Original

RECEIVED
MAR 18 1996
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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

DOCKET FILE COPY ORIGINAL
DOCKET FILE COPY ORIGINAL

To: The Commission

COMMENTS OPPOSING THE COMMISSION'S PLANNED RADICAL RESTRUCTURING OF THE PAGING INDUSTRY AND RELATED CHANGES TO THE PAGING LICENSING PROCESS

Table Of Contents

Page

Summary.....ii-iii

Introduction.....1

Description Of Supercom, Inc. And Description Of Interests Affected By The Commission's Proposed Restructuring.....1-2

The Commission's Regional Licensing Proposal Would Adversely Affect The Public Interest.....2-4

The Commission's Proposed Regional Licensing Scheme Would Impermissibly Require Supercom To Go To An Auction In Order To Modify Its Existing Paging System.....4-10

A. Modification Applicants Cannot Be Required To Go Auction To Obtain Additional Spectrum.....4-6

B. The Commission's Proposal Would Improperly Create Mutually Exclusive Situations.....6-7

C. The Commission's Proposal To Change To Wide Area Licensing Is Not Support By The Law Or The Facts.....8-10

The Commission's Initial Regulatory Act Analysis Improperly Fails To Consider The Financial Impact Upon Small Businesses....10-14

Conclusion.....14-16

No. of Copies rec'd 0+4
List ABCDE

Summary

The Commission's NPRM proposes to radically alter the structure of the paging industry and how paging licenses are obtained. The NPRM proposes to create artificial, federally regulated, wide-area paging markets. Additionally, the Commission proposes to institute market build-out rules which require paging system construction regardless of demand. Adoption of the Commission's proposed market restructuring rules is not required and is not supported by known facts or existing law.

The paging industry has existed for nearly fifty years. During that time paging service providers proposed and constructed paging systems based upon demands of the market place. If a particular locality demanded paging service, a paging service provider would file an application with the Commission. Upon receipt of Commission approval the necessary equipment to provide the service would be installed.

The NPRM notes that the paging industry is rapidly expanding. The NPRM notes that there are no application backlogs associated with lower band paging applications. The NPRM notes that applications for the lower paging bands are substantially comprised of fill-in and expansion applications filed by existing licensees. Under these circumstances, there is no problem which would be solved by the Commission's proposed "solution."

In fact the Commission's proposal, if adopted, would cause serious paging service problems contrary to the public interest. Existing paging service providers, except for the "lucky" regional licensee, would be unable to expand systems as subscriber demand

developed. The "lucky" regional licensee, in congested areas, would be required to pay inflated buy-out prices for existing paging systems in order to meet the Commission's artificial build-out requirement.

There are several legal problems with the Commission's proposal. First, the Communications Act does not permit the Commission to auction spectrum which a licensee seeks to modify its existing system; the Communications Act does not permit the Commission to auction spectrum for non-mutually exclusive applications for an initial license. The NPRM and the Commission's public notices indicate that mutual exclusivity for lower band Part 22 frequencies is only an infrequent concern. By creating large area markets, the Commission's proposal appears intended to create mutually exclusive situations where none would exist under current licensing rules. Congress specifically directed the Commission to use its rule making process in an effort to avoid mutual exclusivity. It is improper for the Commission to use its rule making process to create mutual exclusivity in a service which is essentially local in nature.

Finally, the Commission does not at all assess the financial impact its rules will have on small businesses. Specifically, the Commission fails to discuss the impact new costs associated with a) the bid amounts for large markets; b) the added costs associated with the purchase of substantially more equipment to meet the artificial build-out requirement; and c) the open-ended copyright liability and/or copyright enforcement litigation costs pertaining to the use of Rand McNally's MTA market structure.

Introduction

Supercom, Inc. (Supercom), by its attorney, hereby submits comments in opposition to the Commission's fundamental restructuring of the paging industry market structure and the paging licensing process proposed in the Notice of Proposed Rule Making (NPRM) in the captioned docket.[1] In opposition thereto, the following is respectfully submitted:

Description Of Supercom And Description Of Interests Affected By The Commission's Proposed Restructuring

1) Supercom is affiliated with rural telephone exchange companies located in Michigan which provide a variety of communications services. Supercom would qualify as a small business under the Commission's auction rules adopted in other services and under the small business rules at issue instantly.[2]

---

[1] The NPRM at paragraph 20 states that

> in the Part 22 Rewrite proceeding, we received numerous comments suggesting that we adopt geographic licensing procedures for paging instead of continuing to license paging systems. (Emphasis added.)

