

that "smaller firms that apply for licenses to serve 'their local areas' . . . will have a greater incentive to introduce service quickly to their areas than will larger firms obtaining licenses for larger service areas."⁶⁴ To illustrate this, DOJ provides the following case in point:

If the Commission issues larger licenses, and does not substitute fiat for market-based decisionmaking by imposing build-out requirements, there is no guarantee that the acquiror of, *e.g.*, the New York MTA will develop PCS services in medium or smaller communities in the area, *e.g.*, Syracuse, New York, or Burlington, Vermont. . . , as quickly as would a party that sought a smaller license restricted to those areas.⁶⁵

Notwithstanding the speed of deployment benefits of MSA/RSA licensing, some have blamed delays in cellular licensing on the use of these market divisions.⁶⁶ BellSouth, however, correctly recognizes that the "greatest delays in cellular processing resulted not from use of the MSAs and RSAs but from the use of comparative hearings and the rulemaking process."⁶⁷ If the actual licensing of cellular is used as a yardstick, the FCC should recognize that "license applications for all 428 RSAs [were received] in just a six-month period and licensing was completed for the RSAs, except for the markets involving complex legal issues, less than three years later."⁶⁸

⁶⁴ Sprint at 4.

⁶⁵ DOJ at 22-23.

⁶⁶ *See, e.g.*, NTIA at 14-15.

⁶⁷ BellSouth at 32.

⁶⁸ BellSouth at 32; *see also* AllTel at 14; CBT at 15-16; USTA at 21.

MSAs and RSAs are also suited to the microcellular characteristics of new 2 GHz services and provide, if anything, territory in excess of geographic needs.⁶⁹ "With smaller cells," Sprint recognizes, "the ideal PCS serving area may be quite different, and correspondingly smaller, than the cellular service areas that have evolved."⁷⁰ Thus, MSAs and RSAs "seem well-matched to the realistic technical and market characteristics of future microcellular Personal Communications Services."⁷¹

Commenters have also argued that MSAs and RSAs have substantial benefits from an administrative standpoint, since these boundaries are well-known and were designed explicitly for mobile services.⁷² As one commenter notes, "[t]he MSA and RSA definitions are time-tested licensing area definitions specifically developed for area-wide radio licensing,"⁷³ which "reflect hundred of changes made in response to industry comments."⁷⁴ Accordingly, "[t]his administratively simple scheme benefits the FCC, which has already established well-defined boundaries and priorities among markets for licensing."⁷⁵ These definitions also benefit the consumer public by conforming to realistic customer expectations

⁶⁹ See, e.g., McCaw at 15-16; BellSouth at 35; CSI at 4; Century at 11-12; Centel at 12; GTE at 34-35; NYNEX at 23; Palmetto at 2; Rock Hill at 5; SNET at 7.

⁷⁰ Sprint at 6; see also CTIA at 55.

⁷¹ GTE at 33.

⁷² See, e.g., McCaw at 15; AMTA at 7-9; BellSouth at 30-31; CTIA at 36-40; Centel at 11; Century at 10; CBT at 16; GTE at 35; NYNEX at 24; Rochester at 18; Rural Cellular at 2; USTA at 21; Vanguard at 12; Viacom at 17.

⁷³ BellSouth at 30.

⁷⁴ BellSouth at 32.

⁷⁵ GTE at 35.

for mobile services, and the financial community, which now has extensive experience in valuating these areas.⁷⁶

Finally, as Centel and others point out, "service areas based upon MSA/RSA boundaries could facilitate the integration of cellular and PCS systems into seamless wireless networks."⁷⁷ By adopting similar licensing areas for 800 MHz and 2 GHz services, providers will more easily be able to coordinate complementary interservice offerings without overlap or boundary problems.

2. The Purported Benefits of Larger Areas Can Be Achieved Without Constricting Entry Opportunities

Many commenters have properly recognized that the purported benefits of larger areas can be achieved through the interplay of market forces if MSAs and RSAs are used.⁷⁸ Clearly, standardization, interoperability, and roaming can be effectively realized through joint licensee initiatives in standards organizations or through consolidation of smaller serving areas. The *Notice*, however, asks whether these marketplace forces should be preempted by licensing of larger service areas to avoid the transaction costs incurred in the 800 MHz cellular service. As discussed below, however, the record shows that consolidation

⁷⁶ See, e.g., BellSouth at 30-31; CTIA at 36-40; Century at 10; GTE at 35; USTA at 21.

⁷⁷ Centel at 12. See also, Century at 6-7; GTE at 35.

⁷⁸ See, e.g., Alltel at 13-14; BellSouth at 35; Century at 11; Sprint at 6-7; NYNEX at 22-24; Rock Hill at 5-6; DOJ at 21.

experienced in cellular markets does not necessarily provide a useful guide for the development 2 GHz PCS offerings.

As an initial matter, the "benefits" attributed by some commenters to large license regions, such as universal interoperability and roaming, may not always be desirable. DOJ postulates that such features might appeal to some, but that another "customer, . . . might prefer lower-cost service that does not offer that feature; PCS licensees should be free to pursue those customers."⁷⁹ DOJ also notes that awarding national licenses on the rationales of promoting universality and developing standards is also defective because, "to the extent that the market determines that [these features] are desirable or appropriate, [they] can be achieved without awarding national licenses at the initial period in the development of PCS."⁸⁰

As a further matter, the argument that large licensing areas are needed for PCS because MSAs and RSAs were "too small" for cellular customer needs fails to recognize that the true size of cellular markets and PCS markets may not be comparable.⁸¹ In this regard, DOJ notes that the *Notice's* "observations [regarding cellular consolidation] are relevant to, but not dispositive of, the question of the appropriate PCS license area size," since "[t]he

⁷⁹ DOJ at 19.

