

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

In the Matter of)
)
Promoting Efficient Use of Spectrum) ET Docket No. 22-137
through Improved Receiver Interference)
Immunity Performance)

To: The Commission

**COMMENTS
OF THE
ENTERPRISE WIRELESS ALLIANCE**

The Enterprise Wireless Alliance (“EWA”), in accordance with Section 1.415 of the Federal Communications Commission (“FCC” or “Commission”) rules, respectfully submits its Comments in the above-entitled proceeding.¹ EWA supports this first step in the investigation of approaches that would enable the FCC to “reorient [its] spectrum management lens – from focusing primarily on the transmitter side of wireless networks to focusing on both the transmitter *and* receiver sides of wireless systems.”² In light of continuously escalating demand for wireless communications, licensed and unlicensed, the Commission has a statutory obligation to consider all means of maximizing the use of available spectrum. The NOI is a broad-ranging inquiry into this complex subject. The outcome cannot be predicted at this stage but the need to investigate this issue, in EWA’s opinion, cannot be disputed.

I. INTRODUCTION.

EWA is a national trade association representing business enterprises, wireless sales and service providers, hardware and software system vendors, and technology manufacturers. The

¹ *Promoting Efficient Use of Spectrum through Improved Receiver Interference Immunity Performance*, Notice of Inquiry, ET Docket No. 22-137, FCC 22-29 (rel. Apr. 21, 2022) (“NOI”).

² *Id.* at ¶ 34.

Alliance also represents a significant number of commercial service providers that offer primarily two-way dispatch communications for business and governmental customers.

The systems deployed by its members are essential to the day-to-day lives of all Americans. They are integral to the delivery of electricity, water, oil and gas, and all other essential services. They are used in the construction of roads, bridges, airports, refineries, and every other imaginable facility needed to support the American economy. These licensees have continued to invest in technology advances and deploy more spectrally efficient equipment to accommodate their growing requirements since they have not received an infusion of new spectrum since the mid-1980s. They are fortunate in relying on vendors that recognize the vital nature of their operations that deliver robust, reliable equipment, both on the transmit and receive side.

But wireless systems do not exist in a vacuum. If systems in adjacent bands include receivers that are not designed with adequate interference immunity, EWA members and the FCC become embroiled in avoidable interference complaints – a waste of valuable resources. For this reason, and because the entire country benefits when its limited spectrum resources are used as efficiently as possible, EWA supports this Commission initiative and looks forward to reviewing the comments of other interested parties.

II. EWA ENDORSES THE FCC’S RECOGNITION THAT ONE SIZE WILL NOT FIT ALL IN THIS AREA AND THAT APPROPRIATE TRANSITION PERIODS WILL BE REQUIRED IF LEGACY RECEIVERS ARE AFFECTED.

The *ex parte* presentations already filed in response to the NOI and the comments cited in various trade press articles focus largely on reinforcing what the FCC has noted already in this proceeding: There is no single approach that would work best for all wireless services, and receivers that do not comply with new criteria, whether adopted through industry-led efforts,

FCC policy guidelines, or by FCC regulation, must have a reasonable time to conform to new requirements.

As the FCC and other parties have pointed out, receiver design is only one factor in how a system responds to its RF environment.³ It generally is part of an overall integrated system design within which transmitters and receivers are required to communicate effectively in a world already drenched in RF noise. Even the definition of harmful interference varies across services. Some systems can tolerate missing transmissions because the messages are repeated multiple times and no single transmission is essential. In others, even a single missed or garbled communication can produce severe consequences. Because wireless systems vary so significantly in their capabilities, their requirements, and the environment in which they operate, their receiver criteria, if any, also must be bespoke.

If it is determined that receivers should satisfy defined criteria, the transition process must be considered carefully. Given the vast number of receivers in the marketplace, many of which are in the hands of consumers with little or no knowledge of or interest in such matters, the transition timeline for equipment in certain services could be lengthy. But that is no reason for not initiating this discussion or, if a record is developed that warrants action, for declining to proceed. The FCC has undertaken challenging endeavors in the past such as the DTV transition, also involving minimal receiver specifications, because the public interest in improving the quality of television service and putting spectrum to its most productive use justified that decision.⁴ EWA is confident that if the record supports receiver criteria, the FCC will take into consideration factors such as cost, typical life cycle of the equipment at issue, the ability to accommodate RF noise, the critical nature of the wireless devices potentially affected,

³ See, e.g., *ex parte* presentation of Spectrum Sharing Working Group of the FCC Technological Advisory Council (“TAC”), April 27, 2022.

⁴ *Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, MM Docket No. 00-39, Second Report and Order and Second Memorandum Opinion and Order, 17 FCC Rcd 15978 (2002).

international regulatory parity, and the availability of replacement receivers, particularly in light of our increased awareness of supply chain issues, and other matters the FCC considers relevant.⁵

III. FCC REGULATION OF RECEIVERS SHOULD BE USED ONLY IF LESS INTRUSIVE APPROACHES PROVE INADEQUATE.

The FCC wisely has not assumed that if defined receiver criteria are necessary, all such criteria must be developed and enforced by the agency. The NOI seeks comment on approaches that involve “incentives, guidelines, or regulatory requirements.”⁶ EWA, like all parties that have spoken to this issue on the record or through the trade press, agrees with the FCC’s baseline conclusion that voluntary industry action should be pursued with FCC involvement through policy pronouncements or even regulatory requirements as a backstop. Industry-driven work through organizations such as the ITU, the 3GPP, and others has been a hallmark of international wireless standards collaboration. While this proceeding only addresses receiver performance in the United States, the FCC’s TAC and other industry groups have the experience and the ability to promote the introduction of more interference-resistant system design where needed.

Since entirely voluntary measures may not be adequate in all cases, the FCC should be prepared to issue guidance notifying users and vendors that receivers should be sufficiently interference-resistant to coexist with co-channel and adjacent channel systems, especially in the wireless world of greater spectrum sharing among disparate users. If necessary, the Commission also may need to adopt harm-claim thresholds or similar standards that define, not how a receiver must be designed, but its ability to reject interference before it is permitted to claim interference protection.⁷ Those types of approaches allow the FCC to promote improved receiver

⁵ NOI at ¶¶ 156-165.

⁶ *Id.* at ¶ 78.

⁷ *See, e.g.*, 47 C.F.R. §§ 22.970(b), 90.672(b).

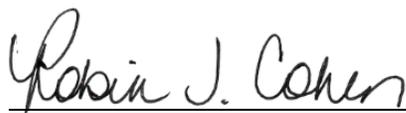
performance without involving itself in complex and varied system design issues that are best left to the marketplace.

IV. CONCLUSION.

In the past, the Commission relied significantly on guard bands to avoid interference between adjacent allocations used by disparate system types. Receivers could be less interference-resistant when the FCC created significant spectral separation between allocations. However, in a world of increasing spectrum scarcity, designating spectrum for non-use has become an unaffordable luxury. The FCC and the wireless industry need to collaborate in defining a better, more spectrum-efficient means of avoiding interference situations to the maximum extent possible while still promoting technological innovation. EWA looks forward to working with the FCC and other parties in addressing this critical issue.

Respectfully submitted,

ENTERPRISE WIRELESS ALLIANCE

By: 
Robin J. Cohen
President/CEO
13221 Woodland Park Road
Suite 410
Herndon, Virginia 20171
(703) 528-5115

Counsel:

Elizabeth R. Sachs
Lukas, LaFuria, Lantor & Sachs, LLP
8350 Broad Street
Suite 1450
Tysons, VA 22102
(703) 584-8678

June 24, 2022