RECEIVED

OCT 20 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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

	)	GEN Docket No. ~~90-314~~
	)	ET Docket No. 92-100
In the Matter of	)	
	)	RM-7140, RM-7175, RM-7617
	)	RM-7618, RM-7760, RM-7782,
Amendment of the Commission's	)	RM-7860, RM-7977, RM-7978
Rules to Establish New Personal	)	RM-7979, RM-7980
Communications Services	)	
	)	PP-35 through PP-40, PP-79
	)	through PP-85

LICENSING PROPOSAL OF PCN AMERICA, INC.

PCN America, Inc.
By its attorneys

John P. Bankson, Jr.
Joe D. Edge
Hopkins & Sutter
888 Sixteenth Street, N.W.
Washington, D.C. 20006
(202) 835-8000

October 20, 1992

No. of Copies rec'd 0+12
List A B C D E

TABLE OF CONTENTS

I. MILLICOM PROPOSES A PCS LICENSING PLAN 2

A. The Need for a Comprehensive PCS Licensing Plan 3

B. The Disadvantages of National Licensing 4

II. THE CREDIT CARD INDUSTRY MODEL 5

III. A THREE-TIERED APPROACH TO PCS LICENSING 6

A. Tier One - Two National Network Operators 6

1. National Network Operator Restrictions 8

2. NNO Nonprofit Status 8

B. Tier Two - Two Regional Licenses in Each of 49 "Major Trading Areas" (MTAs) 9

1. Attributes of Tier Two (MTA) Licensing: 9

2. Tier Two Licensee Ownership Restriction 10

C. Tier Three - Local Licenses 10

IV. CONCLUSION 11

SUMMARY

Millicom proposes a three-tiered licensing plan for Personal Communications Services (PCS). Tier One would consist of two competing National Network Operators (NNO) which would select PCS technology and provide for nationwide interconnection, billing, roaming, and database functions. NNOs would not construct cell site facilities or provide direct service to the public. Tier Two would consist of ninety-eight regional licensees (one operating on each of two frequency blocks) serving forty-nine Major Trading Areas (MTA). The MTA licensees would construct PCS radio, switching, and network facilities and would provide service to the public. Tier Three would consist of local and rural licensees (a minimum of twenty-five per frequency block) within each MTA. To provide spectrum and geographic operating areas for the Tier Three licensees each Tier Two (MTA) licensee would be required to relinquish at least 30% of the land area and 25% of the population within its MTA.

This three tiered licensing plan would ensure rapid deployment of PCS services with nationwide compatibility, roaming capability, and database features. It would avoid the delays and transaction costs experienced by the cellular industry while providing an opportunity to participate in the PCS industry for over 2500 licensed entities large and small.

RECEIVED
OCT 20 1992
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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

	)	GEN Docket No. 90-314
	)	ET Docket No. 92-100
In the Matter of	)	
	)	RM-7140, RM-7175, RM-7617
	)	RM-7618, RM-7760, RM-7782,
Amendment of the Commission's	)	RM-7860, RM-7977, RM-7978
Rules to Establish New Personal	)	RM-7979, RM-7980
Communications Services	)	
	)	PP-35 through PP-40, PP-79
	)	through PP-85

To: The Commission

LICENSING PROPOSAL OF PCN AMERICA, INC.

PCN America, Inc., a subsidiary of Millicom Incorporated, referred to herein jointly as "Millicom," hereby submits preliminary comments on the licensing of Personal Communications Services ("PCS") pursuant to the procedures set forth in Amendment of the Commission's Rules to Establish New Personal Communications Services, FCC Gen. Docket No. 90-314, ET Docket No. 92-100, FCC 92-333, released August 14, 1992 ("NPRM"). This filing will propose a licensing structure for PCS. It is submitted prior to the prescribed comment period to encourage interested parties to discuss this licensing proposal in their comments.[1]

[1]Millicom will submit comments addressing the remaining issues raised by the NPRM on the Commission's prescribed comment date.

I. MILLICOM PROPOSES A PCS LICENSING PLAN

In the NPRM, the Commission sought comments with regard to the geographic scope of each PCS license area, the number of licenses to be issued in each license area, the types of entities to be allowed to apply for PCS licenses, and the mechanism to be used to issue licenses. Millicom proposes here a PCS licensing and authorization plan that addresses these questions.

