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JUN 19 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

BEFORE THE

Federal Communications Commission

WASHINGTON, D. C.

In the Matter of:	)	
	)	ET Docket No. 92-100
	)	
Dial Page, L.P.	)	PP-35
	)	
Mobile Telecommunication Technologies Corporation	)	PP-37
	)	
PacTel Paging (Advanced Architecture Paging)	)	PP-38
	)	
PacTel Paging (Ground-to-Air Paging)	)	PP-39
	)	
Freeman Engineering Associates	)	PP-79
	)	
Global Enhanced Messaging Venture	)	PP-80
	)	
Metriplex, Inc.	)	PP-81
	)	
Mobile Communications Corporation of America	)	PP-82
	)	
Montauk Telecommunications Company	)	PP-83
	)	
Skycell Corporation	)	PP-85
	)	
Requests for Pioneer's Preference in the 930-931 MHz Band To Provide Two-Way Data and Advanced Paging Services	)	

To The Commission:

OPPOSITION TO PIONEER PREFERENCE REQUESTS

PAGING NETWORK, INC.

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June 19, 1992

SUMMARY

Paging Network, Inc. ("PageNet") opposes the Pioneer Preference Requests filed by Global Enhanced Messaging Venture ("GEM"), Mobile Communications Corporation of America ("MobileComm"), Freeman Engineering Associates ("Freeman"), Metriplex, Inc. ("Metriplex"), Montauk Telecommunications Company ("Montauk"), Skycell Corporation ("Skycell"), Dial Page, L.P. ("Dial Page"), Mobile Telecommunication Technologies Corporation ("Mtel"), PacTel Paging both for Advanced Architecture Paging ("PacTel AAP") and for Ground-To-Air Paging ("PacTel GAP"). All seek pioneer's preferences to provide certain two-way data and/or so-called advanced paging services in the 930-931 MHz band.

Most of the foregoing simply fail to demonstrate that they pioneered an innovative new or novel service, which incorporates added functionality, substantial spectral efficiencies, increases in speed or quality of service, or reduced cots. For example, the requests submitted PacTel Paging, MobileComm, Metriplex, Freeman and Skycell are nothing more than preliminary concepts. These applicants have not even begun to explore the appropriate design of a new service, let alone demonstrate that these proposed services warrant a pioneer's preference.

These and other applicants also fail to offer any substantial increases in spectral efficiency. PageNet's own proposal, VoiceNow^{sm} offers an increase in transmission speed of 1000% over existing analog voice paging services. No other

applicant is in the ball park. Appendix A compares the spectrum efficiency improvements proposed by the applicants over existing services, with the most efficient of the proposals offering increased spectral efficiencies in the order of only 20%.

In order to substantially narrow the number of applicants eligible for a pioneer's preference in the Advanced Messaging Services, some applicants are attempting to define eligibility for provision of service in that band very narrowly, so narrowly that only they or one or two other applicants would be eligible. The Commission should recognize such attempts for what they are; that is, an unwillingness of some applicants to be compared to truly innovative proposals like VoiceNow^{sm}. VoiceNow^{sm} is a truly extraordinary service proposal, warranting a grant of a nationwide preference. No other applicant has similarly qualified.

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Requests for Pioneer's Preference in the 930-931 MHz Band To Provide Two-Way Data and Advanced Paging Services	)	

To The Commission:

OPPOSITION TO PIONEER PREFERENCE REQUESTS

Paging Network, Inc. ("PageNet"), by its attorneys, pursuant to Section 1.402 of Commission's Rules and Public Notice

No. DA 92-712, released June 4, 1992, hereby submits its Opposition to the Pioneer's Preference Requests of Global Enhanced Messaging Venture ("GEM"), Mobile Communications Corporation of America ("MobileComm"), Freeman Engineering Associates ("Freeman"), Metriplex, Inc. ("Metriplex"), Montauk Telecommunications Company ("Montauk") and Skycell Corporation ("Skycell"). These Comments also oppose the supplemental Requests filed by Dial Page, L.P. ("Dial Page"), Mobile Telecommunication Technologies Corporation ("Mtel"), and PacTel Paging, both for Advanced Architecture Paging ("PacTel AAP") and for Ground-To-Air Paging ("PacTel GAP"). All seek Pioneer's Preferences to provide certain two-way data and/or so called advanced paging services in the 930-931 MHz band. None demonstrates a truly innovative advanced paging service or advances in spectral efficiency. None is responsive to broad, unmet consumer demand. None represents significant reductions in the costs of providing service. Thus, none of the requests merits an award of a pioneer's preference.

