

BEFORE THE  
**Federal Communications Commission**

WASHINGTON, DC 20554

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

To: The Commission

**REPLY COMMENTS OF XCHANGE TELECOM CORPORATION**

Xchange Telecom Corporation (“Xchange”), pursuant to Section 1.405(b) of the Federal Communication Commission’s (“FCC’s” or “Commission’s”) Rules, 47 C.F.R. § 1.405(b), hereby submits reply comments concerning the above-referenced Notice of Proposed Rulemaking and Order (“3.5 GHz NPRM”) released on December 12, 2012.<sup>1</sup>

**I. INTRODUCTION**

The initial Comments reflect widespread and enthusiastic support for shared use of the 3550-3650 MHz (“3.5 GHz”) band. Xchange and numerous other commenters applauded the Commission and National Telecommunications and Information Administration (“NTIA”) for advancing a spectrum sharing framework for the 3.5 GHz band that employs proven geolocation database technology pioneered in the TV Band White Spaces. The initial Comments reflect near universal agreement that such a system will enable new commercial entrants to make use of the

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<sup>1</sup> See Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band , GN Docket No. 12-354, released December 12, 2012 (“3.5 GHz NPRM”).

band while ensuring that incumbent spectrum users are given robust and comprehensive interference protection.

Several commenters echoed Xchange's recommendation that the Commission reevaluate and, where appropriate, reduce the proposed exclusion zones around federal incumbent spectrum users. In particular, there was strong support to calculate exclusion zones based solely on the interference protection needs of the incumbent federal spectrum users, and to avoid creating overly complicated rules that attempt to protect new entrants who are capable of determining whether or not the ambient spectrum environment in the 3.5 GHz band is suitable for their desired application.

A small minority of commenters made technically unsound and unsupported recommendations concerning the adjacent 3650-3700 MHz band that Xchange urges the Commission to disregard. Specifically, the recommendation to adopt a license-by-rule framework for the adjacent 3650-3700 MHz band is technically infeasible and would dramatically reduce the utility of this band for existing spectrum users that have made a large investment in 3650-3700 MHz equipment in recent years.

## **II. THE RECORD REFLECTS STRONG SUPPORT FOR REEVALUATING AND REDUCING EXCLUSION ZONES**

A diverse group of commenters supported Xchange's recommendation to reevaluate overly conservative exclusion zones based on modeling conducted by the NTIA involving high-power macrocell networks that are not being contemplated for the 3.5 GHz band.<sup>2</sup> Among others, the Telecommunications Industry Association ("TIA") expressed concern that large exclusion zones prohibiting use of 3.5 GHz spectrum in dense urban areas will hinder investment in the band and urged the Commission to undertake an analysis to confirm "that small cell

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<sup>2</sup> See 3.5 GHz NPRM at 40.

deployments will greatly improve (reduce) the size of exclusion zones.”<sup>3</sup> Motorola Solutions, Inc. (“Motorola”) added that exclusion zones could likely be reduced given that “3.5 GHz deployments typically will have low antenna heights, resulting in high attenuations of the signal at significant distances (>200 m).”<sup>4</sup> The Utilities Telecom Council (“UTC”) stated that federal incumbent “users would be protected from interference from [3.5 GHz] users, because small cells have relatively short range compared to radar and fixed satellite operations in the band.”<sup>5</sup> In short, there was consensus across a wide cross section of commenters that an analysis based on high-power macrocell base stations was simply inappropriate for determining how much physical separation incumbent federal spectrum users require from low-power microcell transmitters.

Numerous commenters also reinforced Xchange’s recommendation that the Commission establish exclusion zones based solely on the interference protection needs of the federal incumbent spectrum users in the 3.5 GHz band, and avoid promulgating rules that address interference levels from incumbent transmitters into commercial 3.5 GHz spectrum users. Among others, Motorola stated that new commercial operations “will be able to effectively deal with interference from radars in the field, and the main concern should be about interference into operating radar systems.”<sup>6</sup> Google stated that new 3.5 GHz commercial users should be allowed “to determine for themselves if they are willing to tolerate the interference likely to be

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<sup>3</sup> Comments of Telecommunications Industry Association, GN Docket No. 12-354, at 3 (filed Feb. 20, 2013).

