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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

- ) GEN Docket No. 90-314
- ) ET Docket No. 92-100
- )
- ) RM-1740, RM-7175, RM-7617,
- ) RM-7618, RM-7760, RM-7782,
- ) **RM-7860**, RM-7977, RM-7978,
- ) RM-7979, RM-7980
- )
- ) PP-35 through PP-40, PP-79
- ) through **PP-85**

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**AMERITECH'S COMMENTS ON THE PCS NPRM**

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## SUMMARY

The Commission's impatience to bring new mobile services to consumers is both evident and laudable. Ameritech proposes a **two-tier** licensing and service model to optimally fit the Commission's stated needs of providing new and innovative mobile and portable services, and increasing the number of cellular-like services. Two licenses for higher power Tier 1 services in 487 **BTAs** should be granted, each with 30 MHz of spectrum. Power would be at levels to provide coverages similar to **800** MHz cellular. Two licenses for lower power Tier 2 services of 20 MHz in each BTA would be granted. Twenty MHz would be held in reserve, to be assigned after 5 years based on customer demand.

Only cellular operators and affiliates in their cellular service areas would be barred from owning a Tier 1 license, and then only for 5 years after grant. No cellular or LEC exclusions for Tier 2 licenses would exist. Interconnection arrangements should flexibly meet PCS providers' needs. Part 22 and SMR providers should be at regulatory parity with PCS' non-dominant common carriage services. FCC preemption of interconnection arrangements should occur and the Commission should be poised to preempt other state and local actions which would threaten the four PCS regulatory values of universality, speed of deployment, diversity of services and competitive delivery. structural separation of Part 22 or PCS providers should not be required.

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In the absence of auction or fee increase authority, lotteries should be used with anti-speculation measures such as a refundable deposit based on the **BTA's** POPs, irrevocable financial commitments and detailed engineering plans. After lottery selection, a short build-out period would apply, but there would be no transfer restrictions, so that the license ultimately resides with the provider who values the license most.

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	)	through PP-85

### Comments of Ameritech

Ameritech respectfully submits these comments on the Federal Communications Commission's Notice of Proposed Rulemaking ("NPRM"), released August 14, 1992, concerning the regulation and licensing of Personal Communications Services ("PCS").

#### I. Introduction

The Commission has articulated two primary needs for the establishment of PCS: (1) to provide a family of new and innovative services to meet consumers' demands and needs for mobile and portable communications services, and (2) to introduce additional competition to current mobile radio services. Ameritech applauds the Commission's focus on expeditious implementation of new mobile services whose form and substance are dictated by market forces, rather than

**Ameritech** is concerned that (a) the two stated needs are not entirely coextensive and, accordingly, that **(b)** the proposed single, simplified regulatory scheme does not optimally address &her. These two needs **require** two solutions. The Commission should **establish** two tiers of PCS **licenses**: Tier 1 licenses, focused on **services** which **will** provide alternatives to today's **cellular** offerings; and Tier 2 licenses, focused on providing consumers a wide range of innovative new, lower power **mobile services**. The Commission **should** also authorize unlicensed operation, using low power, localized technologies such as those suggested by Apple in its Petition.<sup>1</sup> This tiered approach is **designed to encourage** the widest deployment of a broad range of PCS services by **multiple** providers in the shortest amount of time, with minimal regulatory intervention and attendant delay.

## **II. The Proposed Rules**

The proposed **rules** primarily **rely** on three high power spectrum assignments **for** PCS implementation. **These rules should** be further **refined** to permit more **facets** of the **market** to influence the evolution of PCS. In so doing, the rules should avoid focusing only on the interests of industry participants..

