



April 10, 2015

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

**Re: Notice of Oral *Ex Parte* Presentation**

*Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354

Dear Ms. Dortch:

On April 8, 2015, Michael Calabrese of New America's Open Technology Institute (OTI) met with Renee Gregory, Legal Advisor to Chairman Tom Wheeler, concerning the above-referenced proceeding.

The OTI representative expressed strong support for the Commission's proposal to create a Citizens' Broadband Radio Service (CBRS) at 3.5 GHz. OTI believes the Commission has done an admirable job in striking a reasonable balance between competing interests, implementing in a practical manner the three-tier dynamic spectrum sharing framework outlined by the President's Council of Advisors on Science and Technology (PCAST) less than three years ago. Calabrese reiterated the longstanding support of OTI and of the Public Interest Spectrum Coalition (PISC) for an Order ensuring that a majority of the 3550-3700 MHz band is reserved for General Authorized Access (GAA) and that also permits opportunistic access to Priority Access License spectrum until such time as the licensee reports to the Spectrum Access System that it is commencing actual service.

The OTI representative first asked for clarification about reported provisions in the draft Report & Order that could potentially combine to create uncertainty about whether there will always be a sufficient amount of GAA spectrum available in every market and at all times. Any uncertainty about the availability of GAA in every market could stall or undermine the development of a mass market for GAA chips, devices and services. Calabrese reiterated OTI's support for a 50 megahertz "floor" for GAA. For example, if the Commission decides to assign PALs only below 3650 MHz, then the 3650-3700 MHz band should be reserved for GAA at all times.

Calabrese noted that a second option would be to change the initial apportionment of GAA and PAL spectrum to 90 and 60, respectively, rather than 80 and 70, so that the chances of GAA foreclosure would be lower. OTI believes the FCC should err on the side of more GAA spectrum. Because the Spectrum Access System dynamically determines the spectrum available in each area, the Commission could easily increase the ratio of PAL spectrum in the future, whereas it would be extremely difficult to reallocate already-licensed PALs for GAA use.

Calabrese expressed OTI's strong support for provisions in the draft Order aimed at deterring the warehousing of PALs and particularly the acquisition of PALs by speculators or other parties not interested in immediately deploying facilities that make actual and intense use of the band. Calabrese noted that if there is only one bidder, or if there is demand for fewer than eight PALs in a census tract, it is likely that that 150 megahertz of GAA spectrum can meet the needs of any party denied a PAL in the absence of an auction. More critically, OTI believes that to deter warehousing and speculation, the Commission should attach a substantial reserve price or annual user fee to any assignment of a PAL, whether or not there is an auction, in order to ensure that the PAL holder has a strong financial incentive to deploy actual facilities and service in the PAL area.

The OTI representative next reiterated OTI's concern about reports that companies, including Qualcomm and Verizon, are testing pre-certification versions of LTE-U technology that could be used by licensed services to dominate GAA in an anti-competitive manner. OTI suggested there is a strong need for preemptive "rules of the road" concerning the shared nature of the GAA bands in order to avoid another Section 333 Wi-Fi blocking controversy down the road. Mobile carriers will have both the ability and strong incentives to aggregate GAA spectrum as a free adjunct to their licensed networks, initially as one-way Supplemental Down Link channels, both lowering their costs for licensed spectrum while for the first time being able to charge consumers for the use of unlicensed spectrum.

OTI and Public Knowledge have raised particular concerns with regard to Qualcomm's effort to ensure that the control channel for LTE use of unlicensed spectrum – including, potentially, the General Authorized Access portion of the 3.5 GHz band – is anchored in a licensed frequency and gives carriers an advantage over unlicensed users.<sup>1</sup> Calabrese emphasized that it is contrary to the Commission's goals in adopting a three-tier band – and to the PCAST's admonition that dynamic spectrum sharing should include opportunistic access by a diversity of providers and the public – if the Commission in this Order essentially permits an expensive carrier license to be the gateway to preferred use and even dominance of the GAA spectrum.

Moreover, based on our understanding, individual carriers will have the option to configure their LTE-U equipment to dominate GAA bands. Even if LTE-U can in theory share GAA (or other unlicensed bands) with 802.11 Wi-Fi technologies, carriers will have the option to introduce just enough latency to frustrate consumer use of real-time applications, such as FaceTime video calling. Carriers would have powerful incentives to use LTE-U to deter mobile market entry by "Wi-Fi First" providers, such as wireline ISPs, a development that would also undermine intensive use of this breakthrough small cell band and harm a far wider range of small cell users, including community networks as well as

---

<sup>1</sup> See, e.g., *Ex Parte* Letter of Michael Calabrese and Harold Feld to Marlene H. Dortch, Federal Communications Commission, GN Docket No. 12-354 (March 16, 2015).

individual business and household users.

Calabrese stated that merely requiring equipment to have the “capability” of operating in a two-way mode on the band does not go far enough. He suggested that the Commission consider requiring that at least on the open and shared GAA portions of the band, operators and devices should be required to operate across the 3.5 GHz band ***on a standalone basis and without being dependent on a control channel anchored in licensed spectrum outside the band***. Otherwise, the Commission would be making the purchase of an expensive cellular license the price of favored use of what should be the public and fairly-shared GAA portion of the band.

OTI has no objections to the use of LTE or any other technology on GAA or other unlicensed bands, provided that a general standard of coexistence ensures that these bands remain part of the public commons equally open and useful to everyone. If mobile carriers want to control spectrum and aggregate it into licensed networks, they should go to auction, or to secondary markets, and use licensed spectrum. Requiring that GAA spectrum is shared fairly and not controlled from outside the band could be a technologically neutral requirement, leaving industry and individual companies the ability to decide exactly how to implement coexistence.

OTI believes that at a very minimum, the Commission should use the Further Notice it will release with this Order to seek further comment – as well as technical data – on appropriate and neutral coexistence rules that will ensure GAA spectrum serves its intended purpose as opportunistic, open and fairly shared public spectrum. Anything less than this threatens the integrity of the PCAST vision of a spectrum abundance premised on open access and intensive spectrum re-use.

Respectfully submitted,

*/s/ Michael Calabrese*  
Director, Wireless Future Project  
Open Technology Institute  
1899 L Street, NW - 4<sup>th</sup> Floor  
Washington, DC 20036

cc: Renee Gregory