Comments on Cellular Radio (letter from Chairman Wirth to Acting Chairman Lee dated March 24, 1981)

1. Could a cellular radio system potentially serve substantially more members of the public than traditional two-way radio services?

Several years of Commission study and public comment have indicated that cellular radio systems can be far more efficient in terms of spectrum usage than traditional two-way radio services. Through frequency reuse made possible by decreasing the size of the cells, it is believed that thousand of users can be accommodated where only a very few can be accommodated under the present system.

2. Is the amount of the spectrum allocated for cellular radio sufficient to permit full scale development of the technology?

While there remain differences of opinion among those commenting on the subject, the Commission now believes that 20 MHz per system is sufficient to at least begin to offer this service to the public. With 40 MHz available at the beginning and an additional 20 MHz in the general reserve and available should this technology require it in the near future, it seems likely that there is sufficient spectrum availability to provide for needs in the forseeable future.

3. Will cellular radio telephony be affordable to the general public?

It appears that, at least initially, cellular radio technology will be affordable only by business users and more affluent private individuals. As the technology develops, however, it seems likely that the equipment required to perform this service will come down in price so as to become affordable to more and more people.

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4. Describe the AT&T experiment in Chicago. Have any other companies demonstrated or proposed to demonstrate cellular technology?

The AT&T experiment in Chicago consists of ten cells with limited spectrum and a limited and carefully controlled business clientele in a market

test mode. Results of the experiment so far have been very good and those customers participating in the test have been very enthusiastic. American Radio Transmission Service (ARTS) with considerable support from Motorola have constructed a system in the Baltimore-Washington area which is now in experimental use. However, that system apparently isn't far enough along to permit a market test. Millicom has also petitioned for a developmental license to construct a system in Raliegh-Durham. The Commission has not yet acted on that request.

5. Is there any technical, economic or other reason why entry into this market needs to be restricted or controlled by the Commission?

There are both technical and economic reasons why the Commission must be involved in the regulation of the cellular rate systems. First, the Commissi on is seeking to establish a nationwide, compatible system of mobile telephone service and, therefore, there must be some assurance that all equipment manufactured for one system will be able to perform in another system. The Commission also has an interest in the efficient use of the spectrum provided for cellular radio service and as a result will be monitoring the development of the systems to determine if the efficiencies we expect are indeed being realized. Our concerns on the economic side of the equation relate to the financial and technical ability of applicants to actually provide service with the least possible delay. Because construction and operation of these systems will require very significant capital outlays and extensive technical expertise, we hope to establish threshold requirements that will limit consideration of applicants on a comparative basis to only those who are actually qualified to provide the service. Our concerns are greatly diminished with regard to the providers of retail cellular service who will be reselling the basic service from the carriers. The states, however, will retain jurisdiction to control entry and rates of these resellers. Not all states

choose to rate regulate radio common carriers and, presumably, such forbearance will also apply to cellular services in those states.

6. Could cellular radio telephony provide an alternative to existing local distribution by wire?

Conceivably, it could. However, it would do so at what now appears to be far greater cost than the wireline system and inevitably at a much greater cost in spectrum use than the wirelines.

7. If cellular radio telephony could provide an alternative to local distribution by wire, is such technology likely to be fully developed as such by local telephone companies?

Perhaps if the local wireline carrier were the only eligible provider of service it might have some incentive to delay cellular service although this is not clear. In the plan approved by the Commission, however, any desire by the wireline carrier to thwart development of cellular service can be overcome by another entrant on the non-wireline side.

8. Why is it necessary or desirable to divide the 40 MHz total cellular allocation in half, allocating half to wireline carriers and half to others?

Part of this question was answered in the response to question 7. There are other possible benefits to permitting parallel development of this technology since both carriers will have incentives to innovate in order to provide better service at lower cost.

9. Would such a division ensure only two providers, whereas without a division there could be three or four providers (or at least far more users) because allocation would be more efficient?

The Commission is satisfied on the basis of its own studies and comments from interested parties that there is a point at which inefficiencies begin to escalate because of a lack of sufficient channels to permit extensive reuse of the channels. Where it was intially argued that a single provider should be allocated

75 MHz, the Commission has now determined that 20 MHz appears to be sufficient spectrum to, at least initially, demonstrate the benefits of reuse to a significant degree. It should also be noted that each provider of service requires a certain number of channels for control purposes and, thus, the more providers of service the larger number of channels which must be set aside for control purposes.

