

systems. Given these rules, would the costs and benefits of improved receiver interference performance be internal to licensees, and would they thus make efficient decisions regarding receiver performance? Would there be a need for receiver standards under a fully implemented property rights model, where markets allocate exhaustively and exclusively defined spectrum usage rights? How would such rules affect licensees, such as broadcasters, who do not have a decisional role in the performance of consumer receivers?

22. We believe that the Commission has the necessary statutory authority to promulgate receiver immunity guidelines and standards under Sections 4(i), 301, 302(a), 303(e), (f), and (r) of the Communications Act of 1934, as amended. We request comment on this assessment of our authority.

Use of Receiver Interference Immunity Performance Guidelines and Standards in Specific Radio Services

23. The receiver interference environment and demands placed on receiver performance are, to a large degree, dependent on the specific service supported by the equipment and the services provided on neighboring frequency bands. For example, mobile services that operate on relatively narrow channels with no guard bands or separation between communications channels need to use relatively high quality receivers that are sensitive to low level signals, provide good selectivity, and are resistant to overloading. Similarly, a service which involves safety of life generally needs to use equipment that is more robust in tolerating potentially interfering signals, to provide added assurances of dependable, reliable operation in environments where such signals are present. On the other hand, the signals of the terrestrial broadcast services, such as AM radio, can be received with relatively low cost receivers that may be less sensitive to low level signals, less selective, and more susceptible to overloading. As a result of such differences, we intend to explore operational environments and characteristics of the different types of services as they affect minimum receiver performance needs, as part of our investigation in this proceeding. As observed by the Task Force, the types of operations and services occupying neighboring frequency bands are a significant factor in the environment in which a receiver operates, and so we seek information on receiver performance issues of specific types of service and operations relating to both

the in-band and out-of-band environments.

24. Given the large number of communication services, it appears more tractable to consider grouping the service related receivers immunity performance parameters that would most directly impact the development of receiver metrics. One grouping by service would include: (1) Public safety services, (2) satellite services, (3) mobile services, (4) fixed terrestrial services, and (5) broadcast services. Another grouping by area of use could consider services functioning in metropolitan and rural areas. Neither grouping is meant to be exclusive, but simply to isolate major performance and environment factors that could be considered for the development of receiver interference immunity performance standards. We seek comment on the types of groupings of services that would simplify the development of robust receiver performance, recognizing that, whenever appropriate, we have granted broad flexibility for licensees to offer different services in the same frequency band in order to respond to ever-changing marketplace needs. With the large number of communications services that are currently in operation, a program to study and define minimum receiver performance specifications across all radio services will be a substantial undertaking. We request comment and suggestions on how to plan for and manage such a program should we decide to undertake it. In particular, we request comment and suggestions regarding the services and/or receiver types with which to begin and how we should organize the process for defining immunity specification. We intend to closely involve industry and other interested parties that have expertise and interest in these matters in the specification process and request comment on how that involvement should be arranged. In this same context, we request comment on the parties that should be included in the work on developing standards for receivers used in the various services and/or service groupings. The specification of minimum receiver interference immunity performance guidelines/standards will involve tradeoffs in costs and perhaps other factors. We therefore ask for information on the cost implications of the various options for minimum immunity specifications for receivers used with the various radio services. We seek comment on issues relating to receiver immunity performance and guidelines/standards in our suggested service groupings as discussed below. We also

seek comment on whether these groupings are appropriate, or whether grouping by other factors such as frequency band or operating bandwidth are more appropriate.

25. *Public safety services*—Public safety communications systems are used by organizations such as police, fire and emergency medical services whose mission often involves safety of life. These organizations need and, indeed, demand that their communications systems provide a very high degree of reliability. Thus, the operating requirements of public safety communications systems would seem to warrant or even necessitate the use of receiver immunity performance guidelines/standards that are tighter than those for general communication services. This could be affected perhaps by requiring that the guidelines/standards for public safety receivers be set higher than those for other equipment. We ask the following questions in this regard:

- Should we adopt an approach that would subject public safety communications systems to higher requirements for receiver interference immunity performance than other classes of receivers?
- What parameters of public safety system performance should be subject to minimum guidelines/standards for immunity to interference and how should we establish such guidelines/standards?
- What values should be specified for the parameters of public safety receiver interference performance?
- Are the reliability needs of public safety systems used for different types of operation, such as dispatch, personal location/identification, video/audio monitoring, telemetry, etc. different and if so, how should these differences be treated in establishing minimum performance guideline/standards?
- In cases where a general communication service can be used in a safety of life or property mode (such as E911 and VHF marine), should receivers used with such services be subject to guidelines/standards for interference immunity similar to those for public safety of receivers when operating in a safety mode?

26. As an illustration of a current approach on receiver standards for public safety services, the Public Safety National Coordination Committee (hereinafter the "NCC") has identified technical standards for radio receivers operating on the interoperability channels in the 700 MHz public safety band. It has also proposed that these standards be incorporated into the