REED SMITH SHAW & McCLAY

1200 18TH STREET, N.W.
WASHINGTON, D.C. 20036
202-457-6100

FAX 202-457-6113
TELEX NO. 64711

PITTSBURGH, PA
PHILADELPHIA, PA
HARRISBURG, PA
McLEAN, VA

WRITER'S DIRECT DIAL NUMBER

(202) 457-8656

ORIGINAL
FILE

June 1, 1992

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: ET Docket No. 92-100
Paging Network, Inc.,
Petition for Rulemaking

Dear Ms. Searcy:

Transmitted herewith on behalf of Paging Network, Inc. ("PageNet") are an original and five (5) copies of its Petition for Rulemaking seeking the allocation of the 930-931 MHz band for Advanced Voice Messaging such as PageNet's VoiceNow Services.

Should any questions arise in connection with this filing, kindly contact the undersigned counsel directly.

Sincerely yours,

Judith St. Ledger-Roty

Judith St. Ledger-Roty

Enclosures

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List A B C D E

ORIGINAL

BEFORE THE

Federal Communications Commission

WASHINGTON, D. C.

In the Matter of:	)	
	)	
Paging Network, Inc.	)	ET Docket No. 92-100
	)	
Petition For Rulemaking To Allocate the 930-931 Reserve Band for the Establishment of Advanced Paging Services	)	RM-

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PETITION FOR RULEMAKING

PAGING NETWORK, INC.

Judith St. Ledger-Roty
Marnie K. Sarver
Lynn E. Shapiro
Kathleen A. Kirby

Its Attorneys
REED SMITH SHAW & McCLAY
1200 18th Street, N.W.
Washington, D.C. 20036
(202) 457-6100

June 1, 1992

Summary

Paging Network, Inc. ("PageNet"), the largest and fastest growing paging company in the United States, has developed a new voice paging service, VoiceNow, with unprecedented capabilities, and requests that the Commission institute a rulemaking to allocate the 930-931 MHz band, in ten 25 KHz channel blocks to enable the provision of this and potentially other innovative paging services for which there is substantial untapped demand.

VoiceNow Services, which alert subscribers that a voice message has been received and store the message in the pager, for the first time, provide voice paging subscribers with the ability to listen to their voice pages when they want and eliminate the inconvenience of having to place a telephone call to receive messages as required by many currently existing voice messaging services. Both current and potential paging subscribers have demonstrated a substantial interest in VoiceNow services, and many indicated they would subscriber to the service. As expected, the VoiceNow Services capabilities found most appealing are the: (1) instantaneous transmission of voice message directly to pager; (2) ability of paging subscriber to listen to the message at his or her convenience (and store the message for repeat playback if desired); (3) ability to use the service as a screening device in determining whether to return call; and (4) greater message capacity over existing voice storage systems.

Traditional simulcast paging systems cannot accommodate widespread voice paging services as a result of spectrum scarcity,

particularly in large markets. Thus, there is currently an extremely small market for voice paging, an unfortunate scenario given the substantial demand that exists. However, the technical framework for PageNet's VoiceNow services cures the spectrum scarcity issues that have confronted voice paging providers to date, and enables the widespread provision of advanced voice paging on a spectrally efficient and cost effective basis.

PageNet's system merges simulcast and frequency reuse concepts, resulting in efficient use of limited spectrum. Using two channels for signalling the pager that a message has been received, and eight channels for message delivery, all at 25 KHz of bandwidth, PageNet estimates that it can serve 22 times as many subscribers as can existing voice paging providers. Further, this allocation scheme based on 25 KHz spacing is consistent with existing assignments in adjacent bands enabling shared equipment and the potential for overflow to adjacent 929 and 931 MHz channels to increase message capacity if necessary.

PageNet believes that its proposed service should be competitively provided on a national basis, and its allocation scheme is designed to enable four carriers to provide advanced messaging services in the 930-931 MHz band, be they voice or data offerings. Moreover, to ensure the development of a competitive market, PageNet proposes that the Commission adopt a flexible regulatory approach to the provision of these services resulting in the best price to end-users, maximum spectrum utilization, increased innovation, and enhanced competition.

