Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

ORIGINAL

In the Matter of	)	
	)	
Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Development of Paging Systems	)	WT Docket No. 96-18 PP Docket No. 93-253
	)	
Implementation of Section 309(j) of the Communications Act Competitive Bidding	)	

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To: The Commission

COMMENTS OF LIBERTY CELLULAR, INC.

Liberty Cellular, Inc. ("Liberty"), by its attorneys and pursuant to FCC Rule Section 1.415, respectfully submits these Comments in response to the Commission Notice of Proposed Rule Making in this proceeding.[1/] In this *Notice*, the FCC proposes to change in major respects the license assignment process and, in so doing, alter certain operating protections afforded paging system licensees.

I. Introduction

1. Liberty is a Kansas corporation headquartered in Salina, Kansas. Liberty is owned by approximately twenty-eight local exchange carriers, directly or through affiliates, who participate in regional ownership of commercial mobile radio facilities, common carrier point-to-point microwave radio service facilities, and a fiber optic network, as well as related, supporting facilities.

1/ *Future Development of Paging Systems*, FCC 96-52, 10 FCC Rcd ___ (February 9, 1996) *(Notice)*.

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Liberty's stockholders and their affiliates also hold, individually, numerous licenses in the fixed and mobile radio services.

2. Presently, Liberty has pending with the Commission a set of sixteen applications designed to offer service to the entire state of Kansas utilizing frequencies in the 931 MHz band. The applications were filed on May 30, 1995, and appeared on Public Notice as accepted for filing on June 14, 1995, and on July 19, 1995.[2/] None of Liberty's applications has been granted or otherwise acted upon by FCC staff. Liberty is therefore interested in the outcome of this Notice proceeding.

3. In the Notice, the Commission queries whether co-channel interference protection should be based on the Commission's

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[2/] The location, file number and call sign of Liberty's pending applications are as follows:

LOCATION	FILE NUMBER	CALL SIGN
Council Grove, Kansas	32638-CD-P/L-95	KNLS 262
Willis, Kansas	32641-CD-P/L-95	KNLS 263
Medicine Lodge, Kansas	32657-CD-P/L-95	KLNS 268
Jetmore, Kansas	32660-CD-P/L-95	KNLS 269
Tribune, Kansas	32662-CD-P/L-95	KNLS 270
Scammon, Kansas	32667-CD-P/L-95	KNLS 271
Goodland, Kansas	32669-CD-P/L-95	KNLS 272
Atwood, Kansas	32671-CD-P/L-95	KNLS 273
Partridge, Kansas	32672-CD-P/L-95	KNLS 274
Phillipsburg, KS	32674-CD-P/L-95	KNLS 275
Fort Scott, Kansas	32676-CD-P/L-95	KNLS 276
Asland, Kansas	32677-CD-P/L-95	KNLS 277
Burden, Kansas	32678-CD-P/L-95	KNLS 278
Paola, Kansas	32679-CD-P/L-95	KNLS 279
Wayne, Kansas	32682-CD-P/L-95	KNLS 280

existing tables, and tentatively concludes that the eight-radial contour method is more suitable.[3/] It is to this proposal that Liberty addresses its comments.

II. *The Commission's Proposal for Determining Co-Channel Interference Protection Is Inequitable*

4. The Commission has attempted to balance certain interests of future licensees with the needs of current licensees and applicants over the important issue of interference protection. In the Notice, the Commission seeks comments on whether to adopt a uniform methodology to measure interference for the various paging services.[4/] To achieve uniformity, the Commission proposes to depart from the current methodology used to measure interference for 931 MHz channels. The Commission tentatively concludes that the eight-radial contour method "may be preferable to a fixed radius method, because it will more reasonably predict potential interference to incumbents and provide geographic licensees with greater flexibility in placing their facilities."[5/]

5. The Service Area Boundary ("SAB") and interference contour for 931 MHz paging transmitters are currently determined from FCC Rule Sections 22.537(e) and (f). Tables E-1 and E-2 of those sections show how the SAB and interference contour are determined based upon antenna height and operating power variables.

