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September 10, 1993

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Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20054

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

92-100 /

Re: Paging Network, Inc.
Petition for Reconsideration and
Clarification, GEN Docket No. ~~92-314~~,
ET Docket No. 92-100

Dear Mr. Caton:

Transmitted herewith on behalf of Paging Network, Inc. are an original and four (4) copies of its Petition for Reconsideration and Clarification in the above-captioned proceeding.

Should any questions arise in connection with this filing, kindly contact the undersigned counsel directly. Thank you for your attention to this matter.

Sincerely yours,

Judith St. Ledger Roty
Judith St. Ledger Roty

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SEP 10 1993

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of the Amendment)
of the Commission's Rules to)
Establish New Narrowband Personal)
Communications Service)

GEN Docket No. 90-314
ET Docket No. 92-100 /

PETITION FOR RECONSIDERATION AND CLARIFICATION
OF
PAGING NETWORK, INC.

Judith St. Ledger-Roty
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Its Attorneys

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Dated: September 10, 1993

SUMMARY

PageNet believes it imperative that the Commission reconsider, from a technical and economic perspective, its conclusion that narrowband PCS licenses be granted on a Major Trading Area ("MTA") and Basic Trading Area ("BTA") basis for regional and local licenses, respectively. PageNet's analysis of the Commission's MTA/BTA licensing scheme leads it to believe that entities purchasing licenses for such systems may be buying a pig in a poke. For the majority of markets, the combination of the small licensing areas coupled with the power standards the Commission has adopted for the MTAs and BTAs will result in technically inferior, unreasonably expensive systems. Worse case, spectrum will lie fallow, and consumers will be deprived of services. PageNet, therefore, urges the Commission to reconsider its choice of MTAs and BTAs, relying instead on truly regional and local wide area systems.

PageNet also requests that the Commission clarify its construction requirements. In particular, in the context of Rule Section 99.14 (Construction Requirements), PageNet believes that the Commission must more precisely set forth a licensee's obligations.

The Commission should also modify its rules to require Mtel to provide consumers with the innovative service for which it will receive facilities. The absence of such a requirement would provide Mtel the greater certainty of an award of a license

without the concomitant obligation of the licensee to provide the service for which it received the award. In order to avoid this possibility, the Commission should require Mtel to build the system, and offer the service, for which it received a pioneer's preference.

Lastly, PageNet believes the long overdue advent of auctions necessitates the Commission consider the inter-relationship between auctions and the grant of pioneer preferences. Pioneer preferences were devised in order to provide innovators with a greater expectation that they would receive a license. The advent of auctions, and thus the certainty which an appropriate auction format grants prospective licensees, requires the Commission to rethink its pioneer preference scheme, and importantly, establish a market price for the spectrum ultimately awarded recipients. As set forth below, failure to do so would not only grant the entity awarded the pioneer preference a license, but a competitive advantage which would unreasonably and undeniably alter the dynamic of markets in which a pioneer preference winner operates.

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BEFORE THE
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In the Matter of the Amendment)
of the Commission's Rules to) GEN Docket No. 90-314
Establish New Narrowband Personal) ET Docket No. 92-100
Communications Service)

PETITION FOR RECONSIDERATION AND CLARIFICATION
OF
PAGING NETWORK, INC.

Paging Network, Inc. ("PageNet"), by its attorneys and pursuant to Section 1.429 of the Commission's Rules, hereby petitions for reconsideration and clarification of the Commission's July 23, 1993 First Report and Order ("Order") in the above-captioned proceeding.

I. INTRODUCTION

PageNet is the nation's largest and fastest growing paging carrier. Since 1982, it has opened paging operations in more than 100 of the country's largest cities. Its growth has been almost exclusively internal, applying for and receiving both common carrier and private carrier 900 MHz paging licenses.

PageNet has, perhaps, more experience in the 931 MHz band than any other carrier, as it early on recognized both its potential and its limitations in the provision of paging services. PageNet has also been on the cusp of the evolution of advanced messaging services. As the innovator of VoiceNow, PageNet applied

for a pioneer's preference from this Commission in 1992. PageNet also filed comments and reply comments in the above-captioned proceeding.

The following paragraphs reflect PageNet's concern that the Order, while generally forward thinking, needs modest revision in order to make the industry's and the Commission's hope for narrowband PCS become a reality.