I. INTRODUCTION

In 1982, when the Commission allocated 3 MHz of spectrum in the 928-931 MHz band for paging services,[1/] PageNet was one of the first to recognize the full potential of this spectrum. PageNet immediately applied for and received authorizations to offer paging service in the 931 MHz band, and was the first in the

---

1/ Amendment of Parts 2 and 22 of the Commission's Rules to Allocate Spectrum in the 928-931 MHz Band and to Establish Other Rules, Policies, and Procedures for One-Way Paging Stations in the Domestic Public Land Mobile Radio Service, 89 FCC 2d 1337 (1982) ("One-Way Paging Order").

country to operate a 900 MHz common carrier paging system. Since then, PageNet has expanded its 900 MHz paging operations to 24 states and the District of Columbia and has pioneered the development of regional paging systems. Throughout its history, PageNet has sought to respond to consumer demand for reasonably priced advanced paging services and to fulfill the promise of the 900 MHz band through its innovative, state of the art paging systems.

In the past ten years, as PageNet's operations have grown, its paging services have evolved from comparatively primitive tone and voice services to include alphanumeric paging and voice messaging services. In response to customer demand to communicate by voice, PageNet currently offers low priced, automated voice messaging and personalized automated answering service marketed under the names PageMail° or PageMailBox™. Based on its investigation of the mass consumer and small business markets, PageNet has concluded that there is strong consumer desire to communicate by voice through instantaneous, reasonably priced advanced paging services. As such, it filed on June 1, 1992, a Petition for Rulemaking to Allocate the 930-931 MHz Reserve Band for the Establishment of Advanced Paging Services, including its advanced voice paging, known as "VoiceNow℠ Services," and a Request for Pioneer's Preference to provide such services.

Unlike the captioned Pioneer's Preference Requests, PageNet's proposal for VoiceNow℠ Services satisfies important public interest objectives. VoiceNow℠ is an innovative new voice paging service. As PageNet demonstrates, spectrum conservation methods

permit it to increase by over 22 times the subscriber capacity per system, as compared to analog simulcast tone and voice systems. PageNet has simultaneously reduced the per subscriber costs of voice paging by up to one-half compared to the costs of providing an equivalent service over analog networks, and thus will be able to capture the substantial unmet consumer demand for these services. These accomplishments demonstrate without question that PageNet is entitled to a Pioneer's Preference for designing and establishing the technical feasibility of introducing VoiceNow^{sm} Services on a spectrally efficient, cost-effective basis.

None of the Pioneer's Preference Requests presently before the Commission proposes such a service. In fact, the majority of the Requests propose very little that is innovative in terms of service, price, spectral efficiencies, or technology in general, and none fully satisfies the Commission's pioneer preference criteria.

II. THE 930 MHZ BAND SHOULD BE USED FOR PAGING SERVICES

The Commission in 1982 allocated 3 MHz of spectrum in the 900 MHz band for one-way paging services. Amendment of Parts 2 and 22 to Allocate Spectrum in the 928-941 MHz Band, and Established Rules, Policies and Procedures for One-Way Paging Stations, 89 FCC 2d 1337, 1351 (1982)(hereafter "One-Way Paging Allocation Order") ("there is a clear need for additional one-way paging services and facilities and for diverse sources of supply."). It purposefully held in reserve however, one MHz of that spectrum for one-way

paging systems. Id. at 1342 ("930.000-931.000 (forty 25 kHz frequencies) - reserved for one-way paging systems"). It further reiterated its intention that the reserve band not be a "spill over" for tone-only or tone-voice systems which use current technology, but was a band [reserved] for technologies which are only now being developed. The Commission is now confronted with a plethora of applicants seeking to utilize this spectrum to provide a wide array of services, most of which seek to provide services for which this band was reserved. Some, however, potentially seek to expand use of the band for other than its reserved purpose.

As the Commission noted, paging services are "one-way" services. That is, paging services offer the public one-way communications capability as opposed to, for example, cellular radio services, which offer instantaneous two-way communications services. Tone only, tone and voice, numeric, and alphanumeric paging services all constitute one-way communications services, consistent with that definition. One-way data services also certainly fall within the ambit of paging services generally. It is for advances in the provision of these services that this spectrum was reserved.