[3/] *Notice* at ¶ 50.

[4/] *Notice* at ¶ 46.

[5/] *Notice* at ¶ 50.

The resulting protected service area for a paging transmitter corresponds mathematically to the Height Above Average Terrain ("HAAT") of the site and the Effective Radiated Power ("ERP") of the transmitter.

6. The present, administratively simple method assigns a circle for both the SAB and the interference contour based on the site HAAT and transmitter ERP. The current method does not take into account all local terrain features or the antenna gain of the antenna in use. On the other hand, the proposed SAB and interference contour formulas do account for variations in the terrain and transmitter ERP along the eight cardinal radials.[6/]

7. Although both computation methods are relatively simple to implement, the proposed FCC formulas, if adopted, would reduce the size of both the SAB and the interference contour of existing and proposed 931 MHz paging stations. As an applicant for numerous paging station licenses in the state of Kansas, Liberty would be directly affected and aggrieved by the proposed change in computation methodology.

8. Attached hereto is an Affidavit prepared by Shahram Hojati, D.Sc. (the "Hojati Affidavit") which includes an analysis of four of Liberty's proposed paging sites under the Commission's current and proposed formulas for determining SAB and interference

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[6/] *Notice* at ¶ 50.

contour. Exhibit I of the Hojati Affidavit depicts a comparison between Liberty's proposed SABs when computed according to the current and proposed methods, and Exhibit II shows a comparison of the interference contours according to the formula used. Dr. Hojati explains as follows:

> Exhibits I and II clearly indicate that Liberty's SAB and interference contours would be reduced in size if determined according to the method set forth in the NPRM. Moreover, the exhibits show that Liberty would lose protection of areas that otherwise would be protected under the current rules. Exhibits I and II show that if the new method is adopted, Liberty would lose between 20 and 30 percent of its protected service and interference areas when compared with the areas computed under current FCC rules. [Hojati Affidavit, para. 6.]

Such an effect could not have been anticipated by Liberty in the design of its statewide paging system. Liberty and those who ultimately will use Liberty's paging system are likely to be affected adversely by the proposed change in formulas. Despite Liberty's meticulous planning, subscribers will incur interruptions of service if FCC rule changes cause Liberty's service area to be reshaped due to incursions by other subsequently licensed entities.

9. If the Commission adopts the formulas proposed in the Notice, future geographic area licensees will obtain rights to unplanned "white" areas (*i.e.*, gaps between co-channel stations). Dr. Hojati confirms Liberty's concerns in this area:

> The FCC's proposed method for determination of SAB and interference contours would result in gaps between the contours of Liberty's state-wide 931 MHz paging facilities which were carefully designed and proposed in applications now pending before the FCC. A change in the rules would create unplanned gaps between the protected areas of Liberty's proposed stations and could allow another licensee to disrupt

> a regional service offering by Liberty. [Hojati Affidavit, paragraph 7.]

It is apparent that such a result is not in the interest of the public, and it would undermine the basis for investment by Liberty and other similarly situated applicants in paging systems. Accordingly, although the proposed eight-radial method may be somewhat more accurate in its predictions, the results are inequitable to both incumbents and applicants with cut-off protection under the current rules.

III. Conclusion

10. For the reasons explained, the Commission's interference proposal set forth in the *Notice* would have a significant adverse affect on incumbents and applicants such as Liberty who filed for multiple paging sites before the filing freeze took effect. The Service Area Boundaries and interference contours computed under current Commission rules would shrink in some cases as much as 20 to 30 percent if computed under the formulas proposed in the Notice. Such a change would be disruptive to paging system operations, and result in a deterioration of service quality to the

public. Liberty urges the Commission to abandon its proposal to employ the "eight-radial contour method," and to retain the existing interference tables.

Respectfully submitted,

LIBERTY CELLULAR, INC.

