



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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Amendment of the Commission's)
Rules to Establish New Personal)
Communications Services,)
Narrowband PCS)

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

Implementation of Section 309(j) of)
the Communications Act -)
Competitive Bidding, Narrowband PCS)

PP Docket No. 93-253

To: The Commission

**COMMENTS OF VERIZON WIRELESS
MESSAGING SERVICES, LLC ON THE SECOND
FURTHER NOTICE OF PROPOSED RULEMAKING**

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SUMMARY OF PLEADING

Verizon Wireless Messaging Services, LLC (“VWMS”) is commenting in response to the Commission’s *Second Further Notice of Proposed Rulemaking* pertaining to the narrowband PCS allocation.

The VWMS comments urge the Commission to proceed as soon as practicable to assign by auction all remaining unlicensed narrowband PCS spectrum. In this regard, VWMS endorses the consensus spectrum band plan forged by PCIA (the “Consensus Plan”) which offers an integrated proposal covering all of the available spectrum. The Consensus Plan preserves the flexibility and diversity of the original narrowband PCS allocation scheme while making adjustments to reflect changes in circumstances and market conditions.

Specifically, the Consensus Plan maintains the following important aspects of the original allocation: (a) diverse channel pairings (symmetrically paired, asymmetrically paired and unpaired channels); (b) a variety of geographic license areas (national, regional and local); and (c) unpaired response channels for use by existing carriers along with previously assigned channels to provide advanced services.

The Consensus Plan also improves upon the prior allocation by (a) creating certain larger outbound channel blocks to accommodate more spectrum-intensive services; (b) creating a more diverse group of response channel sizes in order to support the variety of services that are emerging in this space; and (c) channelizing and assigning the reserve spectrum to support the continued growth in narrowband PCS services that is taking place.

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To: The Commission

**COMMENTS OF VERIZON WIRELESS
MESSAGING SERVICES, LLC ON THE SECOND
FURTHER NOTICE OF PROPOSED RULEMAKING**

Verizon Wireless Messaging Services, LLC ("VWMS") hereby submits its comments in response to the *Second Further Notice of Proposed Rulemaking* ("*Second FNPRM*") in the above-captioned proceeding.¹ The following is respectfully shown:

¹ *Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS*, GEN Docket No. 90-314, ET Docket No. 92-100; *Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Narrowband PCS*, PP Docket No. 93-253, *Second Report and Order and Second Further Notice of Proposed Rule Making*, (rel. May 18, 2000) ("*Second R&O and Second FNPRM*"), 65 FR 35875. The Commission extended the deadline for submission of comments from July 5, 2000 to July 19, 2000. *See Order*, GEN Docket No. 90-314, ET Docket No. 92-100; PP Docket No. 93-253, (rel. June 26, 2000), 65 FR 41035.

I. Preliminary Statement

The *Second FNPRM* seeks comment on the Commission's proposal to license the one remaining megahertz of narrowband PCS spectrum currently held in reserve.² The Commission also seeks comment on how this reserve spectrum should be channelized, and whether it should rechannelize the remaining unlicensed but currently channelized narrowband PCS spectrum.³ Finally, the Commission seeks comment on its tentative conclusion that the reserve spectrum should be auctioned at the same time as the remaining unlicensed, but currently channelized, narrowband PCS spectrum.⁴

VWMS is a member of the Verizon Wireless family of companies formed as a result of the FCC-approved wireless venture between Bell Atlantic Corporation ("BA") and Vodafone AirTouch Plc and the FCC-approved merger between BA and GTE. VWMS provides narrowband messaging services on paging and narrowband PCS spectrum throughout the United States. VWMS currently has approximately 4 million narrowband messaging units in service. As a substantial holder of narrowband PCS spectrum⁵, and as an active participant through its predecessors in interest in all aspects of the allocation and assignment of narrowband PCS spectrum, including the two previous narrowband PCS auctions, VWMS has a cognizable interest in this proceeding and a substantial basis in experience for informed comment.

² *Id.* at ¶82.

³ *Id.* at ¶83.

⁴ *Id.* at ¶82.