PageNet's VoiceNow^{sm} service is one such advance. The fact that its paging network deploys a return link from the paging unit to a receiver does not metamorphise its or anyone else's one-way paging services into two-way services. Return links must be deployed to alert the paging network as to the location of a paging subscriber where frequency reuse techniques are being deployed. This permits the paging system to send a one-way page

to the appropriate pager over the appropriate frequency. Under these circumstances, from the paging customer's perspective, the paging service provided is identical to the services offered today.

"Acknowledgment" capability, per se, which adds functionality to existing paging services, also should not be excluded from being offered in this band. Acknowledgment capability as envisioned by Dial Page and others inform the person placing the page that the service requested (e.g., delivery of a page to a paging customer) has been performed. In that regard, it is like certified mail; the person sending the letter receives an acknowledgment that the letter was received by the addressee. In the absence of the underlying service, however, whether mail or paging, there would be nothing to acknowledge. It is thus not an independent service, but added functionality or a complement to existing services. Carriers desiring to deploy this added functionality certainly should not be precluded from doing so.

On the other hand, services which offer two-way voice and/or data capability may not fit squarely into any definition of advanced paging services. Those that provide interactive, on-line communications are clearly outside the Commission's intended use of this band. Allocations for these services already exist, e.g., at 220 MHz, or are currently pending in the Emerging Technologies proceeding, e.g., for PCS, before the Commission. Given that, PageNet believes it inappropriate to permit the offering of these services in the 930 MHz band. There is clearly already more than sufficient demand for services for which the band was reserved.

Among the many proposals which clearly do constitute one-way paging services, and thus are appropriate for consideration of a pioneer's preference for the 930 band, are PageNet's VoiceNow^{sm}, PacTel's AAP and GAP, Dial Page's Acknowledgment Paging, MobileComm's "VIP Service," and Metriplex's "HDNAP". These and other qualifying proposals should be examined by the Commission against the pioneer's preference criteria to determine if any of them meet the Commission's thresholds for granting pioneer's preferences, and the 930 spectrum accordingly allocated, to fulfill the unmet needs of subscribers seeking advanced paging services.

III. PROPOSED PARADIGM OF ANALYSIS FOR GRANT OF PIONEER'S PREFERENCE

As expressed in the Communications Act, the Commission's public interest mandate is to make available, so far as possible, to all the people of the United States a "rapid, efficient, nationwide and worldwide .... radio communications service with adequate facilities at reasonable prices." 47 U.S.C. § 151. As with all its other actions, the agency's grant of any pioneer's preference must be in furtherance of that public interest mandate. Thus, in reviewing the captioned requests, the Commission should focus foremost on the real world consequences of any such award and evaluate how these consequences will serve or disserve the public interest. In delineating the criteria worthy of a Preference award the Commission implicitly recognized that a pioneer's preference is not a certificate that hangs on the wall of the recipient, but a withdrawal of a frequency from the general

pool open to other potential users or services. These criteria are particularly important when considering whether to grant a pioneer's preference for an Advanced Messaging Service ("AMS") at 930 MHz.[2/]

The Commission has held that it would award a pioneer's preference to a party that demonstrates it has developed an "innovative proposal that leads to the establishment of a communications service not currently provided or a substantial enhancement to an existing service." Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, 6 FCC Rcd 3488 (1991) (hereafter "Pioneer Preference Order"). Specifically, it has recognized that a showing of certain characteristics potentially qualifies a proposal for a pioneer's preference, including: 1) added functionality; 2) a new use of the spectrum; 3) changes in the operating or technical characteristics of a service; 4) increased spectrum efficiency; 5) increased speed in the transmission of information; 6) increases

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2/ Any proposal to provide AMS at 930 MHz should also be consistent with the Commission's original intent to carve out a contiguous 3 MHz block of spectrum from the 929-931 MHz dedicated to one-way paging services. In reserving the 930-931 MHz band for advanced technology one-way paging systems, the Commission rejected proposals to interleave frequencies in this band and sought to maintain all 40 frequencies in a contiguous reserve pool. One-Way Paging Order, 89 FCC 2d at 1340. Here, there is but 1 MHz of spectrum proposed to be allocated, compared, for example, to the 50 MHz of spectrum allocated for cellular service, itself an innovative service when first introduced. The introduction of incompatible services with different channeling plans than the adjacent spectrum would destroy the compatibility and consistency of this allocation scheme.

in the quality of information transfer; and 7) a significant reduction in cost. Id. at 3494.