⁸⁰ DOJ at 17-18.

⁸¹ Importantly, McCaw is not suggesting that the Commission utilize "cellular" licensing areas for PCS, or that there is any correlation between PCS and cellular service patterns. Rather, McCaw is suggesting that MSAs and RSAs should be used because they are the smallest available practical market divisions. In fact, McCaw would suggest even smaller areas, since PCS will be a highly localized service. *See, e.g., n.69, infra.*

size of current cellular service areas may be misleading. . . ."⁸² NTIA, for its part, argues strongly that "the Commission should be careful in interpreting [cellular] market development as a guide to PCS" because "there may be little correlation between the optimal size of a cellular license and optimal size of a PCS license."⁸³ NTIA further notes that "many [cellular] acquisitions did not serve to consolidate geographically licensees' properties," but rather merely transferred a license from a spectrum speculator to an entity seeking to provide service to the public.⁸⁴

There are, in fact, valid reasons to believe that the most efficient PCS markets will *not* resemble current cellular consolidation patterns. As one commenter observed, the "cellular service was envisioned primarily as a service for customers travelling in automobiles, a service that implies the need for relatively large service areas, and has resulted in a relatively expensive, high-function service."⁸⁵ A service without these architectural and cost constraints, such as the proposed 2 GHz offerings, may develop quite differently,⁸⁶ and indeed, "[t]he 'efficient size' of a PCS firm may vary over time, by area, by service provided, or by technologies used to provide those services."⁸⁷

⁸² DOJ at 17.

⁸³ NTIA at 13-14 n.24.

⁸⁴ NTIA at 13-14 n.24.

⁸⁵ DOJ at 20.

⁸⁶ Indeed, the recent Joint Experts Meeting on PCS technical standards, for example, did not include vehicular capability among the core required functions for new 2 GHz services.

⁸⁷ DOJ at 21.

As a consequence, DOJ argues, "[i]n view of the difficulty in predicting at such an early stage of PCS technology the likely efficient size of PCS service areas, license areas should be established in the way that will best permit the market to adjust to achieve efficient service areas."⁸⁸ Notably, however, erring by creating more extensive regions than necessary is not self-correcting, unlike erring by establishing smaller markets that can be consolidated. Numerous commenters have recognized that larger areas are hard to "trim down" to achieve optimal sizing.⁸⁹

Furthermore, the detrimental effects of licensing large areas are likely to be persistent. Licensing large areas, for example, will tie up valuable spectrum resources for long periods, and thus implicates lasting spectral efficiency concerns, since providers will tend to serve only the most densely populated regions at the outset.⁹⁰ Larger areas also generally benefit "deep pockets"⁹¹ because "[t]he large geographic service areas proposed by the Commission will create a financial hurdle so high that only the largest companies would be able to participate in these services."⁹² This, in turn, means that excessively large service areas would restrict entry as the service is developing, permanently distorting competition.

⁸⁸ DOJ at 21.

⁸⁹ Sprint at 7; *see also* Alltel at 13; BellSouth at 34; NTIA at 15; NYNEX at 24; USTA at 22; DOJ at 21 & n.22.

⁹⁰ *See, e.g.*, McCaw at 17; CTIA at 48-49; GTE at 34; NTIA at 15-16; Sprint at 8; DOJ at 22-24; USTA at 21; Vanguard at 12.

⁹¹ *See, e.g.*, McCaw at 21; GTE at 35 n.32; USTA at 19-21.

⁹² Concord at 3.

3. The Other Proposals for Licensing Areas In The *Notice* Suffer Serious Defects

A large number of commenters have also expressed pointed dissatisfaction with national, Major Trading Area ("MTA"), Basic Trading Area ("BTA"), and Local Access and Transport Area ("LATA") licensing. Not only do these larger areas share the deficiencies noted above, but commenters have also raised additional problems specific to each of these forms of licensing. Accordingly, as discussed below, licensing regions for PCS that are larger than MSAs and RSAs is not in the public interest.

National Licenses. Commenters have opposed the use of national license areas because such a scheme would slow deployment,⁹³ and, more importantly, sacrifice diversity and innovation.⁹⁴ As noted by DOJ, "[national licensing] could severely limit the total number of firms nationwide that can enter PCS businesses and thereby retard the development of innovative and diversified PCS services."⁹⁵ Accord to Telocator and other commenters, national licenses could also detrimentally affect standards development.⁹⁶

[W]hile assignment of a single nationwide license would accomplish the establishment of a *de facto* technical standards for PCS, it would do so at the expense of technical experimentation and diversification. Such a strategy creates the significant potential that the industry will commit itself early to a technology which is not, in fact, the optimum

⁹³ See, e.g., McCaw at 18-19; Alltel at 15; AMTA at 8-9; BellSouth at 37-39; CTIA at 51-52; Florida at 7-8; GTE at 34 n.30; SWB at 22-23; DOJ at 21; Vanguard at 12-13; Viacom at 17-18.