Reference to paragraph 9 of the Part 22 Rewrite discloses that only "several parties" made the suggestion. 9 FCC Rcd. 6513, 6515. Footnote 23 of the Part 22 Rewrite discloses that only the Personal Communications Industry Association (formerly Telocator), Paging Network, Inc., and the Office of Advocacy of the Small Business Administration suggested the proposed radical restructuring of the paging industry. It is not understood why three pleadings filed in the Part 22 Rewrite proceeding now constitute "numerous comments" rather than "several" comments. We trust the Commission will find an appropriate superlative to describe the "mountain" of comments against the proposed changes which are filed in the instant proceeding.

[2] Average annual revenues over the past three years for all affiliated businesses is less than $12 million.

2) Supercom is currently licensed to provide paging services in Michigan. Supercom began providing paging services on 152.84 MHz in 1987. Supercom currently operates approximately fourteen paging transmitters. Since 1987 Supercom has added base station locations as public demand has warranted. Supercom's paging unit growth was approximately 10-15% in each of the last two years.

3) Attached hereto is a map depicting Supercom's currently licensed paging area.[3] Supercom's paging service area is generally smaller than the large regional areas proposed to be licensed by the Commission in the captioned rule making proceeding. Supercom estimates that it will need to add nine base stations within the next three years in order to satisfy anticipated paging demand.

4) Supercom estimates that 90% of the paging business in its market area is local, 10% is regional, and 0% is nationwide.[4] Thus, paging is substantially a local service.

---

[3] The Commission has requested comment on how existing paging system service areas company to MTAs. NPRM, para. 36. However, as discussed in paragraph 25, et seq., below, the Commission has attempted to validate Rand McNally's dubious copyright claim to its listing of county names. Thus, it is not possible to draw the MTA boundaries on the attached map. The Commission has proposed rules which, because an external factor, cannot be fully discussed in this rule making. Because a significant issue in this rule making may not be discussed without subjecting the commenter to potential copyright liability and/or an infringement suit, the proposed rule making is defective and the Commission may not adopt the proposed rules.

[4] For the purposes of this discussion, local is defined as the area covered by Supercom's current paging operation; regional is defined as the area covered by one or more an MTAs; and nationwide is loosely defined as service to a substantial portion of the continental United States.

The Commission's Regional Licensing Proposal Would Adversely Affect The Public Interest

5) The Commission's regional licensing proposal would substantially and adversely affect Supercom's plans to meet the public's paging demands by requiring it to invest significant sums of money in bids, equipment, and buyouts of co-channel systems in order to meet the Commission's buildout requirements. Expenditures of these sums to serve the sparsely populated localities of interest to Supercom is not feasible.

6) Supercom's planned expansion would, in fact, gain little territory compared to the size of the Commission's proposed regional licensing areas. Thus, the Commission's proposal to adopt artificially large paging markets would cause Supercom to bid to provide service to markets which do not demand service.

7) If adopted in their current form, the Commission's proposed regional paging licensing scheme cause paging applicants to proceed in one of two ways, neither of which advances the public interest. First, potential bidders for extensively utilized paging channels would understand that in order to expand an existing system it must 1) bid on a large area regardless of current paging demand and financial resources and 2) buy-out co-channel neighbors under circumstances in which the co-channel neighbor knows that the successful bidder is required to meet build-out requirements. Thus, the Commission's proposed rules will cause an artificial

premium to be placed on paging system sale prices to the monetary benefit of the seller but to the detriment of everyone else.[5]

8) Second, the Commission's proposed regional paging licensing scheme informs paging licensees that it is not rational to pay the Federal government in order to obtain an opportunity to pay a neighbor an inflated paging system purchase price. Thus, the Commission's proposed regional paging licensing scheme would cause paging system expansion to grind to a halt while public paging demand goes unmet.[6]

