

vested interests of these incumbent users. See generally, Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, 7 F.C.C. Rcd 1542 (1992). Current licensees in this part of the spectrum include private radio users -- both commercial entities and local governments (including public safety offices) -- and common carriers. Microwave facilities licensed in this band have played an important role in the provisioning of high quality, widely available cellular services throughout the country. The Commission has implicitly recognized, to its credit, that it simply cannot be predicted which of these varied uses, including the yet-unknown services within the label "PCS", might be optimally suited for this part of the spectrum. Thus, while fully supporting the proposed allocation in the 2 GHz band for PCS, CTIA believes the Commission should continue its well-directed efforts to facilitate equitable accommodations between existing and future uses of the 2 GHz spectrum.

B. PCS Licensing Scheme.

The section of the Notice addressing spectrum allocation and alternative licensing schemes for PCS sets forth the competing public interest considerations to be weighed in any PCS allocation scheme. First, the Commission explains that if an unlimited amount of spectrum were available, thereby permitting unrestricted open entry, it "would allow market forces to determine the optimum number of service providers."

Notice at 5690. Absent other considerations, the possibility of an infinite number of licensees would best serve consumer welfare. However, as the Commission further acknowledges, spectrum is indeed a limited resource. Id. There are thus unambiguous opportunity costs and efficiency losses in misallocating spectrum to suboptimal uses. See generally, NTIA Spectrum Management Report, supra, at 98-99. A second consideration, then, is to minimize these losses by promoting the most efficient uses of scarce spectrum. Third, the Notice identifies the need to assign sufficient spectrum to each PCS licensee such that it is "competitive" with existing licensees, that is, to ensure that PCS providers have adequate spectrum per license to achieve minimum efficient scale. The Commission's goals of low-cost, widely-available PCS services can be fully realized only if PCS providers are given enough spectrum to permit efficient operation.

As discussed below, CTIA believes that these three public interest considerations can best be balanced by a scheme that permits as much entry as appears reasonably feasible, with opportunities for market corrections as may be required through the ready transferability of PCS-allocated spectrum. Under such a format, the Commission would adopt a "modular" approach to licensing PCS spectrum, such that once the requisite "modules" or building blocks are defined by the Commission as the licensing agency, they may be aggregated or divided as the market sees fit in response to technical requirements and

customer demand. These "modules" would define, in essence, the set of "property rights" (subject, of course, to Section 304 of the Act, inter alia) to which PCS licensees accede: the amount of spectrum and particular frequencies on which licensees may operate, the amount of freedom from interference, the geographic scope of these rights, their duration, and the conditions under which such rights will be renewed. See generally Coase, The Federal Communications Commission, 2 J. of L. and Econ. 1 (1959); DeVany et al., A Property System for Market Allocation of the Electromagnetic Spectrum: A Legal-Economic-Engineering Study, 21 Stan. L. Rev. 1499 (1969); D.W. Webbink, "Frequency Spectrum Deregulation Alternatives," OPP Working Paper No. 2 (1980). Because it is a critical part of the scheme proposed by CTIA, our discussion begins with the importance of free transferability of PCS licenses.

1. PCS Licenses Should Be Readily Transferable, in Whole or in Part.

The critical importance of ready transferability of PCS spectrum to the proposed licensing format should be emphasized. The Commission simply does not have the requisite clairvoyance to predict and establish a priori the most efficient arrangements and outcomes for PCS. To compensate for this inability to predict outcomes, the Commission should embrace a regulatory mechanism that most readily admits of mistakes and permits quick and constant market correction.

Permitting transfers of PCS-licensed spectrum with only minimal review and delay represents such a self-correcting mechanism. The transfers should be permitted in whole or in part, that is, a PCS licensee should be allowed, via contract or outright sale, to assign to others all or some of the rights to which it is entitled under its PCS license. The partitioning and aggregating of rights may occur either by frequency or geographic area. Transfers of control would of course be subject to prior Commission approval, as set forth in Section 310(d), 47 U.S.C. § 310(d).