⁵ VWMS holds a nationwide narrowband PCS license and three regional licenses.

VWMS also is a member of the Personal Communications Industry Association (“PCIA”) and has taken an active role in the development of the consensus narrowband PCS band plan (the “Consensus Plan”) that is being proposed by PCIA in comments filed concurrently herewith. VWMS is filing these separate comments to support the Consensus Plan, and to highlight particular points it believes are important for the Commission to take into consideration as it proceeds with the further allocation of narrowband PCS spectrum.

II. Several Core Aspects of the Commission’s Narrowband PCS Spectrum Plan Should Be Preserved

The Commission correctly notes in the *Second FNPRM* that considerable time has passed since comments were last filed upon which the Commission’s current narrowband allocation plan was based.⁶ VWMS agrees that the record needs to be updated, especially with respect to the reserve spectrum, and that certain changes to the channelization of the unassigned spectrum are warranted as discussed below. Despite the fact that certain changes to the original bandplan are warranted and will serve the public interest, there are many aspects of the Commission’s original narrowband PCS vision that have indeed stood the test of time and need to be preserved.

A. Spectrum Pairings

In establishing the current narrowband allocation, the Commission adopted a variety of narrowband PCS channel configurations in order to accommodate and foster diverse narrowband PCS services. Specifically, the Commission adopted a range of bandwidths and

⁶ *Second FNPRM* at ¶82.

⁷ *Second FNPRM* at ¶82.

pairing options, such as symmetrically paired (50 kHz paired with 50 kHz), asymmetrically paired (50 kHz with 12.5 kHz), and unpaired (50 kHz with no return channel and unpaired 12.5 kHz return channels) spectrum. These different channel pairings allowed carriers to “pick and choose” the spectrum best suited to the services they envisioned. This fostered interest from diverse industry members and, as a result, there was robust bidding activity at both the nationwide and regional narrowband auctions. Significantly, the different spectrum pairings have been put to commercial use to meet specific customer needs as evidenced by the number of narrowband carriers who have timely constructed systems meeting their initial construction benchmarks. Based upon the results of the previous auctions, the industry experience with the existing bandplans, and VWMS’ own experience, VWMS completely supports the Commission’s previous policy of having diverse channel pairing options with a mixture of symmetrically and asymmetrically paired spectrum as well as unpaired spectrum.

VWMS urges the Commission in particular to continue to make provisions for asymmetrically paired channels in addition to the more traditional symmetrically paired and unpaired channels. Many of the services currently offered by the industry use asymmetrically paired spectrum.⁸ These include Assured Messaging (a service which uses the return channel to signal when the subscriber unit to which a message is destined is in range), Acknowledgment Paging (a service in which the subscriber unit uses the response channel to confirm that a particular message has been received) and Two Way Paging (a service in which the subscriber

⁸ For example, the services offered by WebLink Wireless, VWMS, and Metrocall all use asymmetrically paired spectrum. Currently, carriers are able to use 12.5 kHz channels in both directions to offer basic narrowband PCS service. As the bandwidth needs for base-to-mobile information increases, additional 12.5 kHz –mobile channels may be used.

unit uses the response channel to respond to a page by the user selecting from a preprogrammed list of short responses, by the user selecting from an answer pick list sent by the caller, or by the user sending a full text response message). In all of these configurations, there is no need for the inbound response channel to have as much bandwidth as the outbound base transmit channel.⁹ Consequently, VWMS supports a bandplan that maintains a variety of spectrum pairings, including symmetrical, asymmetrical and unpaired channels. The Consensus Plan meets this objective.