Resolution of internal industry conflicts, standing alone, does not meet customer needs. **The** impact of regulation on networks, applications, providers and manufacturers is a valid regulatory concern, but as the prime focus of

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<sup>1</sup>**Apple Computer, Inc.'s Petition for Rulemaking, filed February 13, 1992, FCC No. RM-7618.**

regulatory scheme, there is danger of relegating the actual end users of PCS, the consuming public, to a secondary role. An inward-looking approach may have served the industry well in an earlier era, but today's rapidly accelerating technical change (as typified by the emerging wireless technologies underlying PCS) demands that customers, not industry participants, be held paramount. Today's telecommunications industry must **earn** commercial success by delivering exactly what customers want, not by merely "gaming" the regulatory process. In moving expeditiously toward authorization of commercial PCS offerings, the Commission should focus more tightly upon customers\* needs than on the desires of the developing industry and its hopeful participants.

The NPRM identifies two distinct market "needs" which it believes can be satisfied by the emerging technologies of PCS. First, the NPRM acknowledges that substantial customer demand is apparent for advanced new services and capabilities which have, to date, comprised the industry's working definition of PCS (typically thought to include low-power miniature handsets, new features and capabilities, long battery life, microcell design, etc.). Second, the NPRM sets out an additional goal of using PCS to provide additional competition for current cellular **service** providers. NPRM at **para.** 25-28. The addition of this second "need" for PCS is in response to a recent General Accounting Office report on the state of competition in cellular service markets. That report suggests using PCS and other emerging services as a means to inject additional competitive pressure into today's cellular service markets. <sup>2</sup>

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<sup>2</sup> **General** Accounting Office, ~~Concerns About Competition In The Cellular Telephone Industry~~, July, 1992.

In proposing rules to satisfy these two needs (advanced new services and additional cellular competition), the NPRM takes on a “one size fits all” character: it constructs a compromise service definition for PCS and a regulatory structure which stretches to cover both the new low power services and the perceived need for more competitive cellular markets. The result is a very loosely-woven fabric which may not effectively meet either of the consumer interests which have been identified.

For example, the NPRM specifies that three PCS providers be licensed in each **service** area and that each be given a license allowing for operation at high power levels. NPRM at **para.** 34 and 116. At such power levels, these licenses could provide cell coverage areas roughly comparable to current cellular offerings. A number of factors in this scheme would combine to discourage timely deployment of the new types of advanced, low power wireless services which have been the basis for nearly all the Experimental PCS licenses granted by the Commission. Attempting to accommodate both high power and low power operations may delay the standards process and force compromises in standards which increase the costs of both infrastructure and end-user equipment. Spectral efficiency may not be optimized because it will be difficult to take advantage of the vastly different sharing capabilities of high and low power systems. Finally, the financial requirements, logistical complications and market uncertainties of deploying new networks might tend to preclude the less proven low power services.

This “high power” scenario embodied in the proposed rules creates other problems related to industry organization. After positioning PCS licensees as direct competitors to current cellular providers, the Commission then postulates a

dilemma: if it permits current cellular **providers** to obtain **licenses** to provide a high **powered** PCS service in their **current** serving **areas**, the Commission **worries** that such **concentration** of licenses may reduce the \*competitive **benefits**" it meant to achieve by introducing additional competition. **NPRM** at **para.** 64. On the other hand, if it denies cellular providers eligibility for the new PCS licenses, the Commission recognizes that it may be forcing PCS providers to forego potential **"greater production efficiencies"** such as "lower unit costs" which current cellular providers might be able to bring to the market if they could obtain **PCS** licenses. **NPRM** at **para.** 66. The proposed rules offer no good solution to this dilemma.

**The** Commission has properly declined to impose a **service** definition on PCS, **proposing** only "that personal communications services be defined as a **family** of mobile or portable communications services which could provide services to individuals and businesses, and be **integrated** with a variety of **competing** networks." **NPRM**, at **para.** 29. There is good reason for the Commission not to move too far **afield** from a market-based approach. The delays and **failures** in the United Kingdom's PCS efforts are generally thought to have resulted from over-rigid initial **service** definition and **other** heavy-handed approaches. Unfortunately, the **NPRM's** "one size fits all" high power **service** definition may not, in fact, fit anyone very well either.