Millicom proposes that the Commission create a three-tiered licensing scheme consisting of a National Network Operator,[2] 49 Regional licensees[3] assigned to Major Trading Areas (MTA) and, within each MTA, at least 25 Local Licensees.[4] The Commission would initially create two frequency blocks for PCS licensing and thus there would be two competing NNOs, two licensees within each Regional MTA (for a total of 98 MTA licensees) and at least fifty local licensees within each MTA.[5]

---

[2]The NNO's principal function would be to set engineering standards for PCS networks and to provide for nationwide interconnection, roaming, and billing. The NNO would not be licensed to construct PCS cell sites and related facilities.

[3]Regional licensees would be authorized to construct PCS facilities and would hold the operating license for each MTA.

[4]Local licensees would be authorized to construct facilities and would hold the operating license for smaller local and rural markets within each MTA.

[5]This proposed licensing plan deals with only a portion of the PCS 1850-1990 MHz spectrum. At most, only 80 MHz of the 140 MHz available would be used under this plan, leaving at least 60 MHz for PCS growth, unlicensed services, and future new technology applications. The purpose of this licensing plan is to facilitate the rapid deployment of personal communications services while reserving sufficient spectrum for future growth and/or new technical innovations.

A. THE NEED FOR A COMPREHENSIVE PCS LICENSING PLAN

A PCS licensing concept that includes a national presence and relatively large regional operating areas has a number of obvious advantages in the implementation of a new service or technology such as PCS. The experience of the cellular industry is instructive in this regard. That industry is consolidating from the original 734 licensing areas to fewer, much larger, effective operating areas in order to maximize economies of scale and scope. The designation of 49 Regional licensing areas will greatly reduce the regulatory and transaction costs associated with the kind of painfully slow consolidation cellular is experiencing.[6] Moreover, the designation of National Network Operators will greatly simplify the immediate implementation of Universal Personal Telecommunications (UPT) by facilitating:

1. regional and national roaming capabilities,
2. coordination of technical standards,
3. coordination of business arrangements between individual PCS operators for intercompany tariff compensation, and
4. standardized billing.

Millicom's PCS licensing plan will also create the opportunity for an economic consortium for equipment purchasing and will aid smaller licensees in effectively negotiating intercompany interconnection and compensation arrangements with wireline companies. This negotiating strength will give

[6]Parties interested in providing PCS will pay high entrance or filing fees to the government rather than underwrite the cost of the shakedown witnessed in the cellular industry where lottery winners reaped the benefits of the consolidation process.

the subscriber the best opportunity to benefit from lower prices for equipment and services and from economies of scale and better interconnection rates, as well. The Millicom plan gives the National Network Operators the ability to implement a new wireless technology which could "leapfrog" wireless developments in the rest of the world, allowing the U.S. to drive global PCS standards and providing enormous export opportunities. All licensees, large and small, associated with a national system would have the power of national marketing and "branding" of service offerings which would assure rapid consumer acceptance. This faster product penetration will allow PCS to catch up and effectively compete with current wireline and cellular systems with their existing infrastructure and customer bases.[7]

B. THE DISADVANTAGES OF NATIONAL LICENSING

Nationwide licenses for the provision of personal communications services to each individual market would allow the fewest number of firms to participate. Nationwide licensees may fail to tailor their systems to the natural geographic dimensions of individual PCS markets and may not provide adequate service to smaller communities. Smaller service areas allow more diverse participation and greater technical and service innovation which may be important in the early implementation of PCS to help define markets. However, these benefits come at a cost in terms of licensing delays, transaction costs and diminished service compatibility. Millicom's PCS

---

[7]Other countries have awarded multiple national licenses for PCS-like services. In August, Millicom received one of two national licenses in the United Kingdom for wireless local loop services.

licensing plan resolves these concerns by providing for national standardization and interconnection while creating over 2500 licensing opportunities.

II. THE CREDIT CARD INDUSTRY MODEL

The approach used for this PCS licensing plan is analogous to that of the credit card industry. At one time, American Express dominated the credit card industry. Many local and regional banks attempted to issue their own credit cards but found they could not compete with the national presence of American Express. The Bank of America then introduced Visa and a national network concept by making its services and trademark available to small banks nationwide. The national network concept was so successful that the InterBank organization soon followed with MasterCard. The concept provided standardization and the ability to offer nationally recognized charge services to even the smallest banks. Today, because of the benefits of the national network concept, the credit card industry is universally accepted, highly competitive, standardized in the US and abroad, and has created tens of thousands of American jobs. The credit card industry provides a three-tiered model that includes the national network operator at the first tier, major regional banks in the second tier and small, local banks in the third tier; all able to offer credit card services to the public and able to compete with American Express. This three-tiered approach should be followed for PCS.