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Exhibit 1	The Market for Digital Voice Pagers With Voice Storage Capabilities prepared by: Economic and Management Consultants International, Inc.
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Exhibit 3	Paging: The Whole Story, Mobile Office, November 1991
Exhibit 4	Proposed Part 22 Rules for Implementing AMS Service
Exhibit 5	Proposed Part 90 Rules for Implementing AMS Service

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PETITION FOR RULEMAKING

Paging Network, Inc., ("PageNet"), through its attorneys, hereby requests that the Commission institute a rulemaking to allocate the 930-931 MHz band, in ten 25 kHz channel blocks, for the provision of a wide range of advanced paging services for which PageNet and potentially other paging services innovators believe there is substantial unmet demand.[1/]

1/ The Commission required all applicants requesting a pioneer's preference to file a petition for rulemaking setting forth the spectrum allocation necessary to permit the licensing of their proposed service, as well as the rules that the applicant proposes should govern the licensing and provision of service. See Establishment of Procedures to Provide a Preference To Applicants Proposing An Allocation For New Services, 6 FCC Rcd 3489 (1991) ("Pioneer's Preference Order"); see also 47 C.F.R. § 1.402 (1991).

I. INTRODUCTION

PageNet believes that the most important innovation, bar none, to paging services in the 90s is its own proposal to offer ubiquitous voice paging services, referred to as "VoiceNow™ Services" on a spectrally efficient, cost effective basis -- something never before possible.

From the consumer's perspective, VoiceNow™ Services are elegant in their simplicity. With VoiceNow™ Services, a voice page will be sent to the paging receiver and the pager will alert the user that a page has been received and stored in the pager, allowing the user to listen immediately to the message or play it back at a time of the user's choosing.

From an engineering perspective, the system that supports VoiceNow™ Services is extremely complex. A combination of simulcast paging, coupled with frequency reuse as necessary to create increases in capacity, underlie the system design. However, the innovation propounded by PageNet is not merely in demonstrating the confluence of these two technologies. It also lies in meeting the practical real challenges in the design and implementation of a digital system that depends on the transmission of signals from low power paging units to receivers over frequencies adjacent to frequencies on which transmissions are sent to those pagers. The result of PageNet's proposed system is an extraordinary increase in capacity.

The revolutionary engineering advances underlying PageNet's VoiceNow™ Services compare favorably to innovations that fostered the advent of widely available cellular telephone services. Prior

to the advent of cellular, the capacity constraints under which two-way mobile voice systems operated made service quality marginal at best -- voice quality was poor and it was often difficult, and in many cases impossible, to obtain a free channel in order to complete calls. Even with the poor service quality, there were waiting lists to subscribe to these services because there were no alternatives to two-way voice mobile service available. [2/] With the advent of cellular, all that has changed. Two-way mobile voice services, with quality often comparable to that of the landline network, are now available in virtually all of the major markets -- all the result of the innovative application of frequency reuse and other spectrum conservation techniques applied to two-way mobile voice services.

The status of voice paging services today compares to that of two-way mobile voice services prior to the advent of cellular. The availability of tone and voice paging services, comparatively primitive to the VoiceNow™ Services PageNet is proposing, has measurably declined given the spectrum constraints that paging carriers currently face in meeting the escalating demand for paging services. Quality has also generally degraded substantially, especially in larger markets. The result has been a tremendous unmet business and personal demand for those voice services, which utilize substantially more capacity per message than do digital display services, despite this demand, voice

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2/ See An Inquiry Into the Use of the Bands 825-845 MHz for Cellular Communications Systems; and Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, 78 FCC 2d 984, 1009 (1980).

paging services have had to step aside to allow for these more spectrally efficient technologies[3/]

The innovation in system design and implementation of VoiceNow™ Services pioneered by PageNet will allow PageNet and others to begin to meet the current and projected demand for voice paging services. Through PageNet's innovative marriage of simulcast and frequency reuse techniques, coupled with its knowledge and experience in receive system engineering, the potential capacity to serve voice paging users will increase over 20 fold, permitting the revolution in paging services to begin.

II. THE PROPER PARADIGM OF ANALYSIS FOR GRANTS OF SPECTRUM ALLOCATION

As expressed in the Communications Act, the FCC'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, its grant of any spectrum allocations must be in furtherance of that public interest mandate. Thus, the Commission should keep foremost in mind the real world consequences of any such award and adjudge whether these consequences will serve or disserve the public interest.