<sup>4</sup> Comments of Motorola Solutions, Inc., GN Docket No. 12-354, at 7 (filed Feb. 20, 2013) (“*Motorola Comments*”).

<sup>5</sup> Joint Comments of Utilities Telecom Council, Edison Electric Institute and National Rural Electric Cooperative Association, GN Docket No. 12-354, at 12 (filed Feb. 20, 2013).

<sup>6</sup> *Motorola Comments* at 7.

experienced in a certain geographic area.”<sup>7</sup> Google elaborated that “[d]eclaring geographic areas off-limits to potential users based solely on the supposition that users would be unable to solve interference challenges is an inflexible approach that leaves no room for innovation.”<sup>8</sup>

Given the overwhelming support in the initial record, Xchange reaffirms its request for the Commission to reevaluate the appropriate parameters for exclusion zones before moving forward. As Xchange emphasized in its Comments, implementing unnecessarily expansive exclusion zones in the 3.5 GHz band will do little or nothing to help alleviate the looming spectrum crunch in large cities along the eastern and western seaboard, the areas where spectrum is most urgently needed to avoid a crisis.<sup>9</sup>

**I. THE COMMISSION SHOULD REJECT TECHNICALLY UNSOUND RECOMMENDATIONS REGARDING THE ADJACENT 3650-3700 MHz BAND**

A minority of commenters suggested that the Commission adopt a “license-by-rule” framework that would include the 3.5 GHz band as well as the immediately adjacent 3650-3700 MHz band. For example, the Public Interest Spectrum Coalition (“PISC”) asserted without any technical support that “[c]reating a contiguous 150 megahertz bloc of spectrum under the same license-by-rule approach and technical rules will greatly benefit WISPs and other existing users of the 3650 MHz band.”<sup>10</sup> PISC’s assertion regarding the 3650-3700 MHz band is incorrect.

The implementation of a licensed-by-rule scheme that does not give priority to existing licensees would seriously degrade the quality of the service delivered under the current framework for the 3650-3700 MHz band. Why? Existing licensees in the 3650-3700 MHz band have made an enormous investment in equipment in recent years that is incompatible with the

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<sup>7</sup> Comments of Google, Inc., GN Docket No. 12-354, at 14 (filed Feb. 20, 2013) (“*Google Comments*”).

<sup>8</sup> *Id.* at 14.

<sup>9</sup> See Comments of Xchange Telecom Corporation, GN Docket No. 12-354, at 6-7 (filed Feb. 20, 2013).

<sup>10</sup> Comments of Public Interest Spectrum Coalition, GN Docket No. 12-354, at 33-34 (filed Feb. 20, 2013).

proposed geolocation database technology and cannot be readily retrofitted. If forced to implement a license-by-rule scheme in the 3650-3700 MHz, incumbent licensees would be at constant risk from interference from new itinerant systems that would transmit indiscriminately across the 3650-3700 MHz band. Given that Xchange and other current licensees provide carrier-grade services using the 3650-3700 MHz band, including lifeline telephony service, the aforementioned risk of interference would threaten the viability of the 3650-3700 MHz band as a transmission medium.

In any case, with respect to licensed-by-rule operations in the 3650-3700 MHz band, the Commission must provide protection to incumbent licensees. The Commission should ensure that incumbent licensees operating under the current lite-licensed framework have priority and can register in the geolocation database for protection, the same way the Commission provides priority for grandfathered earth stations.

## **II. CONCLUSION**

Xchange continues to enthusiastically support the Commission's Notice. For the reasons discussed at length above, there remains a need to reevaluate exclusion zone contours. In addition, the Commission should disregard technically unsound recommendations to adopt a license-by-rule framework in the adjacent 3650-3700 MHz band.

Respectfully submitted,

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