II. SUMMARY

PageNet believes it imperative that the Commission reconsider, from a technical and economic perspective, its conclusion that narrowband PCS licenses be granted on a Major Trading Area ("MTA") and Basic Trading Area ("BTA") basis for regional and local licenses, respectively. PageNet's analysis of the Commission's MTA/BTA licensing scheme leads it to believe that entities purchasing licenses for such systems may be buying a pig in a poke. For the majority of markets, the combination of the small licensing areas coupled with the power standards the Commission has adopted for the MTAs and BTAs will result in technically inferior, unreasonably expensive systems. Worse case, spectrum will lie fallow, and consumers will be deprived of services. PageNet, therefore, urges the Commission to reconsider its choice of MTAs and BTAs, relying instead on truly regional and local wide area systems.

PageNet also requests that the Commission clarify its construction requirements. In particular, in the context of Rule Section 99.14 (Construction Requirements), PageNet believes that

the Commission must more precisely set forth a licensee's obligations.

The Commission should also modify its rules to require Mtel to provide consumers with the innovative service for which it will receive facilities. The absence of such a requirement would provide Mtel the greater certainty of an award of a license without the concomitant obligation of the licensee to provide the service for which it received the award. In order to avoid this possibility, the Commission should require Mtel to build the system, and offer the service, for which it received a pioneer's preference.

Lastly, PageNet believes the long overdue advent of auctions necessitates the Commission consider the inter-relationship between auctions and the grant of pioneer preferences. Pioneer preferences were devised in order to provide innovators with a greater expectation that they would receive a license. The advent of auctions, and thus the certainty which an appropriate auction format grants prospective licensees, requires the Commission to rethink its pioneer preference scheme, and importantly, establish a market price for the spectrum ultimately awarded recipients. As set forth below, failure to do so would not only grant the entity awarded the pioneer preference a license, but a competitive advantage which would unreasonably and undeniably alter the dynamic of markets in which a pioneer preference winner operates.

III. THE COMMISSION'S RELIANCE ON MTA/BTA REGIONS IS INAPPROPRIATE.

The Commission's Order concluded that the majority of the narrowband PCS spectrum should be channelized for nationwide and large regional licensed service area use. See Order at 13. However, contrary to the comments of the vast majority of participants, it defined large regional systems as those encompassed within the 47 MTAs. The Commission also designated some channels for local use, which it defined as areas limited by the 487 BTA boundaries. Lastly, the Commission reserved some frequencies for use by existing licensees, again using BTAs as the service area boundaries based on the fact that "most existing paging is now licensed on a local basis." Order at 13.

In selecting MTAs and BTAs, PageNet believes the Commission inappropriately implicitly analogized paging services with cellular, broadband PCS and other services whose transmitters operate on low power. Signals from these transmitters might cover a few hundred yards to a few miles. Paging transmitters including advanced messaging services, on the other hand, are typically high powered, with signals reaching from a few miles to, more typically, 20 or more miles in all directions.

In part precisely because of the difference in transmitter coverage and thus the substantially reduced need, as compared to cellular and PCS, for hundreds of transmitters, paging has evolved to be a low cost, high information content service. It is important that the Commission not adopt rules that result in any higher costs for the provision of advanced messaging than

necessary. However, as set forth below, the Commission's MTA/BTA licensing scheme will add substantially increased costs because of the increased number of transmitters which will be required to provide even marginal service.

PageNet urges the Commission to revise its service areas definitions to reflect 3-5, but no more than 10 regions. Since the Commission has concluded that some even smaller regions are necessary, PageNet urges the Commission to establish local service areas no smaller than MTAs.

A. BTA Service Areas Are Neither Technically Nor Economically Viable for PCS or Existing Paging Services.

1. BTAs for Narrowband PCS are Technically Unworkable.

The Commission apparently selected BTAs based on its belief that BTA service areas would foster participation by small businesses, and increase competition at the local level. According to the Commission, "... by providing channels at the local level, we will foster broader participation in narrowband PCS, allow entry by smaller firms and businesses, increase competition and promote diversity in the provision of narrowband PCS services." Order at 13. Also see p. 17 ("The availability of these new licenses provide significant opportunities for small business participation through licensing at the local level....").

In the context of PCS, BTAs will not allow for meaningful participation by small businesses. The choice of BTAs will limit those small businesses that do participate to constructing unduly expensive, technically inferior systems.

These will have artificially circumscribed service areas which omit from coverage significant population centers, and thus cannot be competitive.

