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**Testimony**

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**TELECOMMUNICATIONS**

**Competition in the Cellular  
Telephone Service Industry**

Statement of  
Kenneth M. Mead, Director,  
Resources, Community, and Economic  
Development Division



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Mr. Chairman and Members of the Subcommittee:

We appreciate this opportunity to discuss the competitiveness of the cellular telephone service industry. Cellular phone service is one of the fastest-growing segments of the telecommunications industry. From its inception in the early 1980s, the cellular phone service industry in the United States has grown to nearly \$6 billion in annual revenues, with about 8 million subscribers paying an average of \$74 per month for service. Under current Federal Communications Commission (FCC) rules, no more than two cellular carriers may operate in each geographic market area. To address questions about the cellular marketplace, Senator Harry Reid asked us to examine the competitive structure of the industry and whether the FCC's policies ensure the availability of cellular services at competitive prices. This testimony is based on our report to Senator Reid on these issues, which is being released today.<sup>1</sup>

Overall, we found the following:

- A market in which only two firms provide a product or service--the situation in the cellular marketplace--is unlikely to have competitive prices, because the firms may have incentive to recognize their interdependence and maintain prices above the competitive level. In addition, when market entry is restricted and adequate substitutes may not be available, the likelihood increases that prices will be above the competitive level.
  
- Resellers buy blocks of cellular service at wholesale rates from the two licensed carriers in a market and then repackage and sell the service to consumers. Because

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<sup>1</sup>Telecommunications: Concerns About Competition in the Cellular Telephone Service Industry (GAO/RCED-92-220, July 1, 1992).

resellers do not own or operate cellular systems, they do not compete with the carriers at the wholesale level. Under the current market structure, the resellers' presence in a market will generally not lead to lower rates for consumers.

- Neither the FCC nor the states are evaluating how profitable the industry is, although the states have authority to regulate intrastate cellular rates. The limited available data on costs and prices in the cellular marketplace are not sufficient to determine whether prices for cellular services are competitive. Because of the potential for noncompetitive behavior in this type of market, the industry may need further examination.
  
- Emerging technologies that provide service similar to cellular service may improve the competitive structure of the industry if they are furnished by firms other than those already providing cellular service in a given market. However, controversies over the source of spectrum and method of licensing the providers of these new communications services may delay their introduction into the marketplace.

We are making recommendations to the FCC that are designed to (1) enhance competition in the cellular service industry and (2) facilitate an evaluation of industry competitiveness if increased competition is not forthcoming.

#### BACKGROUND

The FCC administers the allocation and use of the electromagnetic spectrum (radio waves) for all non-federal users--including the radio spectrum used by cellular telephones--and it

licenses cellular carriers to use specific spectrum frequencies.<sup>2</sup> In 1981 the FCC authorized the licensing of two carriers in each market to build facilities and offer cellular telephone service. Typically, one license went to the existing local telephone company (referred to as the wireline or landline carrier) and one to an applicant not affiliated with the local telephone company (the nonwireline carrier). The FCC allocated the use of the radio spectrum to the two licensed carriers, who in turn made the capital investment to build, operate, and maintain cellular systems. In late 1983 the first cellular telephone systems began operating commercially in the Washington, D.C./Baltimore, Maryland area and in Chicago, Illinois. Currently, licensed carriers operate in all 734 urban and rural geographic market areas designated by the FCC.

Licensed carriers sell cellular services directly to consumers, or they hire independent agents to obtain subscribers on a commission basis. Also, the FCC allows an unlimited number of firms, called resellers, to buy blocks of cellular phone numbers from the carriers at wholesale prices to sell to consumers at retail prices. In effect, resellers become their customers' cellular phone company, handling billing and services, while the licensed carrier operates and maintains the system.

CURRENT MARKET STRUCTURE MAY  
PROVIDE ONLY LIMITED COMPETITION

The two-carrier (duopoly) market system that the FCC created may not provide significant competition in cellular markets. In any duopoly market, adequate competition is a concern because it is likely that producers can recognize their interdependence and may be able to maintain prices above the competitive level. In

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<sup>2</sup>The National Telecommunications and Information Administration, in the Department of Commerce, allocates the radio spectrum assigned to federal users.

general, the fewer the number of producers, the less likely that they will price competitively.

