

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

In the Matter of)	
)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands)	WT Docket No. 06-150
)	
Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems)	CC Docket No. 94-102
)	
Section 68.4(a) of the Commission's Rules Governing Hearing-Aid Compatible Telephones)	WT Docket No. 01-309
)	

REPLY COMMENTS OF LEAP WIRELESS INTERNATIONAL, INC.

Leap Wireless International, Inc., on behalf of itself and its affiliated companies ("Leap") hereby offers the following Reply Comments in connection with the above-captioned Notices of Proposed Rulemaking ("Notice").

I. THERE IS BROAD SUPPORT FOR REVISING THE UPPER AND LOWER 700 MHZ BAND PLANS

Apart from the comments of a few supercarriers, whose interests in maintaining the *status quo* of mammoth geographic license sizes (and a correspondingly enormous cost to obtain such licenses at auction) are transparent,¹ the record in this proceeding demonstrates broad support for reconfiguring the

¹ Comments of Cingular Wireless LLC (Sept. 29, 2006), at 5-9; Comments of Verizon Wireless (Sept. 29, 2006), at 3-5.

Upper and Lower 700 MHz bands in a fashion that will better promote the explicit concerns of Congress to avoid excessive concentration in the assignment of radio spectrum licenses, and to disseminate mutually exclusive spectrum licenses among a wide variety of applicants.²

Since the filing of initial comments, Leap has participated in discussions regarding – and hereby supports – a consensus band plan proposal that will achieve the above goals. This Balanced Consensus Plan is being filed today as an independent submission by all of the signatories to the proposal, including Leap. The plan, which features a mix of licenses of varying geographic sizes and block sizes, will ensure that all carriers – small, mid-sized, and large – will be able to aggregate 700 MHz licenses in a fashion tailored to their needs and to the needs of their customers. Leap urges that the Balanced Consensus Plan be adopted.

II. THE COMMISSION SHOULD ALSO REVISE ITS UPPER 700 MHZ POWER AND OUT-OF-BAND EMISSION LIMITS

In its initial comments, Leap proposed raising the Upper 700 MHz Band power limit to 2 kW ERP, and revising Upper 700 MHz Out of Band Emissions (“OOBE”) limits to $53 + 10 \log P$. Leap believes that these changes are important to the deployment of innovative technologies and services at 700 MHz, and will still provide an adequate level of protection to public safety users.

By contrast, if the Commission moves in the opposite direction and adopts overly restrictive limits, as some parties have suggested, then the Upper and Lower

² 47 U.S.C. § 309(j)(3),(4).

700 MHz bands could be rendered effectively unusable. At a minimum, parties who have sounded alarm bells regarding the need for more stringent interference protection for public safety users must be required to provide evidence of a problem. To date, the record contains only speculative conclusions on this point.

Sprint Nextel, for example, cites intermodulation interference, OOB interference, receiver overload interference, and broadband degradation as phenomena likely to occur in the Upper and Lower 700 MHz bands once they are used on a widespread basis for commercial wireless operations. Sprint Nextel reasons only by analogy, however, and provides no specific detail or examples of how interference problems will occur at 700 MHz. Sprint Nextel cites no statistics regarding the magnitude of the interference problems it claims, and provides no references to support any quantitative record of interference issues, including intermodulation interference.

Indeed, the only quantitative “analysis” that Sprint Nextel offers to support its assertions of likely intermodulation interference with public safety is contained in two footnotes. In one footnote, Sprint Nextel states that a PFD limit of 3 mW/m² will result in a street level signal of approximately -14 dBm, and asserts that this signal level will lead to intermodulation products well above the mandated protection levels.³ However, the analysis assumes a receiver intermodulation rejection ratio of either -70 or -75 dB, but does not take into account the bandwidth of the public safety receiver. If the public safety receiver has a bandwidth of 25

³ Sprint Nextel Comments (Sept. 29, 2006) at 9, n.19.

kHz, and a wireless carrier were using CDMA technology, for example, then there would be a factor of -17 dB that should be added to the -14 dBm signal level, yielding a PDF of -31 dBm in 25 kHz.

Similarly, in the next footnote, the results of another calculation are given where an on-street power of -41 dBm is assumed – but again, there is no band width associated with this calculation for the interfering signal or for the receiver.⁴ For narrowband receivers in the public safety bands there will again be additional protection from a CDMA2000 system on the order of -17 dB. If the public safety bands intend to use technologies, such as CDMA2000, then there will be no interference issue with Leap's intended use of 3G cellular technology. CDMA2000 operators have adjacent spectrum in mobile frequency allocations all over the world, and there is no co-existence problem.

Sprint Nextel's assertions of OOBE interference, receiver overload interference and broadband degradation are subject to the same critiques – *i.e.*, no technical analysis is provided to back up such claims and no specific examples are provided of observed problems. As such, Sprint Nextel's alarmist predictions cannot and should not form a basis for technical rules in this proceeding. In general, Sprint Nextel appears to advocate the imposition of severe limits on the output power and spectral emissions of any commercial wireless service in the Upper and Lower 700 MHz bands, which would severely limit the range of services that can be offered in the spectrum. Leap does not believe that such a result is in the public

⁴ *Id.* at 10, n. 20.

interest.

III. THE RECORD SUPPORTS THE RETENTION OF “SUBSTANTIAL SERVICE” PERFORMANCE REQUIREMENTS

In its initial Comments, Leap observed that the Commission has implemented the “substantial service” requirement across a number of wireless services,⁵ recognizing that “construction benchmarks focusing solely on population served or geography covered may not necessarily reflect the most important underlying goal of ensuring public access to quality, widespread service.”⁶ The Commission has determined that a substantial service standard (i) better enables the Commission to take into demonstrations of adequate deployment in rural areas, to niche markets, or to discrete populations or regions with special needs, and (ii) encourages licensees to provide the best possible service and avoid construction merely to meet regulatory requirements rather than market conditions.⁷

⁵ *See, e.g., Rural NPRM*, 18 FCC Rcd 20802, 20819 ¶ 34 (“In more recently adopted rules for wireless services, such as our Part 27 rules for private services, Lower and Upper 700 MHz, 39 GHz, and 24 GHz, the Commission established the substantial service standard as the only construction requirement.”). *See also* Coalition Proposal at 44. (“There is ample precedent for [a substantial service] approach as the Commission has adopted this very same requirement for operation at 2.3 GHz, the Upper 700 MHz band, the Lower 700 MHz band, the paired 1392-1395 MHz and 1432-1435 MHz bands or the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands.”).

⁶ In the Matter of Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, *Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order*, 21 FCC Rcd 5606 (2006), ¶ 276.

⁷ *Id.*, ¶ 277.

Most carriers in this proceeding support maintaining the “substantial service” approach.⁸ A market-oriented approach to spectrum policy that utilizes a substantial service standard to meet build out requirements will ensure the actual deployment of wireless facilities and the broader provision of wireless services. The Commission should maintain that standard with respect to the deployment of services in the 700 MHz bands.

Respectfully submitted,

/s/

Robert J. Irving, Jr.
Senior Vice President and
Leap Wireless

General Counsel
International, Inc.

10307 Pacific Center Court
San Diego, CA 92121

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⁸ *See, e.g.*, Comments of AT&T (Sept. 29, 2006), at 12; Comments of MetroPCS (Sept. 29, 2006), at 15; Comments of Verizon Wireless (Sept. 29, 2006), at 6-10.