### **III. Ameritech's Proposal -- a Two-Tier Model**

**Ameritech** **proposes** a licensing structure which would not only permit the deployment of PCS to be driven primarily by customer needs, but would also achieve the Commission's **overall** goal of fostering competition in

telecommunications markets in general. The proposed structure would allow for wireless service evolution from both **high** and low power platforms, to the extent warranted by customer demand. Ameritech's proposal consists of a two-tier licensing approach, in which each tier would initially be structured to support one of the articulated "needs" for PCS: Provision is made for a service platform which is a direct alternative to current cellular offerings, and also for a second category of new, lower-power offerings which, in response to customer demand, could evolve into a richly diverse family of services. An "unlicensed" low power capability would also be authorized.

Like the **NPRM**, this two-tier model does not put much dependence on service definitions. It adopts the **NPRM's** proposal that the spectrum should be used for services which are predicated primarily on the needs of "people on the move". **NPRM** at **para. 30**. Within such a construct, only broadcast-related services and fixed microwave services would be excluded.<sup>3</sup> Within the two tiers proposed by Ameritech, anyone receiving a Tier 1 (high power) license could use PCS spectrum to operate low power services, while Tier 2 (lower power) licensees would only be limited by the capabilities of the technologies used.

Instead of a national/super-regional license dichotomy, as suggested by the **NPRM**, the two-tier model would employ a regional (**BTA**) licensing scheme, flexible enough to evolve with market demand. Ameritech proposes a licensing structure which maximizes the pool of qualified participants by minimizing the use of artificial regulatory exclusion of qualified participants as a means to satisfy concerns about potential anticompetitive behavior. The proposal relies instead on

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<sup>3</sup>As the **NPRM** notes, fixed microwave service designed to be ancillary to mobile services would be permitted. **NPRM** at **para. 30**.

customer focus, rather than regulatory **handicapping**, to develop a competitive marketplace and to expedite the availability of new services.

**THE TWO-TIER MODEL**

	Tier 1	Tier 2
Number of Providers	2	2
License Area	Regional <b>(BTA)</b>	Regional <b>(BTA)</b>
Spectrum Allocation	<b>30 MHz per licensee</b> <b>[20 MHz in Reserve -- for 5 year review]</b> <b>[20 MHz unlicensed allocation]</b>	20 <b>MHz per licensee</b>
Power Levels:		
Base Stations	500 watt	3 watt
Mobile units	15 watt	<b>.25</b> watt

**(TABLE A)**

**A. Tier 1 Licenses**

Tier 1 **licenses** will consist of a class of services supported by high power levels to position them as comparable in coverage and range to current **cellular** offerings, thus providing a substitute to the cellular **services** available today. However, if eventually so driven by **market** demand, the Tier 1 providers would not be prohibited from providing **"new"** low-power **services** competitive to the offerings of Tier 2 licensees.

1. Number of Providers/Size of Spectrum Block.

As the NPRM notes, the number of initial providers directly relates to the amount of spectrum available. NPRM at **para.** 34. The NPRM itself, given spectrum limitations, suggests three high power licensees. The two-tier model proposes to use the available spectrum for four licensees altogether. In the Tier 1 area, this means two new licensees offering potential alternatives to cellular services, thus competing with cellular providers -- and with each other.

Tier 1 licensees should each receive 30 MHz blocks of spectrum. This size of spectrum block appears necessary, as PCS competitors commence operation, because of the problems of operating high power services in a band already crowded with **fixed** microwave users.<sup>4</sup> While the various PCS experiments conducted under the Commission's auspices allege success in using spectrum sharing techniques, all of these trials use the low power concepts pioneered in PCS.<sup>5</sup> None use the high levels of power -- necessary for capabilities competitive to cellular -- proposed in either the two-tier model or the Commission's **NPRM**. At high power levels, frequency sharing is largely impractical. For example, a 1.9 **GHz** high power digital cellular base station operating in the beam of a fixed microwave link may cause interference up to 100 miles away.