In addition, the following characteristics of the cellular marketplace may reduce the likelihood of competition:

- Although one carrier may have a somewhat larger service area or offer somewhat better quality service, few significant quality differences exist among cellular carriers. Economic theory indicates that similarity in product quality may facilitate noncompetitive behavior.
- The cellular industry is a duopoly not because of market forces but because the FCC established this market structure and continues to restrict market entry. To the extent that new firms can enter a market freely, it becomes increasingly difficult to maintain noncompetitive pricing practices. Noncompetitive behavior may be more likely to occur in a restricted-entry industry than in an open-entry industry.
- Because licenses for cellular service can be sold by the original licensee--and many have been--a carrier may find that its competitor in one market is also its competitor in several other markets. Moreover, where licenses have been sold to carriers in partnership, competitors in one market may be partners in another market. This pattern of ownership may facilitate the type of interdependence among competitors that is conducive to noncompetitive behavior.
- Currently, many analysts believe that no adequate substitutes exist for cellular service. Lack of adequate substitutes for a given product or service makes it easier for firms to maintain prices above the competitive level because consumers have no alternatives. If the consumer

wants the particular product or service and there are few adequate substitutes, price becomes less important in the buying decision.

When it set up cellular markets in the early 1980s, the FCC required cellular carriers to sell to resellers on a nondiscriminatory basis. Although the FCC recognized the resellers' potential to enhance competition, it was uncertain whether a market structure that included resellers would lead to either a greater diversity of service or lower prices.

The resellers' costs are, for the most part, controlled by the carriers from which the service is purchased. They do not compete directly with carriers at the wholesale level and their presence does not alter the industry's duopoly market structure. Hence, their presence in a market cannot deter licensed carriers from exercising market power, or generally lead to lower prices for consumers.

#### THE COMPETITIVENESS AND PROFITABILITY OF THE CELLULAR INDUSTRY IS NOT BEING EVALUATED

Profitability is a critical component in evaluating whether an industry's prices are set at or near competitive levels. However, a firm's profits in the cellular phone service industry stem from both access to the radio spectrum and market power. The radio spectrum that the FCC allocated to cellular carriers is a scarce and valuable resource, and a portion of carriers' profits are probably attributable to control of this resource. Some analysts contend that, from a public policy perspective, it might have been preferable for taxpayers, rather than private firms, to reap the return from this scarce public resource. However, the FCC currently licenses, and hence allocates, spectrum generally through either comparative hearings or lotteries--neither of which provide

the government, and thus taxpayers, a financial return for the allocated spectrum.

The source of the profits notwithstanding, determining profitability may be an appropriate first step in assessing the reasonableness of prices for cellular service. However, neither the FCC nor the states currently have any system in place to regularly obtain sufficient evidence to determine the profitability of cellular carriers. States have the authority to regulate intrastate cellular service rates, but we could find no evidence that any states have required carriers to periodically submit financial data for the purpose of determining whether cost-based pricing regulation should be imposed. Public utility officials from the six most populous states told us that cellular is not an essential service, and the industry is sufficiently competitive, so traditional public utility regulation is not necessary.<sup>3</sup>

According to the FCC, it has the authority to regulate interstate cellular rates but not intrastate rates. However, the FCC does not collect revenue, cost, and other data from cellular carriers. As part of ongoing industry monitoring, the FCC, among other things, reviews complaints filed against carriers, responds to petitions for rulemaking, and adopts or modifies rules as needed. In addition, the FCC says that it reviews all applications for and transfers of licenses to ensure that the public interest, convenience, and necessity are served. The FCC recently acknowledged that, in the absence of evidence such as price and cost data, it is difficult to conclude that the cellular service industry is fully competitive. The FCC believes that concerns about the lack of sufficient competition in the cellular service industry should be resolved through the introduction of new personal communication services in the near future.

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<sup>3</sup>We consulted with officials from California, Florida, Illinois, New York, Pennsylvania, and Texas.

