

FCC Opens Inquiry into Potential Receiver Standards

April 25, 2022

On April 21, 2022, the Federal Communications Commission (FCC or Commission) adopted a Notice of Inquiry on Promoting Efficient Use of Spectrum through Improved Receiver Interference Immunity Performance (NOI or Notice). While the Commission has typically focused its rules on the transmitter side of radio systems, this inquiry represents a shift in focus to the role that receivers can play in managing unwanted interference—and the issues that can be created by legacy receivers when reassigning spectrum. The Commission seeks to develop an up-to-date record on the role of receivers as part of its broader exploration of policy tools that can harness new technologies and promote expanded and efficient spectrum use. Comments will be due 45 days after Federal Register publication, with replies due 75 days after publication.

The Notice's inquiry into receiver standards is driven by "several recent Commission proceedings," which have underscored that "receivers and receiver interference immunity performance play an increasingly critical role in enabling more efficient spectrum use." ¶ 1. The NOI notes that the FCC has generally focused on transmitter performance, rather than receiver performance, but it does describe a number of limited, historic circumstances where the Commission has spoken more generally to receiver standards to avoid for interference protection. ¶¶ 7-16. Although the Notice makes reference to receivers' immunity to interference within the receiver's licensed or allocated band, the focus of the NOI is on immunity to interference that is outside the receiver's band, i.e., interference due to overload or blocking. Notably, the Notice specifically states that interagency issues, which have played a role in recent high-profile disputes about receivers and spectrum re-assignment, are outside the scope of this

Authors

Megan L. Brown
Partner
202.719.7579
mbrown@wiley.law

Joshua S. Turner
Partner
202.719.4807
jturner@wiley.law

Tawanna D. Lee
Consulting Counsel
202.719.4574
tdlee@wiley.law

Brandon L. Hinton
Senior Engineering Advisor
202.719.4502
bhinton@wiley.law

Practice Areas

Telecom, Media & Technology
Wireless

proceeding. ¶ 2, fn.1.

Broadly, the Notice seeks first to develop a record on a number of technical issues related to receiver performance, including: receiver performance parameters; the radio frequency (RF) environment generally; and information on transmitters and receivers, such as specific information on transmitter characteristics; specific information on receiver characteristics; and integrated systems analysis. ¶¶ 37-77. The NOI then asks about alternatives for promoting better receiver performance, presenting three different approaches: supporting incentives, including voluntary and industry-led approaches including standards development; issuing guidelines whether in terms of clarifying Commission policy, issuing a policy statement, or considering ways to advance approaches such as an interference limits policy, and/or a harm claim threshold approach; and mandating regulatory requirements. ¶ 78. The Commission's discussion of these three approaches is summarized below.

Standards Development. The Notice acknowledges that the Commission has in the past expressed a "general preference for relying on voluntary approaches and guidelines that are supported and managed by industry," but notes there are challenges to voluntary approaches in certain situations. ¶¶ 80-92. The Commission seeks comment on the various voluntary approaches, including industry-led approaches, that currently serve to promote better receiver performance and more interference-resistant system designs, including views on the role of voluntary standards and guidelines to promote improved receiver performance and steps the FCC might take to promote development and use of such standards and guidelines.

Guidelines/Policies. The Notice seeks comment on whether the Commission should consider establishing clearer guidance on Commission policies relating to receivers and receiver performance in spectrum management going forward, including expectations about the extent to which incumbent receivers will receive interference protection as new services are introduced. ¶¶ 98-101. The FCC invites comment on whether it should clarify the respective responsibilities associated with transmitters and receivers in spectrum allocation and assignments; whether it should develop performance criteria or some form of ratings to incentivize design, manufacturer, and development of receivers that promote receiver interference immunity; and how to implement and notify stakeholders of policy guidance and changes. ¶¶ 102-106. The Commission also seeks comment on whether it should craft a new policy statement to help bring receiver interference immunity performance into fuller consideration in spectrum management decision. ¶¶ 109-118. While the Commission states there's no "one size fits all" criteria, the Notice asks about the possibility of the FCC establishing interference protection criteria for particular radio services—which it has to date mostly declined to do—including defining thresholds for "harmful interference." ¶ 135. Since the release of the initial draft of the NOI's text, known as the "white copy," the Commission has added an inquiry into whether receivers that meet a standard when deployed should be upgraded or replaced as new receiver standards are developed, in order to continue to receive interference protection. ¶ 136.

Regulatory Approaches. With respect to regulatory approaches, the NOI asks a number of questions about the potential for regulatory action, including but not limited to: whether Commission regulation should apply broadly, or whether there are particular services or situations that require a rule; what form regulation should take; whether the agency should require disclosure of certain aspects of receiver performance (with labeling,

operator's manual, etc.); what kind of testing might be required; and whether receiver requirements should be included in the equipment certification process. ¶¶ 137-147. The FCC also asks about how each of these approaches to receiver standards would impact innovation and the marketplace. ¶¶ 153-155.

Noting that there are "many billions of receivers currently in use" many of which "presumably operate efficiently and include robust interference immunity" the Commission also asks how to address legacy receivers in the marketplace and transition to less susceptible receivers. Among other questions, the Commission invites comment on questions about how to identify the installed base, the speed with which receivers in particular services are replaced, and what approaches would facilitate transitions and minimize costs. ¶¶ 156-161.

During the open meeting, Commissioner Starks indicated an interest in broadening the proceeding's focus to address potential benefits of receiver performance standards for national security. To that end, the NOI as adopted makes further key changes to the white copy, inviting comment on considerations relating to competition, public safety, and national security. For example, the NOI asks if improvements in receiver interference immunity performance (e.g., selectivity to reject unwanted emissions) would enhance the ability of receivers to reject jamming and spoofing attempts? ¶ 165.

The Commission asserts that it believes that it has the authority to take this action, but asks specifically about the scope of its Title III authority over receivers (as opposed to transmitters) and its authority to require device manufacturers to meet certain standards. ¶¶ 166-171. The Commission also asks for comment on any other approaches (such as agency-convened workshops) and any issues related to diversity, equity, and inclusion. ¶¶ 172-173.

Please contact any of the authors listed on this alert for more information on this NOI. Wiley's Telecom, Media & Technology practice has a wealth of expertise on spectrum management and regulations, having long counseled a diverse array of wireless clients. Our team of engineers and attorneys include former FCC officials that are deeply involved with all aspects of the FCC's spectrum management regime.