III. A THREE-TIERED APPROACH TO PCS LICENSING

Millicom proposes that PCS licenses be issued in accordance with a three-tiered licensing plan:

Tier One -	Two National Network Operators
Tier Two -	Two Regional Licenses in each of 49 "Major Trading Areas" (MTAs)
Tier Three -	Multiple Local Licenses in each of 49 MTAs

A. TIER ONE - TWO NATIONAL NETWORK OPERATORS

Two national authorizations would be issued (the term "National Network Operator (NNO)" is a more accurate term and is substituted for national licensee). The national authorizations would be issued for the provision of certain services, functions and specifications on a national basis. The NNO would not provide PCS services directly to the end user. PCS services would be provided by Tier Two and Tier Three licensees in individual licensed markets (see below).[8] The NNO would adopt technical standards and specifications capable of supporting all features and services required of Personal Telecommunications Service (PTS) as defined by Telocator in its document entitled " PCS Service Descriptions". Tier Two and Three licensees would implement standard NNO-defined services such as voice communication, billing, and signalling, while optionally choosing the ancillary features and services necessary to implement customized PCS

[8]Ownership restrictions applicable to NNOs as well as Tier Two and Tier Three licenses are addressed below.

offerings[9]. NNOs would be chosen by comparative hearing[10] and would not be eligible for a Pioneer Preference. Each NNO would provide, at a minimum, a nationwide database and signalling platform which would perform national database management services as well as signalling transport and query functions. Each would provide a standardized billing platform and function as a clearinghouse for intercompany billing. Each NNO might, optionally, provide a bearer channel voice and data transport network for use by Tier Two and Tier Three licensees affiliated with the NNO. Finally, each NNO would provide quality control of PCS services provided by the associated licensees. Each NNO would be owned by a consortium and each could also be awarded up to five (5) non-contiguous Tier Two MTA licenses.[11]

---

[9]A common technical standard (or two depending on the choice made by each NNO) and nationwide platforms for signaling and database management may be more important and beneficial to the user public than diversity of technology and implementation. Requiring the NNOs to use a technology that offers the widest variety of services and capabilities, would ensure that Tier Two and Tier Three licensees will have available a "laundry list" of features and services from which to choose. This choice of capabilities will allow the licensee to customize its service offerings while maintaining a standard implementation of services offered universally as well as a common platform for billing, roaming, collections, etc.

[10]An alternative method of creating the NNO might be to first award two Tier Two construction permits in each MTA in the manner described below. The Commission would then require that all Tier Two permitees assigned to a common frequency block (Block 1 or Block 2) agree on the creation of an NNO for that particular spectrum block. After the NNO was formed and functioning on a non-profit basis, the Commission would issue final Tier Two licenses.

[11]NNOs created by agreement between the 49 Tier Two common spectrum block licensees would not receive any Tier Two license awards and would have no ownership in any Tier Two or Tier Three license.

1. NATIONAL NETWORK OPERATOR RESTRICTIONS

No current U.S. telecommunications provider (e.g., RBOC, LEC, Dominant IXC, Cellular and Paging, etc.) could own more than 10% of an NNO. No single entity or company could own more than 25% of an NNO nor any ownership in more than one NNO. This requirement would guarantee that no current telecommunications provider could create a national monopolistic presence in the United States. It would also assure competition with interexchange carriers proposing to develop nationwide personal numbering services. No current manufacturer of telecommunications equipment could own any portion of an NNO. This would prevent conflicts of interest by preventing a manufacturer from controlling a potential market for its equipment. No NNO could have ownership in more than five (5) Tier Two licenses or ownership in more than one provider of PCS in any single MTA[12].