The Commission's choice of BTAs is, first, undermined by the fact that radio waves do not stop at artificial borders, e.g., BTA boundaries. To assure that signals do not overlap these borders, the Commission has, through a formula, imposed restrictions on the effective radiated power ("ERP") a licensee may operate at within 50 miles of those artificial boundaries. These reductions in power, in turn, drastically affect a licensee's ability to provide reliable service in those areas. In many, many instances, the signal received by the pager will not be as strong as that of manufacturers' minimum specifications, and thus, pagers will not be able to receive a page.^{1/}

This circumstance exists to some degree with traditional paging, but is exponentially exacerbated with BTAs because of their limited circumference. Many are less than 50 miles across diameter;^{2/} signals from a single paging transmitter operating at an average height and an average ERP would exceed the boundaries, even if placed in the center of the BTA. The reality, of course, is that transmitters are placed where needed to obtain maximum coverage, including building penetration, at the most reasonable costs.

¹ This phenomena also plagues the FCC's choice of MTAs, albeit to a lesser, although still unacceptable, extent. See discussion at Section III.B.

² See Attachment A for a sample of BTAs under 50 miles across⁷, in just the eastern portion of the country.

PageNet's concern is not merely theoretical. Tables I-II, (Attachment B), demonstrate the unacceptably reduced service. For example, take an average transmitter operating 21 miles from a boundary, with the height of the antenna radiation center above average terrain (AHAAT) at 300 feet. The power under these circumstances would need to be reduced to the point that the reliable service area coverage from that transmitter will be approximately four miles.

As Table I shows, drastic reductions in power will be required for all transmitters operated at normal heights within 15 miles of the border, and for higher sites that are up to 29 miles from the border.^{3/}

In fact, under the formula the Commission has adopted to determine height/power limitations for transmitters within 50

3

Table II gives an estimated maximum reliable communication distance between the transmitter and receiver located within an urban building. The formula used in the design is a rearrangement of a standard irregular terrain propagation model (EGLI) commonly used to describe path loss between two points. In the table given, certain assumptions were made to allow for constants. The receiver antenna was fixed at 30 feet height above average terrain to preclude variants for path obstruction. Receiver sensitivity was set to a value normally published with current pager specifications. Allowances were included for fade (10 dB) and building loss (28 dB) based on a published figures commonly used. It should be noted that PageNet is significantly experienced in signal measurements and believes the model to produce a reasonable expectation of coverage for the parameters given. To use the table, find the ERP value desired at the top of each column and intersect with the height of the antenna (AHAAT). The resultant figure is the maximum distance in miles that could be expected under the given conditions for a 90% reliability of receiving a communication within a building of moderate construction. This table is considered to be a "reliable service area" calculation.

miles of a boundary,^{4/} the authorized power is so limited that it may not be possible to operate these transmitters at any reasonable power level. Assuming an average transmitter site with 300 feet AHATT and an effective radiated power ("ERP") of 1000 watts, application of the formula would preclude transmitter sites from being located within 30 miles of a boundary. In-building coverage from such a site would be no greater than seven miles. Thus, reliable service would not be possible for 23 miles on either side of any boundary. Since many BTAs are no greater than 50 miles across, see e.g. Attachment A, no transmitters operating at normal levels would be permitted.

Under such circumstances, the system operator's choice is a bleak one - it can fail to serve whole population centers that lie within a 25 mile path adjacent to the BTA boundaries, or to the extent even possible, add numerous very low power transmitters, thereby substantially increasing the costs of providing service. This result is simply not palatable. ^{5/}

⁴ The Commission's power standards for narrowband PCS service are based on the distance of the base station from the service area boundary. If the station is located more than 124 miles from the boundary, 3500 watt power is authorized; if located less than 124 miles, but more than 50 miles from the station, a range of power from 3500 to 16 watts based on antenna height is authorized; if located less than 50 miles from the boundary, the licensee must use the FCC formula, which results in substantially diminished formula, to determine its power limitation. Order at 19.

PageNet assumes that technical changes to transmitting stations or the addition of stations is allowed on a "permissive basis," provided that distance to boundary and co-channel separation criteria are met.

⁵ This problem is exacerbated even more by the Commission's
Continued on following page

Given the substantially degraded, more expensive service that will result from using BTAs as service areas, PageNet urges the Commission to increase the geographic coverage for narrowband PCS service areas. By increasing size, one decreases the number of boundaries and thus diminishes the resulting huge coverage gaps in populated areas. If, for example, the Commission were to use, at a minimum, MTAs instead of BTAs for local-wide area coverage, there would be far fewer boundaries, and thus fewer areas that would go unserved as a result of power limitations.^{6/}

Continued from previous page

decision to use fixed circles to define service areas. The Commission's use of circles is, in effect, an effort to fit round pegs into square holes. Obviously, some areas will go unserved using such an approach. If the Commission were to allow service areas to be defined based on antenna pattern, licensees would have more flexibility in serving locations close to the "boundary" as they could then place transmitters at locations that maximize service and minimize interference.