Moreover, before the Commission awards a pioneer's preference, it must look at a continuum and determine exactly how the proposal serves the public. If there is no need or demand for a particular service, or no demand at the cost proposed, its innovativeness serves no purpose, and it offers the public no benefit. It would be inappropriate, then, for the Commission to grant a pioneer's preference for innovation alone. An applicant for a pioneer's preference should demonstrate not only that it has "thought out the capabilities or possibilities of the technology or service, or has brought them to a more effective state," but also that there is an unmet need for the services proposed, and that it is feasible to offer these services at prices which will permit subscription by those for whom the service is intended.

IV. APPLICANTS FOR A PIONEER'S PREFERENCE HAVE A HEAVY BURDEN OF PROOF

In establishing standards and criteria under which it would award a pioneer's preference, the Commission made clear that it would not grant such preferences casually. See Pioneer's Preference Order at 3494; Request for Pioneer's Preference, Low-Earth Orbit Satellite, ET Docket No. 91-280, Tentative Decision, 7 FCC Rcd 1625, 1627 (1992) ("VITA Decision"). Rather, it indicated that an applicant would have a "significant burden to persuade the Commission that its proposal has sufficient merit." Pioneer's Preference Order at 3494. Incremental enhancements to currently

available service do not qualify for a preference. It is not this type of improvement or enhancement that the Commission seeks to reward. Existing service providers are expected to make incremental improvements in increased network efficiencies, and to design and implement new services as part of their public interest obligation. VITA Decision at 1627 ("many of the technical achievements that ORBCOMM argues are justification for a pioneer's preference are relatively routine design features that most new LEO satellite licensees would be expected to accomplish"). Rather, the Commission's pioneer preference request was designed to award breakthroughs in services or technological development to encourage and award innovators who bring technology to an advanced state.[3/] It seeks to create incentives for investment in new service offerings that are tantamount to a "breakthrough" or "new generation" of technology.[4/] Id. at 3494 and n 10.

When the Commission's rigorous standards for awarding preferences is applied to applicants in the Advanced Messaging Service ("AMS"), none but PageNet qualifies for an award.

3/ The Commission noted that it sought to encourage the investment generally necessary to pioneer advanced services by providing innovators an opportunity to benefit directly from the fruits of their innovations. Pioneer Preference Order at 3488.

4/ The pioneer's preference was established to spur technological development that might not otherwise be funded or proceed at as fast a pace. Id. at 3488.

V. NONE OF THE CAPTIONED REQUESTS FOR PIONEER'S PREFERENCE SATISFIES CRITERIA NECESSARY FOR A PREFERENCE AWARD

Some of the following proposals offer modest improvements in spectral efficiency. Some offer services not previously available and could be characterized as "new" services or enhancements to existing ones. Some offer added functionality. None constitutes a breakthrough. Most proposals are for marginal improvements or enhancements, which each licensee should strive to make as part of its public interest obligation, even absent the award of a pioneer's preference.[5/] None represents a substantial increase in capacity resulting from increased spectral efficiencies. None represents a significant reduction in service costs. The following paragraphs apply the Commission's standards to the other applicant's proposals, and demonstrate their fatal shortcomings.

A. Global Enhanced Messaging Venture

GEM's proposal fails to quality for a pioneer's preference because it proposes no new or novel use of the RF spectrum. Nor does it claim to offer enhanced spectrum efficiency, increased speed of transmission, reduced costs of services or other advancement the Commission established as criteria by which it will measure pioneer's preference requests. In fact, GEM's service itself is extremely cumbersome. A description of GEM's service makes these offering points readily apparent.

5/ See, e.g., VITA Decision, 7 FCC Rcd at 1628.

Under GEM's proposal, the message to the paging subscriber is entered into the system by GEM's Pagentry unit via dial-up landline telephone system; the message is sent to the paging subscriber utilizing a proprietary alphanumeric paging protocol via a one-way RF channel; all return messages (acknowledgments and responses) are sent back to the person sending the page via dial-up landline telephone system. In other words, the "enhancement" is not a mobile service, per se. One needs to interconnect the Pagentry units to the landline telephone network in order to acknowledge receipt of the call. One might just as easily place a call to the paging party and tell them the page was received.