3/ PageNet's own tone and voice subscribership has declined from approximately 7.5% of its total subscribers in 1987 to .2% today. Some portion of that decline is attributed to the sale of two small PageNet systems.

In determining whether frequency should be allocated for a particular service, the Commission must consider that such an allocation results in the withdrawal of frequencies from the general pool open to other potential users or services. As such, the Commission must carefully weigh not only the innovativeness but the consequences of a specific proposal, including whether the proposed service will increase spectrum efficiency, add functionality and reduce costs. In other words, before the Commission agrees to award limited and valuable spectrum, whether through a pioneer's preference or a spectrum allocation, 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.

III. PAGENET IS AN INNOVATOR IN MARKETING AND TECHNOLOGICAL DEVELOPMENT OF PAGING SERVICES

Throughout its history, PageNet has been committed to innovation in the provision of paging services to the business and consumer market. Now a full ten years after its founding, PageNet is both the largest and fastest growing paging company in the United States. Its growth has come primarily from building new, innovative, state of the art paging systems through which it offers a full panoply of paging services at the lowest possible price. PageNet has always been committed to turning paging services into a commodity product offering features that

facilitate the use of pagers as a productivity tool for both businesses and individuals at a price each can afford.

Recognizing the promise of the 931 MHz frequencies allocated by the Commission in 1983, PageNet immediately applied for and was granted authorizations to offer paging services on those bands. PageNet's 900 MHz paging system in Tulsa, Oklahoma was the first of its kind operational in the country. Since then, PageNet has expanded its 900 MHz paging operations to serve, through its subsidiaries, markets in 22 states and the District of Columbia.

PageNet was also a pioneer of regional systems. In anticipation of growing demand for such services, PageNet built the first 900 MHz west coast paging network, providing users the opportunity, with one pager telephone number, to be paged anywhere in the Northern California area, the Los Angeles Metropolitan area, San Diego, Phoenix and Tucson, Arizona, and Las Vegas, Reno and Lake Tahoe, Nevada. PageNet followed this development with similar advances in the Northeast corridor, offering comprehensive coverage throughout Washington, D.C., Maryland, Virginia, Philadelphia, New Jersey, New York, Connecticut, Rhode Island, and Boston -- all the way to the Maine border. Upon seeing the broad acceptance of these regional systems, PageNet now sees this level of service as a minimum requirement. Networks are under construction in the Southeastern, Southwestern, and Central U.S. to serve the growing need for regional paging in those parts of the country.

Like many others who recognized that a substantial segment of the potential pager user population preferred voice

communications, PageNet continues to offer primitive tone and voice paging services in some markets and is introducing paging services with limited voice storage capability. Yet like all other paging carriers, it has been unable to offer these services on a spectrally efficient or cost effective basis to large numbers of subscribers, particularly in large metropolitan areas.

As an alternative to tone and voice services, PageNet has attempted to meet the consumers' desire to communicate by voice through voice messaging services. To that end, it offers low priced automated voice messaging and personalized automated answering services marketed under the names PageMail® or PageMailBox℠. This service enables a caller to leave a recorded voice message that is stored in the Company's computerized voice message retrieval center. When a message is left for the subscriber, the subscriber is alerted through a page and can place a telephone call to retrieve the message(s) at any time.

Based on its extensive internal exploration of potential services that could expand service options for existing paging users and fulfill the substantial unmet demand for instant, reasonably priced mobile voice services, PageNet designed and refined its concept for, and the implementation of, VoiceNow™ Services. It has also aggressively sought to obtain distribution channels to make the paging services even more accessible.[4/]

4/ PageNet has now put in place the retail and reseller distribution channels that will facilitate the provision of its VoiceNow™ Service to the public. PageNet believes, in particular, that its current and projected retail distribution channels will expand consumer awareness of

Continued on following page

IV. VOICENOW SERVICES ARE PROVIDED THROUGH AN ADVANCED SYSTEM DESIGNED TO MEET MARKET DEMANDS

A. VoiceNow™ Services Are Light-Years Ahead of Existing, Readily Available Voice Paging Services.

VoiceNow™ Services designed by PageNet are both elegantly simple and convenient to use. They offer exceptional advances in concept, design and implementation over existing, comparatively primitive, tone and voice services and voice mail services.