⁹⁴ See, e.g., BellSouth at 38; GTE at 34 n.30; NYNEX at 21; Sprint at 8; SWB at 23; Vanguard at 13.

⁹⁵ DOJ at 16.

⁹⁶ USTA at 21.

technology for PCS, and reduces the opportunity for marketplace experience to identify and drive PCS technology to that technology which best meets the marketplace's needs.⁹⁷

Under these circumstances, McCaw believes its characterization of national licensing as the "worst possible option" has been adequately supported by the record and should not, in any event, be adopted.

MTA and BTA Service Areas. The record also demonstrates persuasively that licensing using MTAs or BTAs is not in the public interest.⁹⁸ NTIA notes that the Commission has "little basis . . . for concluding that either the [MTAs] or [BTAs] are ideal as areas for PCS licenses," because "they do not necessarily reflect the needs of future PCS users," "the [BTAs] are almost as numerous as MSAs and RSAs," and "the [MTAs] may be considered too large because they often incorporate more than one metropolitan area."⁹⁹ Furthermore, as CTIA points out, the Commission has already rejected the use of BTAs for wireless services after receiving criticism 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."¹⁰⁰

"Since a proposal to use BTAs as licensing areas for a wireless services already has been rejected by the Commission after public comment, and since an investment of significant

⁹⁷ Telocator at 8.

⁹⁸ See, e.g., McCaw at 19-20; BellSouth at 36-37; CTIA at 40-50; NTIA at 20; Rochester at 16; Vanguard at 10-11.

⁹⁹ NTIA at 20.

¹⁰⁰ CTIA at 43 (citing *Selection from Mutually Exclusive Competing Cellular Applications*, 98 F.C.C.2d 175, 206 (1984)).

time and resources would be required to customize the Trading Areas for PCS," CTIA concludes the use of Trading Areas here "is inherently suspect."¹⁰¹ Accordingly, MTAs and BTAs should not be used for PCS licensing.

LATA-Based Service Areas. The Commission's final option, LATAs, also has been soundly criticized by commenters.¹⁰² As noted by NTIA, LATAs do not appear to be "a viable alternative for defining PCS service areas" "[b]ecause LATAs were drawn to accommodate the terms of the AT&T consent decree, [and NTIA] question[s] whether they have strong relevance to all potential PCS providers other than the telephone companies that have been directly affected by them."¹⁰³ Indeed, even the "telephone companies that have been directly affected by them" do not support LATA licensing.¹⁰⁴ Under the circumstances, the Commission should not utilize LATA-based licensing for new mobile services.

4. MCI's Proposal To License Three National Consortia By Comparative Hearings Is Fundamentally Flawed and Inconsistent with the Commission's PCS Goals

Although the majority of commenters supported licensing PCS on a MSA/RSA or other type of local basis, MCI urges the Commission to license PCS on an national basis in

¹⁰¹ CTIA at 43-44.

¹⁰² *See, e.g.*, McCaw at 21; AMTA at 8-9; CTIA at 44; Cox at 11; Comments of Metrocall of Delaware, Inc. at 9 ["Metrocall"]; NTIA at 18; Omnipoint at 16; Rochester at 17; SWB at 23-24; Sprint at 8.

¹⁰³ NTIA at 18.

¹⁰⁴ Ameritech at 17-18; Bell Atlantic at 15-28; BellSouth at 30-39; NYNEX at 21-24; Comments of Pacific Telesis Group at 21-28 ["PacTel"]; SWB at 23-24; Comments of U S West, Inc. at 12-15 ["U S West"].

the form of three mandatory national consortia. MCI's melding of the concept of local operators with the enforced overlay of a national manager, however, sacrifices the virtues of both without helping to achieve any of the Commission PCS policy goals. The MCI national consortium proposal is fundamentally flawed, self-serving, and must be rejected.¹⁰⁵

National consortia would limit, not promote, diversity and competition in PCS offerings. In the *Notice*, the Commission established as two of its objectives fostering a rich diversity of PCS services and establishing a competitive marketplace. National consortia would impede these goals in several critical respects:

- ▶ By licensing only three national PCS providers, the MCI proposal would produce at most three different PCS basic approaches. That national consortia could restrict diversity is evident from MCI's reference to "standardized construction plans" and nationally prefabricated parts.¹⁰⁶ In contrast, even assuming just three licensees per market, licensing on an MSA/RSA basis would create more than two thousand new opportunities for PCS service providers.
- ▶ A national consortium structure would constrain regional and local innovation and diversity. By insisting that local PCS providers set aside spectrum for an unspecified, but potentially broad, "uniform floor" of "basic services," a national consortium would impede the development of unique responses to regional and local market needs.¹⁰⁷
- ▶ Limiting PCS to three national service providers would run a great risk of turning PCS into a commodity business with few significant distinctions. The "uniform floor" cited by MCI could easily stunt PCS development by leading

¹⁰⁵ MCI nowhere addresses the fact that consortia historically have been created to establish a monopoly service provider where a spectrum shortage or other factors make competition impractical.

¹⁰⁶ MCI at 12. MCI cites these as grounds for alleging that national consortia would enjoy economies of scale. In this respect, the alleged economies of scale would come at the cost of a reduction in service diversity.

