

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Promoting Investment in the 3550-3700 MHz	)	GN Docket No. 17-258
Band	)	

**COMMENTS OF THE  
TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

The Telecommunications Industry Association (“TIA”)<sup>1</sup> hereby submits comments to the Federal Communications Commission (“Commission”) in response to the Notice of Proposed Rulemaking (“NPRM”) in the above-captioned proceeding.<sup>2</sup>

TIA’s members provide technologies underlying all *three* tiers of the 3.5 GHz band – federal and satellite incumbents, priority access licensees (“PALs”), and general authorized access (“GAA”) users. Five years after this proceeding began, TIA members continue to have a significant interest in achieving the maximum potential of the band for mobile broadband, including the use of small cell technologies, while ensuring appropriate protections for incumbent users. TIA member companies have invested in the development of technologies designed for the Citizens Broadband Radio Service (“CBRS”), including the development of spectrum access systems (“SAS”) to provide dynamic access to spectrum.

Therefore, we urge the Commission first and foremost to move quickly to consider any potential changes to the CBRS rules in order to promote predictability and finality for all market

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<sup>1</sup> TIA is the leading trade association for the information and communications technology (“ICT”) industry, representing companies that manufacture or supply the products and services used in global communications across all technology platforms. TIA represents its members on the full range of policy issues affecting the ICT industry and forges consensus on industry standards.

<sup>2</sup> [Notice of Proposed Rulemaking](#) and Order Terminating Petitions, *Promoting Investment in the 3550-3700 MHz Band*, GN Docket No. 17-258 (rel. Oct. 24, 2017) (“NPRM”).

participants. Against that backdrop, we endorse below three proposed alterations to the service rules that the Commission could implement quickly to improve the likelihood of commercial success for CBRS without causing disruption to technology development efforts underway.

**I. The Commission Should Assign Priority Access Licensees via Longer Renewable Terms.**

TIA supports the Commission’s proposal to increase the PAL license term to 10 years with the possibility of renewal.<sup>3</sup> We agree with CTIA and T-Mobile that the current three-year PAL term with no renewal rights significantly undermines incentives for operators to invest in the band.<sup>4</sup> In its *Spectrum Frontiers* proceeding in 2016, the Commission itself explained that longer terms were particularly appropriate in bands where “new technology is still nascent and will require time to fully develop.”<sup>5</sup> Moreover, the Commission found that awarding a renewal expectancy for subsequent license terms would be “consistent with [its] treatment of many other licensed services and [would] provide[] incentives for licensees to continue to provide service.”<sup>6</sup>

The 3.5 GHz band differs from the millimeter-wave bands in important ways, and the Commission should ensure that innovative services have opportunities to make use of the band. That said, both proceedings have represented clear efforts by the Commission to promote spectrum sharing and investment in new technologies. This easy-to-implement licensing policy change will enable the CBRS to reach its full potential.

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<sup>3</sup> NPRM ¶ 13.

<sup>4</sup> See CTIA, [Petition for Rulemaking](#), filed June 16, 2017 in GN Docket No. 12-354, at 6-9 (“CTIA Petition”); T-Mobile, [Petition for Rulemaking](#), filed June 19, 2017 in GN Docket No. 12-354, at 11-13 (“T-Mobile Petition”).

<sup>5</sup> [Report and Order and Further Notice of Proposed Rulemaking, Use of Spectrum Bands Above 24 GHz for Mobile Radio Services](#), GN Docket No. 14-177, *et al.*, 31 FCC Rcd 8,014, 8,077-78 ¶ 176 (2016) (“*Spectrum Frontiers* Report & Order”).

<sup>6</sup> *Id.* at ¶ 177, 31 FCC Rcd at 8,078.

## II. The Commission Should Assign Priority Access Licenses For Larger Geographic Areas.

The Commission should adopt the proposal to increase the PAL license size to Partial Economic Areas (“PEAs”).<sup>7</sup> We agree with CTIA and T-Mobile that licensing PALs on a census tract basis creates a “far more complicated licensing scheme than is necessary”<sup>8</sup> to ensure that the spectrum is put to its best use, and would “depress[]” interest in the band.<sup>9</sup> The more recent *Spectrum Frontiers* proceeding again provides instructive points of comparison. For example, in the 37 and 39 GHz bands, the Commission initially proposed to use counties – an area already larger than census tracts – but ultimately determined that Partial Economic Areas (“PEAs”) would “strike the appropriate balance between facilitating access to spectrum by both large and small providers and simplifying frequency coordination while incentivizing investment in, and rapid deployment of, new technologies.”<sup>10</sup>

The same would be even more true in the 3.5 GHz band. Notably, the higher frequency millimeter-wave bands are “expected to provide coverage of areas measured in meters, not kilometers,”<sup>11</sup> while signals would normally propagate much further in the 3.5 GHz bands. Again, while there are important differences in the two licensing schemes, the Commission can look to the more recent *Spectrum Frontiers* proceeding for guidance as it considers whether to increase the license size for PALs.

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<sup>7</sup> NPRM ¶ 23.

<sup>8</sup> CTIA Petition at 9.

<sup>9</sup> T-Mobile Petition at 16.

<sup>10</sup> *Spectrum Frontiers* Report & Order ¶ 121, 31 FCC Rcd at 8,061.

<sup>11</sup> *Id.* ¶ 33, 31 FCC Rcd at 8,028 (quoting [Notice of Proposed Rulemaking, Use of Spectrum Bands Above 24 GHz for Mobile Radio Services](#), GN Docket No. 14-177, *et al.*, at ¶ 111, 30 FCC Rcd 11,878, 11,912 (2015)).

### **III. The Commission Should Revise The 3.5 GHz Emissions Limits To Support 20 MHz and 40 MHz Wide Channels.**

The Commission should support Qualcomm's proposal to revise the 3.5 GHz band emissions limits to support 4G LTE and 5G NR channels wider than 10 MHz.<sup>12</sup> The current 3.5 GHz band emissions limits require significant signal attenuation outside the channel of operation; for example, mobile devices using a 20 MHz channel bandwidth need to implement 4 dB Additional-Maximum Power Reduction ("A-MPR") (*i.e.*, a reduction of more than half the maximum allowed power level) to comply with the limits. Requiring the transmit power level for 20 MHz operations to be reduced by more than half significantly diminishes signal coverage and mobile service quality. 40 MHz operations would require even greater A-MPR and suffer an even worse penalty. As Qualcomm has explained, imposing this penalty within the 3550-3700 MHz band provides no greater protection for adjacent channel operations.<sup>13</sup> The FCC should relax the limits to help support wideband operations in this important band.

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<sup>12</sup> NPRM ¶ 54; *see also* Qualcomm, [Letter from Dean R. Brenner to Marlene Dortch](#), filed June 19, 2017 in GN Docket No. 12-354 ("Qualcomm Ex Parte").

<sup>13</sup> *Id.* at 2.

#### **IV. Conclusion**

TIA once again urges the Commission to act promptly on proposals in the NPRM to allow CBRS to begin in the near future.

Respectfully submitted,

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