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In addition to the power issue, the minimum co-channel separation distance is specified at 70 miles by Section 99.417 regardless of height or power. With the distance across most BTAs less than 70 miles, common frequency allocations in adjacent BTAs may not be possible with the BTA as the boundary. Some of the MTAs may also be affected as the cities targeted for stations will be close to MTA boundaries. Springfield and Trenton are examples where common channel grants would be precluded over broader geographic areas than PageNet believes the Commission intended.

Formulas, if used for distance to boundaries, should be used to establish co-channel separation. In addition, formulas should be specific for power on radial and not result in imposing a maximum where greater power or distance would be allowed. For example, directional antennas are commonly employed as a means of reducing power in one direction, while enhancing it in others. By using a directional pattern, distance to boundaries may be minimized in one direction while serving full allowable power in a direction away from the boundary.

2. BTAs Are Not Representative Of Existing Local Systems

The Commission may have concluded that existing paging systems are roughly analogous to BTAs based on the fact that the Common Carrier Bureau licenses transmitters on a transmitter by transmitter basis, with each 900 MHz transmitter entitled to a 70 mile protection radius. However, this is an archaic licensing scheme which prospective licensees accommodate in building out new systems by filing scores of transmitter sites simultaneously. It is only when a carrier needs to improve signal coverage or expand its service territory that a single or a few transmitter applications, which might equate to BTAs, come into play.

In order to demonstrate this point, PageNet compared the geographic coverage of BTAs with those of its own existing paging systems. The Houston BTA, for example, does not cover Beaumont and Port Arthur, population centers which are integral to providing service in the Houston metropolitan area and which PageNet and other local providers cover. PageNet's local wide area Miami system, serving the greater Miami area, covers portions of at least four BTAs. PageNet's local wide area Los Angeles system covers portions of at least five BTAs. PageNet's local San Francisco Bay area system covers portions of at least six BTAs. These examples represent systems which the industry considers local in nature. Thus, local does not equate to BTAs but rather at a minimum is several times larger.

3. BTAs Do Not Cover Sufficient Population Centers To Be Economically Viable.

Even assuming that paging carriers could provide reliable service within geographic boundaries of each BTA, these systems are not likely to be economically viable, as there is insufficient population in most BTAs to cover the costs of constructing and operating advanced paging systems. (Of course, this problem is compounded when one considers the additional expense associated with constructing low power systems with an increased number of transmitters in order to minimize the "border" impact, as described above.)

PageNet does not believe that the number of potential subscribers in BTAs will warrant the build out of advanced paging systems in those circumscribed areas. PageNet relies on the penetration of existing paging services, which is now approximately 5% nationwide in reaching this conclusion. (This penetration, of course, took over 15 years to achieve. It has not been an overnight phenomena.)

The population range of the BTAs, see Attachment C, indicates that the size of 297 of the 487 BTAs would not allow an economically viable advanced paging system, since their populations range from approximately 26,000 to less than 250,000. Assuming 5% penetration, these carriers may have 1,300 to 12,500 subscribers over the next several years. In more sparsely populated BTAs, that percentage will be even less, since the market penetration for advanced paging, particularly within the first few years, is likely to be at still a lesser percentage.

Given expected capital expenditures necessary for transmitter systems and receiving equipment, it is obvious that the population of these BTAs could not support advanced paging. The next category of BTAs (up to 500,000 population) would be marginal at best, and would certainly entail a significant financial risk. Even those markets between 500,000 and 1,000,000, from a financial standpoint, could prove unworkable. Only the 52 markets with 1,000,000 or more population, from a financial standpoint, could possibly be truly viable.

4. The Commission Should Not Use BTAs To Define The Geographic Scope Of Licenses Allocated To Existing Services.

The Commission also adopted BTAs for the unpaired acknowledgment channels being reserved for existing providers of paging service, apparently because it believes that existing paging carriers provide predominantly "local" service ("... this approach is appropriate given the limited number of channels and the fact that most existing paging is now licensed on a local basis.") Order at 13.