¹⁰⁷ MCI concedes that the national network manager would "require" its local operators to provide "a uniform floor of basic services." MCI at 10. There can be no assurance that the "uniform floor" will not consume all of the spectrum available to a given consortium.

to the replacement of diverse local PCS services with a narrow selection of nationwide norms.¹⁰⁸ The result would be less, not greater, diversity in PCS services.

Licensing national consortia through comparative hearings would not facilitate the speed of deployment of PCS. MCI's comments argue that selecting consortia through comparative hearings would minimize delays inherent in comparative procedures. Upon inspection, however, MCI's proposal suffers from all of the defects associated with comparative hearings. As discussed below, adding the further dimension of a national network consortium would protract an already cumbersome comparative process.

- ▶ Comparative hearings are not likely to produce a speedy deployment of PCS. MCI suggests that licensing PCS through the use of comparative hearings for three consortia would lead to swift implementation of PCS. This optimism, however, is unjustified for several reasons: (1) as shown by the experience in licensing the top 30 cellular MSAs, comparative hearing processes can lead to substantial delays in service implementation; (2) MCI's expectation that there would be few applicants for the national consortia is unrealistic, and the prospect of winning one of only three national franchises would surely attract speculation on a scale dwarfing that of recent mobile services licensing proceedings; (3) given the enormous value of national spectrum rights, applicants can be expected to wage protracted legal battles, even if only two applicants are involved;¹⁰⁹ and, (4) MCI's proposal requires developing new and complex comparative criteria -- a time-consuming and contentious process.

- ▶ MCI's proposal does not avoid the need for the FCC to review the qualifications of the local licensees. Indeed, even under its proposal, MCI concedes that the FCC would review the qualifications of both the national

¹⁰⁸ MCI at 10.

¹⁰⁹ The comparative hearing in *RKO General* lasted nearly twenty years. *RKO General, Inc. (KHJ-TV)*, 3 FCC Rcd 5051 (1988).

managers and the local operators, so MCI's claimed benefit would not exist.¹¹⁰

- ▶ MCI's proposed eligibility criteria would slow the deployment of PCS by rendering ineligible many of the most experienced national providers of cellular and other telecommunications services. In the name of diversity, MCI advocates licensing criteria that effectively disqualify the most experienced national providers of cellular and other communications services -- which include many of the applicants for pioneer preferences.¹¹¹ Licensing PCS solely to national consortia lacking experience in providing nationwide mobile telecommunications simply is not likely to speed deployment, given that even MCI concedes that "technical knowledge is essential" to PCS deployment.¹¹²
- ▶ Theoretical speed of licensing gains would not necessarily lead to speed of deployment. Even if national consortia were to quicken the licensing process, MCI's consortium proposal does not assure swift deployment of PCS on a local basis. MCI's proposed scheme allows consortia to apply without identifying all local operators, potentially creating unserved "gaps" that could persist indefinitely. In addition, the years of problems with cellular pre-lottery settlements suggest that even voluntary settlement arrangements do not necessarily lead to swift service implementation.¹¹³

MCI's proposal will not ensure ubiquitous service and would remove marketplace incentives for service to rural areas. In the Notice, the Commission established "universality" as one of its policy goals in providing spectrum and a regulatory structure for

¹¹⁰ Furthermore, even licensing a national entity might not avoid the need to consider the qualifications of the participants to serve as licensees themselves. For example, in *Land Mobile Satellite Service*, 4 FCC Rcd 6041, 6043 (1989), *rev'd and remanded sub nom. Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428 (D.C. Cir. 1991), *on remand, Land Mobile Satellite Service*, 7 FCC Rcd 266 (1992), the FCC reviewed the legal, technical, and financial qualifications of the individual participants in the consortium.

¹¹¹ See MCI at 9 n.6. MCI's proposed criteria would appear to preclude all of the following experienced mobile and national communications services providers, among others, from any meaningful role in PCS: McCaw, the Bell Operating Companies, most large independent LECs, AT&T, and Sprint.

¹¹² MCI at 8-10.

¹¹³ See *Rural Cellular Service*, 4 FCC Rcd 2440 (1988). The Commission found that allowing the pre-decisional formation of "alliances" had consumed excessive staff time and delayed service to the public.

PCS. Experience in the mobile services demonstrates that a national consortia approach is unnecessary for achieving universality. The cellular experience demonstrates that licensees will voluntarily cooperate to produce the degree of universality the market requires. As the Commission recognizes, cellular service is now available on a nationwide basis.¹¹⁴ Not only have cellular licensees spent substantial resources in introducing service to their own urban and rural service markets, but they also voluntarily have cooperated in order to provide seamless service for roamers, such as McCaw's North American Cellular Network,¹¹⁵ without the need for national consortia.

Finally, the assumption that a national consortium would assure universal coverage is unsupported. Under MCI's proposal, a consortium could apply with gaps in its coverage of local and rural markets, with no obligation to have them filled in at any time thereafter.¹¹⁶ This provides no assurance that the consortium would ever establish universal service. Furthermore, licensing national consortia would be less effective in bringing PCS to rural areas than licensing multiple competing local service providers, since

¹¹⁴ Notice at 5678. Even MCI has commended the performance of the cellular industry in increasing subscribership and in increasing the ability to serve "roamers." *MCI Petition for Rulemaking for Policies and Rules Pertaining to the Equal Access Obligations of Cellular Licensees* at 1-3, RM-8012 (filed June 2, 1992).