With VoiceNow™, the caller desiring to place a page will hear a personalized greeting followed by a beep, which signals the caller to leave his or her desired voice message.[5/] The message is captured and recorded in the pager unit -- not by a remote storage facility. After the caller leaves the message, the pager to which the message is sent will alert the paging customer that a message has been received. The paging customer can choose whether to listen to the message instantly, or wait to listen to the message at a more desirable time. The message will replicate the calling party's own voice, permitting intonation and inflection in the original message to be perceived by the person receiving the messages. When the paging customer desires to hear the message, he or she can simply press a button on the pager to hear the

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Continued from previous page
paging as a desirable communications tool and provide both consumers and small businesses greater opportunities to conveniently purchase VoiceNow™ Services.

5/ A caller will have the option of leaving a digital display message instead, should he or she choose.

message. A set number of messages (based on length) can be stored in the pager indefinitely and played back as desired.

PageNet's VoiceNow™ Services offer substantial added functionality over other existing tone and voice services and voice mail services offered today. Currently with tone and voice services, a caller will initiate a page by dialing the paging telephone number of the subscriber. The caller will, after the appropriate prompts, leave a message no longer than a predetermined length. That message will be sent over the landline and paging network to the paging subscriber. The pager will emit a tone immediately prior to the voice message being audibly "played" for the paging customer. Consumer acceptance of tone and voice services has had been comparably limited because the paging customer has had until very recently no choice but to listen to the page at the time it is received, regardless of whether the page arrives at a convenient or obtrusive time.[6/] Likewise, the paging customer has no ability to maintain any privacy of communications.

To facilitate more convenient voice communications, a substantial number of paging users are subscribing to voice mail services such as those offered by PageNet. These services are subscribed to as an adjunct to existing paging services.

6/ Motorola has very recently introduced a pager with limited voice storage capability. This begins to address the previous lack of storage; it does nothing to eliminate the spectral inefficiences associated with simulcast, analog systems, and thus does not address the most serious impediment to consumer access to ubiquitious, high quality voice paging services.

Typically a page is sent by the caller to the paging customer, indicating that a voice mail message had been delivered to the "mailbox" of the paging user.

However, voice mail services are hampered in their acceptability and usefulness from the consumer's perspective because as noted, in order to access the voice mail messages, consumers need to place a telephone call to access the remote voice storage terminal where messages are stored awaiting delivery. This means of access is cumbersome to some paging customers imposing additional costs on all paging voice mail subscribers who must pay for the telephone call made to the remote voice storage terminal. If one assumes an average of 60 voice messages a month at an average of $.25 per call, the paging customer has to pay $15.00 per month merely to receive his or her messages.

VoiceNow™ Services merge the desirable features of existing tone and voice services and voice mail services, simultaneously eliminating those aspects of the service that users find obtrusive, inconvenient, costly, and otherwise undesirable. Pages will be sent to the pager itself, rather than to a remote computer, allowing users to listen immediately to the page or store the voice message for later retrieval at a more convenient time. No obtrusive messages need be broadcast at unexpected times. No phone calls need to be placed in order to receive messages. Of equal or greater importance, though, voice paging services will be ubiquitiously available to hundreds of thousands

of subscribers in each system rather than to a nominal 1500 or so subscribers.

B. There Is Exceptionally High Demand for VoiceNow™ Paging Services.

PageNet has long recognized the potential market for voice paging services.[7/] Nonetheless, concurrent with its exploration of a technical means to provide spectrally efficient voice paging services, PageNet verified its conclusions that substantial demand for VoiceNow™ paging services existed.[8/]

In order to measure potential purchase interest in VoiceNow™ Services, PageNet hired marketing experts to conduct four focus groups, two comprised of non-subscribers of mobile technology and two comprised of existing subscribers of paging services. All participants included indicated a general awareness of mobile communications technology. In both user groups, there was a very high degree of interest in subscribing to VoiceNow™ Services for both business and personal use. See The Market for Digital Voice

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7/ PageNet has tailored its own system design and targeted its own marketing efforts toward digital display paging due to the extant limitations in providing voice paging services given the capacity required to transmit voice messages and the concomitant shortage in spectrum capacity.

8/ Motorola, Inc. has also recognized the potential demand for voice paging services. It has predicted that if system capacity limitations can be solved, the number of voice pagers could increase from less than 2.5 million nationwide in 1990 to in excess of 18 million nationwide by the year 2000. See Exhibit 2, submitted as Figure 2 in Motorola's Comments in RM-7617, filed March 11, 1991. PageNet's own experience would indicate that these estimates may be conservative.