We examined data on retail prices that licensed carriers charged for cellular service in the 30 largest cellular phone markets between 1985 and 1991. We obtained the unverified data from a consulting firm, which was the only source we were able to identify that had compiled industry data of this type. According to these data, average prices were fairly constant over the period. However, taking inflation into account, there were real price decreases of about 27 percent on average across the 30 largest markets. In about two-thirds of the markets, the best available prices between the two carriers were very close and often nearly identical for a given package of cellular services. In about one-third of the markets, prices differed by more than 10 percent--with an average difference of 22.4 percent. However, even in markets where prices were nearly identical, additional information would be needed to conclude that noncompetitive pricing practices had occurred. Appendix I lists the 30 cellular markets we reviewed.

Although cash flows have been negative for many cellular carriers because of large initial capital outlays, the FCC and others contend that the industry will be very profitable in the future. For example,

- According to a 1989 report by the California Public Utilities Commission, which relates 1988 data on 14 of its licensed cellular carriers, the average return on sales for wholesale operations was 31 percent and the average return on sales for all operations was 15 percent. The average return on equity reported by these carriers was a very healthy 24.5 percent.
  
- The California-based Cellular Resellers' Association's analysis of financial performance of the cellular carriers in Los Angeles, San Diego, and San Francisco/San Jose showed wholesale investment returns of between 25.3 percent and 123.1 percent in 1988.



-- Stock analysts, optimistic about the future of the industry, report that growth of cellular cash flow and earnings should be robust over the next decade, and stock values should appreciate substantially in the long run.

Finally, the value of cellular licenses as represented by sales transactions indicates the high expected value of these firms. Several analysts have noted that the prices of licenses sold divided by the total population of the market area have increased considerably since cellular systems first went on line. For example, some systems recently sold for over \$200 per person in the market area. More importantly, analysts believe that these prices are considerably more than the actual replacement cost of the firms' assets. Analysts attribute these high prices to, among other things, the expectation of future earnings.

EMERGING SERVICES HAVE POTENTIAL  
TO ENHANCE COMPETITION

Today's personal communications services--cordless phones, paging devices, and cellular phones--will soon be joined by new services that share certain characteristics with cellular and use both existing and new telecommunications technologies. For example, digital cordless telephone radio networks are essentially self-contained services that will use inexpensive, pocket-sized terminals, intelligent networks, and smart cards, and they will be capable of voice, data, and image transmission. As technologies advance and this and other new services that provide a function similar to cellular are brought to the marketplace, competitiveness in the cellular industry may improve.

The FCC is currently developing regulatory policies for implementing the new services. As part of this process, the FCC invited comments on a wide range of issues, including whether there is a need for restrictions on license eligibility. The FCC has

acknowledged that potential problems and benefits may result if it permits carriers to apply for new service licensing in a market where they are a licensed cellular carrier. However, if any restrictions are placed on granting additional licenses to the existing carriers, FCC officials told us that the existing carriers would be able to use their current spectrum allocation for other mobile services, including some personal communications services. Although certain technological obstacles may need to be overcome to use the cellular spectrum for alternative services, FCC officials stated that these obstacles were not insurmountable. We support a policy that gives first preference to firms that are not current cellular providers in a given market area in order to increase the number of source options available to consumers, and thus encourage carriers to lower their prices.

The FCC has also begun what it calls a "pioneer preference" program to ensure that innovators have an opportunity to participate either in new services, that they develop or existing services that incorporate new technologies. This program should foster the formation of new services but it could guarantee licenses to existing cellular carriers if they develop the new services. In addition, the FCC approved a proposal to develop specialized mobile radio systems in the congested cellular markets of Chicago, Dallas, Houston, Los Angeles, New York, and San Francisco. The new service, which may be available in Los Angeles as early as 1993, will be similar to cellular within the immediate market. FCC is expected to license the developer--Fleet Call--in all six markets. Officials of Fleet Call see this as an opportunity to be the third major provider of mobile phone services, in direct competition with the cellular carriers, in these markets.

SOURCE OF SPECTRUM MAY PRESENT  
MAJOR HURDLE FOR NEW TECHNOLOGIES

The FCC expects new services with new providers to begin competing in the cellular marketplace as early as next year. However, the scarcity of radio spectrum presents major obstacles that may delay introduction of the new services. Virtually all of the spectrum that is suitable for these services already has been allocated. In January 1992 the FCC proposed using 220 megahertz of spectrum that was allocated for other purposes for emerging telecommunications technologies.<sup>4</sup> Public comments on the proposal are due July 6, 1992. The FCC noted that taking spectrum from other purposes and reserving it for new services will enable FCC to decide upon frequencies for new applications in an orderly manner, without having to go through a difficult and time-consuming spectrum reallocation process each time a new service is introduced.