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<sup>4</sup> A major concern with high power PCS as proposed by both **Ameritech** and the **NPRM** is the difficulty of efficiently sharing spectrum at such intense power levels. This difficulty results in part from using the Frequency Division Duplex (**FDD**) system the Commission suggests as the prototype for PCS spectrum use. NPRM at **para.** 39.

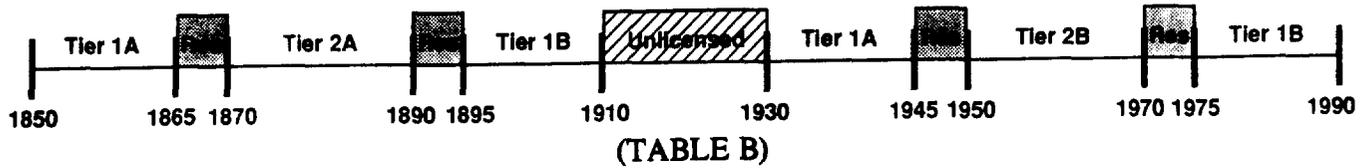
<sup>5</sup> In fact, these trials actually demonstrate various avoidance techniques rather than true spectrum sharing.

In order to provide a nearly ubiquitous high power service, there must be sufficient spectrum allocated to allow for adequate coverage and capacity through avoidance. Under the NPRM, 2 **GHz** fixed microwave operations licensed to state and local governments, including public safety, would retain co-primary status indefinitely and would be exempt from any involuntary relocation. **Other** fixed microwave licensees could be relocated involuntarily, but only **after** a period of 3 to 10 years. Since these incumbent stations are generally channelized in 10 MHz blocks, some spectrum would be rendered unusable in most metropolitan areas if this approach were to be adopted.

Of course, over time, as the spectrum is cleared, this generous 30 MHz block of spectrum for Tier 1 licenses could constitute an unfair advantage over current 800 MHz cellular competitors who will have a lesser amount of spectrum than the PCS licensees and hence, less capacity. The effect of this type of artificial regulatory edge may be exacerbated by the fact that many current cellular providers will also be forced to support at least two technologies over the foreseeable future: the existing (and spectrally-inefficient) analog base and one or more digital technologies.

**2. Block Allocations.** Tier 1 licenses should assign two blocks of 15 MHz each, with an **80** MHz separation. This structure recognizes that a high-power system is more likely to be FDD and that fixed microwave users typically operate in **80-MHz** paired configurations. Table B below illustrates a potential sharing scheme among all tiers of licensees.

## Ameritech Proposed Block Allocations



3. **Power Limits** If the goal of Tier 1 licenses is to allow direct competition to 800 MHz cellular, then these services should be put on a relatively equal footing. 200 Watt mobiles do not allow for any possibility of sharing, nor is that power in any way compatible with cellular mobiles. Given the 7 dB extra propagation loss at 1.9 GHz, 15 Watt mobiles are more in line with cellular-like service. Likewise, a 100 Watt (EIRP peak limit) base station for 800 MHz cellular is comparable to 500 Watts at 1.9 GHz.

### B. Tier 2 Licenses

Tier 2 licenses should be structured for the lower power services generally identified by the industry in this docket as “personal communication services” (small, lightweight, low powered handsets, capable of long talk times within limited ranges). These services will likely be cross-elastic with each other and with Tier 1 offerings.

1. Two Tier 2 licensees should be issued, in blocks of 20 MHz each. Since a Tier 1 licensee could operate both high and low power systems, Tier 2 appears to make business sense if it is positioned as a segmented service. Since ubiquity through low power cells is probably not economically feasible over the next few years, this service may not initially be considered mass-market. However, by targeting significant customer needs, this offering may grow to be a more ubiquitous service in densely populated areas.

