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SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Notice of Inquiry*, ET Docket No. 03-65, FCC 03-54, adopted March 13, 2003, and released March 24, 2003. The full text of this document is available for inspection and copying during regular business hours in the FCC Reference Center (Room CY-A257), 445 12th Street, SW., Washington, DC 20554. The complete text of this document also may be purchased from the Commission's copy contractor, Qualex International, 445 12th Street, SW., Room, CY-B402, Washington, DC 20554. The full text may also be downloaded at: <http://www.fcc.gov>. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the FCC Consumer & Governmental Affairs Bureau at (202) 418-0531 (voice), (202) 418-7365 (TTY).

Summary of the Notice of Inquiry

1. By this action, the Commission begins consideration of incorporating receiver interference immunity performance specifications into our spectrum policy on a broader basis. Such specifications could be in the form of incentives, guidelines or regulatory requirements (or a combination of these) in particular frequency bands, services or across bands and services. We believe that incorporation of receiver performance specifications could serve to promote more efficient utilization of the spectrum and create opportunities for new and additional use of radio communications by the American public. From a technical standpoint, a radio receiver's susceptibility to interference is largely dependent on the interference immunity of the device, particularly with regard to its rejection of undesired radiofrequency (RF) energy and signals. If the receivers used in connection with a radio service are designed to provide a certain immunity or tolerance of undesired RF energy and signals, more efficient and predictable use of the spectrum resource can be achieved. Such receiver improvements could also provide greater opportunities for access to the spectrum. These opportunities will potentially lead to consumer benefits in the form of innovation, competition and choice among services and devices.

2. Increasingly in recent years, the preemptive effect of minimally

performing receivers has been demonstrated, as licensees seek protection for service predicated on the performance of receivers with little tolerance for other signals. Had the RF environment in which these services would be expected to operate in the future, or the expected performance characteristics of those receivers, been defined in some way, these services could have been developed with receivers that could better tolerate the introduction of newer services on the same or proximate frequencies. Accordingly, in this Inquiry we seek information, comment, and research on issues concerning the current receiver environment, *i.e.*, the immunity performance and interference tolerance of existing receivers, the possibilities for improving the level of receiver immunity in the various radio services, and the potential positive and negative impacts of receiver standards on innovation and the marketplace. We also request comment on the possible approaches by which desired levels of receiver immunity or tolerances could be achieved, including incentives for improving performance, voluntary industry standards, mandatory standards, or a combination of these or other approaches. In this regard, it is not our intent at this time to implement a new regulatory regime that would generally subject all receivers to mandatory standards. Rather, we believe it is preferable to rely primarily on market incentives and voluntary industry programs that provide for flexibility in establishing and managing guidelines for receiver immunity, rather than formal mandatory standards incorporated into our rules. At the same time, we note that in the past the Commission has mandated various transmitter standards in order to control interference levels. As we recognize that receivers can contribute as much as transmitters to the existence of perceived interference, there may be benefits to the adoption of guidelines, labeling rules, or even mandatory standards for certain classes of receivers. This may be particularly relevant in situations where we continue to find that command and control spectrum management techniques are in the public interest [*e.g.*, public safety] or in situations in which it is not possible for all the relevant industry and consumer parties to reach voluntary agreements.

3. We further request information and comment on the considerations that should guide the Commission's approach to these matters in the various licensed radio services. This proceeding

builds upon recent work of the Spectrum Policy Task Force (Task Force) to examine means for improving the management of the radio spectrum to increase the public benefits derived from use of the spectrum resource. In its Report, the Task Force concluded that the increases in demand for radio services in the limited amount of available spectrum and the rapid advances in radio system technologies, including new digital transmission systems, in recent years are necessitating that the Commission change its traditional model for managing the radio spectrum. The Task Force observed that greater opportunities for spectrum access would be facilitated if the minimum performance characteristics of the receiver were known and therefore recommended that we make receiver performance a more prominent part of our spectrum policy. In response to the Task Force report, a number of parties expressed their support for receiver standards and guidelines developed by industry standards groups. Several parties expressed support for Commission mandated requirements for certain receivers. Other parties oppose mandated receiver standards and guidelines.

4. The principal limiting factor in the allocation and assignment of radio frequencies is interference to received signals. Radio interference can occur when RF energy other than a desired signal is present in a receiver. Such undesired energy can be present from the emissions of one or a combination of other sources generating RF energy or can be generated within the receiver itself. Interference occurs when undesired RF energy is manifested in a radio communication system as a performance degradation, misinterpretation, or loss of information that could be extracted from a desired signal in the absence of the unwanted energy. The adverse effects of undesired energy present in a receiver can be minimized by improved design of the receiver.

5. The Commission's radio spectrum policies and rules, including its efforts to promote spectrum efficiency, traditionally have relied primarily on approaches that control the emissions and locations of transmitters and the frequencies used by specific types of radio operations. Under this model, the Commission has established operational parameters in given portions of the spectrum in which the pattern of radio signals, both geographically and technically, is well understood and generally predictable by equipment manufacturers and licensees.