

**CARLSON WIRELESS™**  
Microwave Broadband and Telephone

September 15, 2010

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: TV White Spaces  
Written Ex Parte Presentation  
ET Docket Nos. 04-186 and 02-380

Dear Ms. Dortch:

Since 1986, Carlson Wireless has been focused on serving the telecommunications needs of rural and remote areas. As a radio manufacturer, we optimize our product lines specifically for longer and geographically difficult paths as well as for solar powerability. As a result, we have had the opportunity to work with a number of Native American Tribes over the last 20-plus years. Carlson Wireless would like to lead the industry by assisting Tribes and local service companies in getting operational examples of this technology in place in the near future. Located in Northern California, there are five Tribes in our immediate area, and we are actively working with two of them to do demonstrations projects as soon as possible.

We agree with the Commission that TV white spaces could be of particular benefit to Native Americans living on Tribal lands. The National Broadband Plan (Recommendation 5.17) specifically noted the benefits that white space spectrum could have on Tribal lands. We agree – with the availability of TV white space frequencies for rural broadband use, we see a huge potential for the Native American Tribes. We want to add three points to the record:

- **Minimal New Infrastructure in Culturally Sensitive Areas:** With 2 to 5 times the area coverage of WiFi, the TV frequencies make it much more possible that *existing* infrastructure will support the backhaul and last-mile portions of equipment. This makes it unnecessary to alter the landscape of culturally sensitive areas, which has been a sizable constraint in the past. The Commission can enhance this benefit by permitting base stations to operate from above the current 30-meter limit. This rule change, which is supported by WISPA, Motorola and Spectrum Bridge, would mean that fewer areas on Tribal lands will be necessary for towers.
- **Lower Capital Expense:** Greater coverage means fewer towers and access points, which typically represent more than 50% of the cost and time in building a network. Therefore, one could expect *more homes and businesses* will get coverage for the same initial grant. Again, allowing base stations to operate from greater heights will allow further cost savings to be realized. In some cases, the high cost of infrastructure – specifically the cost to build tower sites – will prevent service from being deployed on Tribal lands. This would be a most unfortunate outcome.

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- **Spectral Segregation of Unlicensed Wireless Microphones:** First, we believe that unlicensed wireless microphones should be confined to the two available channels adjacent to Channel 37 on a *non-exclusive* basis, meaning that wireless microphones would be registered as Part 15 devices in the geolocation database on these channels for the specific event. If additional white space spectrum is needed, then unlicensed wireless microphones should be permitted to register to use Channels 14-20 (where no mobile devices are allowed). We do not believe that the record supports the need for additional spectrum for unlicensed wireless microphones. However, if the Commission decides to make additional spectrum available, we suggest the following: (1) use of other channels should be upon application to the Commission (OET on delegated authority following public notice) and with a certification made under penalty of perjury, (2) there should be a meaningful application fee to prevent unnecessary blocking of channels that could be used for other purposes (per event basis), (3) the application must show that Channels 14-20 and the two non-exclusive channels are not available based on a specific showing and reasonably efficient technical solutions, and the inability of existing microphone equipment will not be sufficient to meet this criterion, and (4) the application must be for specific channels on specific dates/times (not open-ended).

We appreciate your consideration of these points, which will greatly contribute to the deployment of broadband on Tribal lands.

Respectfully submitted,



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