

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Unlicensed Operation in the Band 3650 – 3700 MHz	)	ET Docket No. 04-151
	)	
Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band	)	ET Docket No. 02-380
	)	
Amendment of the Commission’s Rules With Regard to the 3650-3700 MHz Government Transfer Band	)	ET Docket No. 98-237
	)	

**REPLY COMMENTS OF INTEL CORPORATION**

Intel Corp. (Intel) hereby submits the following reply comment in response to this proceeding considering how to maximize the efficient use of the 3650-3700 MHz band (“3650 MHz band”) and foster the introduction of new and advanced services. Intel is the world’s largest semiconductor manufacturer and a leader in technical innovation. Intel is also a leading manufacturer of communications and networking chips and equipment.

Multiple commenters agreed with Intel that a licensed approach is the most efficient use of this spectrum and would best meet the Commission’s goals.<sup>1</sup> Such an approach facilitates:

- Higher Power Operation- which would benefit rural broadband providers.
- Portable Use- which would enable the deployment of low cost, client devices such as mobile computers.
- Global Harmonization- which would allow US consumers and business to benefit from global economies of scale.

HIGHER POWER OPERATION

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<sup>1</sup> See comments of Motorola @ 3; ITA @ 2, API @ 3, Navini @ 2

We agree with the Commission “that there is a growing demand for higher-powered unlicensed devices operating at lower frequencies where the combination of propagation characteristics and higher power are more conducive to longer-range communications.” However, as Motorola points out “offering higher operating powers, as high as 25 watts EIRP for fixed unlicensed transmitters...has the potential to be victimized by its own success – the limited bandwidth available in the band could quickly be impacted by multiple “high powered” unlicensed broadband transmitters operating in the same area.”<sup>2</sup>

Fundamentally, Intel believes that the proven key to long range wireless broadband deployment is to provide the QoS and investment incentives afforded by exclusivity. As ITA states “A licensed spectrum allocation in the 3650 MHz band would allow higher power limitations, effectively serving larger geographic areas than unlicensed devices or services.”<sup>3</sup> We concur with Motorola that “Provision of this spectrum on a licensed basis will provide certainty of spectrum access for licensees.”<sup>4</sup>

#### PORTABLE USE

We also agree with Motorola that use of the 3650 MHz band on a licensed basis would allow wireless internet service providers (“WISPs”) or other service providers to provide broadband services for mobile, transportable or fixed backhaul services. Because good harmonization exists for use of the 3.5 GHz band for WiMAX, radios for this band are one of the primary candidates to be integrated into mobile computers by 2006 to support roaming between WiMAX service areas. In fact, the 3.5 GHz band is one of the first profiles that will be tested for conformance and interoperability by the WiMAX Forum.

Accordingly the Commission should reject the Coalition of C-Band Constituents<sup>5</sup> and the IEEE 802 suggestion that devices “be limited to fixed, point to point operations only”<sup>6</sup> because such a regulation will exclude U.S. consumers and businesses from a major application of the band. In contrast, a

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<sup>2</sup> See Motorola Comment @ 2

<sup>3</sup> See ITA Comment @ 2

<sup>4</sup> See Motorola Comment @ 3

<sup>5</sup> See Coalition of C-Band Constituents Comment @ 1

<sup>6</sup> See IEEE 802 Comment @ 4

licensed approach would still permit for the provisioning of the back-haul services envisioned by IEEE 802. Moreover, a licensed approach would better facilitate such services than the IEEE 802 proposal, because a licensed approach would not require the additional regulations that IEEE 802 proposes in order to reconcile higher power operation with an unlicensed regime.

#### GLOBAL HARMONIZATION

Numerous countries already have allocations that will permit the deployment of WiMax in this band. As Motorola points out:

Licensing of frequencies in the immediate vicinity of 3.6 GHz is occurring around the world. For example, Europe has implemented licensed base services in this band in 10 countries per ERC/REC 12-8. China has already completed 2 rounds of licensing and is working on another.

*See:*

*[http://www.globalsources.com/am/article\\_id/9000000050240/page/showarticle?action=GetArticle](http://www.globalsources.com/am/article_id/9000000050240/page/showarticle?action=GetArticle). Finally, Brazil completed its auction of 3.5 GHz licenses in 2003. See*

*<http://strategis.ic.gc.ca/epic/internet/inimr-ri.nsf/en/gr112825e.html>.<sup>7</sup>*

Provision of this spectrum on a licensed basis will provide certainty of spectrum access for licensees and provide partial harmonization with many other regions of the world where this band is allocated on a licensed basis.<sup>8</sup>

A licensed approach in the U.S. would further harmonize the use of this band and allow US consumers and businesses to reap the benefits.

#### PERSONAL IDS

Finally, we concur with NYCWireless *et al* that the Commission should not require personal beacons in low power mobile devices.<sup>9</sup> “THE COMMISSION SHOULD NOT REQUIRE PERSONAL BEACONS

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<sup>7</sup> See Motorola comment @ footnote 7

<sup>8</sup> *ibid* @ 3

<sup>9</sup> See NYCWireless *et al* comment @ 11

IN LOW POWER MOBILE DEVICES.” (commenter’s emphasis) Such a requirement would not mitigate interference, but would raise security and privacy concerns.

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Respectfully submitted,

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