

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

**Spectrum Policy Task Force Seeks Public
Comment on Issues Related to
Commission's Spectrum Policy**

ET Docket No. 02-135

COMMENTS

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SUMMARY

Because of the unique characteristics of the shared private radio spectrum below 512 MHz, the Commenters submit that the public interest would be best served by maintaining the status quo -- namely, the current site-by-site and shared use licensing regime that has well served the users of these bands for many years. Current users have invested millions of dollars in internal-use communications systems that facilitate the efficient operation of their core business activities and provide communications reliability and redundancies that are not available from commercial operations. The Commission can help ensure efficient use of the shared bands by continuing its license audit and construction notification requirements, and by better enforcement of Rule Section 90.187(e). The Commission could provide licensees with greater flexibility by permitting data communications on a co-primary basis with voice traffic, and by allowing certain system modifications on a notification basis.

While ensuring that spectrum is put to its "best and highest value use," the overriding consideration is that the Commission act in the public interest, convenience and necessity. As the Commission has recognized, the public interest does not always result in the Commission receiving the highest monetary value for a license.

Changes to interference protection criteria should not be considered until the Commission decides on how land mobile systems will be licensed in the future. If the Commission will continue to license site based systems on a shared basis, the current interference criteria that includes selection of the most appropriate frequency by a frequency coordinator and coordinator obligations to help resolve post-licensing conflicts should continue to work well.

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ET Docket No. 02-135

To: The Commission

COMMENTS

Blooston, Mordkofsky, Dickens, Duffy & Prendergast, on behalf of its clients listed in Attachment A hereto ("Private Radio Commenters"), respectfully submits the following comments in response to the Commission's Public Notice, dated June 6, 2002, in the above-captioned docket.¹ These comments, except where noted specifically, address the Task Force inquiries as they would apply to Private Radio Services in the shared frequency bands below 512 MHz. Private Radio Commenters applaud the Commission's desire to ensure that scarce spectrum resources are used in an efficient manner. However, because of the unique characteristics of the shared private radio spectrum below 512 MHz, the Private Radio Commenters submit that the public interest would be best served by maintaining the status quo -- namely, the current site-by-site and shared use licensing regime that has well served the users of these bands for many years.

¹ "Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policy," *Public Notice*, ET Docket No. 02-135 (June 6, 2002) ("*Spectrum Policy Public Notice*").

I. WHAT SPECIFIC POLICY AND RULE CHANGES ARE NEEDED TO MIGRATE FROM CURRENT SPECTRUM ALLOCATIONS TO MORE MARKET-ORIENTED ALLOCATIONS?

A transition from the current licensing regime to market-area licensing would not be appropriate for the shared frequencies below 512 MHz. Current users have developed expensive internal-use communications systems that facilitate both the efficient operation of their core business activities and provide communications reliability and redundancies that are not available from commercial operations. This is because many such business activities, *e.g.*, emergency road services, alarm monitoring and response, manufacturing and petroleum exploration, are inherently dangerous, and the licensees cannot risk the loss of critical communications services from a commercial provider, as happened following the terrorist attacks on September 11, 2001. Because of this need, licensees are already heavily invested in equipment and technology. To force them to either reengineer their systems or purchase commercial services would almost certainly lead to stranded investment and economic waste, as well as the risk of loss of reliable communications services.

In connection with its transition to the Universal Licensing System ("ULS"), the Commission has recently modified its rules to require all wireless licensees, including those operating in the private radio services on the shared use frequencies below 512 MHz, to affirmatively notify the Commission of the construction of any new or modified facilities. This procedure is designed to help ensure that the Commission is able to recover unused spectrum, while keeping it in the hands of those who have a valid use for it. The Commission has also implemented a license database audit as recommended by the Land Mobile Communications Council ("LMCC"), which is facilitating the cancellation of numerous licenses that were either never constructed or have since been dismantled. These measures will go a long way toward ensuring a more efficient use

of the shared bands. Of course, in certain areas of the country, even with these procedures, the frequency bands below 512 MHz are heavily congested. As a result, the Commission should allocate additional spectrum for private use in these heavily congested areas. However, imposing an auction regime on the existing shared bands would not be beneficial.

II. SHOULD CURRENT, RESTRICTIVE SERVICE AND OPERATING RULES APPLICABLE IN MANY BANDS BE CHANGED TO PROVIDE LICENSEES WITH GREATER FLEXIBILITY? IF SO, IN WHICH BANDS AND HOW?

The Commission's site-by-site licensing rules in Parts 1 and 90 provide an effective regulatory framework for licensing spectrum below 512 MHz. In these shared bands, the Commission could provide licensees with greater flexibility to operate voice or data systems by permitting data communications on a co-primary basis with voice traffic. Currently, data emissions are largely authorized on a secondary basis.² Thus, the Commission should amend its rules to elevate the status of data emissions to co-primary with voice emissions.