¹¹⁵ The North American Cellular Network provides another example of how members of the cellular industry voluntarily have worked together to improve service across regions. Still another example is the recent Request for Proposal issued by the Cellular Telecommunications Industry Association regarding a backbone signaling network to allow a "seamless roaming network" by next summer. See "CTIA Seeks Bids From Companies Interested In Building National 'Seamless Roaming' Network; Automatic Call Delivery Service Expected To Be Operational By Next Summer," *Telecommunications Reports* at 35 (Nov. 23, 1992).

¹¹⁶ See MCI at 16. MCI states that the national consortium would "designate the areas with which its local owner-operators . . . would build and later operate the PCS infrastructure." *Id.* at 10.

those consortia having "gaps" in the initial application would likely receive less attention from the national manager than heavily populated areas.

II. THE RECORD SUBSTANTIATES THE NEED FOR OPEN ENTRY POLICIES FOR ALL CLASSES OF CARRIERS

A. THE RECORD STRONGLY SUPPORTS OPEN ELIGIBILITY FOR ALL QUALIFIED APPLICANTS

A broad base of commenters have shown that erecting artificial entry barriers does not serve the public interest. The Commission should instead adopt policies that neither exclude nor favor any qualified applicants for new PCS spectrum opportunities. As discussed below, both a ban on cellular participation and spectrum set-asides for local exchange companies ("LECs") are unjustified and unwarranted.

Many commenters have argued that excluding cellular carriers from new PCS spectrum opportunities will prevent the fullest development of new PCS offerings in the 2 GHz band.¹¹⁷ As stated by Telocator:

Cellular carriers, as evidenced by the wide range of PCS offerings on cellular spectrum and the number of experimental PCS filings, can

¹¹⁷ See, e.g., McCaw at 22-33; Alltel at 5-8; Ameritech at 14-17; Comments of Anchorage Telephone Utility at 1-5 ["Anchorage"]; Bell Atlantic at 5-12; BellSouth at 43-49; CCI at 7-15; Centel at 14-17; Century at 2-7; CTIA at 59-69; Florida at 8-10; Comments of Freeman Engineering Associates, Inc. at 11 ["Freeman"]; GTE at 36-42; Comments of Harrisonville Telephone Company at 2-4 ["Harrisonville"]; Comments of Hughes Network Systems, Inc. at 7-8 ["Hughes"]; Comments of the Illinois Commerce Commission at 9-10 ["Illinois"]; Comments of Interdigital Communications Corporation at 12-15 ["Interdigital"]; Comments of Kerrville Telephone Company at 2-6 ["Kerrville"]; Lincoln at 8-9; Comments of Point Communications Company at 3 ["Point"]; Comments of Puerto Rico Telephone Company at 7-12 ["PRTC"]; Comments of Roseville Telephone Company at 10 ["Roseville"]; Rural Cellular at 3; Comments of the Rural Independent Coalition at 8-13 ["RIC"]; SNET at 3-6; SWB at 13-15; TDS at 13-22; USSBA at 21-22; Comments of the Utilities Telecommunications Council at 33-34 ["UTC"]; Vanguard at 16.

add innovation and diversity to 2 GHz PCS. Cellular operators also have existing plant, personnel, and resources available to rapidly deploy new 2 GHz services upon authorization. Cellular carriers . . . have experience, resources, and expertise useful in bringing PCS to its fullest potential.¹¹⁸

As discussed below, these arguments were echoed by a number of other parties, who also noted that cellular carriers' expertise, knowledge, resources, and infrastructure will allow them efficiently to implement a diverse and innovative range of new PCS offerings that cannot now be offered on cellular spectrum for the following reasons.

First, commenters have noted that cellular carriers have invaluable expertise in wireless services that would make them efficient competitors in new 2 GHz PCS spectrum.¹¹⁹ Centel argues, for example, that "[c]ellular carriers have developed expertise in customer needs, wireless technology, infrastructure requirements, and capital formation that should be brought to bear on expanding the scope of PCS services."¹²⁰ Furthermore, parties note that cellular carriers have developed extensive knowledge pertaining to the particular wireless needs of customers in their existing service areas, which would allow them to offer more services tailored to localized needs.¹²¹

¹¹⁸ Telocator at 5.

¹¹⁹ *See, e.g.*, McCaw at 27; Bell Atlantic at 8-9; BellSouth at 44-45; Centel at 15-16; GTE at 37; PacTel at 15; SWB at 15; Comments of Telocator at 5 ["Telocator"].

¹²⁰ Centel at 15.

¹²¹ *See, e.g.*, Alltel at 6-7; BellSouth at 43; CCI at 8.