The Commission's Proposed Regional Licensing Scheme Would Impermissibly Require Supercom To Go To An Auction In Order To Modify Its Existing Paging System

A. Modification Applicants Cannot Be Required to Go To Auction To Obtain Additional Spectrum

9) The rules proposed in the NPRM would require existing licensees to go to auction in order to modify their existing systems. The proposed rules would also require applicants

---

5 Even the seller at an inflated price may not be happy. Many companies, including Supercom, are in the paging business to provide service to the public. Such companies do not want to be forced out of the paging business because expansion is impossible, even if the buy-out price is at some premium. In those areas in which frequencies are not congested, paging system values will decline because there is no expansion possibility and because there is no buyer who must purchase the system to meet the Commission's artificial build-out requirement.

6 Purchases of paging systems are permitted during the pendency of the NPRM. NPRM, at para. 139. The NPRM does not explain why a paging operator, or a paging industry entrant, will be willing to pay the Federal government for the opportunity to buy an existing paging system at inflated prices when those same paging systems are available today at market prices which are unaffected by artificially created, Federally regulated, market boundary and service rules.

proposing new systems to go to auction, even though their applications might not be considered mutually exclusive with competing applications under the current rules.[7] The Commission's proposal to require these applicants to go to auction violates the Communications Act of 1934, as amended.

10) 47 U.S.C. §309(j)(1) authorizes the Commission to conduct auctions only for "mutually exclusive applications . . . accepted for filing for any initial license or construction permit . . . ." The legislative history is very clear that the auction authority

> would apply only when there are mutually exclusive applications for an initial license for the use described in subsection 309(j)(2). Competitive bidding would not be permitted to be used for unlicensed uses; in situations where there is only one application for license, or in the case of for [sic] a renewal or modification of license. H.R. Rep. No. 111, 103d Cong. 1st Sess. 253 (1993).

11) Congress has specifically instructed the Commission that it cannot auction spectrum in instances where a station modifica-

---

[7] The NPRM does not state what percentage of lower band paging applications for new stations result in mutually exclusive situations. It is not apparent from the Commissions's public notices that mutual exclusivity on the lower paging channels is significant either compared to the number of applications which are filed or in terms of absolute numbers. The Commission itself acknowledges that "current licensing activity on the lower paging bands is confined largely to the addition of fill-in sites and minor expansion by existing licensees." NPRM, para. 13. In the past when the Commission sent mutually exclusive lower band common carrier paging applications to lottery, generally only two or three applications would be involved in any particular lottery. Moreover, lottery sessions were scheduled many months apart so that the Commission could, over time, schedule enough lotteries (approximately ten) to make the effort worth the Commission's time. Mutual exclusivity in the lower band common carrier paging service is not a substantial concern and has not been for a considerable period of time. Thus, the NPRM appears to be a solution in search of a problem.

tion is proposed and in instances where there is only one application for an initial license. Thus, the Commission's proposal to send such applications to auction violates the Communications Act and should not be adopted.

B. The Commission's Proposal Would Improperly Create Mutually Exclusive Situations

12) The Commission acknowledges that demand for paging frequencies for the lower CCP channels is not substantial and there is no application backlogs for these frequencies. NPRM, para. 28. The Commission has previously determined that mutually exclusive paging applications should be subject to auctions. Second Report and Order, 75 R.R.2d 1, 17 (Comm'n 1994). All that is left to do is to determine which auction procedures are best suited to various situations which arise in the paging industry.[8]

13) Rather than merely determine an appropriate auction process for mutually exclusive paging applications, however, the Commission has proposed fundamental alterations to the paging industries' market structure and to the paging service's licensing schemes. Yet, despite the Commission's acknowledgement that the

---

[8] If mutually exclusive paging applications are filed for the lower paging channels, the Commission could accept sealed bids from the two or three applicants. In the past, generally only two or three mutually exclusive applicants would be involved in the relatively rare mutually exclusive situations which arose. The sealed bid procedure has the potential to work much more rapidly than the previously used lottery procedure in which the staff would wait for months for enough mutually exclusive situations to arise to warrant conducting a lottery. The Commission could adopt a rule which states that a bid must be submitted within 30 days after a public notice noting the mutually exclusivity.

paging industry is expanding rapidly, NPRM, para. 6, despite the Commission's acknowledgement that "current licensing on the lower paging bands is confined largely to the addition of fill-in sites and minor expansion by existing licensees," NPRM, para. 13, and despite the nearly fifty years in which market demands have determined where and when paging stations shall be constructed, the Commission has preliminarily determined that Federal regulation of paging market sizes and paging system build-out rates is required.