By: Pamela L. Gist

David L. Nace
Pamela L. Gist
Pamela Gaary

Its Attorneys

Lukas, McGowan, Nace & Gutierrez, Chartered
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(202) 857-3500

March 18, 1996

A F F I D A V I T

City of Washington :

: SS

District of Columbia :

I, SHAHRAM HOJATI, having been first duly sworn, depose and state as follows:

1. I graduated from George Washington University with a Doctor of Science degree in Electrical Engineering and Computer Science.

2. I am familiar with the Federal Communications Commission's ("FCC's") rules including Part 22, and since 1986 have prepared or supervised the preparation of the technical portions of numerous applications, paging and cellular filed with the FCC.

3. On behalf of Liberty Cellular, Inc. ("Liberty"), I have examined a Notice of Proposed Rule Making ("NPRM") released February 9, 1996 by the FCC (WT Docket No. 96-18, PP Docket No. 93-253). The NPRM proposes a new formula method for determining the service and interference contours for 931 MHz paging facilities. This method, if adopted, would replace the current FCC rule[1] which determines Service Area Boundary ("SAB") and

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[1] Sections 22.537 (e) and (f) are the current rule provisions for determining distance from a site transmitting antenna to its Service Area Boundary and interference contours.

interference contours based on transmitter effective radiated power ("ERP") and site height above average terrain ("HAAT") in accordance with Tables E-1 and E-2 of the rule.

4. I have examined the proposed FCC formulas for determining SAB and interference contours as included in the Commission's NPRM.

5. I have prepared Exhibits I and II as included in this Affidavit, showing Liberty's 931 MHz proposed service and interference contours for four of its numerous proposed paging stations. The exhibits show the contours using both the current and proposed FCC methods. Exhibit I depicts a comparison between Liberty's SAB contours, which were determined according to the FCC's current and proposed methods. Exhibit II depicts Liberty's interference contours which were determined according to the FCC's current and proposed methods.

6. Exhibits I and II clearly indicate that Liberty's SAB and interference contours would be reduced in size if determined according to the method set forth in the NPRM. Moreover, the exhibits show that Liberty would lose protection of areas that otherwise would be protected under the current rules. Exhibits I and II show that if the new method is adopted, Liberty would lose between 20 and 30 percent of its protected service and interference areas when compared with the areas computed under current FCC rules.

7. The FCC's proposed method for determination of SAB and interference contours would result in gaps between the contours of Liberty's state-wide 931 MHz paging facilities which were carefully designed and proposed in applications now pending before the FCC. A change in the rules would create unplanned gaps between the protected areas of Liberty's proposed stations and could allow another licensee to disrupt a regional service offering by Liberty.

The foregoing statements of fact are true and correct to my personal knowledge.

Shahram Hojati 3/15/96

SHAHRAM HOJATI, D.Sc.

Subscribed to and sworn to before me
this 15th day of March, 1996.

