Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20054

In the Matter of	)	
Fostering Innovation and Investment in the Wireless Communications Market	)	GN Docket No. 09-157
A National Broadband Plan For Our Future	)	GN Docket No. 09-51

To: The Commission

COMMENTS OF THE ENTERPRISE WIRELESS ALLIANCE

The Enterprise Wireless Alliance ("EWA" or the "Alliance") submits these comments in response to the Commission's Notice of Inquiry seeking information about the relationship between innovation and investment in wireless communications, and what steps the Federal Communications Commission ("FCC" or "Commission") might take to encourage both.[1] The Commission's heightened interest in this subject is motivated, in part, by its ongoing investigation into broadband communications issues in furtherance of the development of the National Broadband Plan it has been directed to deliver to Congress by February 17, 2010.[2]

The NOI poses an expansive series of questions about this vital and highly complex subject. It is not be possible for the Alliance, or likely for any party filing in this proceeding, to provide meaningful comments on each and every issue raised in this document. However, the Alliance hopes that the combined submissions of all interested parties will provide the FCC with

[1] *Fostering Innovation and Investment in the Wireless Communications Market,* GN Docket No. 09-157, Notice of Inquiry, FCC 09-66 (rel. Aug. 27, 2009) ("NOI").

[2] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) ("ARRA").

the information it needs to reach informed decisions on how best to facilitate further innovation and investment in wireless communications.

I. INTRODUCTION

EWA is a national trade association representing many business enterprises, wireless sales and service providers, hardware and software system vendors and technology manufacturers. The firms represented by the Alliance range from small businesses to leading national Fortune 500 organizations, including those that are engaged in transportation, petrochemical, manufacturing, retail, utility, construction and other critical national industries. Each of these entities is a member of the Alliance because of the need for innovative wireless capabilities to help promote business improvements, operational productivity and employee safety. EWA is also an FCC-certified frequency advisory committee that processes in excess of 6,500 frequency selection and licensing transactions annually.

II. WIRELESS TELECOMMUNICATIONS HAS AN UNPARALLELED HISTORY OF INNOVATION

The Commission is correct when its notes that "In the wireless marketplace, the pace of change over the past decades has been extraordinarily rapid and has delivered new and empowering technologies to American consumers."[3] In fact, wireless telecommunications has taken on ever-increasing importance in meeting a variety of key societal requirements, including the delivery of educational opportunities, health care options and energy savings. It has become an absolutely critical driver generating economic growth in this country and around the globe. Thus, while it is appropriate for the Commission to investigate how it might better foster wireless innovation, it is evident that the FCC has charted the right path between regulation and restraint in this area over the past decades. Absent a compelling record to the contrary, the Commission

[3] NOI at ¶ 3.

likely should not stray far from its present course, which has fostered both wireless innovation and the investment needed to fund that innovation.

A. The Benefits of Wireless Innovation Go Far Beyond Public Consumption of Wireless Services and Applications.

The NOI focuses largely on the benefits that have been enjoyed by consumers of wireless services and applications – the now commonplace ability to play games, watch movies, join social networks and access virtually every data point known to man, all on wireless devices. The Alliance is deeply impressed by the technical and sociological creativity of those who have brought all of these capabilities to the palms of our hands.

The focus of many EWA members, however, is somewhat different. They use innovative wireless devices to improve their business productivity, to enhance the security of their operations, and to expand their service capabilities. For example:

- A national retail chain has improved its ability to reduce theft, manpower, and incident response times by monitoring audio and video in a central facility from over 100 stores via a wireless security solution. In addition to the resource savings, its goal was to combine surveillance feeds with land mobile communications feeds into a single record for case management.
- Asset tracking solutions are increasingly being deployed throughout enterprises of all sizes. Businesses are tracking equipment in their facilities to better manage resource availability and prevent theft. For example, a construction company will track heavy equipment, hospitals track mobile carts, and taxicab and limousine companies track their drivers and make the passenger pickup process more efficient.
- With an increasing number of digital land mobile radios in use, connectivity with the Internet Protocol ("IP") has greatly improved efficiencies and removed obstacles for how work crews and co-workers interact. Examples include radio over IP applications, allowing interoperability between land mobile and other communications networks; and telemetry applications for governmental entities to track school buses, their operations (arrival at bus stops, doors opening) and maintenance intervals.

The impact of wireless innovation is at least as significant in the business as in the consumer markets. Both must be measured to develop a true picture of the importance of this issue to the nation's economy.

B. Wireless Innovation and Investment Both Require Some Measure of Regulatory Stability.

There undoubtedly are examples of geniuses willing to strike out into an entirely novel wireless enterprise, undaunted by a seemingly forbidding and unstable regulatory landscape. But those are the rare exceptions. They likely will be rarer yet in the future as the cost of innovation continues to increase and the time in which a pioneering enterprise must succeed or die becomes ever shorter. The Commission's rules must provide a level of certainty sufficient to attract the financial and manpower commitments that permit a concept to be tested over a reasonable amount of time.

This is not to say that the regulatory environment must remain frozen in time. The Commission has evidenced its own innovative prowess in recent years in developing a variety of regulatory frameworks for different types of wireless services. In addition to the traditional site-based licensing model, the FCC rules now include geographic licenses awarded by competitive bidding, overlay auction licenses with (and sometimes without) relocation rights, entirely unlicensed services, hybrid constructs such as the "licensed/unlicensed" 3.65 GHz band, and other mechanisms that permit the Commission to apply an appropriate degree of regulatory involvement to particular service offerings. What is important in fostering innovation is that entities know under which regulatory structure they will operate so they are able to match their investments to their likely return, an analysis that depends, at least in part, on how they are governed by the FCC.

