



**Internet and Telephone**

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7 August 2017

**VIA ECFS**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, DC 20554

Re: Docket Number **RM-11791** – *Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3700 – 4200 MHz Band*

Dear Ms. Dortch:

Cal.net, Inc. hereby submits the following comments in **strong support** for the recent petition from the Broadband Access Coalition to open the 3700-4200-MHz band to terrestrial fixed-wireless point-to-multipoint ("P2MP") operations.

Cal.net is a facilities-based fixed-wireless Internet Service Provider ("WISP") and a Competitive Local Exchange Carrier based in California. We focus almost exclusively on the rural markets of the western foothills of the Sierra Nevada Mountains and currently provide broadband services to many thousands of residential and business customers. We offer standard speed packages up to 25 Mbps down / 4 Mbps up, along with dedicated symmetric connections up to 100 Mbps down/up. We also provide facilities-based digital telephony (VoIP) services. Our service area is quite rural, and covers over 2,000 square miles with an average housing density of about 60 households per square mile. In much of our service area, we are the only provider who can offer true broadband speeds.

Cal.net is embarking on a very deliberately aggressive growth plan over the next few years that will comprise not just geographic expansion into even-more sparsely populated rural areas but also significant upgrades to our existing service capabilities. Additionally, we intend to bid in the forthcoming FCC Connect America Fund reverse auction, and this band could be instrumental for us to deliver the required 100-Mbps service levels. We are also upgrading our network infrastructure to support streaming digital video service, becoming a true "triple play" service provider. Key to this growth is the rapidly-improving capabilities of fixed wireless P2MP technologies that are beginning to easily allow service plans of 100 Mbps and more to end users over long distances. But these technological marvels are often hamstrung

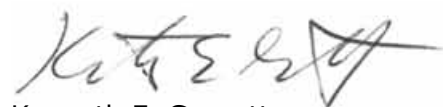
by lack of spectrum availability. The unlicensed 2.4-GHz band is too narrow, and the unlicensed 5-GHz band is frequently too noisy to find wide enough usable bandwidth to support those speeds while simultaneously serving large numbers of customers. Furthermore, due to electromagnetic propagation characteristics, the 5-GHz band is essentially a line-of-sight-only band, and does not lend itself well to near-line-of-sight ("nLOS") situations – and a large proportion of our service areas requires something that will penetrate a few trees without significant degradation of service quality. The forthcoming CBRS band (as currently defined) will open up additional bandwidth for nLOS situations – but the narrowness of that band (150 MHz) is still just barely sufficient in the best of cases.

To solve these challenges, Cal.net and the entire WISP industry urgently need this proposed 500 MHz of spectrum. This structure detailed in the petition will enable cost effective high-quality 100-Mbps-plus services to be delivered to consumers due to a number of factors:

- The width of the band not only enables these speeds from a technical perspective, it also provides sufficient room to allow multiple providers to deliver these high speed packages simultaneously in the same area, thus promoting healthy competition.
- The licensed nature of the proposal ensures that competing providers can coexist peacefully without imposing interference upon each other.
- The "lightly-licensed" approach ensures that spectrum costs will be kept to a minimum, allowing those substantial savings to be passed on to the consumer.
- The mid-band positioning and increased power allowed by operating in a licensed manner enable true nLOS capabilities, thus dramatically increasing the serviceability of the band, reaching those difficult customer locations that are currently unable to be served.

In sum, Cal.net respectfully urges the Commission to accept this petition and to prepare a Notice of Proposed Rulemaking with the utmost of exigency in order to move this concept forward to reality.

Respectfully submitted,



Kenneth E. Garnett  
Chief Technology Officer  
Cal.net, Inc.