However, as noted above at Section III, A.2, existing paging operations bear no relationship to BTAs, and are not operated, as the Commission suggests, on a local basis. The vast majority of paging systems in existence today are regional and wide area in nature, covering multiple cities and states. In order to more closely align the service areas for these new frequencies to the market that exists, the service areas must be

substantially increased, e.g., reflecting at least the geographic coverage of MTAs.

B. MTA Service Areas Are Neither Technically Nor Economically Viable Regional Systems.

1. The Use of MTAs For Regional Advanced Messaging Services Is Technically Difficult.

MTAs suffer from the same infirmity as do BTAs, albeit to a lesser extent. That is, they have borders, which in particular in the eastern third of the United States, are sufficiently proximate to population centers as to preclude or diminish coverage in those areas.

For example, Springfield, Massachusetts is within the Boston MTA. It lies immediately adjacent (3 miles) to an MTA border. A licensee in the Boston MTA would be required to reduce power to less than 5 watts for any transmitter station in the Springfield area, and then only if the antennae height is less than 50 feet above average terrain. In the first instance, it is nonsensical to think that carriers would be required to pay for and install transmitters limited to 5 watts. Secondly, for existing PageNet systems, antenna height averages about 350 feet above average terrain, and thus, placing all of these antennae at no more than 50 feet would place a tremendous burden on licensees to find appropriate sites.

PageNet estimates that in order to serve Springfield a licensee would have to install between 50 and 100 transmitters under the formula MTA approach. Comparatively, a common carrier licensee in the 931 MHz Band could offer equivalent coverage with 4-6 transmitters. The net effect is that Springfield is likely to

be served only by nationwide licensees, as it is highly improbable that any licensee would invest in the expense associated with building out the number of transmitters necessary (which would then operate at de minimus power levels) to offer inferior service to the immediate urban area.

Springfield is only one of several cities which is near MTA borders. Other cities in the east include Trenton, New Jersey; Philadelphia and Allentown, Pennsylvania; Salisbury and Youngstown, Maryland; Ocala and Gainesville, Florida; and Benton Harbor, Michigan. Attachment D sets forth an incomplete list of other cities which are sufficiently near the MTA borders as to experience the same impact.

2. MTAs Are Not Representative Of Regional Systems.

In the paging industry MTAs perhaps most closely approximate wide area local systems. They are certainly not the large regional systems the vast majority of the commenters urged the Commission to adopt in order to take advantage of economics of scale. See Order at 16. Nor do they reflect the truly regional service, such as the northeast, the south, and the Midwest on which more and more customers who do not need truly national service, but do need multi-state service, rely. Id.

Furthermore, division of the country into 47 MTA regions will deprive licensees of the economies of scale associated with larger regions, and, consequently, of the ability to reflect these savings in the pricing of their services.

3. The Existence Of Aggregation Rights And Licensing By Auctions Do Not Diminish The Infeasibility Of Licensing Regional Systems On An MTA Basis.

The Commission apparently believes that the fact that carriers will have the ability to aggregate MTAs (now in the context of auctions) will offset any disadvantages licensees might otherwise suffer. This simply is not correct. Aggregation of MTAs into large, truly regional systems will be far more difficult than the Commission suggests.

In the context of sealed bids, for example, a licensee might well lose the award for key cities, but get others. In the absence of oral, sequential auctions, it would essentially require licensees to buy up those systems which they did not win from existing licensees, thus forcing on them the transactions costs associated with aggregation both the carriers, and presumably the Commission, are trying mightily to avoid. These include both the acquisition costs, and the administrative costs associated with transfers of controls both at the state and federal levels.

The reasonableness of aggregation is further diminished for those applicants whose proposed advanced messaging service requires more than one channel. In order to provide VoiceNow on a regional basis, for example, PageNet will likely need three (3) 50 KHz channels. Even assuming oral bidding, where licensees have a greater degree of certainty that they will obtain the desired licenses, aggregation is not a viable option. Recall that in order to create truly regional systems, on the east coast, for example, a company might have to participate in and win 20 or more

auctions for one channel, and 60 or more auctions for three channels.

The more auctions that the Commission conducts, the more opportunities presented for a "spoiler" to enter and impact the outcome. For example, a competitor could enter an auction for spectrum it does not actually want (but would be willing to pay for if necessary) solely to raise the price that its competitor must pay, thereby forcing that carrier to incur costs it otherwise would not. This is obviously an uneconomic outcome, and will ultimately harm subscribers who will be required to bear the brunt of these increased costs. Although the potential for "spoilers" is not eliminated by larger service areas, the incidence of this activity will decrease commensurate with the reduction in the number of auctions. Moreover, the fewer the number of actions, the quicker service will be provided to the public, consistent with the Commission's "speed of deployment" goal. Order at 3.