The Commission also must be mindful that different structures will be more effective for different types of services. Rules (or the absence of regulation) that might encourage innovation in the consumer marketplace where devices are calculated by the number of millions sold would

not necessarily be effective in bands populated by the much smaller number of enterprise wireless users where innovation is found "downstream" in internal business applications that do not generate revenue, but rather decrease production or distribution costs and, thereby, reduce the price ultimately paid by consumers. These advances may be less visible to the FCC, but they have at least an equal, if not greater, impact on the country's financial balance sheet.

C. Innovation and Spectrum Efficiency

The Commission is correct both in identifying access to spectrum as an essential element in the promotion of wireless innovation and in acknowledging the difficulty in finding appropriate spectrum homes for novel concepts. Decades of ever-increasing demand for wireless capacity have drained the spectrum pool available for allocation by the FCC. While technological advances have enabled entities to make meaningful use of spectrum in bands far higher than were originally thought possible, there are immutable laws of physics that even the most creative innovators cannot alter.

Thus, the FCC is sometimes presented with the situation in which it must determine whether the proposed use, however innovative and/or efficient, can be accommodated without causing harmful interference to existing users. This is a balance that the Commission has achieved in most cases.[4] However, as unencumbered spectrum becomes increasingly scarce, the pressure to allow new entrants on already occupied bandwidth will only intensify.

EWA does not doubt that there have been some instances in which incumbents have attempted to erect "unachievable technical standards"[5] in an effort to prevent or delay the

[4] The FCC's approval of what proved to be incompatible technologies on interleaved channels in the 800 MHz band led to the need to reconfigure that band at substantial cost and disruption to many hundreds of users, a majority of whom are public safety entities.

[5] NOI at ¶ 34.

introduction of innovative competitive offerings. However, there likely are an equal number of situations in which proponents of new services have underestimated the technical impact of their proposals on incumbents in their eagerness to find a spectrum home. It is the nature of the process that these two sides will view a proposal from opposite ends of the telescope and often reach entirely contrary conclusions. Fortunately, the FCC has a deep bench of highly skilled technical experts with the ability to sort through these conflicting positions and determine whether interference is likely to develop. There is no need to recalibrate the interference rights of incumbents versus newcomers. The Commission can be confident that it has the internal resources to reach the optimal solution in such instances under its existing rules and policies.

Moreover, in an environment of severely limited spectrum resources, it is important to recall that innovation does not always equal greater efficiency and that increased efficiency can be achieved in a number of ways. For example, the ability to deliver broadband on demand, an innovation with extraordinary potential, is a bandwidth devourer. The applications may produce important benefits for the American public, but at a substantial spectrum cost. By contrast, most licensees in the Part 90 services are driving their wireless operations to greater efficiency by narrowing their bandwidths as directed by the FCC.[6] Their efforts to satisfy this Commission mandate have encouraged vendors to develop equipment that is both more advanced and more efficient than the existing inventory of Part 90 equipment. The "narrowbanding" of these heavily encumbered bands also will free up capacity for additional uses and users and may provide an opportunity for the introduction of even more innovative technologies over time.

One of the key elements in the promotion of efficiency in the heavily congested Part 90 bands is the use of FCC-certified frequency advisory committees, often referred to as frequency

[6] *See Third Memorandum Opinion and Order, Third Further Notice of Proposed Rule Making and Order,* WT Docket No. 99-87, 19 FCC Rcd 25045 at ¶ 2 (2004).

coordinators, of which EWA is one. These coordinators are the gatekeepers for the Part 90 user community and have promoted the efficient use of spectrum for nearly fifty (50) years. EWA and the other coordinators promote intensive levels of spectrum utilization through communications with spectrum applicants, verification of system technical parameters, system engineering analyses, and accuracy reviews of the license applications themselves. These efforts promote sharing among a variety of business enterprises and commercial communications service providers. The frequency coordinators have facilitated Part 90 narrowbanding and the related introduction of new technologies within this managed spectrum through licensee educational efforts, close coordination with equipment vendors, and ongoing interaction with the FCC. The Commission should consider an expanded role for frequency advisory committees in future or even existing spectrum allocations.

D. Certain Specific Recommendations

- *Timely FCC Action*: Perhaps the most important way for the FCC to foster innovation is to act promptly on matters that come before it. As the Commission recognizes, there is no more effective way to kill a potential innovative concept than to consign it to regulatory limbo. EWA appreciates that the FCC must satisfy its procedural obligations in handling requests, but a concerted effort should be made to identify accelerated processes that conform to those statutory requirements. This effort should include an expedited FCC enforcement process, one that discourages wireless investment by allowing interring users to operate with little or no risk of sanction.

- *Spectrum User Fees*: The Alliance agrees that properly crafted user fees might lead to greater spectrum efficiency (although not necessarily to increased innovation.) The difficulty has been in developing an effective fee structure, one that does not deny access to those that require it or enable others to stockpile it. EWA would welcome the opportunity to work with the FCC in an effort to develop an appropriate user fee schedule.

- *Use It or Lose It*: The Part 90 services traditionally have been subject to strict construction requirements and the reassignment of spectrum that has not been placed into use on a timely basis or that has been taken out of service. Spectrum is entirely too scarce for the FCC not to demand that those who acquire spectrum, even if by auction, either place it into productive use or relinquish it to others who

will. At a minimum, such an entity should be obligated to enter into good faith negotiations with prospective purchasers or lessees of the unused spectrum.

III. CONCLUSION

The growing importance of wireless telecommunications demands that the FCC consider ways for the agency to promote innovative and more efficient use of the available spectrum. The record developed in this proceeding and the Commission's other initiatives that seek comment on enhancing broadband capabilities in support of the public interest should provide a solid foundation for the development of a National Broadband Plan.

Respectfully submitted,

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