14) Congress directed that "the Commission should, in the public interest, continue to use engineering solutions, negotiation, threshold qualifications, service rules, and other means in order to avoid mutual exclusivity." H.R. Rep. No. 111, 103d Cong. 1st Sess. 258 (1993). Rather than follow this clear Congressional mandate, and after nearly fifty years of a free market approach, the Commission has proposed creation of artificial, federally-sized paging markets. This market structure is intended to create mutually exclusive application situations for the purpose of holding auctions in direct contravention of Congress' stated intent![9]

---

[9] As discussed in footnote 7 above, mutual exclusivity application situations in the lower band common carrier channels is quite rare. The Commission itself acknowledges that "current licensing activity on the lower paging bands is confined largely to the addition of fill-in sites and minor expansion by existing licensees." NPRM, para. 13. Thus, it appears that the Commission is proposing rules with the purpose of creating mutually exclusive application situations contrary to Congressional intent.

C. The Commission's Proposal To Change To Wide Area Licensing Is Not Supported By The Law Or The Facts

15) The NPRM proposes to turn what are essentially intrastate paging services into interstate services through adoption of the Rand-McNally MTA market structures; Rand-McNally MTAs generally overlap state lines. In 1987 the Court of Appeals for the D.C. Circuit determined that the Commission exceeded its authority when it attempted to preempt state entry regulation of intrastate common carrier mobile services. See Memorandum Opinion and Order, 2 FCC Rcd. 6434 (Comm'n 1987).[10] The court made its determination even though pagers could be triggered by out-of-state calls and even though some paging systems crossed state lines.

16) The NPRM does not list factors which lead to the conclusion that the essentially local nature of the paging industry has changed substantially way since 1987. Thus, the Commission attempt to turn what is essentially a local service to a wide-area, interstate service is unfounded.

17) Supercom's existing paging service area is wholly within one state. Furthermore, the initial comments filed in the earlier portion of this rulemaking (interim licensing) demonstrate that the essentially local nature of the paging industry remains: Many

---

[10] Recent amendments to the Communications Act prohibit state entry/rate regulation absent authorization from the Commission. However, the pertinent point is that paging has been determined by the court to be an essentially intrastate service offering.

carriers indicated that their service areas are much smaller than the MTA's proposed by the Commission.[11]

18) Moreover, the NPRM itself acknowledges the continued local nature of the paging industry. The Commission states that

> with respect to the lower band channels -- most of which continue to be occupied by smaller systems -- we propose to maintain the current height-power limits, so that we can continue to limit the range of each facility and promote spectrum efficiency. NPRM, para. 61

19) Thus, the Commission recognizes that, at least for the lower paging channel bands, small systems predominate. Moreover, the Commission acknowledges that the reach of these systems is kept to a minimum to promote the efficient use of spectrum. Adoption of a regional licensing system ignores the fact that paging is essentially a local service. As described above, the creation of Federally regulated, artificial market boundaries and service rules will require spectrally inefficient system construction: service must be provided to locations solely to meet numerical build-out goals rather than to satisfy market place demands for service. The

---

[11] See, e.g., Comments Opposing the Paging Application Filing and Processing Freeze and Comments Concerning the Interim Licensing Proposal (Porter Communications, Inc.) p. 1; Comments Opposing the Paging Application Filing and Processing Freeze and Comments Concerning the Interim Licensing Proposal (Chequamegon Telephone Cooperative, Inc.) p. 1; Comments Opposing the Paging Application Filing and Processing Freeze and Comments Concerning the Interim Licensing Proposal (Baker's Electronics and Communications, Inc.) p. 1; Comments Opposing the Paging Application Filing and Processing Freeze and Comments Concerning the Interim Licensing Proposal (Paging Associates, Inc.) p. 1.