The Commission has promoted the transfer/sale of licenses as a way of sustaining the development of competitive services, notably in the public mobile radio services area. In the paging area, for example, the Commission found that:

the public interest does not require any restriction on the transferability of authorizations in these services....[W]e see no public interest reason to restrict the transfer of paging operations.

Revision and Update of Part 22 of the Public Land Mobile Radio Services, 95 F.C.C. 2d 769, 801 (1983); see also, Revision and Update of Part 22 of the Public Mobile Radio Service Rules, 99 F.C.C. 2d 311, 320 (1984). The Commission relaxed its anti-trafficking rules as part of a general rulemaking designed to "eliminate or reduce government regulation in favor of the self regulation characteristic of a competitive marketplace." 95 F.C.C. 2d at 770, 800. The Commission noted that it was important to recognize the "reality of the marketplace," that

there are "many situations in which it is financially advantageous to sell a station even though it has been operated for less than two years." Id. at 800. Thus it relaxed the rules to "allow licensees more easily or readily to take advantage of these economic opportunities." Id.

Similarly, in cellular operations, the Commission adopted relaxed anti-trafficking rules patterned on the rules adopted in the conventional public mobile services area to facilitate the transfer of cellular licenses. Cellular Lottery Rulemaking, 98 F.C.C. 2d 175, 217 (1984). The Commission found that its policies requiring limited time and public interest assessments on sales of construction permits, and its allowing free transferability post-construction of cellular licenses awarded by lottery, best balanced "the public interest in efficient use of the spectrum through free transferability of licenses" against a concern for speculation. Id. Subsequently, the Commission further relaxed its anti-trafficking rules by permitting for-profit transfers or sales of unbuilt cellular authorizations. See Bill Welch, 3 F.C.C. Rcd 6502, 6504-05 (1988). The Commission determined that this relaxed policy would "serve the public interest and advance our long-term goal of providing rapid and efficient service to the public." Id. at 6505. The Commission should now continue this progressive relaxation of its anti-trafficking rules, especially as applied in the PCS context.

Furthermore, in ensuring the ready transferability of PCS licenses, the Commission should explicitly allow the subdivision/combining and partial transfer of PCS spectrum as well. As Besen, et al. explain, subdivision/combining and partial transfer of spectrum have long been advocated as ways of increasing spectral efficiencies.³¹ They conclude that "[a]llowing licensees the freedom to combine or subdivide spectrum assignments as needed to provide new services is an excellent way in which to allow flexibility."³²

The Commission has in recent years embraced the notion of subdividing/combining and partially transferring spectrum as effective vehicles for maximizing spectrum efficiency. For example, in reworking its regulatory framework for SMR services, the Commission lifted its prohibition on partial assignments of trunked SMR authorizations. Amendment of Part

31 See Attachment A, S. Besen, R. Larner, and J. Murdoch, "An Economic Analysis of Entry by Cellular Operators into Personal Communications Services", at 25 (Nov. 1992); see also, NTIA Spectrum Management Report, supra, at 118 ("Greater ability to "alienate," or transfer, the spectrum needed for that service would permit a user to "lease" a portion of its spectrum authorization to another party that could put the spectrum to better use.... Similarly, users could aggregate spectrum rights in order to provide a desired service."). Id. (emphasis added).

32 Besen, et al., at 28; see also Webbink, "Frequency Spectrum Deregulation, Property Rights and Markets: Where Are We Now?", at 7 (1988) ("...users should be given complete or at least partial property rights in the use of the spectrum. Such rights would include the authority to buy, sell, sublease, share, divide and combine their spectrum use rights.").

90, Subparts M and S, of the Commission's Rules, 3 F.C.C. Rcd 1838, 1847 (1988). By permitting partial assignments of trunked systems, the Commission endeavored to "ensure efficient use of the spectrum with a minimum of government intrusion into the operations of the SMR market." Id. at 1847. Similarly, Instructional Fixed Service (ITFS) owners are now authorized to lease excess capacity for a variety of non-ITFS purposes. MMDS Spectrum Allocation, 94 F.C.C. 2d 1203 (1983). In the Operational-Fixed Microwave Radio Service, the Commission authorized private OFS licensees to lease their excess capacity to other Part 94 eligibles on a for-profit basis.