In fact, larger service areas make even more administrative sense in the context of auctions. The greater the number of regions or local service areas, the greater the number of auctions the FCC will have to conduct. This will result in additional expense for the Commission, increased uncertainty for applicants, increased potential for spoilers, delays in service, and possibly higher rates for service.

The obvious result of smaller regions and local service areas is that the FCC will have to conduct auctions for each region and local area for which there are mutually exclusive

applicants.^{7/} Larger service regions mean fewer auctions, and, consequently, significant savings in terms of cost and man hours for the Commission. However, perhaps less obvious yet more significant, is the impact that smaller service areas will have on the bidding process and ultimately on subscriber rates.

IV. THE COMMISSION SHOULD CLARIFY ITS CONSTRUCTION REQUIREMENTS TO MORE CLEARLY SET FORTH A LICENSEE'S OBLIGATIONS TO CONSTRUCT

PageNet commends the Commission for determining that licensees who fail to meet its construction requirements will forfeit their licenses and be ineligible to regain them. Order at 17. However, in light of the risk of forfeiture, it is imperative that the Commission's rules very clearly set forth a licensee's obligation in that regard, including the precise geographic scope and/or number of transmitters necessary to satisfy the construction requirements. In that regard, PageNet believes the Commission needs to clarify what is meant by low power base stations. (Order at 16, ¶ 37 and 6 n. 22).

The absence of a definition of low power base stations makes it difficult, in the context of MTAs and BTAs, to determine when a licensee has satisfied its construction obligations -- is it when 25% of the service area is constructed within five years and 50% is constructed within 10 years, or is it when a licensee

⁷ Even if the Commission concludes, as PageNet believes it should, that larger service areas are appropriate, auctions for adjacent areas cannot be condensed into one day. Bidders must know whether they have been successful in an auction before determining whether to participate in an auction for an adjacent area.

utilizing "low power" systems has a particular number of transmitters, or both?

Furthermore, to the extent there are systems which incorporate both high and low power transmitters, it is not clear which requirement would apply. PageNet requests the Commission clarify these points to ensure that services do not inadvertently violate the Commission's construction requirements thereby jeopardizing their licenses.

V. MTEL'S PIONEER'S PREFERENCE

A. The Commission Should Clarify that Mtel Must Construct the System it Proposed.

The Commission awarded Mtel a pioneer's preference for its Nationwide Wireless Network ("NWN"). Order at 32. The Order states that Mtel's NWN "is capable of offering consumers a broad range of two-way services in a single 50 KHz channel, such as advanced messaging with acknowledgment service in local areas or nationwide and a variety of information and messaging services, including transmission of text messages that are lengthy by paging standards." Order at 25. PageNet and others have challenged the technical feasibility of the system Mtel proposes as well as the consumer demand, and thus the economic viability of such a system. Nonetheless, in awarding Mtel a preference, the Commission has, implicitly, indicated that it believes Mtel's representations. The Commission's rules must now hold Mtel to those representations or require Mtel to relinquish its preference.

This requirement for all preference recipients is eminently reasonable; conversely, failing to adopt such a rule is unreasonable. The preference was created in the first instance as a mechanism to provide innovators greater assurance that they would be awarded a license, and thus that consumers would benefit from application of the innovation. Certainly, there is no value to developing or rewarding an innovation which isn't offered to consumers. There is no value in innovation for innovation's sake.

The Commission's rules currently fail to assure that consumers will benefit from the innovation for which Mtel received a preference. In fact, Mtel is free under the present rules to divide its 50 KHz nationwide award into two 25 KHz paging channels and solely provide traditional paging services. The Commission's intent in awarding a preference, and the consumer benefit from the existence of a pioneer preference scheme, would not be served by such a result. Therefore, the Commission should clarify that this frequency may be used only to construct and operate the system proposed by Mtel in its pioneer preference request and for no other use.

B. Mtel Should Be Required To Pay For Its Frequency.

The Commission's pioneer preference scheme is intended to "foster development of new services and improve existing services by reducing delays and risks innovators otherwise would face with the Commission's licensing process." Order at 24. In the context of lotteries, where no applicant was required to pay for spectrum, there was no reason to require a pioneer's