Commission's own findings indicate that adoption of regionwide, spectrally inefficient licensing is inappropriate.[12]

The Commission's Initial Regulatory Act Analysis Improperly Fails To Consider The Financial Impact Upon Small Business

20) The Commission's Initial Regulatory Flexibility Analysis (IRFA) concludes, without explanation, that

> the competitive bidding proposals contained in the Notice, if adopted, are expected to benefit small entities. These proposals would establish special provisions designed to facilitate small businesses' ability to access capital and to enter the wireless market. The proposed changes to the Commission's rules also will increase the flexibility of small businesses and lessen the administrative burden on small entities. NPRM, Appendix A, p. 2.

The Commission's unsupported conclusions do not constitute an adequate Regulatory Flexibility Act analysis and the Commission's IRFA fails to consider acknowledged, significant, open-ended costs and the impact that those costs will have upon small businesses.

21) First, it is not at all clear how competitive bidding will benefit small entities. The Commission does not know what a small entity is. The "small business" PCS auction which is currently underway demonstrates the severe inadequacies with the operation of the Commission's small business auction rules. The Commission's "small business" PCS auction has participants which are able to bid more than $1 billion each![13]

---

12 Because paging is essentially a local service, there are no interdependancies among markets and sequential, sealed bids would be appropriate. See footnote 8 above.

13 It is believed that the Commission is the only organization on the planet where a company can bid more than $1 billion and still be classified "small business."

22) We do not mean to imply that those businesses are not in compliance with the Commission's small business rules. The point is that "small business" to the Commission means something entirely different than it does to most others. To the extent that the PCS "small businesses" are in compliance with the Commission's "small business" rules, the questions which arise are 1) where is all the money coming from; and 2) are the "small businesses" merely fronting for wealthy investors?[14] There is nothing in the NPRM which addresses this problem.

23) Second, under the current rules a small entity may propose paging service to one or two communities and then expand the system over time as the market place demands. The current rules do not require auction payments to the Federal government and financial barriers to entry are small. NPRM, para. 122.

24) The proposals contained in the NPRM would create artificially large paging market areas and would regulate the timing of service to various communities. These factors will significantly increase the entry/construction/operating costs for small businesses. Moreover, small entities would face a new, significant barrier to entry, namely, the payment of some unknown bid amount to the Federal government. Contrary to the Commission's conclusion, these substantial, new costs do not benefit small businesses. The Commission's IRFA fails to address these signifi-

---

[14] There are tens of thousands of small businesses in the United States. The Commission structured its PCS small business auction such that only several could significantly participate.

cant costs and justify those costs in view of the public interest. Thus, the proposed rules cannot be adopted.

25) Third, the Commission has not assessed the costs of potential royalty payments and/or court litigation expenses relating to the NPRM's proposal to use the Rand McNally MTA/BTA Listings. The Commission states that a copyright license from Rand McNally must be obtained. NPRM, para. 35.[15] The Commission leaves it to the small businesses to deal with these costs. However, it is the Commission's responsibility to address those costs and assess their impact upon small businesses.

26) The Commission has failed to assess the impact of these open-ended copyright royalty/litigation costs upon small businesses.[16] Thus, the Commission has failed to meet its Regulatory

---

[15] The Rand McNally MTA/BTA Listings are merely groupings of county names. Such listings do not constitute an original work of authorship and thus are not copyrightable. Feist Publication, Inc. v. Rural Telephone Service, Inc., 499 U.S. 340 (1991), 113 L. Ed. 358. Thus, it is at best debatable as to whether Rand McNally's copyright is valid. More importantly, the Commission is not the appropriate forum to determine whether a copyright is valid and the Commission's attempted validation of Rand McNally's copyright is ultra vires.

[16] It is arbitrary, capricious, and not in accord with law for the Commission to establish a private party as an unregulated monopoly provider of information which is critical to the preparation of paging applications. The monopoly provider of such information may charge whatever it pleases for that information. The Commission was advised of this same problem in the PCS auction rule making proceeding. See December 28, 1993 Comments to Petitions for Reconsideration (Hill and Welch) in Gen Docket No. 90-314. Before the Personal Communications Industry Association made a payment to Rand McNally, Rand McNally proposed that each law firm, engineering firm, and each applicant pay thousands of dollars for a license to use the MTA/BTA county listings. If the Commission (continued...)