GEM's proposal mirrors in significant respects proposals it has presented to the industry sporadically over the past few years. The market's reception of GEM's service concept has been cool at best. Upon initial consideration, PageNet's preliminary evaluation was that it is a very pedestrian alphanumeric service, offering consumers very little in the way of spectral efficiencies, improved functionality, or value added enhancements, and thus, concomitantly, that there was no consumer demand for the service over existing paging networks.

Nonetheless, should there develop a demand, existing paging systems could be upgraded to accommodate GEM's proposed service under existing Commission Rules. As noted, the proposed "enhancements" to traditional alphanumeric paging are conducted over the landline telephone network, not the radio frequency network. This fact also demonstrates that the "enhancements" do not constitute a new or enhanced use of radio frequencies. There

is no proposed spectrum use that differs in any way from that in use by all paging companies currently. The Commission has already clearly stated that it does not intend to use these frequencies for current technologies. One-way Paging Allocation Order, 89 FCC 2d at 1341.

In addition, GEM proposes to operate its service on a spectrally inefficient nationwide simulcast basis. Such simulcasting ties up the frequency across the nation for each page, significantly reducing the system capacity as compared to a system such as PageNet's VoiceNow[sm], which utilizes frequency reuse techniques.[6/] Despite its claims, GEM's proposal will not result in any significant spectral efficiencies. Its claimed 1.28 fold improvement over ERMES capability[7/] pales in comparison to PageNet's ability to serve 22 times more subscribers than current voice capability allows. See Attachment A.

GEM provides virtually no demonstration that its proposal will result in significant reductions in cost of services. Its signalling protocol is proprietary and will be available to manufacturers only through licensing agreements. Id. at 47. The result is a potentially non-competitive market with one source of

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6/ PageNet's proposal also contemplates a simulcast channel, but for locating the paging receiver only. The messages in PageNet's system will be sent over local non-simulcast channels configured in a 4-cell reuse pattern. GEM will send each and every message throughout the entire nation, wasting an extraordinary amount of spectrum.

7/ See GEM Demonstration of Technical Feasibility and Request for Pioneer's Preference at 39.

supply, depriving consumers of the benefits of competition, including lower cost.[8/]

As GEM has not satisfied any of the Commission's criteria for a pioneer's preference, its request should be denied.

B. Mobile Communications Corporation of America

MobileComm's proposal, Verified Information Paging or "VIP", adds response and acknowledgment options to standard paging services and supposedly offers increases in spectral efficiencies. Although acknowledgment to the paging party that the page has been received represents a function not currently offered, it is not a new or novel breakthrough. Furthermore, MobileComm's technical proposal remains in the conceptual phase; it has no hard-core technical network design, only ideas about potential network configurations. Nor do the illusory spectral efficiencies claimed by MobileComm warrant a preference.

Over the last few years, numerous paging companies have considered whether user benefits and demand associated with acknowledgment are sufficient to justify the costs of constructing a system exclusively for that purpose. The fact that several companies (MobileComm, Mtel, Dial Page, and Metriplex) now believe

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8/ One reason for the widespread acceptance of many paging services and the proliferation of paging equipment is that virtually all systems utilize standard non-proprietary formats. The result is standardized economical equipment and service. It is unlikely that economies of scale are achievable through GEM's non-standard proprietary proposal. For example, manufacturers would not likely enter into licensing agreements to develop units that can operate on only GEM's system, and which will be sold in competition with the license holder's own equipment.

that such demand may exist does not return this functionality to its infancy. It's an idea which may warrant spectrum use, but clearly not a pioneer's preference. This relatively routine function is more appropriately characterized as a "baby step" in paging's natural evolution. See VITA Decision at 1627.