Pagers with Voice Storage Capabilities, Prepared by Economic and Management Consultants International, Inc., May 1992 ("EMCI Study"), attached as Exhibit 1, at 3.1.4, 3.2.4.

VoiceNow™ Services were viewed by the participants as an exciting, and often a preferred, option over existing paging technology. In fact, 27% of potential users indicated that they would definitely subscribe to the service based on the description, Exhibit 1 at 3.1.4, and there was almost unanimous agreement that if they were in the market for a pager, participants would select VoiceNow™ Services over existing digital display services. Id. Specifically, participants found the service appealing because of the ability to have the message transmitted instantaneously to the paging user, giving the user the choice of when and where to play the message without placing a telephone call to a central computer or voice mail service. The ability to listen to a voice message that would allow them to know immediately the content of the message, rather than merely the telephone number of the person who had paged them, was consistently cited as a factor generating interest in VoiceNow™ Services. For example, one participant stated, "I don't like the idea of having to get back to someone not knowing who it is." Exhibit 1 at 3.1.3. Additionally, the ability to use the service as a screening device before calls are returned and the associated cost savings (i.e., an individual receiving a VoiceNow™ Services page could listen to the message and then determine whether to

incur the expense of returning the call[9/]) was viewed as a positive feature generating interest, as was the greater message capacity of VoiceNow™ Services as compared to existing voice storage pagers.

Participants recognized that many of these voice messages would involve the conveyance of information for which no response on their part was necessary. For example, participants envisioned that the service would be used to notify a paging customer that his or her appointment was running late. Others thought it also useful to be able to reach service industry employees, on the road, to let them know that the scheduled appointments to which they were travelling had been cancelled or rescheduled. Under the latter circumstances, without VoiceNow™ Services, a digital display paging customer would either: (1) have to find a phone to return the page; or (2) continue to his or her destination only to find out that the appointment was cancelled or rescheduled. For most focus group participants, neither alternative was acceptable if VoiceNow™ Services were available at reasonable rates.

V. PARTICULARLY IN LARGE MARKETS, EXISTING TECHNOLOGIES WILL NOT ACCOMMODATE THE DEMAND FOR VOICENOW AND OTHER VOICE SERVICES

There is clearly substantial market demand for voice paging. See, Exhibit 1, EMCI Study. Advanced pager unit technology, such

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9/ Individuals receiving cellular calls are charged for calls they receive. VoiceNow™ Services shift control over cellular costs incurred by giving the individual the choice of whether to return the call and thus incur the cost thereof.

as VoiceNow™ Services incorporates, devised to permit storage of messages in the unit rather than in a centralized voice messaging system, is making voice paging more and more attractive. However, this demand for voice paging services cannot be accommodated, particularly in large markets, using traditional simulcast systems.

Since at least 1987, the paging industry has been undergoing a decline in the number of tone and voice pagers served precisely because capacity limitations do not permit paging carriers to offer services, like voice, that use comparatively greater amounts of spectrum than digital display. See Exhibit 1 at 2.3 and Figure 2.4. Paging carriers responding to EMCI's paging survey indicated that tone and voice paging constituted 24% of their total usage in 1987 as compared to 8% of their total usage in 1991. See Exhibit 1 at Figure 2.2. See also Paging: The Whole Story, Mobile Office, Nov. 1991 at 36, attached hereto as Exhibit 3. Industry statistics indicate that the trend has continued downward in 1992.

PageNet's own experience demonstrates a similar decline. In 1987, PageNet had 19,496 tone and voice units in service representing 7.5% of its total units, whereas in its most recent figures for 1992 PageNet provided service to only 2,374 units constituting a mere .2% of its 1992 units in service.[10/] See Paging Network Inc. March 31, 1992 Prospectus, filed with the Securities and Exchange Commission. In 19 of the 24 states in which PageNet offers service, it no longer offers tone and voice

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10/ As noted at footnote 3, the decline also reflects PageNet's sale of two systems.

service, and in the four states where it does offer such service, it does so only in selected markets. PageNet's reluctance to offer tone and voice service, like that of other high growth paging companies, stems from the fact that it is not possible to offer the service on a spectrally efficient, cost effective basis using traditional technology.

