compliant devices could be developed. Furthermore, it is likely that the relatively smaller size of the market in Colombia (dramatically so if limited to rural areas and small municipalities), would disincentivize manufacturers from developing equipment and / or prevent the economies of scale which lead to the reduction of equipment prices.

Instead, the ANE should permit devices to comply with the out-of-band emissions set out by the FCC or the European Telecommunications Standards Institute (ETSI), adopted by Ofcom. In this way, Colombian users of white spaces will be able to take full advantage of devices being developed for the global market. The ETSI rules permit devices meeting less stringent emissions standards to operate, but the list of available channels and / or authorized maximum power levels is reduced accordingly to ensure the protection of primary users. Regulatory frameworks and TV white space databases can accommodate both the FCC and Ofcom approaches, and allowing both approaches

provides operators and users with additional flexibility. Indeed, the TVWS rules adopted by the Government of Singapore in 2014 allow for either approach.

### **Rules should be permanent rather than for a short, temporary period**

The rules are set for only two years and it is hard to see adequate benefits being proved within that timeframe, especially if any of the three limitations identified above are retained in the final rules. In addition, the uncertainty created by making the rules temporary risks chilling investment when it is not clear whether the use of these technologies will continue to be permitted at the end of the two-year period.

### **Conclusion**

We truly welcome the ANE's vision in becoming one of the early adopters of this technological innovation and fully support the intentions to use access to white spaces to tackle important broadband connectivity issues.

However, in the absence of a national market and permanent rules which permit both fixed and mobile devices, and equipment conforming to pre-existing standards, the excellently-intentioned rules will deliver only limited benefits to the Colombian people. Without at least addressing the issues we have identified, it seems inevitable that there will not be the necessary investment, and people - including rural communities like Rio Arriba - will not benefit from these possibilities.

We therefore urge the ANE to expand the scope of its proposed regulations. We stand ready to provide detailed advice on how to amend the rules to make them a success for Colombia.

Sincerely,

Kalpak Gude  
President  
Dynamic Spectrum Alliance