

develop appropriate minimum performance specifications for those parameters, and publish them. Receivers that meet these specifications could then be clearly marked with a recognizable label or symbol to identify them as complying with industry accepted standards for quality reception. Such identification would allow consumers to easily identify high performance products and manufacturers/retailers to emphasize the features of those products to encourage consumers to purchase them. As part of this approach, the Commission could include reference to the minimum performance standards in its rules and provide that only models that comply with these voluntary standards could be marketed as complying with the industry standards for performance quality or other terminology as might be defined through our rule making process. We request comment on this approach and suggestions for alternative approaches that would provide for implementation of minimum performance specifications for DTV receivers on a voluntary basis. We also request comment on the timeframes that would be required for an industry group to develop recommendations for improved receiver performance. We recognize that digital broadcast tuners will soon become mandatory in many television receivers and the corresponding need to move expeditiously if these standards are to be available in a timely fashion. We request comment on whether an industry group tasked with developing receiver guidelines could be convened within a three month period, and whether recommendations could be developed within six to nine months after that. We will also continue to encourage the inclusion of adequate reception quality in DTV receivers and to monitor the performance of DTV receivers in this regard through efforts to be conducted by our DTV Task Force, Media Bureau, and Office of Engineering and Technology.

The Impact of Minimum Performance Specifications for Receiver Immunity on Innovation and the Marketplace

37. Receiver interference immunity performance specifications have the potential to impact receiver markets in various ways depending on how they are implemented. At the mildest level of impact, any performance specifications may create product differentiation that is generally desirable for consumers/users. For example, voluntary industry guidelines that imply, or define, that compliant products are better or more desirable than those that are not

compliant would create product differentiation. At the same time, the cost of producing compliant devices might be higher than the cost of producing non-compliant devices, resulting in higher prices for compliant products. Consumers/users would ultimately determine whether the compliant products are successful, based on whether they would be willing to pay any higher prices that might be charged for the enhanced performance of those products. At the highest level of impact, mandatory standards with which all products must comply could be expected to result in better, presumably more desirable, products that again might cost more to produce. However, mandatory standards could also stifle innovation by restricting the introduction of products with otherwise desirable new features that are inconsistent with the standards. The time and expense associated with changing mandatory standards can also tend to stifle innovation. The purchasers of products subject to mandatory standards would decide whether the devices succeed or fail in the market. For example, if prices were too high or other features were adversely affected, consumers/users might shift to an alternative communications service. We request comment on the impacts of receiver immunity performance specifications on innovation and markets for receiver equipment. Commenting parties are specifically asked to respond to the following questions:

- What effects would interference immunity performance specifications, in the form of either voluntary guidelines or mandatory standards, have on innovation in equipment design, performance (especially with regard to performance not addressed by specifications) and features?
- What effects would such specifications, again in the form of either voluntary guidelines or mandatory standards, have on receiver markets in terms of cost of production, price and availability of equipment, and user demand?
- What aspects of specifications would have the greatest impacts on innovation and markets and what steps could be taken to minimize or mitigate their impacts.
- To what extent should assessments of the impact on innovation and markets be a factor in the processes that define guidelines and standards?

The Current Receiver Environment

38. The current population of radio receivers generally is subject only to rules limiting the amount of

unintentional emissions they may radiate. Thus, existing receivers are, for the most part, built to provide levels of interference immunity as determined necessary by their designer/manufacturer to provide satisfactory service. This has, of course, resulted in a wide range of immunity performance across products used within the same services and across services. We seek to develop information describing the interference immunity characteristics of receivers used in the various radio services. We ask for comment and information in response to these specific questions:

- How do existing receivers used with the various radio services perform with regard to each of the immunity attributes discussed above?
- How many units with these capabilities are currently in service?
- What is the expected remaining service life of existing receivers?

Treatment of Existing Receivers

39. There are literally billions of receivers currently in use with the various radio services. Depending on the extent to which new receiver interference immunity performance guidelines/standards might become central to particular spectrum policies, these existing receivers could pose impacts to our new spectrum management policies ranging from none to significant. There are a range of possible approaches that could be adopted for treatment of existing receivers, and the appropriate approach to apply would depend on a variety of circumstances. For example, if we were to adopt the guidelines approach for quality DTV receivers discussed and did not change pertinent channel allotment or other technical criteria, existing DTV receivers and new units of these same or similarly performing models would pose no impact on our spectrum policies. On the other hand, if we were to find it necessary to reclaim a portion of the spectrum used by a service, as we have done in the case of the broadcast auxiliary service at 1990–2110 MHz, and needed to support the same number of operations in the remaining spectrum, it might be necessary to require or provide incentives to users to switch to a new technology or more efficient receiver design that complies with minimum interference guidelines/standards and to cease using existing equipment.

40. Looking at this subject more generically, we observe that in situations where we adopted spectrum policies that assumed receivers performed in accordance with a given set of interference immunity