

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

* * * * *

In the Matter of:

THE APPLICATION OF THE CINCINNATI)
SMSA LIMITED PARTNERSHIP FOR THE)
ISSUANCE OF A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY)
TO PROVIDE A NEW DOMESTIC PUBLIC)
CELLULAR RADIO TELECOMMUNICATIONS)
SERVICE TO THE PUBLIC IN THE) CASE NO. 8916
GREATER CINCINNATI METROPOLITAN)
AREA INCLUDING ALL, OR PARTS OF,)
BUTLER, CLERMONT, HAMILTON AND)
WARREN COUNTIES IN OHIO, BOONE,)
CAMPBELL, GALLATIN, AND KENTON)
COUNTIES IN KENTUCKY)

O R D E R

On October 11, 1983, Cincinnati SMSA limited partnership ("Cincinnati SMSA") filed its application for a certificate of public convenience and necessity to provide cellular radio telecommunications service in all or parts of Boone, Campbell, Gallatin, and Kenton counties in Kentucky, and to construct the necessary facilities to provide such service.

On December 15, 1983, a hearing was held on this matter and Midwest Mobilephone Corporation ("Midwest"), by counsel, appeared as an intervenor at the hearing. Cincinnati SMSA requested that the hearing be treated as confidential. The Commission took the request under advisement and asked parties not directly involved in the case to excuse themselves. The Commission did not rule on the confidentiality request at that time.

Discussion

Traditionally, mobile phone systems have been based upon a single high power transmitter with high antenna elevation in order to cover a relatively large (20-25 mile radius) service area. In such a system the frequencies, or channels, cannot be reused within 60-100 miles of the transmitter due to co-channel interference effects. Because of this, the assigned frequencies can be used only once within a typical service area.

The cellular concept of a mobile telephone system is based upon the placement and coordination of multiple low power transmitters within a service area. Each of these transmitters covers a relatively small sub-area (or cell) of the total cellular service area. By limiting the transmitter coverage area, the allocated frequency spectrum can be used more efficiently through frequency reuse. Each frequency may be reused many times throughout the service area without producing co-channel interference effects. Therefore, cellular systems allow many more calls on the assigned frequencies within a given service area. As a subscriber moves through the service area, the cellular system will constantly monitor signal strength and, when appropriate, the system will change the transmission from one cell to another. This process takes about 0.2 seconds and is not noticeable by the subscriber.

The system located in Cincinnati/Northern Kentucky is designed to use all of the voice radio channels allocated by the Federal Communications Commission ("FCC") for use by the wire line common carriers in the 800 MHz band. The system is also

designed so that as customer demand grows, cell reduction may occur to accommodate a large number of customers within the allocated spectrum. Growth will be accomplished by first adding channels to cells where measurements indicate that traffic load begins to approach design limits (2 percent Blocking Probability). When necessary, cell splitting, which creates smaller cells within the larger original cells to permit closer reuse of frequencies, will be implemented.

The design of the system covered by the application calls for a grid of cells separated into repeating groups of seven cells in each group. The number of cells per group is determined by co-channel interference considerations. Research in the cellular telephone area has shown that a ratio of the distance between co-channel cell centers to the radius of the cell of approximately 4.6 provides a good quality of system operation. This criterion was used in the design of the Cincinnati/Northern Kentucky system to ensure good quality of service.

The Cincinnati/Northern Kentucky system contains 21 channel sets, with each set containing 15 voice channels and 1 control channel. Each channel in a given set is separated by 21 other channels or 0.63 MHz (each channel being separated by 0.030 MHz). This is done to prevent cross channel interference within a given cell.

There will be four antenna sites located in Northern Kentucky initially. In Boone County, Kentucky, .9 miles northeast of the intersection of Graves Road and I-75, there will be a 167-foot antenna. This site will contain three Western Electric

CMP-1 voice transmitters and two Western Electric CMP-1 control transmitters. This site will operate on frequency sets 2, 9, and 16. The voice channels will have an effective radiated power ("ERP") of 100 watts. The control channel will have an ERP of 52.5 watts. Also in Boone County, Kentucky, one mile west of the intersection of US 42 and Long Branch Road there will be a 167-foot antenna. This site will contain four Western Electric CMP-1 voice transmitters and two Western Electric CMP-1 control transmitters, and will operate on frequency sets 3, 10 and 17. The voice channels will have an ERP of 100 watts and the control channels will have an ERP of 52.5 watts. In Kenton County, Kentucky, in the immediate vicinity of the intersection of Grandview Drive and Norman Lane there will be a 117-foot antenna. This site will contain 10 Western Electric CMP-1 voice transmitters and 2 Western Electric CMP-1 control transmitters, and will operate on frequency sets 5, 12 and 19. The voice channels will have an ERP of 100 watts and the control channels will have an ERP of 57.5 watts.