Authorization of Private Carrier Systems in the Private OFS Service, 57 R.R. 2d 1486 (1985). The Commission's reason for permitting this subdivision was its desire "to promote more efficient use of the OFS spectrum." Id. at 1500. Finally, cellular carriers have been permitted to subdivide licensing areas geographically as a means of full and prompt utilization of spectrum. See 47 C.F.R. § 22.903(a)(1) (allowing an applicant to propose multiple CGSAs within the RSA).

Ready transferability of licenses, in whole and in part, has previously been promoted by the Commission in analogous circumstances. As discussed below, its adoption is crucial as a matter of policy in the PCS context because it serves as the essential safety valve for the inevitably imprecise decisionmaking tools available to the Commission at this time. By facilitating a market in the "building blocks"

necessary for the provision of PCS, the Commission will promote the efficient and expeditious provisioning of the PCS services themselves.

2. The Commission Should Assign Spectrum So As to Maximize the Number of Participants.

For licensed PCS, the Commission proposes to allocate 90 MHz of bandwidth, with 30 MHz per licensee. Recognizing that there is neither magic nor precise science that will yield the "correct" number, the Notice also seeks comment on alternative options of granting four or five licenses, and/or blocks of spectrum between 20 and 40 MHz. CTIA believes that the alternative proposals should be more closely examined and ultimately adopted by the Commission.

First, given the anticipated importance of PCS to the future of our telecommunications infrastructure, CTIA urges the Commission to consider allocating additional bandwidth beyond the 90 MHz initially proposed. Especially given a very broad definitional approach to PCS, a larger allocation will still permit spectrum utilization across a very broad range of services and uses. With a modest increase in the amount of spectrum proposed by the Notice, the Commission could issue five licenses each with 20 MHz of spectrum and identify an additional 10 MHz as a special reserve to be licensed in the future as additional requirements are demonstrated.

CTIA believes that this scheme will best accommodate and fulfill the three public interest factors identified in the

Notice -- multiple entry, spectrum efficiency, and scale efficiency. It also reflects a balancing of these concerns consistent with Commission precedent. For example, in the Commission's first Cellular decision, the Commission expressly weighed concerns relating to competition, spectral scarcity, and minimum efficient scale. Cellular Communications Systems, 86 F.C.C. 2d 469 (1981). The Commission expressly found that the benefits of competition should prevail unless a "compelling" reason could be demonstrated to the contrary. Id. at 478. The Commission thus established an allocation scheme to permit two licensees per market and assigned to each cellular licensee a block of 20 MHz. Rejecting proposals to grant only one license per market with 40 MHz, the Commission found that it could create a competitive structure by assigning a smaller amount of spectrum to each licensee. The amount of spectrum per license was established at 20 MHz because the record before the agency demonstrated that this amount was the minimum necessary to permit a licensee to operate efficiently. Id. at 476 ("each commenter who addressed the spectrum requirements of cellular design agreed that a cellular system based upon [then-proposed] design[s] could not be efficiently operated in a mature configuration in a major market with any allocation substantially less than 20 MHz.") (footnote omitted). Indeed, the Commission assigned the smaller blocks notwithstanding evidence that they could require more than

twice the investment of the larger bandwidths proposed.

Cellular Communications Systems, 78 F.C.C. 2d 984, 1012 (1980).

The record to date lacks any probative evidence regarding the minimum efficient spectral allocation for PCS. Speculation varies widely, anywhere from 18 MHz up to 72 MHz. Absent compelling evidence on this point, the Commission should err on the side of a larger number of competitors and smaller blocks of spectrum. Not only is this approach more consistent with Commission practice, it is also more readily "self-correcting" as the Commission permits marketplace forces to control the provisioning of PCS.