A. SHOULD INCUMBENT USERS BE GIVEN FLEXIBILITY WITHIN THEIR EXISTING SPECTRUM?

Where possible, the Commission should permit shared-use frequency licensees to elect to operate their systems using voice or data or both. In the event that the Commission does not want to grant co-primary status for data transmissions, the Commission should reallocate some channels for data-only traffic, with a voluntary relocation mechanism for those entities licensed on the channels to be allocated for data, who desire to operate voice systems.

The Commission should also permit licensees on frequencies below 512 MHz the flexibility to change certain aspects of their system operation and design without being required

to submit an application for prior approval. Instead, the licensee would be permitted to make permissive modifications (in much the same way that licensees are permitted in the Part 22 Paging and Radiotelephone Service), provided that the licensee files a notification with the Commission within 30 days of making the permissive modification. Such permissible modification would include, *e.g.*, reduction in antenna height, or changes in antenna system, provided there is no increase in effective radiated power or antenna height to tip, etc.

B. SHOULD “SITE” LICENSES (E.G., BROADCASTING, PRIVATE LAND MOBILE) BE CONVERTED TO GEOGRAPHIC AREA LICENSES? IF SO, HOW SHOULD SUCH LICENSES BE DEFINED (E.G., BY POWER LIMITS AT GEOGRAPHIC AND FREQUENCY BOUNDARIES)?

For private radio systems, the answer is no. This is because the Commission, in a Wireless Telecommunications Bureau ("WTB") proceeding, recognized that "the decision to convert [shared-use spectrum below 512 MHz] from current site-based licensing methods to geographic licensing should not be made unless it is clear that the benefits of making the change outweigh the costs."³ The Commission stated further, "[b]ased on the record in this proceeding, we see no reason to make such an across-the-board change to existing licensing processes in private services. Therefore, we will not adopt geographic area licensing rules for existing private services in this rulemaking."⁴

The Commission made this determination less than two years ago, ruling out the conversion of shared-use spectrum below 512 MHz from site-based licensing to geographic

² See, *e.g.*, 47 C.F.R. §§ 90.233, 90.235 and 90.238.

³ Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies; Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz; Petition for Rule Making of The American Mobile Telecommunications Association, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket 99-87, RM-9332, RM-9405, RM-9705, 15 FCC Rcd 22709, at ¶ 31 (2000) ("R&O and FNPRM").

⁴ Id.

licensing and set forth a standard by which such a transition would be acceptable - only if the benefits outweigh the costs. In making this determination, the Commission and the Wireless Telecommunications Bureau ("WTB"), after review of a substantial record, determined that the costs did not outweigh the benefits of moving to a geographic area licensing model. Nothing has happened in the intervening two years to change this conclusion. Therefore, the current Task Force should not reopen that issue but should instead devote its limited resources to the other important issues raised in the Public Notice.

The Task Force should recognize and reward the utility and value of internal private radio communications. While most areas of the country have access to commercial two-way communications, as discussed above, many businesses have a need for private internal two-way communications services that have greater reliability and that can continue to operate even in the event of a wide-spread disruption to commercial services, such as which followed the terrorist attacks on September 11, 2001.

C. HOW SHOULD SPECTRUM NOT CURRENTLY LICENSED BY GEOGRAPHIC AREAS BE ASSIGNED OR RE-ASSIGNED, *E.G.*, BY AUCTIONING COMMISSION-DEFINED "OVERLAYS" OR BY OTHER MEANS?

The Private Radio Commenters expect that the Commission would find that there is insufficient "white space" in the shared channels below 512 MHz to warrant an auction in most areas of the country. In those areas of the country where there is substantial vacant spectrum, the vacancy is a result of a lack of viable need for all of the available spectrum at this time. In such cases, Private Radio Commenters believe that the Commission would not find an auction to be a profitable undertaking. The Commission should therefore continue site-by-site licensing, to allow licensees to propose specialized systems covering their actual operating areas. However,

the Commission should resume enforcement of the spectrum efficiency requirements of Rule Section 90.187(e), limiting applicants to one new channel at a time, except for 10-channel trunking proposals by applicants demonstrating that they have obtained any necessary concurrences from co-channel and adjacent-channel licensees. Applications by certain entities for dozens or hundreds of channels at the same time have only confounded the processing of bona fide channel requests.

D. WHAT ARE THE RELATIVE EFFICIENCIES AND INEFFICIENCIES OF DIFFERENT LICENSING MODELS?

The site-by-site licensing model currently in use for shared channels is the most efficient licensing model at the Commission's disposal. First, the Commission's rules prescribe that applicants for a site license only request a limited service area. As a result, there is no wasted "white space" licensed but not utilized by the licensee. Many licensees require spectrum for a specific location, *e.g.*, a plant or manufacturing facility, oil fields, ranches, office buildings, etc. With site-by-site licensing, the licensee obtains the spectrum that it needs, and does not have spectrum in areas where it does not require coverage. And, unlike the exclusive radio services, the shared channels below 512 MHz are "shared" in every sense of the word. This means that there may be multiple licensees on the same channel in the same geographic area. Because Commission rules mandate cooperation between co-channel and adjacent channel licensees, the instances of interference are relatively infrequent. Second, for many frequency bands, the Commission's rules limit the number of channels or channel pairs for which an entity can apply.