2. NNO NONPROFIT STATUS

The National Network Operator "NNO" would provide its services to the Tier Two and Three licensees on a for-profit basis for a period of ten years. At the end of the ten year period, the consortium would retain ownership of its Tier Two licenses but would divest itself of the NNO entity which would become jointly owned by all Tier Two licensees served by the NNO. Services performed by the NNO would then be provided to the Tier Two

---

[12]See notes 10, 11, supra.

and Three licensees on a nonprofit basis. Percentage of ownership of the NNO would be determined in proportion to the population served by each licensee.[13]

B. TIER TWO - TWO REGIONAL LICENSES IN EACH OF 49 "MAJOR TRADING AREAS" (MTAs)

The United States would be divided into 49 "Major Trading Areas" for the purpose of issuing two licenses per MTA. These licenses would be awarded to Tier Two licensees. MTAs are appropriate primary licensing areas because they represent a logical economic area of interest. Licensing smaller service areas would result in the same long and expensive consolidation underway in the cellular industry.[14]

1. ATTRIBUTES OF TIER TWO (MTA) LICENSING

Tier Two licensees would be chosen by comparative hearing, lottery or auction and would be eligible for Pioneer Preferences. Two operators would be licensed to provide PCS in the 1850-1990 MHz band in each MTA, thus providing a total of 98 licenses for large and medium sized

---

[13]NNOs created initially as an arrangement between the 49 Tier Two common spectrum block licensees would begin as non-profit organizations owned jointly by the associated Tier Two licensees.

[14]Given the 125 mile coordination requirements proposed for PCS by the NPRM, a large licensed service area is needed in order to limit the number of coordinations across service area borders. High power PCS, like the systems that will be implemented first, will also require exacting engineering to guard against adjacent channel and co-channel interference. This system engineering can be simplified with large licensed areas since the required coordination will often be performed within a single system rather than between multiple licensees and systems in smaller licensed areas.

companies or consortiums. Licenses would be awarded for specific frequency blocks (Block 1 or Block 2) identified with an NNO which would have responsibility for that frequency block nationwide. Tier Two licenses would be held for a minimum of five (5) years from date of issue.[15] MTA licensees would be required to use a technical standard supported by an NNO. This requirement would include all interfaces for voice and data circuits as well as signaling. This requirement would assure nationwide roaming ability as well as a seamless platform for billing and collection. This nationwide platform would also simplify such issues as division of revenues and management for the national databases required for "personal" communications. Tier Two licensees would also be required to make available to Tier Three licensees such services as switching, database management and billing services on a non-discriminatory, open network architecture and cost-justified basis.

2. TIER TWO LICENSEE OWNERSHIP RESTRICTION

No current telecommunications owner or operator could have any ownership of a Tier Two license in an MTA where it offers any form of telecommunications service to 10% or more of the population of that MTA.

C. TIER THREE - LOCAL LICENSES

Each MTA licensee would be required to relinquish at least 30% of the MTA land area and a minimum of 25% of the MTA population for licensing to

[15]An exception to this rule could be created should lotteries be used as the selection mechanism. In that event, licenses could be transferred for a period of 180 days after date of issue. This exception would allow the resale of many lottery-won permits to take place in a desirably short time frame.

at least twenty-five (25) separate Tier Three providers in each MTA. Tier Three licensees would be selected by comparative hearing, lottery or auction with the same holding periods specified for Tier Two licenses. No Tier Two licensee could own a Tier Three license within its MTA. Tier Three licensees would construct and maintain cell sites and transmission links. Because of the inherently local nature of their service offerings, Tier Three licensees would be separate and independent from Tier Two licensees and could choose to build their own switching and databases facilities or utilize the network capabilities of the Tier Two licensee as described above. Tier Three licensees would maintain an independent sales force and would have ownership of their customer base. Tier Three licenses would provide rapid PCS deployment to rural America, and would afford minority and small business participation through the availability of over 2400 licenses. Tier Three licensees would provide community-oriented coverage without the risk of equipment or technology fragmentation.

IV. CONCLUSION

Millicom's proposed three tier licensing plan is designed to achieve rapid implementation of standardized PCS offerings while providing maximum participation in PCS licensing through approximately 2500 licensing opportunities. The Plan will create new investment opportunities and American job opportunities and create the potential for a large PCS

export market. The plan will rapidly provide nationwide competition to existing telecommunications networks and services as well.

Respectfully submitted,

PCN America, Inc.
By its attorneys

John P. Bankson, Jr.
Joe D. Edge
Hopkins & Sutter
888 Sixteenth Street, N.W.
Washington, D.C. 20006
(202) 835-8000

October 20, 1992