The Notice proposes that each PCS licensee have exclusive use of 30 MHz of bandwidth. The number is derived with little discussion other than a stated desire to ensure sufficient spectrum so that PCS providers can be competitive with cellular and others. As discussed earlier, the Commission should not proceed on the exclusive assumption that it is licensing "more" cellular service. Indeed, to the extent that PCS evolves into a set of services that are very poor substitutes for cellular services as they are known today, the amount of spectrum allocated to each "class" of service is truly irrelevant.

Even if parity with cellular service providers were the appropriate test, a cursory observation of cellular licensees' 25 MHz assignments is woefully incomplete. As the Notice correctly recognizes, cellular spectrum is currently

being utilized to service end users with analog technology. Those customers and cellular companies with substantial sunk investment in analog equipment may eventually move to digitally based equipment, but this will occur only over a long period of time. The cellular industry is working to ensure that the transition is a smooth and relatively easy process, so as to satisfy both commercial and public policy needs. Analog technology is also expected to dominate for some time into the future for roaming traffic. As depicted in Chart A to Attachment B, CTIA estimates that nearly 16% of all subscribers will still be analog users even after 10 years. More importantly, with incompatible digital technologies, 100% of cellular subscribers will require access to analog channels when roaming and in times of emergency services. Analog technology, a far less efficient user of spectrum, will thus have to be accommodated for a reasonably long time into the future.

Cellular carriers have sufficient incentive to work out these transitional arrangements, and there is no need for any governmentally imposed requirement to do so. But as cellular carriers strive to avoid analog customer inconvenience, disruption, and expense, as well as to ensure nationwide compatibility, they should not be penalized for doing so.

Moreover, as discussed in Attachment B, there are other technical limitations that lead to the conclusion that

cellular spectrum is not readily equivalent to PCS-assigned spectrum. For example, the channelization plan for cellular makes it exceptionally difficult to begin deployment of 800 MHz spectrum for multimedia services involving broadband requirements. Similarly, the propagation characteristics of the two frequency bands are different, suggesting that they may well have disparate efficient uses. Were competitive equities between PCS and cellular in fact the determinative factor for the assignment issue, they would necessarily counsel that PCS blocks be no larger than cellular licensing blocks, and indeed, because of the limitations on cellular spectrum (including the need for cellular operators to accommodate existing analog investment), a nominally lesser amount would be in order. CTIA's proposal for 20 MHz apiece, plus spectrum in reserve, will achieve the balance the Notice seeks.

As noted above, the Commission is unlikely to be able to determine the efficient amount of spectrum to be assigned to each market participant. Even if the Commission could accurately assess the minimum efficient scale today, that assessment would very likely change as technology advances, and further, would vary by service offering and geographic market. The question then amounts to how the Commission can best permit the market to determine these issues. Given that the Commission will necessarily either "underassign" or "overassign" the spectral requirements, CTIA urges the

Commission to err on the side that is more readily corrected by the market.³³

When coupled with the ready transferability of PCS spectrum, with respect to whole licenses or partial transfers as CTIA has urged, a decision that risks "underassigning" spectrum is more readily cured in the marketplace. If 30 or 40 MHz is in fact required to achieve minimum efficient scale for the provision of PCS services, then PCS providers will be free to engage in transactions to aggregate sufficient spectrum in order to achieve such scale, subject of course to Commission review and approval. The same market correction will not necessarily occur, however, should the Commission "overassign" spectrum per licensee. Overestimating minimum efficient scale in this context would delegate to the actual PCS licensees the decision whether to sell off spectrum to a wholly new entrant, a determination that market incumbents may or may not find to be profit-maximizing. Thus, in the particular instance of overassigning spectrum per licensee, it would appear that the market cannot necessarily be relied upon to serve the public interest. Moreover, the Commission might have no way of second-guessing the market to know whether the absence of subdividing spectrum to new entrants was due to efficiency

³³ Unquestionably, there are transaction costs in these market corrections. These costs inhere whether the market is aggregating or subdividing spectrum assignments, however. See, e.g., DeVany et al., supra, at 1507-08, 1517.

reasons, i.e., that its initial determination on minimum efficient scale was correct, or because the incumbents found it against their own private interests to permit additional entry.

Given the uncertainties and potential risks inherent in "overassigning," CTIA urges the Commission to act in favor of granting more licenses with somewhat reduced spectrum assignments.