Second, the record shows that cellular carriers can implement new 2 GHz PCS offerings rapidly and economically by utilizing existing infrastructure and resources.¹²² Indeed, Vanguard argues that "[b]y failing to permit cellular licensees to utilize . . . existing and ubiquitous wireless networks in the development of 2 GHz PCS systems, the Commission could jeopardize the prompt delivery of affordable, diverse and universal PCS services."¹²³ Rochester, for its part, notes that "[p]recluding . . . cellular companies from holding PCS licenses would effectively remove companies that could well be the most efficient PCS providers."¹²⁴

Third, commenters have persuasively shown that cellular carriers will bring innovation and diversity in services.¹²⁵ BellSouth, for example, argues that:

In a free market, without eligibility restrictions, the public benefits from particular companies' interest in offering a wide range of related products or services, other companies' potential economies of scale or scope in offering new products or services, and other companies' interest in providing new or hybrid products as new entrants. If there are artificial restrictions on entry, however, the diversity of offerings will be lessened.¹²⁶

Thus, authorizing cellular carriers to participate will bring great advantages in speed of deployment and diversity of services. Using their existing networks as a wireless backbone,

¹²² See, e.g., McCaw at 31; Bell Atlantic at 5-10; BellSouth at 45; CCI at 9-10; CTIA at 67; Centel at 16; GTE at 37; SNET at 5; SWB at 15; TDS at 20; Telocator at 5; USTA at 18-19; Vanguard at 17.

¹²³ Vanguard at 17.

¹²⁴ Rochester at 9.

¹²⁵ See, e.g., McCaw at 30-31; BellSouth at 40-45; TDS at 21; Telocator at 5.

¹²⁶ BellSouth at 40.

cellular carriers will also be able to foster ubiquity and provide low cost service for the public.

Finally, the record shows that the hypothesized potential for anticompetitive conduct purportedly justifying a cellular exclusion is unrealistic in light of current cellular capacity constraints.¹²⁷ Southwestern Bell, for example, notes that "unduly limiting cellular participation would be particularly troublesome because it could stop or slow the natural evolution and growth of cellular into more personal-based mobile services."¹²⁸ USTA further notes that the vast benefits of cellular participation will not materialize absent allowing cellular carriers full participation in new spectrum opportunities due to these capacity constraints:

It is also clear that capacity, economic constraints and the embedded network architecture presently used in delivering cellular service will not permit, within the spectrum allocated for cellular, the wide range of services and price points that are necessary to meet the needs of a broad range of customers.¹²⁹

McCaw believes that the record clearly shows that the benefits of permitting cellular participation in new spectrum opportunities outweigh any prospective threat of anticompetitive action.¹³⁰

¹²⁷ See, e.g., McCaw at 29-30; BellSouth at 47-48; Century at 5-6; CTIA at 65-67; Comcast at 10-11; GTE at 40; Harrisonville at 5-6; USTA at 17-18.

¹²⁸ SWB at 14.

¹²⁹ USTA at 17.

¹³⁰ If the Commission nonetheless concludes that the mere fact that cellular carriers have access to some spectrum for mobile services warrants restricting cellular eligibility, the Commission must also consider restricting the eligibility of other prospective PCS providers that have resources that could potentially be used to
(continued...)

In a similar vein, commenters, other than rural telephone companies,¹³¹ have also virtually uniformly rejected policies favoring particular classes of carriers through the use of set-asides as being unwarranted and discriminatory.¹³² Indeed, the Bell Operating Companies, the largest LECs in the country, have not supported set-asides for local exchange operations. As stated by the New York Department of Public Services, "[w]hereas the Bell system was recognized as the primary proponent and developer of cellular technology -- thus the justification for a LEC set-aside -- this is not the case for PCS."¹³³ Accordingly, LEC set-asides for PCS licenses are unwarranted and have not been justified on the record.

B. A RECENT OFFICE OF PLANS AND POLICY STUDY STRONGLY SUPPORTS CELLULAR PARTICIPATION IN PCS

On November 10, 1992, the Office of Plans and Policy released a landmark working paper on the cost structure of PCS that convincingly concludes that consumers will benefit by cellular participation in PCS. The *OPP Paper* makes a number of important findings in support of this conclusion. As set forth below, the *OPP Paper* finds the potential for strong

¹³⁰(...continued)

offer PCS. In particular, it would be discriminatory to restrict cellular eligibility while allowing entry by specialized mobile radio providers, which also have spectrum; cable operators, which have an existing base of fiber optic and coaxial cable; and, alternative access providers, which have existing transmission plant facilities. *See, e.g., Alltel* at 6; *Century* at 4; *Bell Atlantic* at 10-14; *GTE* at 22.

¹³¹ *See, e.g.,* Comments of Clear Creek Mutual Telephone Company, *et al.* at 6 ["Clear Creek"]; Comments of National Rural Telecom Association and the Organization for the Protection and Advancement of Small Telephone Companies at 13-15 ["OPASTCO"]; *SCTA* at 10-12; *USTA* at 22-27.

¹³² *Adelphia* at 12; *BellSouth* at 24; Comments of Cablevision Systems Corporation at 14-15 ["Cablevision"]; Comments of CELSAT, Inc. at 18-19 ["CELSAT"]; *Florida* at 11; *New York* at 9-10; Comments of Pagemart, Inc. at 12 ["Pagemart"]; *DOJ* at 30.

¹³³ *New York* at 9.

economies of scope between PCS and cellular that can significantly alter the cost function for PCS. The *OPP Paper* also finds that without additional spectrum, cellular operators could be precluded from implementing PCS technologies. Finally, the *OPP Paper* clearly suggests that the benefits of cellular "in-market" participation outweigh any competitive concerns. McCaw urges the Commission to rely on the objective and rigorous work of its own staff in resolving vital PCS policy issues.