In contrast, under an auction licensing scheme, the Commission would offer spectrum in large geographic licensing areas, which would be inconsistent with the very localized private internal systems now used by private industry and public safety entities. Such a scheme would

result in wasted white space where the applicant has no requirement for communications services. This is because most auction and post-auction observers agree that the Commission's partitioning and disaggregation rules never fulfilled their promise to effectively place spectrum into the hands of those who need service in outlying areas.⁵ In many cases, a geographic licensee can meet its coverage requirements by constructing its system only in the largest cities in its market. Free from the threat that it will lose its authorization, many geographic licensees refuse to waste their time, effort and expense of partitioning and disaggregating spectrum to meet the needs of entities elsewhere in the license area.

E. HOW WOULD THE INTERFERENCE RIGHTS OF INCUMBENTS AND NEW LICENSEES BE REDEFINED UNDER FLEXIBILITY?

The interference rights of incumbents and new licensees would not have to be redefined in the frequencies below 512 MHz if the Private Radio Commenters' flexibility approach (discussed above) is adopted. There would not be reengineering of the spectrum and hence all "new licensees" would be licensed in the same manner as "old licensees."

F. WHAT, IF ANYTHING, SHOULD THE COMMISSION DO TO FACILITATE EFFICIENT RESTRUCTURING OF SPECTRUM HELD BY NEW LICENSEES AND INCUMBENTS, I.E., REDUCE TRANSACTIONS COSTS, AVOID STRATEGIC HOLDOUTS, AND CREATE GREATER CERTAINTY ABOUT COSTS?

Private Radio Commenters believe that the issue of efficient restructuring is more relevant to licensees who have achieved exclusivity on their spectrum, rather than licensees on the shared frequencies below 512 MHz. In the shared bands, measures such as the license audit,

⁵ Amendment to Parts 1, 2, 87, and 101 of the Commission's Rules To License Fixed Services at 24 GHz, WT Docket No. 99-327, Order on Reconsideration, FCC 01-151, 15 (rel. May 17, 2001).

construction notification requirements and enforcement of Section 90.187(e) will facilitate greater efficiency. Likewise, efficient use would be encouraged by enforcement of the requirement that existing licensees move to narrowband operations when they receive interference from narrowband licensees on adjacent "offset" frequencies.

In the bigger picture of frequency allocation and management, Private Radio Commenters believe it would be appropriate for the Commission to complete its *Secondary Markets NPRM* before proceeding with any further policy changes.⁶ Once the spectrum lease option is available, those ready to use spectrum would be able to gain access to it more easily than is currently the case. To obtain the use of already licensed spectrum today, an entity has to negotiate and enter into management agreements, partitioning agreements, disaggregation agreements, etc., due to the constraints of the Commission's Intermountain Microwave *de facto* control policy.⁷ This is expensive and time-consuming and the entities with the larger licenses have little incentive to do it. As a result, spectrum lies fallow in many areas of the country where the larger operator has either decided that it would not be sufficiently profitable to build a system in that area, or that it would not be worth the headache of entering into negotiations to disaggregate or partition.

III. SHOULD SPECTRUM POLICY BE DIFFERENT IN DIFFERENT PORTIONS OF THE SPECTRUM OR IN DIFFERENT GEOGRAPHIC AREAS?

Yes. Spectrum policy should be different for shared use frequencies below 512 MHz as compared to frequencies assigned or licensed on an exclusive use basis. As discussed above, the

⁶ Promoting Efficient Use of Spectrum Through Eliminating Barriers to the Development of Secondary Markets, Notice of Proposed Rulemaking, WT Docket No. 00-230, 15 FCC Rcd 24203, 24209 ¶ 17 (2000) (*Secondary Markets NPRM*).

Commission should again recognize the value of shared use frequencies for private internal use communications and support its continued development so that private industry is able to continue its efficient use of the spectrum in the furtherance of business and other types of economically vital operations.

A. FOR INSTANCE, SHOULD THE MORE CONGESTED REGION OF THE SPECTRUM (I.E., THAT BELOW 3 GHZ) BE GOVERNED BY DIFFERENT POLICIES THAN THE LESS CONGESTED PORTIONS OF THE SPECTRUM? SHOULD DIFFERENT LICENSING CONCEPTS BE APPLIED TO UPPER MILLIMETER WAVE SPECTRUM WHERE PROPAGATION CHARACTERISTICS LIMIT THE RANGE AND SMALL WAVELENGTHS ENABLE VERY NARROW BEAMS?

Yes. The Commission should utilize different policies for different spectrum bands.

Where spectrum is heavily encumbered (*e.g.*, shared frequencies below 512 MHz), the Commission should forego auctions. Because the upper millimeter wave spectrum is lightly used, a Commission auction of the upper millimeter wave spectrum may be appropriate.