Allocating a smaller amount of spectrum to a **Tier 2** licensee makes sense for two reasons. First, as discussed **earlier**, a low power **system** can share spectrum much more easily than a high power system. Second, a low power **microcell-**based **service** will allow for more **efficient** frequency reuse over a given geographic area, which will increase overall traffic capacity.

2. **Spectrum Allocation**. In order for Tier 2 low power systems to **operate** alongside unlicensed systems, TDD will be the preferred duplex **method**. **This** method allows for easier sharing, which would permit smaller service providers to coexist with incumbent fixed microwave **operators** as spectrum is cleared. Using a contiguous block of spectrum for low power systems would also parallel worldwide activity (e.g. DECT and **CT2**). The primary drawback of using TDD in a **low** power, limited range **system** is its demand for **precise** synchronization. Data rate is also an issue, but a low power **system** will likely be limited as much by path loss as by Inter **Symbol** Interference (**ISI**). Switched antenna diversity, which **helps** to **reduce ISI** effects, is also **easier** to implement with **TDD**.

After five years, the Commission should assign the 20 MHz reserve to wireless services licensees, based on demonstrated consumer **demand** for the various services offered.

3. **Power Limits**. **Ameritech recommends** a 3 watt (**EIRP**) **peak** limit on base stations and a **.25** watt (**EIRP**) peak limit on mobile units for Tier 2 services. The goal of this class of **service** is to allow for the deployment of new, innovative, microcell-based systems. Adopting these limits on power will **help** make the

**equipment** more **"personal"** by accelerating the development of smaller terminal **devices**, and will also **help** these systems share spectrum more **effectively** than **would be possible at** higher power levels.

### **C. Unlicensed PCS Operation**

Spectrum should be allocated for unlicensed devices such as those **proposed** by **Apple** and others. Given the spectrum allocations proposed for uses in **Tiers 1** and **2** of the Two Tier model, **an** unlicensed **allocation** of 20 MHz would **appear reasonable**. Wireless data, **cordless** telephone, wireless PBX and **Centrex** systems and other such applications are well suited for this type of operation. It would also appear that the 1910 to 1930 **MHz** range makes **the** most sense for these systems, since this spectrum is used the least by fixed microwave **service** operators in many areas.

Unlicensed systems would not easily be able to share spectrum with existing users. Complicated data bases or other such safeguards would need to be established if unlicensed systems **were** to operate in **co-primary** status *on an* ongoing basis. Implementation of the required **interference** safeguards could hamper growth in low power market segments, as well as affecting the reliability of existing systems. The Commission must either ensure prompt clearing of the band, or provide strong incentives for negotiation by incumbent fixed microwave users. **One** possible **means** to accomplish **prompt** clearing **of** this band would be to have terminal equipment manufacturers, which would stand to profit the most from unlicensed PCS operation, contribute to a reimbursement fund for incumbents forced to relocate.

## **D. Eligibility Requirements**

No class of potential participants should be barred from using the PCS technology and spectrum either under the two-tier model or under the proposal offered in the NPRM. Such prohibitions, designed to meet speculative fears, have little relation to actual market operation. They have not worked in the past and in fact have only acted to stall industry development. Nonetheless, it can be expected that some may argue that eligibility requirements related to competitive business holdings should be imposed on some potential PCS providers, notably cellular and local exchange carriers (**LECs**). NPRM at para. 63-83. As discussed below, the two-tier model opens PCS licenses to the greatest number of industry participants, providing the greatest potential for competitive delivery and diversity of services.