Maintaining a variety of spectrum pairings will preserve the successful “pick and choose” approach at a time in the industry when flexibility is critically important. Existing industry players are executing a variety of business plans that give rise to different spectrum needs. For example, some carriers’ business plans may call for additional base-to-mobile bandwidth, so only the unpaired channels would be of interest to them. Other new entrants will likely be looking for asymmetrically paired or symmetrically paired spectrum in order to begin offering service. Making available a variety of spectrum pairings serves the public interest by allowing the free market, rather than the Commission, to determine how the spectrum ultimately is configured and assigned. For example, having both paired and unpaired channels allows the

⁹ This notion of asymmetrical service should come as no surprise to the Commission. Many of the applications for the narrowband PCS service include pull information services which typically have the user sending a short query (less than 50 characters) to an internet site and the internet site returning hundreds of characters (such as a request for the current price of a stock and the return information being the opening price, the daily high price, the closing price, the volume, and the net change in price). In addition, narrowband PCS services include many push information services (such as a customer going to a web site and asking that certain information be sent to her unit at a specified time in the future) which also consumes mainly base-to-mobile bandwidth.

market to decide how much base-to-mobile and mobile-to-base spectrum is needed to fulfill a particular carrier's business plan.¹⁰

B. Geographic Areas

The original narrowband allocation plan also offered diversity in terms of geographic service areas. Specifically, the Commission allocated nationwide, regional and local channels in order to accommodate carriers of all sizes within the allocation. The Commission, in the *Second Report and Order* which accompanied the *Second FNPRM*, eliminated the previously established BTA-based licenses based upon the conclusion (which is correct, in the view of VWMS) that BTAs represent too small a licensing area for narrowband PCS.¹¹ Nonetheless, the Commission adopted MTAs for licensing a portion of the narrowband PCS spectrum, thus preserving the nationwide, regional and local channel scheme, albeit on a slightly modified scale. VWMS generally supports the retention of a variety of geographic areas for narrowband PCS channels, including some local (*i.e.* MTA) channels, but believes based upon the trends in the marketplace that the geographic areas should in most instances be larger than MTAs.

There has been rapid growth in the development and use of national and multi-state systems, even though many messaging requirements are "local" in nature, and some smaller

¹⁰ VWMS, however, does not support completely uncoupling all base-to-mobile and mobile-to-base spectrum because VWMS believes that there is a certain amount of spectrum that is the bare minimum needed to offer service. Given the current services, VWMS believes that the PCIA Consensus Plan meets this objective by having sufficient spectrum in each channel pairing to support a viable service.

¹¹ As was mentioned extensively in the comments that lead up to the *Second Report and Order*, in many instances BTAs could not be covered by even a single transmitter without spilling over into adjacent BTAs. As a result, significant amounts of geographic areas in the BTA could not be served so as to protect co-channel licenses in adjacent BTAs.

carriers continue to offer their services in relatively confined geographic areas. Consequently, VWMS does not support licensing the majority of the remaining unlicensed spectrum and the reserve spectrum on an MTA basis. As was the case with BTAs, spectrum licensed on an MTA basis poses the risk that significant areas of the United States may not be served because MTA licensees would be required to afford co-channel interference protection to adjacent MTA licensees, thus inhibiting service in border areas. As a result, VWMS believes that the bulk of the remaining narrowband PCS spectrum should be licensed on a regional or nationwide basis. Nonetheless, since some new entrants may want to enter the market in a specific geographic area, or may plan to offer a niche service, the Consensus Plan provides for one 50-12.5 kHz and one 0-12.5 kHz channel to be licensed on an MTA basis. This also will accord small businesses, which may not want to provide regional or nationwide services, an option to enter the market without having to negotiate with a regional or nationwide licensee for a partitioned license.¹²

In sum, VWMS supports a spectrum plan that maintains a variety of geographic options. Just like spectrum pairings, diverse geographic license areas allow carriers to “pick and choose” the area of service or amount of spectrum in a particular geographic area that best meets their business needs. In addition, although the vast majority of existing narrowband PCS carriers are nationwide in scope, separate carriers may have different supplemental spectrum needs in particular regions of the United States. For example, a nationwide carrier that has a significant presence (and the bulk of its customers) in a particular region – such as the Southeastern United

¹² Of course small businesses may find a partitioned license to be of greater value than an MTA license because it would permit that carrier to offer services (on a roaming basis) in an area larger than the MTA. Nonetheless, by auctioning at least one MTA license, small businesses will have an economic option which may allow them to obtain a partitioned license at a lower price than if MTA licenses did not exist.

States – might need more spectrum in that geographic area than in the Northwestern United States. Again, the Consensus Plan accommodates this situation by offering diverse geographic options and should be adopted by the Commission.