Catherine M. Seymour

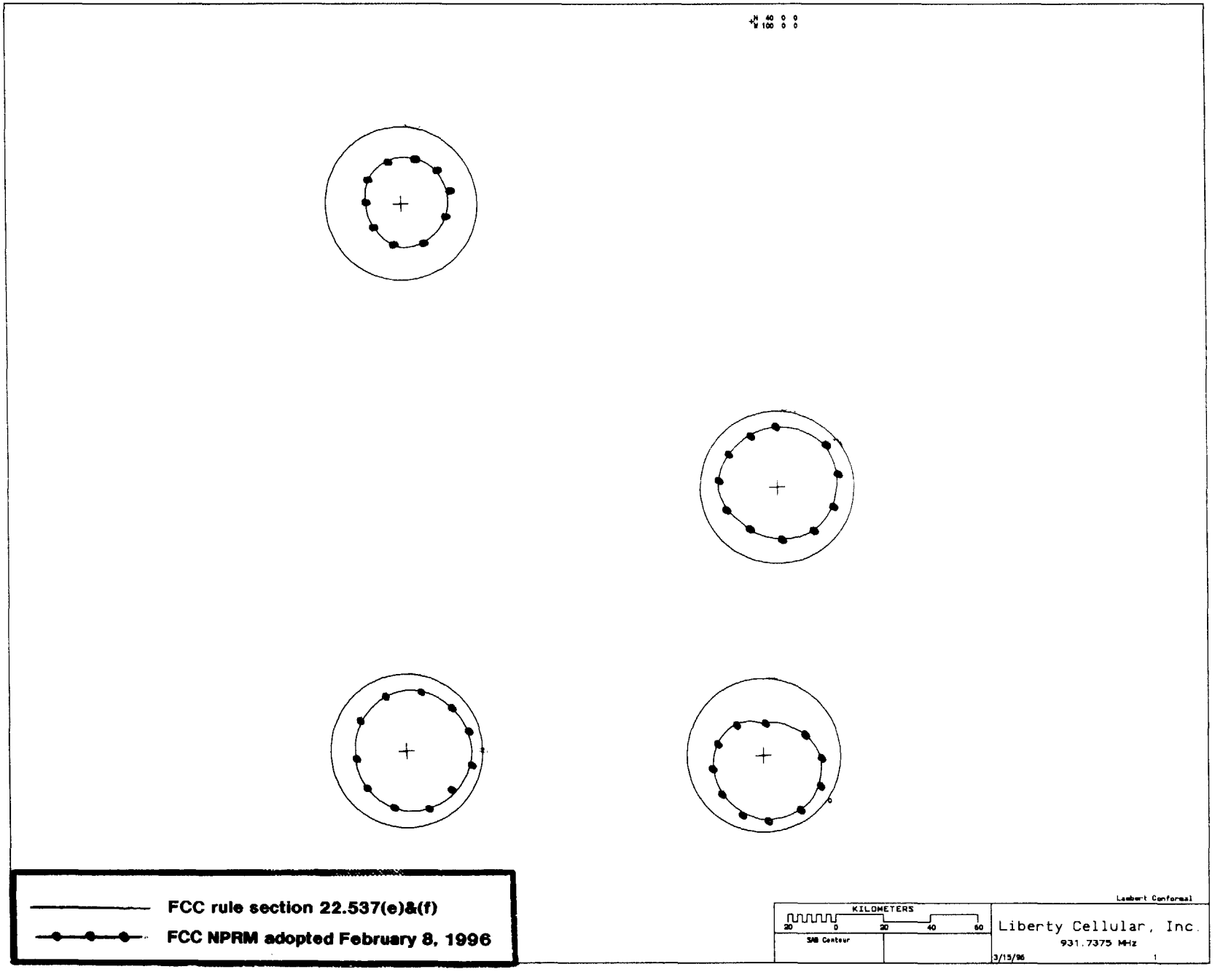
Notary Public

My commission expires:

CATHERINE M. SEYMOUR
NOTARY PUBLIC DISTRICT OF COLUMBIA
My Commission Expires June 14, 2000