MobileComm also claims an entitlement to a preference for substantial increases in spectral efficiencies over that of ERMES. But an evaluation of its proposal reveals that these claims are unfounded. The data throughput anticipated is only 15 kb/sec on a 50 kHz channel. The resulting efficiency is 0.30 bits/sec/Hz, which barely exceeds that of the existing ERMES format, which is 0.25 bits/sec/Hz. See Attachment A for comparison among applicants of spectral efficiencies. The absence of any meaningful frequency re-use means that no further improvements are possible in the space domain, either. VIP, therefore, achieves no greater spectral efficiency beyond current paging technology.[9/]

Furthermore, the flaws in MobileComm's fixed site receiver proposal will diminish this throughput rate. It claims that reverse channel receivers can be co-located with 3500 Watt ERP transmitters because the channel operates in a simplex mode, yet it does not address the technical innovations necessary in transmit and receive filtering to prevent interference from either 929 and 931 MHz paging transmitters, proposed 3500 watt ERP transmitters on an adjacent, unsynchronized channel, or any other

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9/ To put this in perspective, PageNet's VoiceNow^{sm} message transmitters will operate at a data rate of 80,000 bits per second in a 25 kHz channel. Id.

930 MHz transmitter. MobileComm has apparently attempted to balance the forward and reverse links by equalizing gains and losses, but ignores the fact that the basis for performance of both links are interference limited.[10/] This proposed co-location and balancing concept works well for cellular, where there are 1664 channels with the transmit and receive portions separated by 45 MHz; however, with very few channels and no protection from adjacent channel transmitters, such as here, the result will be significant interference. The interference will result in repeat pages, reducing net efficiencies.

MobileComm has also failed to demonstrate satisfaction of other important pioneer's preference criteria. Its proposed 50 KHz bandwith is not compatible with the adjacent 929 or 931 MHz bands, and it has made no showing either that its service can be offered at reduced costs, or that any demand for the service exists.

The failure to demonstrate any demand is particularly significant here. MobileComm states that its first generation terminal unit would be available within a year after a volume order is placed. MobileComm Request for Pioneer's Preference at 6. However, it makes no showing that there will be sufficient demand for the service to support such a "volume order."[11/]

10/ Even MobileComm's Engineering Affidavit at Appendix A of its Request for Pioneer's Preference states that power output and receiver sensitivity are critical factors, but its proposal fails to consider an interference - limited environment.

11/ The only cost information provided by MobileComm is that its subscriber equipment will wholesale for $250. MobileComm

Continued on following page

Moreover, additional enhancements will only be added as demand requires. Id. Thus, it is questionable when, if at all, MobileComm's proposed service would be commercially available.

C. Metriplex, Inc.

Metriplex requests a pioneer's preference for its development of a "new high speed, hybrid data network with acknowledgment paging." Reduced to its essentials, this proposal contemplates the provision of alphanumeric pages of increased length, combined with acknowledgment functions, and some provision of data telemetry and information services. Metriplex proposes no new or novel services, nor does it otherwise meet the Commission's criteria for award of a pioneer's preference.

As noted supra, the addition of acknowledgment capability to existing paging services does not constitute a new or novel service or application. It is merely added functionality which adds value for some users. The provision of telemetry and information services mentioned, almost as an afterthought by Metriplex, similarly are not new or novel. Telemetry, as well as industrial process control and medical laboratory information services can and are offered today under Parts 22, 90 and 94 of the Commission's rules.[12/]

Continued from previous page
Request for Pioneer's Preference at 6. It does not provide any information concerning retail equipment or service cost to the subscriber, or cost for the fixed site infrastructure. Therefore, it is impossible to determine if the total cost of service will support the level of subscribers necessary to load the system.

12/ See e.g. 47 C.F.R. §§ 22.501; 90.238, and 94.105.

From a purely technical perspective, too, this proposal falls short. It represents no significant advances either in data transmission speeds, spectral efficiency or other general criteria set forth by the Commission. The proposed transmission speed of 2400 bps for the paging channel, See Petition for Metriplex, Inc. for Pioneer's Preference at 2, is no faster than utilized by existing conventional paging systems, and significantly slower that the 6250 bps that ERMES utilizes. Metriplex's proposal to transmit data at 2400 bps is primitive by comparison to today's advanced data signalling speeds of up to 19.2 kbp. See PageNet Opposition to Pioneer Preference Requests, filed June 1, 1992 at 9; see also Attachment A.

The proposal is devoid of all other significant detail; it doesn't state whether paging signals will be simulcast, or use some other control mode; it doesn't state whether, and if so, what compression techniques, will be used. It simply is too superficial a showing to glean an understanding of the proposal itself, let alone conclude that the proposal represents significant advances. Similarly, Metriplex presents no evidence to suggest that its proposals will result in significant cost reductions for existing or proposed services.