C. Response Channels

The original narrowband PCS allocation made available certain unpaired “response” channels for existing licensees to acquire and couple with previously allocated spectrum (including traditional paging channels) in order to allow more advanced services to be provided.¹³ This approach should be maintained. Several carriers, VWMS included, continue to perceive a need to add response channel capacity or capabilities to already existing systems in order to compete effectively. The manufacturers have in fact produced equipment that enables carriers to “mix-and-match” a variety of inbound and outbound channels in the paging and narrowband PCS portions of the 900 MHz band. Thus, the ability to make beneficial use of unpaired response channels is becoming a marketplace reality.

In keeping with VWMS’ support for diverse spectrum options, VWMS favors allocating response channels of varying bandwidths. Some carriers will need less response bandwidth because their business plans call for less spectrum-intensive services (*e.g.* Assured Messaging or some niche services). Other carriers will need greater response channel bandwidth to offer the more robust two-way narrowband PCS services. And, making multiple response channels of varying sizes available will again allow carriers to pick, choose and combine the

¹³ Originally the Commission restricted eligibility for these channels to existing Part 22 and 90 licenses of paging spectrum. In the *Second Report and Order*, the Commission eliminated the restricted eligibility for these channels. VWMS continues to believe that these channels are of little use to any other licenses other than existing Part 22, 24, and 90 licenses and the Commission should accordingly restrict eligibility for these channels to those licensees.

spectrum as their needs require. These considerations have been taken into account in the Consensus Plan.

III. Certain Adjustments Are Appropriate to Reflect Changed Circumstances

While the narrowband allocation generally has stood the test of time, there are changes in circumstances that justify the Commission creating some new configurations as it proceeds to allocate and assign the remaining narrowband spectrum:

A. Larger Outbound Channel Blocks

The *Second FNPRM* observes that “it may make sense to create channel blocks that are larger than those currently in existence”. *Second FNPRM*, para. 83. VWMS agrees. The appetite for wireless services has continued unabated, and the market demand is moving toward uses that consume more bandwidth (e.g., wireless e-mail, push and pull information services, etc.). Making some channels available with more than 50 kHz of spectrum not only will accommodate outbound services that require more bandwidth, but also will allow carriers to subdivide narrowband PCS channels and to create narrowband PCS reuse plans that will increase spectral efficiency in this service just as they do in the cellular and broadband PCS arenas. Thus, VWMS supports the availability of some larger spectrum blocks. The PCIA Consensus Plan meets this objective.

VWMS does not, however, support the creation of only two 300 kHz licenses and one 400 kHz license as was alluded to in paragraph 83 of the *Second FNPRM*. There are too many significant viable competitors in the narrowband PCS space to be accommodated with an allocation which limits the number of available channels so severely. In VWMS’ view, it may well be easier and less expensive for a carrier to aggregate spectrum by buying multiple channels

(or by buying licensees that hold needed spectrum) than it will be to buy partitioned spectrum from an existing license.¹⁴ Consequently, VWMS urges the Commission to resist creating too small a number of larger blocks of spectrum. The Consensus Plan, in the view of VWMS, strikes an appropriate balance.

B. Larger Response Channel Blocks

The need for larger spectrum blocks is not limited to the 50 kHz outbound channels, but rather extends to the 12.5 kHz response channels as well. Currently, the narrowband PCS technology supports response channel bandwidths in 12.5 kHz increments. As mentioned previously, there are a variety of narrowband PCS services being offered today with differing response channel needs. For example, Assured Messaging can be offered on a single 12.5 kHz response channel. On the other hand, multiple response channels will ultimately be required to offer the more robust narrowband PCS services in order to get frequency reuse in a market. Based upon current market trends, VWMS expects the bulk of narrowband PCS services to be the more robust offerings which require multiple response channels. Accordingly, VWMS urges the Commission to configure the majority of response channels into larger blocks than the current 12.5 kHz configuration.¹⁵

¹⁴ As mentioned earlier, having both options available – securing channels in the auction and partitioning of existing licenses – serves the public interest because providers desiring to enter the market will have a variety of options in which to do so. If the Commission however relied solely on one of the options, carriers seeking to enter the market would have less choice and would correspondingly pay more to enter the market. Accordingly, having more channels available will allow new entrants to be more competitive with existing licensees.

