

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

In the Matter of)	
)	
Spectrum Task Force Invites Technical Input)	ET Docket No. 10-142
On Approaches to Maximize Broadband Use)	WT Docket No. 04-356
Of Fixed/Mobile Spectrum Allocations in the)	WT Docket No. 07-195
2 GHz Range)	

**REPLY COMMENTS OF LEAP WIRELESS INTERNATIONAL, INC.
AND CRICKET COMMUNICATIONS, INC.**

Leap Wireless International, Inc. and Cricket Communications, Inc. (collectively, “Leap”) submit these reply comments in response to the Commission’s Public Notice inviting technical input on the best ways to encourage the growth of terrestrial broadband services in the 2 GHz spectrum. Leap applauds the Commission and the Spectrum Task Force for initiating this proceeding and for continuing to support terrestrial wireless broadband service.

The record in this proceeding confirms that there is urgent need for additional spectrum for wireless broadband services. The Commission has recognized that “spectrum is an increasingly pivotal input” for wireless carriers.¹ The Commission also has noted the immense growth in wireless services, and, in particular, wireless data services,² and this growth in demand has created a tremendous spectrum crunch. The U.S. has been at the forefront of innovation and

¹ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Fourteenth Report, WT Docket No. 09-66, ¶ 4 (May 20, 2010) (“14th Wireless Competition Report”).*

² *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 10-133, ¶¶ 2, 160-162, 185-188 (June 27, 2011) (“Fifteenth Wireless Competition Report”).*

development of wireless broadband services, but the availability of spectrum—or lack thereof—remains the principal constraint on growth, particularly for small, regional and mid-sized carriers. For these reasons, Leap strongly supports the Commission’s efforts to encourage the development and deployment of terrestrial broadband services in the 2 GHz spectrum range, a band that is particularly well-suited for mobile broadband services.

The record in this proceeding also establishes overwhelming support for the need for further investigation of the 1755-1780 MHz band that is currently under review by the National Telecommunications and Information Administration (“NTIA”). Commenters point to significant efficiencies that could arise from pairing this spectrum with spectrum in the 2 GHz range, particularly the spectrum at 2155-2180 MHz, and the record indicates that such pairing could create more productive wireless broadband plans.³ Leap supports the views of virtually all commenters that the Commission should work with NTIA to promote and facilitate this option as expeditiously as possible.

However, the call for ongoing investigation of the 1755-1780 MHz band should not result in prematurely cutting off debate about developing viable plans for the 2 GHz spectrum band. Certain commenters seem to want to place this entire inquiry “on ice” until NTIA completes its review, but there is valuable analysis and investigation that can and should continue today to identify efficient uses of the 2 GHz spectrum that will advance the public interest.

³ *See, e.g.*, Comments of CTIA – The Wireless Association, ET Docket No. 10-142, WT Docket No. 04-356, WT Docket No. 07-195, (filed July 8, 2011), at 2, 8-10; Comments of Ericsson, ET Docket No. 10-142, WT Docket No. 04-356, WT Docket No. 07-195, (filed July 8, 2011), at 5-7; Comments of T-Mobile USA, Inc., ET Docket No. 10-142, WT Docket No. 04-356, WT Docket No. 07-195, (filed July 8, 2011), at 5-10; Comments of Verizon Wireless, ET Docket No. 10-142, WT Docket No. 04-356, WT Docket No. 07-195, (filed July 8, 2011), at 3-4.

For example, the Commission’s third “concept” of pairing 30 MHz of spectrum at 1995-2025 MHz with 30 MHz of spectrum at 2170-2200 MHz could create a significant opportunity to advance mobile broadband services. By allocating sizeable contiguous blocks of spectrum for mobile wireless services, the Commission will significantly advance its goals of maintaining America’s leadership in deployment of next generation broadband services. Leap agrees with the suggestion of Sprint that reversing the uplink and downlink bands (or allowing the industry to determine the best uplink and downlink options) could mitigate potential interference with adjacent uses while simultaneously advancing the Commission’s broadband goals,⁴ and Leap believes that the Commission should investigate this option. The Commission therefore should continue to explore proposals for efficient uses of the 2 GHz spectrum range.