In addition, Private Radio Commenters believe that the Commission should consider phasing in a requirement that licensees use narrowband equipment in areas where frequency bands are most heavily congested. Under this scheme, new licensees would be authorized to operate only narrowband equipment, while existing licensees would receive "grandfathered" status for a reasonable amount of time, and then be required to migrate to narrowband equipment.⁸

B. SHOULD SPECTRUM POLICIES VARY BY GEOGRAPHIC AREA ACCORDING TO THE RELATIVE LEVEL OF SPECTRUM CONGESTION OR USE? FOR INSTANCE, SHOULD THE RULES BE DIFFERENT IN URBAN AREAS WHERE SPECTRUM IS GENERALLY IN HIGH DEMAND, THAN IN RURAL AREAS WHERE THE DEMAND FOR SPECTRUM IS TYPICALLY

⁷ Intermountain Microwave, 24 Rad. Reg. (P&F) 983 (1963) ("Intermountain Microwave").

⁸ For purposes of this requirement, an applicant that is either (a) reauthorizing a previously licensed system without a change in technical parameter or (b) relocating its system, would not lose its "grandfathered" status.

LOW, OR IN THE TRANSITION AREAS – WHERE SPECTRUM DEMAND IS SOMEWHERE BETWEEN HIGH AND LOW DEMAND REGIONS?

Private Radio Commenters do not believe that shared use spectrum requires differing policies for rural and urban users. Rather, the Commission should allocate additional spectrum to support private radio uses in urban areas.

C. HOW CAN SPECTRUM USE, CONGESTION AND DEMAND BE ACCURATELY MEASURED AND PREDICTED?

The WTB performs an annual survey regarding the state of competition in the wireless industry which could be reviewed and analyzed for nascent trends.⁹ For the shared spectrum, the WTB is also conducting a construction and operational audit of its private land mobile database which encompasses the shared frequencies below 512 MHz.¹⁰ This Herculean task involved sending at least one letter to every single licensee in the database and requesting information regarding the operational status of the station. Recently, the Bureau re-sent letters to non-respondents. Once this is done, the Commission will have a more accurate picture of spectrum usage and congestion on the shared frequencies below 512 MHz.

As discussed above, the Commission has also adopted rules requiring private user licensees to notify the Commission of the completion of construction of authorized facilities. In this way, the Commission is able to track which facilities are constructed in its Universal Licensing System ("ULS"). In the past, the Commission has required the submission of loading records and traffic loading studies for certain radio services on exclusive use channels.

⁹ See, e.g., Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Sixth Report, 16 FCC Rcd 13350 (2001) ("*Sixth Annual CMRS Competition Report*").

¹⁰ "Wireless Telecommunications Bureau Announces Commencement of an Audit of the Construction and Operational Status of Private Land Mobile Radio Stations," *Public Notice*, 16 FCC Rcd 14264, (August 1, 2001).

However, traffic loading records do not necessarily provide an accurate portrait of system usage. This is because "loading" refers to the number of units licensed for a particular system, and different industries have different requirements and needs for their radio systems. Some industries may have hundreds of mobile units licensed for a channel with brief radio transmissions, while other industries may use their radios more intensely, and consider the channel at full occupancy with comparatively few mobile units.

The Commission could create an option for an entity that requests to be licensed on a specific frequency to provide the frequency coordinator with evidence that the channel can support the additional traffic. Such showing should be in the form of an airtime usage study over an appropriate trial period. Incumbent licensees should be given the opportunity to rebut this showing. This procedure would permit the frequency coordinator -- and the Commission -- to better make a determination as to whether a shared use channel is fully loaded (and thus alleviate the potential for interference, such that it might exist). The submission of such information would be advisory in nature, and would not abridge the coordinator's discretion in making a frequency recommendation. This procedure would, of course, be somewhat cumbersome and would justify the coordinator charging a higher fee. It would however, be worthwhile in certain areas of spectrum crowding.

IV. ARE THERE CIRCUMSTANCES UNDER WHICH ADOPTING MORE MARKET-ORIENTED ALLOCATION AND ASSIGNMENT POLICIES WOULD AFFECT OTHER IMPORTANT COMMISSION OBJECTIVES? FOR EXAMPLE, COULD THE OPTIMAL PROVISION OF RADIO SERVICES TO OR BY PUBLIC SAFETY AND PUBLIC SERVICE ENTITIES BE HELPED OR HINDERED BY MORE MARKET-ORIENTED SPECTRUM POLICIES? ARE THERE SPECIFIC MARKET FAILURES THAT WOULD PRODUCE SUCH ADVERSE AFFECTS, AND WHAT SHOULD THE COMMISSION DO TO ADDRESS THESE MARKET FAILURES?