1. **Past Experience with Prohibitions**. The Commission's past experience with rules which attempt to protect against potential anti-competitive behavior by barring certain providers from the marketplace has not been successful. During the **1970's**, the Commission used the "ineligibility" rules of Computer Inquiry I to structure the communications marketplace by prohibiting **BOCs** from providing what it called "data processing" services.<sup>6</sup> A decade later in Computer Inquiry II (and later reconfirmed in Computer Inquiry III), the Commission squarely rejected that kind of approach to regulation, because it simply did not work. The Commission found that the inefficiencies associated with eligibility bars far outweighed their value, placing "unnecessary costs . . . on consumers and on

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<sup>6</sup>See Computer Inquiry I, 28 FCC 2d 267 (1971).

society in general " and "resulting in artificially restricting the supply of services available to the public. "7

Recently, in its Video **Dialtone** Order, the Commission again voiced dissatisfaction with rigid prohibitions which bar major players from participating in the communications marketplace. In that instance the Commission specifically recommended that Congress amend the Cable Act to permit the **LECs** to provide video programming, thereby benefiting the public by "increasing competition, spurring the investment necessary to deploy an advanced infrastructure, and increasing the diversity of services made available.. . . "8

2. **Cellular Eligibility.** In the PCS NPRM, the Commission is again considering using an ineligibility status as part of its regulatory structure to spur further cellular competition. NPRM at **para. 67**. Experience in the five-state Ameritech region in the cellular arena demonstrates that cellular competition is already robust. The cellular business operated by Ameritech's subsidiary is a consumer driven, competitive enterprise and will remain such, with or without the emergence of new PCS competitors. Indeed, as discussed in previous sections, cellular carriers may be at a disadvantage -- given the bandwidth which may be assigned to new Tier 1 PCS providers and the cellular operators' hardship of supporting diverse serving technologies -- once the new PCS competitors begin to offer services. Under such circumstances, ineligibility rules make little sense.

However, in light of the eagerness of the Commission to encourage even more competition in the cellular marketplace, it may be expected that pressure will be

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<sup>7</sup>Computer Inquiry II, 77 FCC 2d 384, at para. 111.

\*Video Dialtone, Second Report and Order, released August 14, 1992, at para 135.

exerted to make current cellular carriers ineligible to hold certain types of PCS licenses. If such a **draconian** prohibition is actually adopted it must be carefully circumscribed.

First, the bar should be of limited duration. For example, the rule could exist for a specified period of no more than 5 years, adequate to test the market forces for mobile service but not so **indefinite** as to hamper market development. Second, such a limited ban should apply only to cellular operators (not minority or **non-operating** partners) and their affiliates in current cellular serving areas. Others, such as **LECs** without **cellular affiliates**, would be eligible with no waiting period. Finally, the prohibition should only apply to licenses directly competitive with cellular providers. Under the two-tier model, this would mean that current cellular **operators** and **affiliates** would be barred for **5** years from obtaining Tier 1 PCS licenses in their current cellular serving **areas**<sup>9</sup>. They would be **free to seek** and obtain Tier 2 licenses immediately. Since **the** Tier 2 **services** are structured to be different than the current cellular services, **no** eligibility **bar** should exist for any potential providers.

The **NPRM** suggests that if cellular ineligibility for PCS licenses were to apply, the test for PCS ownership would **be** a five **percent** attribution standard. **NPRM** at **para. 67**, n. 46. Such a limitation is too strict. A “management” test is more **equitable**. Generally, unless a company has significant interest in an enterprise it would not be in a position to exercise control and management. For example, Commission rules involving the **relationship** of broadcast and **cable**

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<sup>9</sup> **The rules must also address the issue of disparate cellular and Tier 1 service areas with minor geographic or population overlaps in a way which promotes, rather than restricts, the widest possible eligibility.**

companies recognize that “where there is a single holder of more than **50%** of the voting stock, no minority interest is cognizable.” Video **Dialtone** Order at **para. 32**, n. 73. There is no basis to apply a more stringent rule to arrangements here. However, in order to liberally address the NPRM concerns, a flexible ownership standard, applying any cellular operator/affiliate ineligibility criterion only to Tier 1 interests over 25% would ensure that capitalization is available to encourage alliances to develop new mobile services.