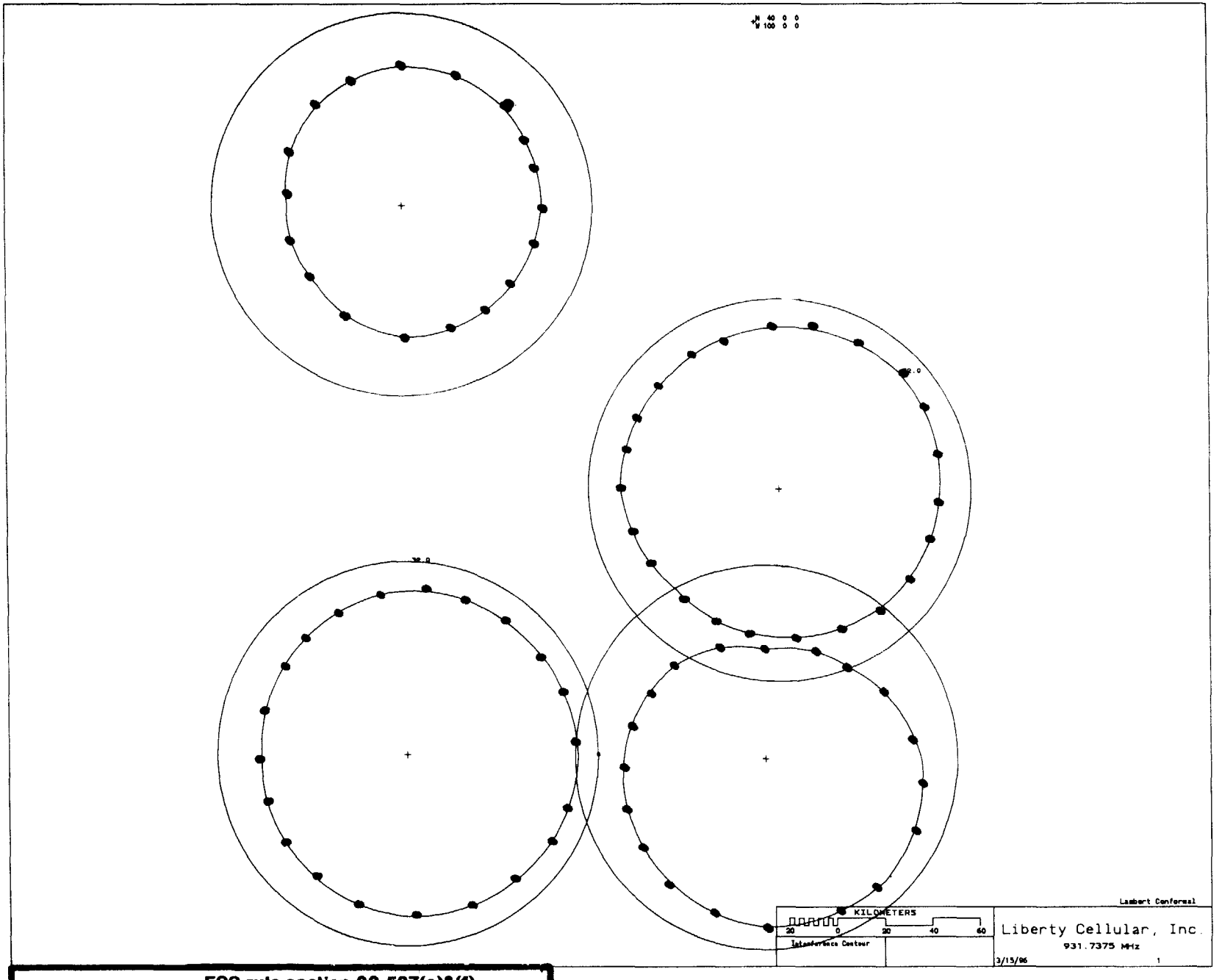
Service Area Boundary Contours

Exhibit I



Interference Contours

Exhibit II



FCC rule section 22.537(e)&(f)

FCC NPRM adopted February 8, 1996

CERTIFICATE OF SERVICE

I, Loren Costantino, legal assistant in the law offices of Lukas, McGowan, Nace & Gutierrez, Chartered, do hereby certify that I have on this 18th day of March, 1996, sent by first class United States mail, copies of the foregoing PLEADING to the following:

* Chairman Reed E. Hunt
Federal Communications Commission
1919 M Street, N.W. Room 814
Washington, DC 20054

* Commissioner James H. Quello
Federal Communications Commission
1919 M Street, N.W. Room 802
Washington, DC 20054

* Commissioner Andrew C. Barrett
Federal Communications Commission
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* Commissioner Rachelle B. Chong
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* Michelle Farquhar, Chief
Wireless Telecommunications Bureau
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Loren Costantino

Loren Costantino

* Delivered By Hand

Attachment A

DOCUMENT OFF-LINE

This page has been substituted for one of the following:

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