In Campbell County, Kentucky, in the vicinity of the intersection of Memorial Parkway and West Southgate Avenue there will be a 117-foot antenna. This site will contain nine Western Electric CMP-1 voice transmitters and two Western Electric control transmitters, and will operate on frequency sets 6, 13 and 20. The above channels will have an ERP of 100 watts and the control will have an ERP of 57.5 watts.

Frequency measurements will be made automatically using IFR1000S communications monitors or equivalent which will measure

the carrier frequency to \pm .00005 percent or better. There will be a control point located at 8888 West 87th Street, Hickory Hills, Illinois, which will be manned continuously to maintain a constant surveillance of the Cincinnati/Northern Kentucky system. When there is an equipment malfunction requiring immediate corrections, maintenance personnel will arrive within 2 hours under normal conditions.

The mobile telephone switching office will employ a 1A ESS Western Electric switch which is specifically programmed to perform cellular system call processing, maintenance, and call hand-off procedures. At the time of the hearing, Cincinnati SMSA was not sure if a mobile telephone switching office would be located in Kentucky because of impending access charge decisions.

Cincinnati SMSA limited partnership is formed by Ameritech mobile phone service of Cincinnati, Inc., owning 54 percent of the partnership and being the general partner; and by Cincinnati Bell, Inc., owning 46 percent of the partnership and being the limited partner. Ameritech mobile phone service of Cincinnati, Inc., is a wholly owned subsidiary of Ameritech Mobile Communications, Inc. ("AMCI"), which in turn is a wholly-owned subsidiary of American Information Technologies Corporation ("Ameritech"), which is one of the seven regional holding companies created by the Bell System divestiture process.

Cincinnati SMSA is a subsidiary of the same organization, AMCI, which has had a full scale cellular test system in operation in Chicago, Illinois, for 5 years.

The FCC cites numerous examples of need in its Cellular Communications Systems Report and Order, released May 4, 1981. In Cellular Communications Systems, 89 F.C.C. 2d (1982), at 94-95, the FCC states: "[s]tate franchising regulations requiring demonstration of public need for cellular service [are] inappropriate." The FCC also states in 89 F.C.C. 2d 58 (1982) that it is "pre-empting the states with respect to the market structure we have established for cellular services" and that

any state franchising regulations requiring demonstration of general public need could adversely affect our frequency allocation scheme by allowing a frequency block to go unused or unduly delaying the implementation of cellular service. (89 F.C.C. 2d at 95, 96.)

The FCC further states in 89 F.C.C. 2d 58, 82 that:

[W]e have already determined need on a nationwide basis and have pre-empted the states from denying state certification based on the number of existing carriers in the market or the capacity to handle the demand for mobile services.

FINDINGS AND ORDER

The Commission, having considered the application and evidence of record, and being advised, is of the opinion and finds that:

(1) Cincinnati SMSA's general partner, Ameritech Mobile Phone Service of Cincinnati, Inc., a subsidiary of AMCI is technically capable of providing cellular telephone service;

(2) Cincinnati SMSA is financially capable and ready to begin construction of the necessary facilities required to provide cellular telephone service;

(3) Midwest's motion that a certificate of public convenience and necessity should be denied due to the failure of Cincinnati SMSA to show public need should be denied since the FCC has pre-empted the states on this issue;

(4) A certificate of public convenience and necessity should be granted;

(5) Cincinnati SMSA's request that its financial documents and transcript of record remain confidential will be ruled upon in a subsequent Order; and

(6) To avoid the possibility of cross-subsidization, Cincinnati Bell should separately and adequately account for the costs of its regulated and deregulated subsidiaries and should carefully scrutinize overhead and capital costs to assure that cross-subsidization does not occur.

IT IS THEREFORE ORDERED that Midwest's motion to deny Cincinnati SMSA a certificate of public convenience be and it hereby is denied.


IT IS FURTHER ORDERED that Cincinnati SMSA be and it hereby is granted a certificate of public convenience and necessity to provide cellular telecommunications service in the counties of Boone, Campbell, Gallatin, and Kenton in Kentucky.

IT IS FURTHER ORDERED that the tariffs filed in Cincinnati SMSA's application containing its rates, rules and regulations be and they hereby are approved, and that copies of these same tariffs shall be filed in the manner prescribed by the Commission 30 days prior to the introduction of the aforementioned service.

IT IS FURTHER ORDERED that Cincinnati SMSA's request that the transcript of record and documents marked confidential in its application remain confidential is reserved for further ruling in a subsequent Order.

Done at Frankfort, Kentucky, this 9th day of February, 1984.

PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman


Commissioner

ATTEST:

Secretary