IV. CELLULAR LICENSING AREAS SHOULD DEFINE THE GEOGRAPHIC SCOPE OF PCS LICENSE AREAS BECAUSE THEY WILL BEST ACHIEVE THE COMMISSION'S STATED GOALS.

Designating the geographic scope of PCS licenses of course raises comparable issues and problems. Here, too, with ready transferability, market correction can be expected to realign PCS service areas to promote their efficient operation. While the Commission's stated goal is to reduce the transaction costs inherent in these market corrections, its proposal to depart from cellular service MSAs/RSAs would actually increase transaction costs. CTIA demonstrates below why use of the cellular licensing areas to define PCS service areas best balances the Notice's stated goals in establishing a regulatory scheme for PCS.

In the Notice, the Commission seeks to create a regulatory structure for PCS which will optimize and balance four values: speed of deployment, universality, diversity of service, and competitive delivery. See Notice at 5679. Notwithstanding its desire to accomplish these four goals, the

Commission proposes four options for defining PCS service areas, none of which would attain these goals as readily as would the cellular service area licensing scheme.

The four alternatives proposed are: (1) the 487 Basic Trading Areas (BTAs) as defined in the Rand McNally Commercial Atlas and Marketing Guide ("Atlas"), plus Puerto Rico; (2) the 47 Major Trading Areas (MTAs; collectively with BTAs, the "Trading Areas") as defined in the Rand McNally Atlas, plus Alaska and Puerto Rico; (3) the 194 Local Access and Transport Areas (LATAs); and (4) nationwide licenses. None of these options, however, satisfactorily promotes each of the Commission's stated goals.

As described in detail below, none of the alternatives considered in the Notice is superior to the geographic licensing scheme already devised and in use for cellular service areas. The substantial investment already made in fine-tuning the cellular MSAs and RSAs is sufficient reason for the Commission to apply them here. Moreover, when one fairly compares them to the proposed alternatives, especially taking into account that an analogous fine-tuning process would have to be repeated, the investment in MSAs/RSAs becomes a compelling reason to utilize them for PCS. Under each of the Commission's four specified values, the MSA/RSA licensing scheme will best serve the public interest.

A. 1. The MSA/RSA Licensing Scheme Promotes the Goal of Speed of Deployment.

The Notice properly seeks to encourage the expeditious deployment of PCS. The cellular industry knows first hand the costs which are incurred through unnecessary processing delays. CTIA respectfully submits, however, that expedition is not served by adopting a licensing scheme merely because it has a lower number of areas. To the contrary, rapid establishment of PCS will be achieved most readily if the Commission adopts small service areas which have already been customized for wireless communications services.

After almost a decade of fine-tuning in three rounds of rulemaking, the MSA/RSA scheme has evolved as an efficient system for the licensing of cellular. The MSA/RSA scheme is the product of significant investments of time and resources by both the Commission and the private sector, and has been "proved out" for wireless communications.

Beginning in 1979, the cellular licensing scheme's MSAs³⁴ and RSAs³⁵ have undergone several permutations, each