In its Public Notice, the Commission stated that it has "implemented various spectrum allocation and assignment policies and models aimed at fostering more flexible use of the radio spectrum so that this important resource can be put to its *best and highest value use*."¹¹ While ensuring that spectrum is put to its "best and highest value use," the overriding consideration must be that the Commission act in the public interest, convenience and necessity. Section 309(a) of the Communications Act of 1934, as amended ("the Act"), states:

Subject to the provisions of this section, the Commission shall determine, in the case of each application filed with it to which Section 308 applies, whether the public interest, convenience, and necessity will be served by the granting of such application, and, if the Commission, upon examination of such application and upon consideration of such other matters as the Commission may officially notice, shall find that public interest, convenience and necessity would be served by the granting thereof, it shall grant such application.

47 U.S.C. §309(a) (emphasis added). The Private Radio Commenters herein respectfully request that the Task Force perform its function with "the public interest, convenience and necessity" as its statutory goal, rather than the "best and highest valued use of the spectrum."

As the Commission has no doubt recognized, the public interest does not always result in the Commission receiving the "highest value" for a license. Indeed, sometimes the public interest lies in the Commission receiving nothing for a license, other than the license application fee. This is because the best use of the spectrum, in the public interest, may differ from the sale or lease of spectrum for the mere purpose of generating revenue for the U.S. Treasury.

Current events have shown all too well that the interests of the common good and those of the general public at times have been forgotten or abandoned over the past decade in favor of the pursuit of the dollar. In this regard, the Commission should recognize the concept of "ruinous competition," or competition merely for the sake of competition. The current economic climate, especially in the energy field and the long distance industry is evidence that "ruinous competition" can arise by allowing or encouraging too many competitors to enter a market, and can have disastrous consequences. Some markets may be able to support a number of competitors offering the same service, but seemingly not nearly as many as apparently believed. The telecommunications industry, and the country's economy, is suffering in part because the market has become flooded with more competitors than the marketplace could reasonably support. As a consequence, companies that might have been able to survive with a little regulatory TLC were damned along with those that never had a hope of fledging. This is not an environment into which private radio licensees should be forced. The Commission has recently licensed several providers of commercial mobile services in the PCS and SMR bands, and is about to authorize more commercial providers in the 700 MHz bands. It should not create even more competing commercial providers by squeezing the shared Part 90 spectrum into the auction mold.

Instead, the Task Force should recognize and reward the worth of private radio internal use systems. Private industry still finds two-way, private radios a necessary and valuable part of their internal business operations. The Commission should respect the versatility of these communications systems and reward the longevity of private industry.

¹¹ *Spectrum Policy Public Notice*, p. 2.

The Commission should also not forget the service that private radio played on September 11, 2001. While wireline and wireless telephone systems quickly became overloaded under the onslaught of phone calls in the wake of the terrorist attacks, private radio systems operating on the shared channels below 512 MHz were, for the most part, not overwhelmed. In some cases, private radio was the only reliable means of communications, which communications were essential for first responders as well as private industry that assisted in the cleanup and supply efforts in New York and at the Pentagon. Likewise, the public interest requires that the Commission continue to facilitate important safety-related operations, such as central station alarm monitoring and automobile emergency response.

V. SHOULD MORE SPECTRUM BE SET ASIDE FOR OPERATING UNLICENSED DEVICES? SHOULD THE KINDS OF PERMISSIBLE UNLICENSED OPERATIONS BE EXPANDED? WHAT CHANGES, IF ANY, SHOULD BE MADE TO THE RULES TO ACCOMPLISH THIS? BECAUSE OF THE COMMON ASPECTS OF UNLICENSED USE, IS THERE CONCERN THAT, AS CONGESTION RISES, SPECTRUM MAY NOT BE PUT TO ITS HIGHEST VALUED USE? IF SO, WHAT POLICIES MIGHT BE CONSIDERED TO ANTICIPATE THIS PROBLEM?

Unlicensed spectrum is a valuable tool which offers affordability, speed and widespread availability. However, unlicensed spectrum has its limitations. Currently, unlicensed networks are not terribly secure and there are people who make it a hobby, or possibly a living, to hack into wireless networks. The Commission should consider adopting policies to encourage greater security for unlicensed spectrum. Moreover, the Commission should ensure that an adequate supply of spectrum is available for higher-powered, more secure licensed radio services.

VI. HOW CAN THE COMMISSION BETTER FACILITATE THE EXPERIMENTATION, INNOVATION AND DEVELOPMENT OF NEW SPECTRUM-BASED TECHNOLOGIES AND SERVICES THROUGH, FOR EXAMPLE, CHANGES IN ITS EXPERIMENTAL LICENSING RULES, INCREASED USE OF DEVELOPMENTAL AUTHORIZATIONS OR PROMOTING DEMONSTRATION PROJECTS?

The Commission's experimental licensing rules as they exist are very flexible. However, one limitation is that an applicant must identify unencumbered spectrum for its application. This is an area where the Commission's *Secondary Markets NPRM* proceeding, when completed, could prove useful. Secondary market rules could facilitate use of PCS, LMDS and other licensed spectrum for alternative, experimental uses in locations where the parent licensee has not constructed and does not intend to construct facilities.