¹⁵ VWMS does believe, however, that one 12.5 kHz response channel should be made available for bidders whose business plan only encompasses the less spectrum-intensive services. In addition, since a simple 12.5 kHz return channel permits greater efficiency in the use of outbound channels, existing licenses may find a limited response channel to be useful.

VWMS, however, opposes making the unpaired response channels available in blocks larger than 50 kHz. Licensing the response channels in blocks larger than 50 kHz could limit the number of competitors who could participate in their use. VWMS believes that the Consensus Plan strikes an appropriate balance between the needs of carriers to have sufficient response channel bandwidth if the licensee only receives one license, and the public interest need for robust competition. Consequently, VWMS urges the Commission to adopt the Consensus Plan.

C. Assignment of the Reserve

VWMS earlier opposed having the Commission proceed to channelize and assign the reserve spectrum. However, AirTouch's concern - - that such an assignment would have been premature given the nascent stage of narrowband PCS development at the time the Commission broached the subject - - has been satisfied with the passage of time. At present, VWMS is of the view that the public interest will be served by the Commission proceeding now to channelize and assign the narrowband PCS reserve spectrum along with the previously allocated but unauctioned and recaptured spectrum. Narrowband PCS services are proliferating and are enjoying market acceptance.¹⁶ Indeed, an evolution is taking place among traditional paging subscribers who are seeking increased functionality in their messaging services. These marketplace developments, coupled with the lifting of the narrowband spectrum cap, argue in favor of proceeding with the assignment of the 1 MHz of reserve spectrum concurrently with the assignment of as yet unauctioned but previously channelized spectrum and any and all returned

¹⁶ To some extent the growth of these services is accelerating as a result of Motorola's new T900 product. The T900 has allowed carriers to begin offering pagers for less than \$100 and has started to spark significant demand for the service. Indeed, VWMS suspects that when the T900 is in full commercial production, the growth rate of narrowband PCS subscribers will undergo another significant increase.

or recaptured spectrum. The Consensus Plan offers an integrated proposal covering all of this spectrum.

IV. The PCIA Consensus Band Plan Should Be Adopted

The paging industry, with the support and assistance of PCIA, has enjoyed great success in its efforts to foster industry consensus in the formulation and implementation of spectrum bandplans that serve the public interest. For example, the licensing scheme that resulted in the allocation and highly successful deployment of private carrier paging (“PCP”) channels for exclusive use on a nationwide, regional and local basis was largely the result of an industry consensus forged with the assistance of PCIA.

The industry consensus that led to the prior narrowband PCS spectrum plan also has proved to be a resounding success. The level of participation in the prior narrowband PCS auctions, which on a “price per MHz pop” basis resulted in some of the highest bidding in any spectrum auction, evidences that the earlier consensus narrowband PCS plan was well conceived, and well designed to meet the market demands and the public interest. Given this successful track record, the Commission should give great weight to the Consensus Plan of PCIA.

Notably, PCIA is a diverse organization which represents a broad cross-section of messaging carriers. Participants in the development of the plan included small, medium-sized and larger carriers. And, importantly, the participants included carriers who are implementing a variety of business strategies targeting service in distinct geographic areas (i.e., some national and some more localized) and distinct services (e.g. talk back paging versus wireless e-mail). The participants also included existing narrowband PCS licensees as well as potential new entrants. The support of these diverse elements for the Consensus Plan highlights the real strength of the proposal: it accommodates a broad range of potentially interested parties and will

foster innovation and competition. Also, the building block approach taken in the plan is flexible and will allow an applicant to aggregate larger spectrum blocks if required to meet their business plan.

V. Conclusion

Based on the foregoing, VWMS respectfully submits that the Commission should proceed, as soon as practicable, to assign all remaining unlicensed narrowband PCS spectrum using the Consensus Plan as the basis for the allocation.

Respectfully submitted,

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