34 The process of fine-tuning MSAs, and later RSAs, for wireless services began in 1979 with CC Docket 79-318. Initially, applicants for cellular licenses defined their own cellular geographic service areas ("CGSAs") without regard to any specified system. Inquiry into Use of Spectrum for Cellular Communications, 86 F.C.C. 2d 469, 509-10 (1981). The following year CGSAs were redefined by reference to Standard Metropolitan Statistical Areas ("SMSAs;" currently known as Metropolitan Statistical Areas) and the service areas for the top thirty markets were drawn. Inquiry into Use of Spectrum for Cellular Communications, 89 F.C.C. 2d 58, 87-88 (1982). A few months later the Commission similarly designated markets 31-90. Inquiry into the Use of Spectrum for Cellular Communications Systems, 90 F.C.C. 2d 571, 580 (1982). The Commission also determined that in New England the service areas should more appropriately be based on New England County Metropolitan Areas (NECMAs) rather than SMSAs. Id. at 579. Experience had taught the Commission that as NECMAs cover larger geographic areas than SMSAs in this particular segment of the country, they "more closely parallel natural markets for mobile services." Id. at 579. At that time, the Commission also considered, but rejected, suggestions by a commenter to modify certain contiguous SMSAs. Id. at 578. In 1984, the Commission initiated a new rulemaking, CC Docket No. 83-1096, to designate additional cellular markets beyond the top ninety. Amendment of Commission Rules To Allow Selection from Mutually Exclusive Competing Cellular Applications, 98 F.C.C. 2d 175 (1984). It took more than two years to complete this second rulemaking. Thereafter, rules were adopted which set forth procedures for accepting applications for unserved areas within MSAs. See Amendment to the Commission's Rules for Rural Cellular Service, 2 F.C.C. Rcd 2306, 2308 (1987). For the initial five years after grant of a construction permit, only licensees and permittees were permitted to file fill-in applications. Id. This grace period

(Footnote continued on page 38)

35 Like the MSA boundaries, the scheme for licensing rural areas for cellular was fine-tuned, in CC Docket

(Footnote continued on page 38)

designed to particularize the service areas for wireless services. Through a long-term process involving detailed analyses, years of trial and error, and numerous rounds of commenting by parties such as cellular applicants, users, equipment manufacturers, consultants, governmental bodies² and law firms,¹ the present day scheme evolved. The significance of this learning process should not be overlooked. The Commission must resist pressure to reinvent a service area scheme when an

34 (Footnote continued)

allowed the permittees/licenseses to adapt their CGSA in response to market conditions without having to compete with other applicants for the same market areas. Id.

35 (Footnote continued)

No. 85-833, after its kinks were uncovered. The Commission initially concluded that licensing areas did not need to be defined in rural areas. Amendment to Commission's Rules for Rural Cellular Service, 51 Fed. Reg. 405 (1986). However, the delay and uncertainty that resulted caused the Commission to reconsider. Rules for Rural Cellular Radio Service, 2 F.C.C. Rcd 3366 (1987). The Commission reviewed numerous comments which proposed various licensing schemes. In fact, the Commission expressly rejected schemes that sought to define RSAs based upon LATAs and Rand McNally Trading Areas. Id. at 3366; see also, infra section IV.A.2. After a significant investment of time and resources, RSAs were delineated in accordance with the needs of cellular services, without regard to LATA boundaries or Rand-McNally Trading Areas. These RSA boundaries were later fine-tuned. This proceeding extended through a Fifth Report and Order released November 1, 1988. Amendment of Commission Rules for Rural Cellular Services, 3 F.C.C. Rcd 6401 (1988).

The historical overview set forth in footnotes 34 and 35 demonstrates the significant time and resources already expended in fine-tuning a service area scheme for communications purposes.

appropriate model, specifically tailored for wireless services, has been developed and tested. By adopting the MSA/RSA licensing scheme the Commission will promote the rapid deployment of PCS, as the time which would be needed to modify any arbitrary boundaries for wireless communications has already been invested in MSAs and RSAs. Thus, the Commission would begin the licensing process with a finished product rather than a raw material.

Today the MSA/RSA service areas are clearly defined and accepted. Ten million subscribers are now familiar and accustomed to the MSA/RSA serving areas. The Commission recently recognized their widespread acceptability and ease in licensing when it defined the licensing areas for Interactive Video and Data Services (IVDS) in terms of the MSA/RSA cellular service areas. See Amendment of Commission Rules to Provide Interactive Video and Data Services, 7 F.C.C. Rcd 1630, 1638 (1992). In adopting MSAs and RSAs for IVDS, the Commission explained that "[t]hese cellular service areas are well known to the communication industry and cover the entire country." Id. at 1638. Their application to IVDS, a wireless service completely unrelated to cellular, further justifies their appropriateness for PCS.