Interference Protection

VII. ARE NEW DEFINITIONS OF “INTERFERENCE” AND “HARMFUL INTERFERENCE” NEEDED? IF SO, HOW SHOULD THESE TERMS BE DEFINED?

The Commission's current definitions of interference and harmful interference for Part 90 operations are adequate. Section 90.7 of the FCC Rules defines harmful interference as:

For the purposes of resolving conflicts between stations operating under this part, any emission, radiation, or induction which specifically degrades, obstructs, or interrupts the service provide by such stations.

47 C.F.R. § 90.7.

Section 90.403(e) of the FCC Rules provides:

Licensees shall take reasonable precautions to avoid causing harmful interference. This includes monitoring of the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.

47 C.F.R. § 90.403(e).

Section 90.173(b), in pertinent part, provides:

. . . Licensees of stations suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If the licensees are unable to do so, the Commission may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations concerned . . .

47 C.F.R. § 90.173(b).

In a shared frequency environment, these rules defined what constitutes harmful interference and the obligations of licensees and Commission to resolve interference issues.

When the Commission began licensing private radio systems on an exclusive basis in the 800 MHz band, it became necessary to adopt a more concrete definition of harmful interference. Thus, at 800 MHz, the Commission adopted frequency re-use criteria that generally prevented an overlap between a proposed station's 22 dBu contour (the interference contour) and an existing station's 40 dBu contour (the service contour).

More recently, in the context of licensing trunking systems on frequencies below 470 MHz that did not monitor their frequencies prior to transmission (i.e., centralized trunking systems), the Commission adopted, in Rule Section 90.187, similar protection to existing licensees that would normally require co-channel licensees to monitor their frequencies prior to transmission. The Commission requires an applicant for a centralized trunking system to obtain consent to the operation of the trunking system from any existing co-channel licensee within specified frequency separation criteria if its interference contour (19 dBu for VHF or 21 dBu for UHF stations) overlaps the service contour (37 dBu for VHF or 39 dBu for UHF stations).

Furthermore, the Commission has relied increasingly on its frequency coordinators to prevent harmful interference, and resolve post-licensing interference issues. The Commission has signed memoranda of understanding with several frequency coordinators in this regard.¹²

While these measures have worked well in the past, it is clear that other measures would be necessary to prevent harmful interference between site-based licensees and market area licensees, especially since market area licensees are generally not required to provide the Commission with details of station locations, antenna height and power. In the 800 MHz band the Commission has issued market area licenses in areas where site-based systems were already licensed and were grandfathered. In that situation, the Commission allowed the grandfathered systems to make modifications that did not extend the station's originally licensed interference contour, and require market area licensees to protect the grandfathered systems from harmful interference. See, *e.g.*, 47 C.F.R. § 90.693 (2001). With respect to most market area licensees, the FCC rules also generally specify a maximum signal level at the boundary of the station's market area that may not be exceeded without the consent of bordering market area licensees. This appears to be a reasonable measure to prevent harmful interference between market area licensees.

Changes to protection criteria should not be considered until the Commission decides on how land mobile systems will be licensed in the future. If the Commission will continue to license site-based systems on a shared basis, as it should, the current interference criteria that includes selection of the most appropriate frequency by a

¹² See, "Private Land Mobile Interference Complaints," <http://www.fcc.gov/eb/interference/plmic.html>.

frequency coordinator and coordinator obligations to help resolve post-licensing conflicts should continue to work well. The real issue is whether the Commission should mix market area and site-based systems on the same frequencies in the same area, in those instances in which the incumbent has achieved exclusivity. Since market area licensees do not normally provide the Commission with technical information about the systems they install, the only way to prevent interference is to require market area licensees to protect site-based systems, since their parameters are known, and to allow the site-based licensee reasonable modifications to its system as its needs change or circumstances require relocation (e.g., loss of tower lease). However, such approach is imperfect at best, since it is difficult to define the circumstances in which an incumbent with exclusivity should be allowed to modify its coverage.

Moreover, if a geographic area licensee is imposed on incumbent shared users, the Commission would be inserting a potential source of disruption to existing licensees without the benefit of a coordinator's recommendation. The market area licensee may not operate in a manner that is compatible with the existing shared users. Again, this would elevate the auction process over the public interest.

VIII. WHAT IS THE IMPACT, IF ANY, OF INCREASED FLEXIBILITY ON HOW HARMFUL INTERFERENCE SHOULD BE DEFINED AND UNDERSTOOD?

If the Commission were to adopt the flexibility plan described herein, and permit licensees to change the parameters of their licenses as long as they do not relocate or increase the contour of their station, flexibility should not cause or increase harmful interference.

IX. ARE MORE EXPLICIT PROTECTIONS FROM HARMFUL INTERFERENCE TO INCUMBENT USERS REQUIRED?

No. The Commission requires licensees of shared channels to monitor a channel before transmitting as a protection against harmful interference. If the current shared use regime is maintained, no additional protection is necessary, except for the consistent enforcement of the Commission's rules.

