



impact of the refarming process currently underway on congestion in the affected bands. The analysis includes estimates of the growth of the number of private wireless radio users, estimates of penetration into the private market of advanced service use (video, data, messaging), and estimates of proportions of these services expected to be supplied by commercial carriers. That data is used, along with reasonable traffic models, to predict the spectrum need. The petition finds a need of 15 MHz by the year 2000, 44 MHz by the year 2004, and 125 MHz by the year 2010. Other documents, in a body of work concerned with private radio use, corroborate the spirit of this finding.

For example, in April of 1995, the National Telecommunications and Information Administration (“NTIA”) concluded that 204 MHz of spectrum would be required for land mobile services in the next 10 years.<sup>3</sup> Of this amount, NTIA forecast that 50 MHz would be required for new advanced private land mobile services including public safety and industrial uses. The Intelligent Transportation System was forecast as needing 85 MHz, and commercial users and other private and Federal land mobile systems accounted for the remaining 69 MHz.

The FCC’s Wireless Telecommunications Bureau’s December 18, 1996 paper entitled “Private Land Mobile Radio Services: Background” (*FCC Wireless Report*) also finds evidence of a need for increased access to spectrum by the PMRS. “The historical forces that have pushed the evolution of the private wireless services continue to produce great changes. Needs and requirements are expanding, as operations become increasingly complex. The use of data

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(...Continued)  
11, 1996. (“PSWAC”)

<sup>3</sup> *U.S. National Spectrum Requirements: Projections and Trends*, NTIA Special Publication 94-31, March 1995.

communications, especially, is expected to grow as users demand more information about and control over their processes.”<sup>4</sup> Though the *FCC Wireless Report* allows for the increased availability of commercial services to satisfy some of the needs of the private wireless community, the report also notes that “Given the specialized nature of some of the private community’s requirements, [immediate access to a radio channel (no dialing required); coverage in areas where commercial systems cannot provide service; peak usage patterns that could overwhelm commercial systems; high reliability; priority access, especially in emergencies; and specialized equipment required by the job or federal regulations] however, it also appears that the need for private systems and services will continue well into the future.”<sup>5</sup>

The Commission has recognized in other fora the congested nature of private mobile radio. For example, in a recent analysis of the level of competition in the wireless communications market, the Wireless Telecommunications Bureau notes that “Dispatch capability is also available on a commercial basis from operators using private land mobile frequencies. However, most private systems utilize virtually all of their allocated channel capacity.”<sup>6</sup>

It is clear, therefore, that though there may be some disagreement as to how much spectrum is necessary to serve the needs of private radio users, there is no disagreement about

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<sup>4</sup> *FCC Wireless Report* in the Executive Summary.

<sup>5</sup> *FCC Wireless Report* in the Executive Summary.

<sup>6</sup> *In re Applications of Pittencrieff Communications, Inc. Transferor, and Nextel Communications, Inc. Transferee, for Consent to Transfer Control of Pittencrieff Communications, Inc. and its Subsidiaries, Memorandum Opinion and Order*, CWD No. 97-22, DA 97-2260, released October 24, 1997 [*hereinafter Pittencrieff Order*].

one fact. This community is going to need increased access to spectrum in the future to continue using wireless communications to advance its mission.

## **II. THE FCC'S CURRENT SPECTRUM MANAGEMENT POLICIES DO NOT ADDRESS THE NEEDS OF PRIVATE WIRELESS USERS**

Congress first granted the FCC authority to use competitive bidding as a licensing mechanism in 1993, with the enactment of the Omnibus Reconciliation Act (OBRA 93). Title III of the Balanced Budget Act of 1997 expands the FCC's current authority to auction non-broadcast spectrum and extends FCC authority beyond 1998, when the authority was due to expire.

Some argue that auctioning spectrum licenses will change the market dynamics surrounding the acquisition of spectrum for wireless communications systems. There are three main ways in which this new dynamic might be expected to meet the needs of the private radio user: 1) private radio users can participate directly in auctions to acquire the spectrum they need, 2) spectrum license holders can take advantage of the FCC's policies on partitioning and disaggregation to supply private radio users with the spectrum they need on an *ad-hoc* basis, and 3) commercial systems will adapt to fully accommodate the needs of private radio users.

Motorola believes that these options are imperfect solutions to satisfying the needs of private users and do not mitigate the need for additional spectrum. Under the current mechanisms, participation in auctions would likely lead to private users holding spectrum licenses in spectrum sizes or geographic areas inappropriate to their business needs. Reselling unused spectrum forces the business owner, against his will, into the new business of communications, as does participation in a partitioning and disaggregation process. The partitioning and disaggregation process also assumes that sufficient incentives exist to cause

commercial spectrum license holders to reassign spectrum to the private system user, but there is as yet no proof of this.

While some suggest that commercial services may adapt to serve fully the needs of the private user, there is no evidence of this as yet. One of the first services, though not the only service, the private users will require is dispatch. The Commission notes that they “believe that entry into dispatch services is not inherently costly, technically challenging, or unduly time-consuming...In addition, there are no regulatory barriers preventing any spectrum holders from entering this market.”<sup>7</sup> And yet, as the Commission writes again, what is “most notable, however, has been the absence to date of entry by cellular and/or PCS providers into the markets for dispatch services. One research group concludes that ‘it seems unlikely that SMR operators will face any meaningful competition for dispatch and group communications service from cellular or PCS companies.’”<sup>8</sup>

Though the FCC believes that “substantial growth in mobile communications service capacity, especially in urban centers, is likely to change the relative profitability of these other services and create incentives for carriers to allocate more spectrum to the provision of dispatch services,”<sup>9</sup> this will be only the first step in addressing the needs of the private radio user, if and when it finally happens. These same forces will then need to create incentives for secure communications, customized coverage, increased capacity, specialized applications, and all of the other traits that distinguish the private radio user.

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<sup>7</sup> *Pitencrieff Order* at ¶ 54.

<sup>8</sup> *Pitencrieff Order* at ¶ 53.

<sup>9</sup> *Pitencrieff Order* at ¶54.

The FCC should not allow its prediction of how increased competition will lead to changes in the wireless communications industry to detrimentally impact the private radio industry. If the changes which the FCC foresees do take place, then users of private radio systems will migrate to commercial services because it is in their best interests to do so. If they do not do so, it is because their needs are not being addressed. We urge the Commission to allow free market principles to reign in this market, and to avoid mandating a transition to commercial services by a spectrum management policy that puts the private radio user at a distinct disadvantage.

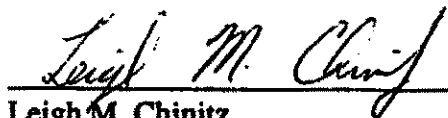
### III. CONCLUSION

In Motorola's view, the LMCC Petition, coupled with the many other works concerned with private radio services, provides sufficient evidence of the needs and challenges faced by this community. We urge the FCC begin a rule making proceeding designed to best accommodate the needs of these users.

Respectfully Submitted,



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