The Commission must take advantage of the time and resources invested in the MSA/RSA licensing scheme. Application of MSAs and RSAs to PCS will undoubtedly reduce the Commission's administrative burden, minimize the expenditure of

public and private resources that otherwise would be needed to establish PCS serving area boundaries, and expedite the offering of PCS to the public. Although the number of PCS licenses to be awarded would be greater under an MSA/RSA scheme than under the other alternatives proposed, the process of redefining a workably efficient geographic licensing area in the case of MSAs/RSAs has already been completed for an analogous wireless service. The tremendous expense and delay needed to repeat and reinvent that process render any other option unacceptable.

2. Use of the Remaining Alternatives for Licensing Purposes Necessarily Would Slow Down PCS Deployment.

Trading Areas. In contrast to the MSA/RSA service areas, the Trading Areas were designed for purposes unrelated to PCS and will need to be modified for PCS. The Commission's goal of expediting the provision of PCS to the market would be disserved. The Rand McNally Trading Areas were expressly designed for the "business user" as they reflect where customers make the bulk of their retail purchases, and the primary centers of banking and specialized services.³⁶

³⁶ Rand McNally, Commercial Atlas and Marketing Guide, at 36 (1992) (hereinafter, Atlas). "Businesses engaged in manufacturing, wholesale and retail trade, transportation and other economic activities are provided with up-to-date data they need to intelligently plan future activities and effectively interface with present and future customers and associates." Id.

Accordingly, Rand McNally researchers who draw BTAs and MTAS focus on factors relevant to retail trade.³⁷ Of primary importance in this regard is newspaper circulation.³⁸ Thus, Rand McNally research has shown that those who live in southern Georgia, for example, are more inclined to receive the daily newspaper of Jacksonville, Florida than of Atlanta, Georgia, its neighboring MTA. Such data is of fundamental importance for advertising or other retail marketing purposes, but its appropriateness to the design and operation of PCS systems is questionable.

There is no particular reason to believe that a primarily retail-oriented division is relevant (let alone superior) for purposes of licensing communications services. As discussed, modifications, like those already crafted for

37 The Notice analogizes the BTA and MTA options to existing Commission rules which use the Arbitron publication "Television Markets and Rankings Guide" to identify television markets. See Notice 7 F.C.C. Rcd at 5700, n.42. This analogy is inherently inappropriate. The Arbitron publication is specifically designed, as its name suggests, to rank television markets, and is used by the Commission for that particular purpose. In contrast, the Commission does not propose here to use the Trading Areas in the manner for which they were designed. They were designed as trading areas for the business user, not as service areas for a wireless communications service. Thus, the use of Trading Areas here is not analogous to the use of Arbitron rankings of television markets for the purpose of determining the largest television markets.

38 Other factors considered in drawing Trading Areas are highway facilities, railroad service, population distribution, and transportation. See Atlas at 39.

rural service areas, would be required to "more accurately reflect the local economic and demographic needs" of each market. See Amendment of Commission's Rules for Rural Cellular Radio Service, 2 F.C.C. Rcd 3366, 3369 (1987). Examples of modifications which were made to RSAs illustrate that the Trading Areas similarly would have to be modified to make them appropriate for PCS. For instance, in 1987 the Commission combined Minnesota RSAs 6 and 7 into a single RSA to "allow more efficient service to corridors of Highways 65 and 169," and to enhance service to Minnesota's Central Lakes Region. Id. at 3379. These local community needs would go unanswered if the current BTA map were used to draw the licensing areas as the counties which were combined into Minnesota RSA 6 are separated among five Rand McNally BTAs. Another example of the kind of fine-tuning any arbitrary licensing scheme requires is found in Wabash County, Indiana. The Commission included Wabash County in drawing the final RSA map in order to allow for "continuous coverage along US Hwy No. 64." Id. at 3375. However, Wabash is not part of the same BTA as the counties in the revised RSA. Were the Commission to adopt the Trading Areas and want a PCS licensee to maintain continuous coverage along U.S. Hwy No. 64 in order to compete with the cellular licensees, the Rand McNally boundaries would have to be adjusted. In addition, based on comments received in 1987, the Commission combined the counties of Hale and Choctaw, Alabama,

into the same RSA. Id. at 3373. Both the BTAs and MTAs split these counties, and therefore the RSA.