X. DOES DEFINING POWER LIMITS (IN-BAND AND AT SERVICE AREA BOUNDARIES) AND COORDINATION PROCEDURES IN THE COMMISSION'S RULES PROVIDE SUFFICIENT CONTROL OVER INTERFERENCE AS NEW USES ARE INTRODUCED BY LICENSEES? WHAT OTHER REGULATORY MEASURES ARE NEEDED, IF ANY?

Existing standards work well, wherein frequency coordinators have an understanding with the Commission that the coordinators will be the initial group charged with resolving interference issues between licenses. As a result, the Commission would become involved only as a last resort, except to the extent that investigation by FCC field personnel is necessary to identify an interference source.

XI. DOES DEFINING POWER LIMITS AND OTHER MEASURES IN THE COMMISSION'S RULES DESIGNED TO PROTECT AGAINST HARMFUL INTERFERENCE AFFECT INNOVATION?

The Commission's Rules will have some affect on innovation vis-a-vis incumbent channels. Nonetheless, the rules also result in a workable radio environment. Without these rules, there would be no structure and little or no incentive to invest in radio infrastructure. On the other hand, the Commission has taken a more flexible approach with respect to new frequency allocations (unencumbered spectrum). Finally, if a frequency proposal would be precluded by the Commission's rules, the proponent has two options: (a) request a waiver of the rule upon a

proper showing or (b) apply for an experimental authorization which, if granted, would permit operation on a secondary non-interference basis.

XII. AS TECHNOLOGY ADVANCES, SHOULD WHAT THE COMMISSION DEFINES AS UNACCEPTABLE OR “HARMFUL” INTERFERENCE CORRESPONDINGLY CHANGE IN THE FUTURE? HOW SHOULD RIGHTS AND OBLIGATIONS OF SPECTRUM USERS BE DEFINED TO FACILITATE SUCH CHANGES AS WELL AS INNOVATION?

The Commission must answer this question on a case-by-case basis as technology advances. Certain innovations might prove sufficiently useful to justify changing the definition of harmful interference. However, requiring implementation of an innovation must be weighed against the investment made in the existing infrastructure.

XIII. IF THE COMMISSION ADOPTS NEW POLICIES TO ADDRESS INTERFERENCE, SHOULD THE RIGHTS OF NEW SPECTRUM USERS BE DEFINED DIFFERENTLY FROM THOSE OF THE PRESENT INCUMBENTS? IF YES, HOW?

Incumbents should be given "grandfathered" status for a sufficient amount of time in order to avoid economic waste by making equipment obsolete. In the absence of such protection, licensees and manufacturers will not have the certainty needed to make decisions to invest in radio technology.

XIV. SHOULD THE COMMISSION CONSIDER DEVELOPING RECEIVER STANDARDS OR GUIDELINES FOR EACH RADIO SERVICE THAT WOULD BE USED IN JUDGING HARMFUL INTERFERENCE? FOR EXAMPLE, SHOULD SUCH STANDARDS OR GUIDELINES AIM TO PROTECT RECEIVERS THAT MEET OR EXCEED THE STANDARDS OR GUIDELINES, BUT ALLOW USERS TO USE LESS ROBUST RECEIVERS AT THEIR OWN RISK? IF SO,

The Commission is already considering this issue in a currently pending proceeding.¹³

Private Radio Commenters feel that it would be inappropriate to comment on this matter in this proceeding.

XV. IN LIEU OF, OR TO COMPLEMENT, TECHNICAL RULES RELATED TO INTERFERENCE, ARE THERE PROCESSES THAT THE COMMISSION COULD CONSIDER THAT WOULD ALLOW PRIVATE PARTIES TO MORE EXPEDITIOUSLY RESOLVE INTERFERENCE ISSUES AND DISPUTES, FOR EXAMPLE, THROUGH NEGOTIATED AGREEMENTS, MEDIATION, ARBITRATION OR CASE-BY-CASE ADJUDICATION?

The Private Radio Commenters believe that the Commission should explore an "alternative dispute resolution" mechanism to address any interference complaints that cannot be initially resolved by the parties. The Commission would become directly involved only if the alternative dispute resolution process is unsuccessful. The Private Radio Commenters believe that interference complaints can be handled more expeditiously in this manner. Nonetheless, the Private Radio Commenters believe that alternative dispute resolution is not appropriate for interference complaints involving safety of life and property, *e.g.*, public safety, alarm monitoring and emergency road service licensees. In these circumstances, the interference complaints should be forwarded immediately to the Commission, on an "emergency" basis for prompt resolution. The alternative dispute resolution process could go forward in such

¹³ See, Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, Notice of Proposed Rule Making, FCC 02-81, ¶ 3 (rel. Mar. 15, 2002).

circumstances only after the immediate interference problem was mitigated such that safety - related communications were not being blocked.