Flexibility Act responsibilities and the subject proposal may not be adopted.

27) Fourth, the Commission's conclusion that the proposals contained in the NPRM "will increase the flexibility of small businesses and lessen the administrative burden on small entities" is without support. Existing licensees, except for the one who is the sole regional licensee on the pertinent frequency, will be unable to expand their systems.[17] One cannot conceive of a greater example of regulatory "inflexibility" than a regulation which prohibits expansion required to meet public demand.[18]

28) Moreover, it is not clear how the proposed reduced application filing requirements will operate in view of the fact that existing licensees' stations must be protected. It is assumed that at least an FCC Form 489 will be required to show protection to neighboring stations.[19] However, what happens if the regional

---

[16] (...continued)
is not similarly rescued in the paging context, the proposed use of the Rand McNally MTA/BTA Listings will not stand.

[17] Because there are currently many licensees in an MTA on any given paging channel, the Commission's aspiration "that in many instances, these existing licensees will seek and obtain geographic licenses" is impossible to satisfy. NPRM, para. 22.

[18] Accordingly, the Commission's statement at paragraph 22 of the NPRM that its proposed rules "would simplify paging system expansion" is not correct. The majority of licensees on any particular paging frequency, save for the one lucky regional licensee, will find it impossible, not simple, not even difficult, to expand under the Commission's proposed rules.

[19] The processing time for an uncontested Form 600 application for Part 22 paging service is generally less than three months. It is assumed that at a minimum an FCC Form 489
(continued...)

licensee is wrong and protection is not afforded to a co-channel station?[20] What notice would be provided to existing co-channel paging service providers that a new co-channel station became operational? How would the existing service provider be able to trace subscriber interference complaints to an improperly operating regional licensee paging station if there is no notice that a new co-channel station is on the air? Finally, why should an existing service provider be subject to the interference caused by a regional licensee during the time, probably prolonged, that an interference complaint is pending at the Commission?

Conclusion

29) In view of the findings in the NPRM which show that the paging industry is expanding vigorously, and in view of the essentially local nature of the paging industry, the Commission's proposal to turn the paging industry into an exclusively interstate service through the creation of artificial paging markets is neither supported by the facts nor the law. The paging industry is currently a free market with minimal entry barriers, including

---

[19] (...continued)
filing will be required so that the Commission is assured that the regional licensee is protecting co-channel stations. Thus, while the regional licensee may save three months on the processing line, there seems to be no monetary savings in filing expenses, except that the filing fee for an FCC Form 489 is $45 while the filing fee for an FCC Form 600 is $265.

[20] To our knowledge direct access to the Commission's Part 90 and Part 22 data bases is not permitted. Thus, the private industry must rely upon private data bases -- oversight of co-channel stations is possible and occurs occasionally.

existing Federal regulation, which permits paging service providers to provide service to communities as subscriber demand warrants.

30) The Commission's proposed creation of artificially large paging markets which must be served within a specified time does not achieve the Commission's goal that "competitive success is dictated by the marketplace, rather than by regulation." NPRM, para. 2. Indeed, the NPRM proposes to erect significant barriers to entry and expansion for all businesses, especially as far as small businesses are concerned.

31) Moreover, contrary to the requirements of the Regulatory Flexibility Act, the Commission has not properly addressed the impact of its proposed restructuring of the paging industry on "small businesses," as that term is generally understood. Significant costs owing to auction bids, significant equipment costs owing to the large area build-out requirement, significant co-channel buyout expenses, and open-ended copyright royalty/litigation have not been addressed by the Commission. Because "small businesses" cannot afford the Commission's "remedy" for an industry which is not sick, and because the Commission has not shown that the public interest requires the exclusion of small businesses from the paging industry, an industry which currently has only insignificant entry barriers,[21] the Commission should not adopt its proposed rules.

---

[21] This assumes that paging spectrum is available. The Commission's proposal does not create spectrum -- any existing spectrum shortage will exist under the Commission's proposal. Thus, this barrier to entry is the same in both instances.

WHEREFORE, in view of the information presented herein, the Commission should not adopt its proposed rules.