The Commission has in fact already rejected the use of BTAs for wireless services. In 1984, the Commission considered and dismissed BTAs as possible geographic boundaries for cellular service areas outside of the MSAs and NECMAs. See In the Matter of Selection from Mutually Exclusive Competing Cellular Applications, 98 F.C.C. 2d 175, 205 (1984). The proposal to use BTAs for a wireless service was sharply criticized by numerous commenters who argued that BTAs (1) are too large (especially in the West); (2) pose "artificial barriers to natural interstate markets"; and (3) are incapable of supporting viable cellular systems. Id. at 206. The Commission Order noted there was only one positive attribute of BTAs, namely that they "follow county boundaries and track existing patterns of business and commerce." Id.

The BTA proposal thus was quickly rejected as a scheme for licensing wireless communications service areas. Indeed, the Commission recognized that the BTAs were "arbitrary". Id. at 207. Furthermore, the Commission noted the use of BTAs "would restrict the ability of cellular service designers to propose service to natural markets and to respond to local market characteristics." Id. Since a proposal to use BTAs as licensing areas for a wireless service already has been rejected by the Commission after public comment, and since an investment of significant time and resources would be required

to customize the Trading Areas for PCS, their usefulness here is inherently suspect.

LATAs. Similarly, the LATA boundaries were drawn to address concerns wholly unrelated to wireless communications services. If the Commission were to use LATAs for PCS licensing purposes, time-consuming modifications would be required, thereby again defeating the Commission's expedition goal.

The telephone LATA boundaries reflect concerns unique to the process of dividing the existing Bell System. In drawing the LATAs, their designers considered, inter alia, "the existing arrangement of the landline telephone system, the location of toll switching centers, and the attractiveness of areas to interexchange carriers." United States v. Western Electric Co., Inc., 578 F. Supp. 643, 648 (D.D.C. 1983). As a result, the size of a LATA often depended more on the size of the Class Four switch serving a particular area than on other factors that would be more relevant to a mobile service.³⁹

³⁹ See, e.g., Philadelphia LATA, United States v. Western Electric Co., 569 F.Supp. 990, 1021-24 ("It would be inappropriate to deprive local ratepayers of the efficiencies that will be realized from toll consolidation projects such as the Philadelphia 4ESS project"); Southeast Florida LATA, id. at 1031-32 ("as the network now stands, all exchanges in the LATA home either on the No. 4ESS switch in West Palm Beach or on the No. 4ESS switch in North Miami"); Akron-Canton LATA, id. at 1036-37 (Akron-Canton is a separate LATA from Cleveland because "Cleveland, with its own Class Four switch is separately designed and operated").

The issues inherent in designing PCS service areas are markedly different. Of fundamental importance in designing service areas for wireless services are traffic and mobility patterns, and the reality that metropolitan areas span multiple LATAs. The MEJ court recognized that:

while the existence of a high volume of daily automobile traffic across LATA boundaries was not a significant factor in the drawing of those boundaries (e.g., between New York and Northern New Jersey), it is of central importance to the design of cellular service areas, since subscribers will want and expect to be in communication with mobile units in this traffic which regularly crosses from one LATA to another.

Id. at 648. Furthermore, the "technological and competitive issues implicated by mobile radio services are, in some locations, significantly different" from those upon which the LATA boundaries were drawn. Id.

Unsurprisingly, the cellular service areas of the non-RBOC cellular affiliates, such as GTE and McCaw, bear no relation to LATA boundaries, and, in fact, span multiple LATAs.⁴⁰ PCS suppliers and customers will similarly be concerned with wireless-related considerations rather than the landline infrastructure. Accordingly, boundaries for a telecommunications service that does not depend on the landline

⁴⁰ For instance, GTE services areas in eight of California's telephone LATAs. Likewise, GTE's cellular service area around Houston, Texas includes three entire LATAs and parts of five neighboring LATAs. Likewise, McCaw services parts of six LATAs in Florida. See Report of the Bell Companies on Competition in Wireless Telecommunications Services, at 101-117 (1991).