I. THE COMMISSION SHOULD WORK WITH NTIA TO CONTINUE TO INVESTIGATE OPTIMAL USES OF THE 2 GHZ BAND, INCLUDING PAIRING THE 1755-1780 MHZ BAND WITH THE 2155-2180 MHZ BAND

CTIA, T-Mobile, and others correctly state that the spectrum in the 1755-1780 MHz range would pair particularly well with spectrum at 2155-2180 MHz.⁵ This pairing would create a block of contiguous spectrum for wireless broadband that is adjacent to both the uplink and downlink allocations for AWS-1 spectrum.⁶ In addition, as CTIA notes, this spectrum range already has been identified by the International Telecommunications Union for commercial wireless uses, and thus allocating the 1755-1780 MHz band for mobile broadband will advance the international harmonization of spectrum,⁷ which in turn will ultimately promote equipment standardization and lower equipment costs. Leap also agrees that the 1755-1780 MHz band, like

⁴ See Comments of Sprint Nextel Corporation, ET Docket No. 10-142, WT Docket No. 04-356, WT Docket No. 07-195, (filed July 8, 2011), at 11-12.

⁵ CTIA Comments at 8; T-Mobile Comments at 6.

⁶ T-Mobile Comments at 7.

⁷ CTIA Comments at 9.

the spectrum in the 2 GHz range, shares positive propagation characteristics that make it ideal for mobile broadband use.⁸

For these reasons, Leap agrees with commenters who urge the Commission to take a broad view of wireless broadband in the 2 GHz range, and to consider that potentially the ideal pairing would be to match the spectrum in the 2155-2180 MHz band with spectrum in the 1755-1780 MHz band. The Commission therefore should not rush to adopt final plans before NTIA completes its review of this spectrum, and instead should take a comprehensive approach to fostering the development of mobile broadband in the 2 GHz spectrum range.

II. THE COMMISSION SHOULD CONTINUE TO EVALUATE VIABLE BAND PLANS WHILE FURTHER INVESTIGATION CONTINUES

On the other hand, the need for a holistic approach that considers the 1755-1780 MHz spectrum does not mean that all further analysis should cease. To the contrary, there is valuable work that the Commission can and should do to facilitate deployment of the 2 GHz spectrum range for mobile broadband. The Commission should continue to evaluate the three proposals that the Task Force has put forth, as well as evaluate additional proposals offered by commenters in the record.

For example, of the Task Force's three "concepts," the third one offers particular strengths and warrants additional evaluation. Taking 30 MHz of spectrum at 1995-2025 MHz and marrying it with 30 MHz at 2170-2200 would create a valuable and much needed 60 MHz of spectrum for mobile broadband services. Larger blocks of spectrum inevitably mean greater capacity and flexibility, and also promote the development of broadband technologies and services to be used in the band. This proposal to allocate 60 MHz for mobile broadband would

⁸ *Id.* at 7.

create significant opportunities for improved and expanded mobile broadband services for the benefit of consumers.

Some commenters raise legitimate concerns about potential interference with adjacent uses of spectrum. CTIA and Ericsson, among others, note that there is a potential for interference with broadband PCS downlink bands at 1930-1990 MHz.⁹ These are concerns that the Commission should address and work to resolve. Leap believes that there are options that could mitigate interference yet allow for beneficial uses of the 2 GHz range for mobile broadband services. For example, flipping the bands, and using lower band spectrum for downlink and upper band spectrum for uplink, could avoid interference. Alternatively, the Commission could take a flexible approach that enables the industry to implement the downlink and uplink options that allow for the most efficient use of spectrum while mitigating interference. This approach has worked before: for the 700 MHz spectrum band, the Commission did not specify uplink and downlink, and left it to the industry to determine how best to utilize the spectrum.¹⁰ As a result, the 3GPP standards team was able to select uplink and downlink in a manner that maximized the utility of the spectrum while minimizing interference. The Commission should consider a similar approach with the 2 GHz spectrum band.

This type of analysis and evaluation can and should continue today, even while NTIA completes its review of the 1755-1780 MHz spectrum. The various industry proposals in the record indicate that the industry is continuing to evaluate and develop options for use of the 2 GHz range, and the Commission should facilitate that exploration and should continue its work in identifying optimal pairings and optimal blocks of spectrum for mobile broadband services.

⁹ CTIA Comments at 12; Ericsson Comments at 8.

¹⁰ See http://wireless.fcc.gov/auctions/default.htm?job=auction_factsheet&id=73 (declining to define uplink or downlink as “permissible operations”).

And the Commission should continue to work to identify mitigation techniques that will offer optimal services with minimal interference.

Finally, it is not lost on Leap (and should not be lost on the Commission) that some of the nation's largest carriers are leading the charge for the allocation of 2 GHz spectrum for mobile broadband uses. When and if such spectrum is assigned using competitive bidding procedures, the Commission should work to establish an auction design and eligibility restrictions that do not favor the largest carriers and that ensure the emergence of robust competition for wireless broadband services. Auctions in which AT&T and Verizon repeatedly are permitted to marshal supercarrier resources to foreclose competition are not in the public interest.

Respectfully submitted,

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