The OPP Paper finds the potential for significant economies of scope between cellular and PCS. The *OPP Paper* identifies the many elements of existing cellular networks that also can serve PCS: "A PCS network of microcells and a cellular network of macrocells could share portions of the switching, backhaul, and cell site, and handset costs."¹³⁴ Indeed, the architecture of a typical cellular system is very similar to the PCS architecture, except on a larger scale.¹³⁵ *OPP* properly recognizes that the costs of implementing PCS can be reduced by capturing such economies of scope, which "exist between services when the costs of providing these services over one network is less than the combined cost of separate networks."¹³⁶ Importantly, "the model only assumes that the start-up costs of the switch and handset costs can be shared," and thus *OPP's* model "ignores

¹³⁴ *Id.* at 39. McCaw notes that the *OPP* cost model assumed that only the start-up costs of the switch and handset costs can be shared. *Id.* The *OPP Paper* thus ignored the potential economies of scope between switching, portions of the backhaul, and antenna site locations. Had these network elements been included in the cost model, the result would have been a finding of even stronger economies of scope. *See id.* at 39-40.

¹³⁵ *See id.* at 36.

¹³⁶ *Id.* at vi.

potential economies of scope between switching, portions of the backhaul, and antenna site locations."¹³⁷

Specifically, the *OPP Paper* states that the economies of scope found between cellular and PCS produce two beneficial effects. First, such economies lower the upfront investment needed to provide PCS.¹³⁸ By utilizing the existing infrastructure of cellular networks, PCS providers can replace the substantial fixed costs of implementing PCS with incremental costs.¹³⁹ The reduced upfront investment makes it more attractive for a firm to enter the PCS market and to provide services in areas where it otherwise may not be economically justified.¹⁴⁰ This, in turn, facilitates the rapid development of an efficient PCS infrastructure, which OPP has identified as an important policy objective in this proceeding.¹⁴¹

The second beneficial effect of the economies of scope found between cellular and PCS is to "reduce to 10 percent the level of subscription at which economies of scale are exhausted for a PCS provider."¹⁴² OPP's cost model indicates that scope economies are the key to realizing important, cost-saving economies of scale. By reducing the penetration level at which such economies are exhausted, the *OPP Paper* suggests that cellular

¹³⁷ *Id.* at 39.

¹³⁸ *Id.* at 43.

¹³⁹ *See id.*

¹⁴⁰ *Id.* at 29.

¹⁴¹ *See id.* at 46.

¹⁴² *Id.* at vii; *see also id.* at 43.

participation in PCS will result in the economically efficient provision of PCS by a maximum number of licensees.¹⁴³

The OPP Paper Finds That Without Additional Spectrum, Cellular Operators Could Be Precluded From Implementing PCS Technologies. The *OPP Paper* recommends that cellular operators be allowed to acquire an additional 10 MHz of spectrum in their existing service areas, and be treated like any other PCS provider in other service areas.¹⁴⁴ OPP realizes that the only way in which cellular operators can provide the kind of low-cost, mass market PCS the Commission envisions is by increasing the existing cellular spectrum allocation.¹⁴⁵ The *OPP Paper* states that "an allocation size below 35 MHz is insufficient to deliver both cellular services and [less spectrally efficient] PCS at the same level of costs."¹⁴⁶ McCaw strongly concurs with OPP that "[w]ithout this additional spectrum, cellular operators could be precluded from implementing [low-cost PCS]."¹⁴⁷

¹⁴³ See *id.* at 49-52.

¹⁴⁴ *Id.* at v and 57-59.

¹⁴⁵ At the same time, however, the *OPP Paper* acknowledges that cellular operators must be able to take advantage of the propagation characteristics of 2 GHz spectrum, which are ideally suited to providing PCS using microcells. *Id.* at 58 ("cellular operators could take advantage of natural propagation characteristics by using 2 GHz spectrum to deliver PCS using microcells, while continuing to use 800 MHz frequencies for mobile services") & 62 n.2 ("increased path loss at 2 GHz may actually affect frequency re-use favorably by increasing signal isolation and reducing interference with other signals between small cells").

¹⁴⁶ *Id.* at 42. In this regard, however, OPP fails to recognize that cellular is highly efficient and deriving extra capacity through decreasing the voice coding rate, in IS-54, to 8 kbps. In contrast, many PCS providers are seeking to implement PCS systems utilizing vocoder rates of 32 kbps. If the ultimate goal is to promote competition between these services, the Commission must recognize that 800 MHz services should not be forced to lower vocoder rates simply to ensure the availability of capacity.

¹⁴⁷ *Id.* at 57.

The *OPP Paper* also recognizes that cellular operators wishing to enter the PCS market must continue to support analog base stations and handsets, thereby reducing the amount of spectrum available for PCS.¹⁴⁸ In light of the fact that providing PCS within a small spectrum block would needlessly raise the cost of service, OPP concludes that "cellular operators could reduce network costs by using additional spectrum to manage their transition to new digital technologies"149

The OPP Paper Demonstrates That the Benefits of Cellular In-Market Participation Outweigh Any Competitive Concerns. The *OPP Paper* proves conclusively that the benefits of cellular in-market participation in PCS outweigh any competitive concerns. Two results of the OPP cost model offer striking evidence for this conclusion. First, the *OPP Paper* determined that "the strong economies of scope found between PCS and . . . cellular services demonstrate that consumers could benefit from allowing these companies to hold PCS licenses."¹⁵⁰ OPP emphasizes that the "explicit cost" of any restrictions on cellular participation is the loss of production efficiencies.¹⁵¹

Second, OPP confirmed that competitive concerns about cellular participation are speculative at best. The *OPP Paper* states that because economies of scale are largely exhausted at low penetration levels, "it is highly unlikely that one or two firms would

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 56.