XVI. SOME PARTIES ASSERT THAT THE COMMISSION SHOULD ADOPT RULES FOR INTERFERENCE THAT ARE BASED ON ECONOMICS, AND NOT PURELY TECHNICAL, IN NATURE. THEY ARGUE THAT EFFICIENT INTERFERENCE MANAGEMENT SHOULD INVOLVE AN ECONOMIC BALANCING BETWEEN THE PARTIES USING THE SPECTRUM. WOULD GREATER USE OF THESE TYPES OF ALTERNATIVES LEAD TO MORE CERTAIN AND EXPEDITIOUS RESOLUTION OF INTERFERENCE ISSUES?

Adopting interference rules based on economics would not be a wise policy. The public interest, convenience and necessity must be the factor which guides the Commission's decisions and policies; not the highest price or value. An economic balancing would result in the wealthiest party always winning the day, which would not be equitable and which would subvert the public interest standard of Section 309 of the Act.

Spectral Efficiency

XVII. WHAT MECHANISMS OR POLICIES MIGHT BE CONSIDERED AS A MEANS OF PROMOTING A PROPER LEVEL OF SPECTRAL EFFICIENCY EITHER THROUGH REGULATORY MANDATES OR ECONOMIC INCENTIVES? ARE THERE MECHANISMS THAT OTHER COUNTRIES USE THAT SHOULD BE APPLIED IN THE UNITED STATES AS WELL?

Shared use private radio spectrum below 512 MHz is currently very spectrally efficient. The Commission should abide by the adage, "if it ain't broke, don't fix it." On the other hand, tweaking may be in order to give current licensees some flexibility in the band, and to provide more spectrum so that users in urban areas do not experience as much channel congestion.

XVIII. DO ANY EXISTING COMMISSION RULES INHIBIT EFFICIENT USE OF THE SPECTRUM? IF SO, HOW SHOULD THEY BE CHANGED?

Private Radio Commenters do not believe that the rules for frequencies below 512 MHz need to be changed to promote efficiency, except as discussed above.

XIX. WHAT NEW TECHNOLOGIES EXIST THAT, IF DEPLOYED, COULD IMPROVE SPECTRAL EFFICIENCIES AND UTILIZATION? WHAT ARE THE BARRIERS TO THEIR DEPLOYMENT?

Access to funding is a barrier to deployment of new technologies on the shared frequencies below 512 MHz.

XX. SHOULD THE COMMISSION CONSIDER WAYS TO QUANTIFY OR BENCHMARK SPECTRAL EFFICIENCY IN A WAY THAT PERMITS FAIR AND MEANINGFUL COMPARISONS OF DIFFERENT RADIO SERVICES, AND IF SO, HOW WOULD SUCH COMPARISONS BE USED IN FORMULATING SPECTRUM POLICY?

Quantifying spectral efficiency is an impossible task to measure objectively. Attempting to quantify or benchmark spectral efficiency would require a measurement and reporting program that would be unreasonably difficult and costly for shared spectrum licensees implement. Such a system would have a disproportionately adverse impact on small businesses, which would be less able to afford automatic monitoring and recording equipment. A reporting system would also require a great deal of Commission time and resources to administer. The Commission moved away from such requirements in the past and would have to explain what changed circumstances justify the imposition of the reporting requirement.

Putting spectrum to its best use does not necessarily mean packing the most communications into the smallest block of spectrum. The Commission should not make the judgment that a frequency which is used for safety-related communications is a less efficient use

of spectrum than a cellular or PCS frequency that is more heavily used for often meaningless conversations.

XXI. HOW, IF AT ALL, CAN THE COMMISSION PROVIDE INCENTIVES FOR OPERATORS TO USE SPECTRUM EFFICIENTLY? FOR EXAMPLE, HOW COULD TO THE IMPLEMENTATION OF FEES (E.G., ON THE BASIS OF HZ PER SQUARE MILE PER MINUTE OR HZ PER POPULATION COVERAGE) OR RECEIVER STANDARDS AFFECT SPECTRUM EFFICIENCIES?

It is possible that the implementation of fees would not affect spectrum efficiencies at all. Large carriers can pass these fees on to the consumer to pay, without feeling compelled to become more spectrally efficient. Users of shared frequencies below 512 MHz already utilize spectrum efficiently, so there would be little justification for the Commission to impose fees on them.

The Commission could look, instead, to the manufacturers of RF equipment in order to encourage spectrum efficiency. Regardless of any fee imposed, operators can only be as efficient as their equipment permits them to be. The Commission could form a task force for manufacturers, to encourage them to design and produce more spectrally efficient equipment.

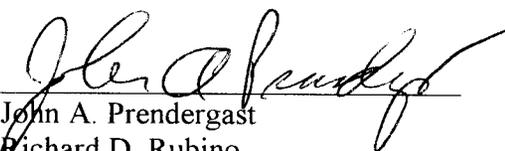
Conclusion

In sum, Private Radio Commenters believe that the shared frequencies below 512 MHz are being licensed and used in a spectrally efficient manner, subject to certain refinements discussed above. The Commission should not adopt market area licensing for these bands.

Respectfully Submitted,

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