April 9, 1981

STATEMENT OF
COMMISSIONER JOSEPH R. FOGARTY
IN WHICH COMMISSIONER JAMES H. QUELLO JOINS
Concurring in Part

In Re: Report and Order on Rules for Cellular Communications Systems--CC Docket No. 79-318

I write separately here to emphasize that the public interest will be well-served by this Report and Order and by the revolutionary cellular mobile radio technology and service which our action unleashes. That there is a critical need for cellular service now--not tomorrow, and certainly not years from now--is abundantly clear. Demand for mobile radio telephone service has far exceeded available supply, particularly in the more heavily populated urban areas of the country. The Illinois Bell developmental market tests have indicated further that the demand for mobile service will be substantially greater than previously anticipated.

Relevant provisions of the Communications Act support and, indeed, in my judgment, mandate prompt Commission action in recognition of the immediate and pressing need of the public for mobile telephone service. Section 1 of the Act, which defines the fundamental purposes for which this agency was established, charges the Commission with making "available, so far as possible, to all the people of the United States a rapid, efficient Nationwide, ...wire and radio communications service with adequate facilities at reasonable charges..." As the Supreme Court has recognized, the ultimate purpose of the Act is "to secure the maximum benefits of radio to all the people of the United States." 1/ Additionally, Section 303(g) of the Act directs the Commission to pursue "the larger and more effective use of radio in the public interest."

1/ National Broadcasting Co. v. U.S., 319 U.S. 190, 217 (1943).

Our action providing for a separate wireline carrier cellular allocation in all markets for a five-year period is designed specifically to meet these statutory and service imperatives. As the Commission found in its Second Report and Order in Docket No. 18262, 2/ critical benefits of technical expertise, access to capital, and nation-wide service compatability and availability will attend the earliest possible construction and provision of cellular service by wireline carriers. These are benefits which the public can enjoy immediately, benefits which no sound and responsible policy analysis can ignore.

While we are attaching paramount importance to the critical need for the expeditious implementation of cellular mobile telephone service, we are not ignoring competitive considerations in reaching this decision. The split-frequency approach which we have adopted allows for two competing cellular systems in every market. The interconnection policy which we have prescribed will require telephone companies to furnish the appropriate and necessary interconnection to cellular systems upon reasonable demand, and upon terms no less favorable than those offered to the cellular systems of their affiliated entities or independent telephone companies. We are promoting a significant second tier of cellular service competition at the retail level by precluding any prohibition on the resale and shared use of cellular services. We are conditioning AT&T's participation in cellular systems and services on its formation of a separate subsidiary which must maintain its own books of account, separate officers, separate operating personnel, and separate computing and switching facilities. Telephone companies may provide cellular terminal equipment but only on an unbundled and detariffed basis, and AT&T may offer such deregulated terminal equipment only through a subsidiary, separate from the subsidiary which will offer cellular service.

2/ 46 FCC 2d 752, 760 (1974).

We have been careful to consider the value of competition in adopting a regulatory structure for the provision of cellular service, but we have also been mindful that promotion of competition is not the whole of the public interest. 3/ Our statutory responsibilities require us to weigh and balance competing objectives of quality, quantity, and timeliness of essential communications service offerings. I believe we have been faithful to those responsibilities in this proceeding, and I believe we have provided a framework for the implementation of cellular service which is firmly based on the overall public interest.

While I enthusiastically join in the bulk of this Report and Order, I am troubled by the Commission's decision to apply the separate subsidiary requirement to all wireline carriers participating in the provision of cellular service. Although the Report and Order alludes to a waiver standard for "small" telephone companies, I am concerned that this approach will only clog up the cellular authorization process with paper and litigation. It would be far better to meet any legitimate concerns about safeguarding facilities-based cellular system competition by definitively selecting a standard for the imposition of the separate subsidiary requirement based on the size of the telephone company (e.g., number of main stations or revenues). I hope that the Commission's decision on this point does not impede the rapid deployment and offering of cellular technology and service which are so clearly in the public interest.

3/ FCC v. RCA Communications, Inc., 346 U.S. 86, 93 (1953); Hawaiian Telephone Co. v. FCC, 498 F.2d 771 (D.C. Cir. 1974).