3. **LEC Eligibility.** The **NPRM** notes that, while some argue **LECs** should be ineligible for PCS licenses, on the whole there is a “strong case for allowing **LECs** to provide PCS ‘within their respective serving areas.’” **NPRM** at **para. 75**. No justification is offered for barring **LECs** from holding PCS licenses in their **wireline** serving areas because of cellular holdings because, indeed, no such justification exists. In today’s industry structure, **LECs** operate along side their cellular affiliates with no evidence of anticompetitive conduct. There is no reason to assume that behavior will change in a PCS environment.

The participation of **LECs** will facilitate the timely availability of PCS by virtue of their resources, expertise, near-ubiquitous infrastructure, operational and administrative support systems, transport and switching capacity, and their commitment to public service. Full LEC eligibility, including the ability to deploy PCS’s underlying technologies for “wireless loop” applications, would thus support the Commission’s stated values of universality, speed of deployment, and diversity of services.

Robust participation of **LECs** in this and other wireless dockets is clear evidence that they seek to use emerging technologies to provide new and more

cost-effective services to their current and potential **landline** customers. This interest, coupled with the fact that **LECs** have been among the most active holders of Experimental PCS Licenses, make it obvious that the Commission's fourth stated value (i.e., competitive service delivery) would also be supported by permitting LEC participation in PCS markets.

The two-tier model, which minimizes the potential for anticompetitive behavior, will permit **LECs** to seek Tier 1 licenses anywhere no affiliate provides cellular service, obtain Tier 2 licenses in all areas and encourage them to develop their **wireline** architectures in an efficient, "PCS-friendly" way, benefiting all PCS users. To facilitate such development, the Commission should require **LECs** -- and all other providers of backbone PCS infrastructures -- to make open-interface arrangement available to all PCS providers on the same basis. See NPRM at **para. 75**.

#### **E. Licensing Areas.**

Ameritech recommends that two Tier 1 and two Tier 2 licenses be issued in each of the 487 "Basic Trading Areas" (**BTAs**) described by Band McNally. As the NPRM notes, the BTA option offers the widest participation by firms with limited resources. NPRM at **para. 60**. Such smaller serving areas are of the type being tested in numerous PCS trials now underway. Given what is currently known about the economics of PCS, the adoption of BTA service areas would provide a chance for participation by the greatest number of providers and, from this breadth of participation, the greatest chance for service diversity and innovation. The value of diversity, especially in the initial state of market development, should not be underestimated. What customers want out of PCS is not yet apparent;

numerous regional service offerings can provide the best evidence of consumer choice.

Further, BTA-sized licenses minimize the investment necessary for the start up. Even using existing backbone infrastructures -- Cable TV networks, the public switched telephone networks (**PSTN**) or fixed microwave facilities -- the costs of deploying microcell-type base stations in numbers sufficient to blanket large coverage areas would be extremely high. Adoption of the smaller BTA as a license area will permit, at least at the outset, some containment of that cost, and would therefore encourage the participation of smaller entrepreneurial **firms**.

#### **F. Interconnection**

The **NPRM** tentatively concludes that interconnection questions should be decided at the federal level and therefore preempts state regulation. It reasons that separate arrangements for intrastate and interstate services may well be infeasible and that state interconnection policies could thwart or impede the development of interstate PCS. NPRM at **para.** 103. The NPRM also seeks comment on how PCS providers should interconnect with the PSTN. The Commission expects that different types of PCS providers may need different levels of interconnection. It proposes a standard which would entitle the PCS provider to "obtain a type of interconnection that is reasonable for the particular PCS system and no less favorable than that offered by the LEC to any other customer." NPRM at **para.** 100-01.