¹⁵¹ *Id.*

dominate the market due to any cost characteristics of the market."¹⁵² Moreover, OPP recognizes that cellular carriers obtaining new spectrum "cannot afford to be complacent" and "[t]he competitive threat of PCS will spur cellular carriers to reasonably match the services and features offered by PCS providers."¹⁵³ Consequently, if the Commission adopts the proposal to license five or six PCS providers per market -- supported by McCaw, many other commenters and OPP -- concerns about attempts to suppress competition would be ill-founded.¹⁵⁴

III. REGULATORY PARITY BETWEEN NEW AND EXISTING PCS CARRIERS IS A PRECONDITION TO A ROBUSTLY COMPETITIVE MARKET

A. COMMENTERS HAVE AGREED THAT REGULATORY PARITY IS NEEDED BETWEEN NEW AND EXISTING PCS PROVIDERS

Numerous and diverse commenters have argued that the issue of the appropriate regulatory status of new 2 GHz PCS licensees should be considered within the larger context of regulatory parity for all wireless services licensees.¹⁵⁵ Telocator, for example, observes

¹⁵² *Id.*

¹⁵³ *Id.* at 40.

¹⁵⁴ *See id.* at 58. The *OPP Paper* states "[i]f five or six 20 MHz licenses are issued, then the benefits of allowing cellular operators to acquire a small amount of additional spectrum would appear to outweigh the costs" *Id.*

¹⁵⁵ *See, e.g.,* McCaw at 44-45; Alltel at 16-17; APC at 49; Ameritech at 22-23; Bell Atlantic at 30-31; BellSouth at 65-66; CCI at 35-36; CTIA at 72-77; Centel at 24-26; Century at 12-13; CBT at 20-21; Ericsson at 27; GTE at 49-55; Metrocall at 18; OPASTCO at 18; NTIA at 39-40; Comments of the National Telephone Cooperative Association at 11 ["NTCA"]; PacTel at 43; Rural Cellular at 1; SNET at 8-9; SWB at 26-27; Sprint at 18-19; Telocator at 13-14; DOJ at 8-9; USTA at 35; Vanguard at 26-27.

that "[b]oth the industry and the public would be best served by adopting a uniform set of regulations that apply equally to the full family of PCS, including both new offerings and existing services such as cellular."¹⁵⁶ More pointedly, Ameritech states "[i]f private carriage status ends up providing a significant advantage to the new PCS entrants . . . , the equilibrium necessary to let the marketplace define success is destroyed. Regulatory interdiction, not competition, could control commercial success."¹⁵⁷ For these reasons, McCaw believes that the Commission must examine the regulatory status of new carriers by reference to regulatory models adopted for existing carriers. Ultimately, the public will benefit if the marketplace alone is allowed to "control commercial success."

The treatment of private and common carriers is clearly disparate. Numerous commenters have exhaustively catalogued the wide range of regulatory burdens that fall on common carriers, burdens from which private carriers are excused.¹⁵⁸ Commenters also recognize that "while each of these requirements has been imposed for public policy reasons, . . . each represents a specific trade-off that is affected by, among other things, the level of competition in the market and the relative level of regulation on other participants."¹⁵⁹ Indeed, as discussed in Section III.B, the recent Court of Appeals action in *AT&T v. FCC* further exacerbates these private carrier and common carrier imbalances.

¹⁵⁶ Telocator at 13.

¹⁵⁷ Ameritech at 22.

¹⁵⁸ *See, e.g.*, McCaw at 44-45; Ameritech at 22; Centel at 24-26; GTE at 50-52.

¹⁵⁹ GTE at 51.

If the Commission fails to acknowledge the factors leading to disparate regulation and insists upon treating the regulatory status of new carriers as a wholly independent question, competitive inequities will surely result. Bell Atlantic, for example, "finds problematic the skewed effect that disparate regulatory treatment of the services may have on marketplace competition by giving one service a wholly artificial advantage over another."¹⁶⁰ Similarly, Vanguard notes that "adopting common carrier regulation for one service and private carrier regulation for the other would lead to advantages in the marketplace that would have little or nothing to do with the relative merits of the services offered."¹⁶¹ In the end, the record makes clear that "[a]bsent [regulatory] comparability, government regulation will have injected a contrivance into the marketplace such that market efficiencies will be disrupted and market outcomes skewed."¹⁶²

B. THE RECENT DECISION COMPELLING FEDERAL TARIFFING OF COMMON CARRIER SERVICES UNDERSCORES THE REGULATORY IMBALANCES BETWEEN PRIVATE AND COMMON CARRIERS

In 1989, AT&T filed a complaint against MCI alleging that Section 203 of the Communications Act required domestic nondominant carriers to file interstate tariffs. After

¹⁶⁰ Bell Atlantic at 30.

¹⁶¹ Vanguard at 26.

¹⁶² CTIA at 73.