

United States Government  
Memorandum

**Date:** March 9, 1987

**To:** Chairman Mark S. Fowler  
Commissioner Mimi Weyforth Dawson  
Commissioner Dennis R. Patrick  
Commissioner Patricia Diaz Dennis

**From:** Commissioner James H. Quello

**Subject:** UHF/Land Mobile Sharing Item

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The Commission is scheduled to soon consider a Report and Order addressing further sharing of the UHF television band by private land mobile radio services, General Docket No. 85-172. Past and current allocation decisions have placed great emphasis on the need for spectrum by the private land mobile radio services, essentially relying on a staff report issued in 1983 (Future Private Land Mobile Telecommunications Requirements). Institutional memory serves me well regarding this report.

The controversy surrounding some of the initial conclusions of the staff led to the report being issued as a staff document. Memoranda from the Chief of OPP and also from then Chief of OST (now OET) clearly indicated that the initial results of the staff projection were seriously flawed. Apparently, the staff report understated the effect of new technologies to solve spectrum congestion problems (where they may exist). OPP also had problems with the staff's methodology in estimating potential spectrum shortfall for land mobile services. The projected growth rate of the private land mobile services, according to OST, was an overestimation of the magnitude of 2 to 3 times. Some adjustments were made. However, due to many other problems with the study as reported by OPP and OST, the results are still questionable. In short, the staff report, while representing a valiant attempt to project spectrum needs for land mobile services, failed to consider important variables and appropriate data bases in the analysis. Therefore, relying on the staff report to support private land mobile radio services allocation decisions is unsound.

I have been and continue to be critical of the Commission's lack of reliable occupancy data and other information necessary for sound decision-making when allocating spectrum to the private land mobile radio services. It now appears we have new data that further questions current and future needs. These newly found data suggest that the Commission's past assumptions regarding channel occupancy in the 800 MHz bands may be in error.

470

Listed in the Commission's Report to the Congress regarding our accomplishments for fiscal year 1985 is a project listed by FOB to determine spectrum occupancy levels at 800 MHz. Furthermore, FOB's 1985 MBO list reported (under Action Plan 5-C, page 3) that FOB performed spectrum occupancy monitoring on 800 MHz in 10 major metropolitan areas. The data were analyzed by FOB and reported to PRB. Apparently, this study was done to assist in PRB's channel reclamation program. Regardless of the intent of the study, the data are applicable to other proceedings where allocation decisions for private land mobile radio services are based on alleged need. If many of the channels that have been licensed are in fact not occupied or at best minimally occupied, then any other argument presented to support the "need" argument is no longer pertinent, e.g., percent increase in the number of licenses granted, or number of applications received under a lottery process.

The September 1985, FOB working paper reporting the results of the study of the 800 MHz land mobile channel occupancy revealed staggering facts. For example, on average 66% of the 800 MHz channel were unoccupied. The working paper depicting the results of the FOB survey was given to PRB for comment. PRB did isolate some problems with the study (e.g., 40 mile vs. 70 mile survey area, and so forth). The staff did respond to some of PRB's criticisms by conducting telephone surveys with a sample of the licensees surveyed in the monitoring study. The telephone follow-up served as a reliability check to the original monitoring study. According to the staff, the telephone effort essentially affirmed the results of the monitoring study. As an aside, due to the telephone check, some licensees returned their unused channels to the Commission.

In the fall of 1986, the FOB conducted a more sophisticated monitoring analysis of the Atlanta market. This monitoring study resolved many of the earlier criticisms raised by PRB. Although not in written form, the staff has indicated that in Atlanta approximately 66% of the 800 MHz channels remain unoccupied. Again these data seriously undermine the alleged need for spectrum by the private land mobile radio service.

The importance of these studies extends beyond the specific results as potentially damaging as they are. The study raises one of the critical questions I have been asking for some time, the question of channel occupancy. Establishing demand for spectrum primarily on the basis of our license record does nothing to assess the use of spectrum by those licensees. The fact that the Commission has reclaimed channels in the private land mobile radio services further suggests that there are many channels that are licensed and remain unused. Such inactivity by licensees creates an artificial demand for additional spectrum. Moreover, basing our allocation decisions and projections of future need for spectrum on the number of licenses issued rather than on the actual use of spectrum leads to bad public policy judgments.

I am recommending that the UHF/Land Mobile item be pulled from the agenda until the Commission has had an opportunity to examine the actual needs of the land mobile community. The fact that the FOB study has existed for two years without review by the Commissioners and their staffs evidences the need for close and exacting scrutiny in allocating spectrum. Because the study has just been made available, I do not believe it is productive at the eleventh hour to provide quick methodological fixes that attempt to either lend support for or detract from the study's results. At this time we should avoid "bootstrapping" methodologies. The uncertainty surrounding this issue requires a thoughtful and deliberate process. At the outset, the Commissioners should review all available data (including FOB and PRB data) regarding occupancy and use of land mobile channels. We must avoid new "evidentiary surprises" when considering spectrum management issues. Furthermore, I suggest that we resume monitoring techniques and reassess the occupancy of channels licensed in private land mobile services in the top ten urban areas. Concurrently with the monitoring study, we can issue a Notice of Inquiry along the lines of the MST/NAB et al. petition addressing broadcasters' future use of broadcast spectrum. Once the facts are available, then the Commission can move forward to formulate sound public policy.

The bottom line is that we do not have the facts necessary to demonstrate the need for spectrum by the land mobile radio services. Without those facts, we cannot make rational allocation decisions.

  
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James H. Quello

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