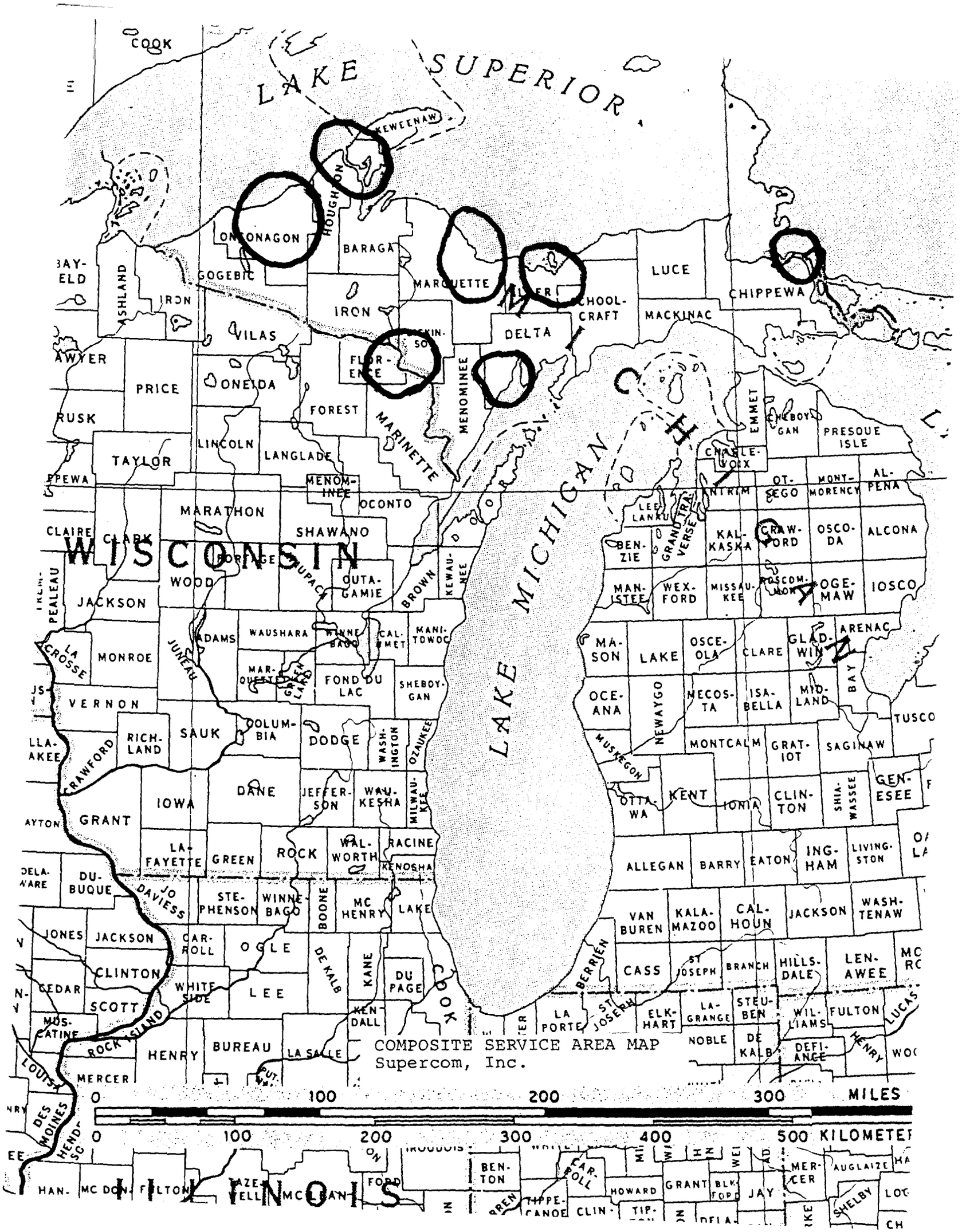
Respectfully submitted,
SUPERCOM, INC.

Hill & Welch
Suite #113
1330 New Hampshire Ave., N.W.
Washington, D.C. 20036
(202) 775-0070
March 18, 1996

Timothy E. Welch

Timothy E. Welch

Its Attorney



COMPOSITE SERVICE AREA MAP
Supercom, Inc.