As discussed at hearings before the full Committee last month, incumbent users of the frequencies have asked the FCC to suspend the proposal. These users--railroads, electric cooperatives, and others--have expressed strong concern about the potential disruption to safe and reliable rail transportation and electrical power services as a result of the proposal to reallocate the radio frequencies that they use. They have requested that the National Telecommunications and Information Administration identify unused government frequencies that may be used by the emerging technologies.

Also pending in the Congress are proposals to auction spectrum for the new services to the highest bidder, rather than to allocate it without charge. Some of these bills would amend the Communications Act by adding a provision authorizing the use of

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<sup>4</sup>In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, Notice of Proposed Rule Making, ET Dkt. No. 92-9, 7 FCC Rcd 1542 (1992).

competitive bidding (auction) for awarding all licenses. Controversies over the source of the spectrum and whether to charge for spectrum allocation could delay the introduction of new services, thus delaying new competition to cellular. Consequently, the FCC may need to consider interim steps for monitoring competitive conditions in the industry to protect consumers' interests.

### CONCLUSIONS

In summary, Mr. Chairman, the existing two-carrier cellular telephone service market structure may produce only limited competition. Because of this structure and entry restrictions, resellers cannot be expected to compete with the carriers at the wholesale level. Neither the FCC nor states gather the data needed to determine whether cellular service prices are competitive. Emerging developments in cellular and similar technologies may solve some of the concerns with the existing cellular market structure. Indeed, the FCC is relying on new services from new sources to resolve concerns over the competitive condition in the cellular marketplace. Hopefully, this will occur. However, the FCC must first overcome obstacles, including the equitable and safe reallocation of radio spectrum, which could significantly delay introduction of the new services. In the event such delays occur, other actions may be needed to protect consumers' interests. Therefore, our report recommends that if the new services are not available within the time frames that the FCC currently envisions, the FCC should begin evaluating the status and development of competition in the cellular service industry. As a first step, the FCC could obtain data necessary to begin assessing the profitability of carriers operating in the 30 largest markets.

The FCC's approval of Fleet Call in six frequency-congested markets should guarantee a new competitor in these markets. The FCC's new service licensing rules and pioneer preference program

offer further potential for competition. However, it is not yet known whether additional carriers or the existing cellular carriers will provide new services in most of the markets across the country. Our report recommends that, in granting licenses and allocating spectrum for the new communication services, the FCC should consider establishing a policy that gives first preference to firms that are not current cellular providers in a given market, particularly if only one new license is granted in the market. However, in instances where the FCC may determine that a current cellular carrier is the most appropriate provider of the new service, the FCC should ensure that the benefits of licensing that carrier outweigh the benefits of enhancing competition.

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Mr. Chairman, this concludes my prepared statement. I would be happy to answer any questions.

30 CELLULAR METROPOLITAN MARKET AREAS IN GAO'S PRICING ANALYSIS

1. New York, New York-Newark, New Jersey
2. Los Angeles-San Bernadino, California
3. Chicago, Illinois
4. Philadelphia, Pennsylvania
5. Detroit-Ann Arbor, Michigan
6. Boston, Massachusetts-Haverhill, New Hampshire
7. San Francisco-Oakland, California
8. Washington, D.C.
9. Dallas-Fort Worth, Texas
10. Houston, Texas
11. St. Louis, Missouri
12. Miami-Fort Lauderdale, Florida
13. Pittsburgh, Pennsylvania
14. Baltimore, Maryland
15. Minneapolis-St. Paul, Minnesota
16. Cleveland, Ohio
17. Atlanta, Georgia
18. San Diego, California
19. Denver-Boulder, Colorado
20. Seattle-Everett, Washington
21. Milwaukee, Wisconsin
22. Tampa-St. Petersburg, Florida
23. Cincinnati, Ohio
24. Kansas City, Missouri
25. Buffalo, New York
26. Phoenix, Arizona
27. San Jose, California
28. Indianapolis, Indiana
29. New Orleans, Louisiana
30. Portland, Oregon

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