The Commission should preempt state regulation of PCS interconnection arrangements. Given the fact that PCS is but a nascent service concept, no clear technical standards for interconnection exist for the industry. Such standards are crucial if a competitive marketplace is to develop. The Commission's preemption of interconnection standards provides a national industry forum for resolution of these kinds of disputes. Conflicting and diverse state regulations would clearly impair the evolution of compatible national services.

Since PCS providers may need differing levels of PSTN support, **open-**interface arrangements (such as those being developed in Ameritech's PCS trial) should be in effect, so that by tariff, a PCS provider may choose that appropriate type and level of connection.

#### **G. Wireless Loop Issues**

The NPRM currently recognizes that **wireline** carriers may gain substantial efficiencies from integrating PCS into local loop operations. NPRM at **para. 75**. For that reason, the Commission evinces a reluctance to declare **LECs** ineligible for PCS licenses. It suggests several alternative ways of involving **LECs** in PCS (besides eligibility for a regular license), including a 10 MHz allotment which would be available to **LECs**, and permitting **LECs** to purchase or lease PCS spectrum in the aftermarket. NPRM at **paras. 75-79**.

However, the Commission also makes clear that any use of PCS spectrum by the LEC -- including its integration with regulated services in a wireless loop application -- would require the implementation of an adequate plan for **non-**

structural safeguards against discrimination and cross-subsidization.’ NPRM at **para. 76--77, M. 51** and 54.

In terms of “wireless loop”, the **NPRM’s** approach, though laudable in its spirit, seems somewhat confused. It recognizes the need for **wireline** providers to be able to use RF technology, especially for loop replacement (wireless loop applications). In fact, it acknowledges the efficiencies which can be gained from such use; yet, in the next breath (and the next footnotes), the Commission requires that non-structural safeguards be in place for such utilization to occur. This would effectively take away all that was given. If, for example, Part 64-type rules are imposed on wireless link substitutions -- merely facilities replacement, rather than the offering of new **services**-- past experience would show that there would be no “efficiencies” gained whatsoever.

Further, it would seem unfair to penalize a LEC with the known extra burdens imposed by safeguards when it substitutes RF technology for **wireline** facilities (as distinguished from services) but not to place that same burden on its competitors. The resultant competitive imbalance would deprive **LECs** of the very cost efficiencies which emerging wireless technologies make possible. If, as expected, costs for RF-based technologies continue to fall over time, the impact of such an artificial regulatory handicap would only become more severe.

If such a result is to be avoided, **LECs** must be free to select the identifying technology for each service which they are authorized to provide, based upon cost factors and service quality issues. A continuing problem, however, is from where the spectrum for RF-based loop replacement should come. One option would be for a **LEC** to purchase use of PCS spectrum from other licensees.

Another would be to allocate spectrum in another range in a later FCC proceeding.

#### **IV. Regulatory Issues**

##### **A. Common v. Private Carrier Regulation of PCS**

The Commission requests comment on the mechanisms by which it should regulate these new PCS licenses. Indeed, it asks whether, given the competitive nature of the services, it needs to regulate them at all. **NPRM at para. 94.** In particular it asks whether the “private carrier” regulatory classification as opposed to the “common carrier” classification is more appropriate for PCS. **NPRM at para. 95.**

The Commission should not allow the separate issue of preemption to cloud its analysis of whether the services provided are common or private carriage. The actual and potential competitors for wireless customers should not be handicapped by the differing regulatory treatment that the private/common carriage “distinction” today affords.<sup>10</sup>

Under either the **NPRM** proposal or the two-tier model, the “high power” licenses will provide additional competition for existing wireless licensees. And in fact, there will be little difference between them. Neither entity will own “essential” facilities, or will have “captive customers”, or will have any interconnection

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<sup>10</sup>In this regard, the “distinction” that private carriage **does not "resell" landline** service at a profit is **economically** vacuous. SMR s profit greatly in service **offerings** from their ability to **interconnect** with the PSTN to complete communications whether **or** not the particular wireline-related charge is simply a “pass-through” to the customer.