Metriplex itself recognizes the preliminary nature of its proposal. With respect to perhaps the most technically difficult aspect of acknowledgment capability, e.g., the ability of an acknowledgment receiver to receive signals sent from low power transmitters contained in the paging units, it only reiterates the complexity of the problem. According to Metriplex, the

effectiveness of any acknowledgment receiver "will be largely a function of transmitting antenna pattern and gain and battery considerations such as size and weight," Id. at 10, but it has drawn no conclusions as to how to proceed given those interrelated factors. Rather, it indicates that these factors "underlie the need for testing in real world conditions for both the pager/ack transmitter unit, as well as the ack/receiver network to determine optional design and implementation if the systems are to be successful."[13/] In other words, Metriplex seeks a pioneer's preference for a system which it has not yet designed and which has significant technical hurdles that Metriplex has not yet solved.[14/] Its extremely preliminary presentation certainly does not warrant the award of a pioneer's preference.[15/]

13/ Metriplex indicates that another motive for its petition is the "need for the Commission to make available necessary spectrum segments so that testing may begin." Id. at 11. This need may warrant the Commission's grant of an experimental license; it does not support grant of a preference or removing frequencies from the frequency pool.

14/ Nor has Metriplex solved questions regarding market acceptability if the service it proposes doubles the size of the receiver. For example, will there be any demand whatsoever for the service?

15/ Aspects of the Metriplex proposal which are discernible are also troubling. For example, Metriplex proposes that channels be allocated beginning with 930.025 KHz, and every 25 kHz thereafter. Id. at 21. This channelization plan is inconsistent with channelization of paging frequencies at both 929 and 931 MHz, and serves no apparent purpose. PageNet presumes this channelization inconsistency is merely a function of the extremely preliminary nature of Metriplex's proposal.

D. Montauk Telecommunications Company

Montauk's proposed facsimile broadcasting service cannot be characterized as an advanced messaging service for which the 930 MHz band is reserved, and thus its Pioneer Preference Request should be denied. The service, which would deliver "a newspaper-like publication to FAX machines equipped with special receivers," Request at 2, is a fixed point-to-multipoint service that should be provided, if at all, under Section 22.501(g) or 94.65 of the Commission's Rules.[16/] The 930 MHz band should be allocated only for advanced paging services, consistent with the adjacent 929 MHz and 931 MHz bands.

Montauk's superficial proposal makes no showing of any demand for either large volumes of information transmitted over a FAX machine that was presumably purchased to transmit and receive "urgent" documents, or for the "instant information" that this service could provide.[17/] The small market to which this service might appeal can be served by "FAXing" information over the public landline network.

16/ Alternatively, this service could be provided via a TV broadcast frequency or FM subcarrier as, if there were widespread demand, it is more akin to a mass media service.

17/ This type of "instant information" is available from other sources, such as CNN Headline News, all-news radio stations, and telephone update lines. Further, for the type of information Montauk proposes to supply, such as television listings, crimewatch information, movie guides, crossword puzzles, obituaries, government action summaries, notices of meetings and free concerts, and sports scores, Request for Pioneer's Preference by Montauk Telecommunications Company at 3-4, a daily newspaper is sufficient. Thus, while Montauk may propose a new delivery vehicle for this information, it is not a "new" service.

In fact, Montauk itself recognizes that this service may fail commercially, and states that in such a scenario, the proposed channels could "eventually be reassigned to paging." Montauk Request at 5. However, the Commission cannot afford at this late date, when there is demonstrated widespread demand for advanced paging services such as PageNet's VoiceNow^{sm}, to gamble with a service for which there is uncertain and unlikely demand, particularly where that service can be provided by alternative, and more appropriate means.

As with numerous of the other proposals, this applicant makes no attempt to demonstrate increases in spectral efficiencies, increases in transmission speeds or comply with other criteria the Commission has found important in considering whether to award a pioneer's preference. Therefore, Montauk's request for a pioneer's preference should be denied.

E. Freeman Engineering Associates

Freeman requests a preference for "a new wide band paging service which allows multiple modes of operation on a single channel." Freeman's notion contemplates the ability to send voice, digital display, alphanumeric and other types of pages over potentially wide area simulcast networks, something neither new nor novel. This could be done today, but it is highly spectrally inefficient to do so.

Apparently recognizing this truism, Freeman indicates that spectrally efficiencies can be gained in voice messaging through digitization and voice compression, and interleaving digital voice