With the demand for one way communications generally escalating at a rapid pace,[11/] paging companies like PageNet have had to meet that demand with spectrally efficient digital display services that can serve tens of thousands rather than a very few thousand users with the same capacity. This necessarily has resulted in a diminution of tone and voice users and an increase in users of digital display pagers.

Nonetheless PageNet has always recognized the consumer demand for tone and voice paging. Its experience has been that its tone and voice customers are extremely loyal to the service, preferring it over other services, including digital display and alphanumeric services, available in the market today. In fact, in smaller markets generally served by smaller carriers under less severe capacity constraints tone and voice paging continues to represent a far more substantial share of the total market. Although also in decline, tone and voice pagers represented approximately 50% of

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11/ Although the growth rate of the paging industry is difficult to determine precisely, industry sources indicate that the numbers of pagers in service has been growing at a rate of over 20% per year and will continue to grow at a rate of 15% over the next five years. See It Was a Very Good Year for Paging Subscriber Growth, Telocator Magazine, July 1991 at 8.

all units provided by smaller paging companies in 1991. See Exhibit 1 at 2.2 and Figure 2.3.

Voice paging services as they currently exist have not captured large market shares because they cannot adequately satisfy consumer needs. Users of these services have complained about voice quality, limited coverage and limited memory (or lack of memory). Exhibit 1 at 2.3. VoiceNow™ Services have the potential to cure these complaints and to meet market needs. In particular, VoiceNow™ Services have greater capacity for message storage and can thus capture longer messages and are expected to have much enhanced quality over existing systems. Further, the resulting increase in spectrum efficiency will allow substantially greater coverage (even in major metropolitan markets) and will accommodate 25 times more subscribers than existing voice paging systems. Exhibit 1 at 2.3.

VI. PAGENET'S INTELLIGENT PAGING NETWORK WILL ALLOW HUNDREDS OF THOUSANDS OF USERS TO OBTAIN VOICENOW SERVICES

A. VoiceNow™ Services Are Technically Feasible on a Spectrally Efficient Basis

PageNet's system design for VoiceNow™ Services merges simulcast and frequency reuse concepts in order to make the most efficient use of limited spectrum. To accommodate PageNet's system design, PageNet will need 2 channels for signalling, and 8 channels for messaging, all at 25 kHz of bandwidth.

The simulcast system, using one channel, will operate as do conventional paging systems today. Multiple transmitters providing coverage over the entire service area will transmit pages on the same frequencies. The simulcast system will transmit to the addressed pager an indication that a message has been received for it and ask the pager to transmit a signal (referred to as an acknowledgment) that it has received the information over what is known as the "talk back" channel.

Once that signal is sent by the pager, its signal strength will be measured by a receiver voting system to determine the location of the pager and the station that can best transmit the voice message to the pager. The voice messages will be sent over frequencies configured in a four cell reuse pattern. The pager will next be instructed, again over the simulcast channel, to adjust its frequency to the one determined by the receiver voting system to be most appropriate and to wait for the voice message.

When the voice message is received in the first instance by the paging system, it is stored in a central computer, pending receipt of information indicating the transmitter and frequency over which to send the voice message. Once known, the central computer will forward the voice message to the transmitter selected.

Forward error correction techniques will be used to assure that the message is correctly received. In the event the message is incorrectly received, the pager will send a second message on the talk back acknowledgment channel and await the re-transmission of the message.

B. Prototypes for Pagers Capable of Performing Consistent with PageNet's Development of VoiceNow™ Services Exist Today

In order for PageNet's vision of VoiceNow™ Services to be implemented, pagers will need to be capable of receiving signals and transmitting signals in response to the information received. Pagers will also need to have the capability to electronically record voice messages when received and to replay those messages upon command by the user.

Through its work with paging manufacturers, PageNet is aware that both types of enhancements exist today and can be incorporated into one pager unit. It is anticipated that the unit will be only one cubic inch larger than the compact digital display units in the field today. The pagers will have the ability to transmit a 2 watt signal. Transmission by the pager will be in pulse bursts, at a low data rate. The duration of the transmission will not exceed 200 ms.

The units will also be capable of combining digital display capability with voice receipt and storage technology, giving the option to choose multiple means of message receipt. (For example, a user could leave a greeting stating "Please leave your telephone number, or a voice message at the sound of the tone.")