

- Supports 20 MHz allocation of PCS spectrum to the local exchange company (20).

**Licensing policies:**

- Supports lottery process with stringent anti-speculation safeguards as most viable option. These safeguards should include: (1) rigorous filing requirements, (2) high, non-refundable initial application fees, (3) demonstration of financial ability to construct and operate the system for one year, and (4) demonstration of technical capabilities to implement the proposal. The Commission should also establish construction deadlines and minimum coverage requirements (20-22).
- Supports the grant of a preference to applicants who have proven they can provide efficient, reliable service to the public (22-23).
- Supports a 10-year license term with a renewal expectancy (23).

**Regulatory status:**

- Different regulatory treatment for cellular and local exchange services and the new PCS licensees will create artificial and undesirable marketplace disparities (24-26).
- The proposed expanded cellular service option does nothing to address concerns about disparate regulatory treatment. Supports Telocator petition instead (26-28).
- Further disparities will arise if PCS providers are allowed to prohibit resale or interconnection to their infrastructures (28-29).
- Comparable interconnection to the PSTN should be made available to all categories of PCS providers (29-30).

**Technical standards:**

- In order not to stifle innovation, the Commission should adopt only minimal technical standards for PCS (30-31).
- Proposed higher power limits are inconsistent with microcellular system (31-32).
- The Commission should establish standards for roaming and interoperability between PCS systems (32).

**CENTURY CELLUNET, INC.**  
Comments on 2 GHz Licensed PCS

**Interest:** Cellular carrier

**Amount of spectrum per licensed system:**

- The Commission should license three broadband PCS carriers in each market with a 20 MHz channel and 5 MHz reserve for each. Each licensee could request the release of its 5 MHz of reserve spectrum on an as-needed basis. If not needed, the reserve can be reallocated (9).

**Service areas:**

- Supports use of MSAs/RSAs as PCS service areas. These areas are appropriate given the microcellular nature of PCS systems (10-12).

**Cellular carrier participation:**

- Cellular carriers should be allowed to hold PCS licenses both within and outside of their cellular service areas. Allowing them to acquire such licenses would not produce anticompetitive results (2-7).

**Local exchange carrier participation:**

- There should be no prohibition on LECs obtaining PCS licenses. LECs are uniquely positioned to offer various wireless services (8).

**Licensing policies:**

- There should be no limits on holding multiple licenses. Licensee merger decisions should be decided on a case-by-case basis (13).
- Supports lotteries as a selection process to expedite the provision of PCS and to allow a greater number of qualified applicants to compete for licenses (13-14).
- Filing fees should be reasonably related to the costs associated with processing the applications -- in no event should the fee exceed \$230.00 per market (14).
- To deter speculation, applications should be required to contain detailed engineering showings, and PCS licensees should be required to construct and operate the systems for one year before being permitted to assign the license or transfer a controlling interest (14).

- Parties that withdraw their applications or petitions to deny should be limited to recovering their reasonable and legitimate expenses (14).

**Regulatory status:**

- Supports liberalization of the cellular rules to permit cellular carriers to provide PCS-type services and removal of the notification requirement (7-8).
- Cellular carriers and PCS licensees should receive like regulatory status. If PCS is classified as private carriage, cellular carriers should have the option of classifying all or part of their operations as private land mobile radio services (12-13).

**CHESNEE TELEPHONE COMPANY**  
Comments on 2 GHz Licensed PCS

**Interest:** South Carolina rural local exchange company

**Band plan:**

- Five allocations of 20 MHz for licensed PCS systems. (1)

**Service areas:**

- Advocates MSA/RSA licensing. (1)

**Cellular carrier participation:**

- LECs with limited partnership interests or minority interests in cellular companies should not be excluded from PCS opportunities. (1)

**Local exchange carrier participation:**

- LECs should be permitted to participate fully in new PCS spectrum allocations because LECs require the latest technology to provide advanced telecommunications to their subscribers. (1)
- One 20 MHz block of licensed PCS spectrum should be set aside for LECs serving the area. (1)

**CINCINNATI BELL TELEPHONE COMPANY**  
Comments on 2 GHz Licensed PCS

**Interest:** Local exchange carrier.

**Band plan:**

- Supports authorization of four PCS licensees per market, each with one pair of 10 MHz frequencies (for a total of 20 MHz each), using 1850-1900 MHz for the lower band and 1930-1980 MHz for the upper band. The fifth pair of frequencies should be allocated to unlicensed PCS. (p. 14).

**Amount of spectrum per licensed system:** 20 MHz.

**Service areas:**

- Basing the PCS service areas on cellular service areas will promote localism, speed deployment of PCS, and eliminate unnecessary confusion. (pp. 15-16).

**Cellular carrier participation:**

- Opposes the FCC's proposal to limit same area interests in PCS and cellular licenses as inappropriately restrictive. Instead of a "greater than one percent" interest standard, the FCC should focus on actual control and participation in the affairs of a licensee. (pp. 8-13).

**Local exchange carrier participation:**

- Full LEC participation in PCS will foster the FCC's goals of universality, speed of deployment, diversity of services, and competitive delivery because LECs provide established infrastructure and experience. (pp. 3-8).

**Licensing policies:**

- Supports the use of lotteries to award PCS licenses, provided that FCC adopts strict application requirements, construction deadlines, and limits trafficking in permits and licenses. (pp. 16-20).

**Regulatory status:**

- PCS should be regulated as a common carrier; parties providing like services must be subject to like regulation. (pp. 20-21).

**CITIZENS UTILITIES COMPANY**  
Comments on 2 GHz Licensed PCS

**Interest:** Public utility providing telecommunications, gas, electric and water services.

**Cellular carrier participation:**

- The actual ability of cellular carriers to use their market power to stifle PCS entrants is questionable (7-8).
- However, if the Commission decides to preclude cellular carriers from obtaining PCS licenses in their service areas, mid-sized and smaller LECs with cellular investments limited to narrow geographic areas should still be eligible. These smaller LECs do not have dominant control of major cellular markets (8).

**Local exchange carrier participation:**

- Local exchange carriers must not be precluded from obtaining PCS licenses. LECs are particularly well positioned to bring PCS services quickly to the public (2-6).
- If LECs are required to provide reasonable interconnection on a "no-less-favored" basis, any potential concerns regarding LEC discrimination will be alleviated (5).
- Opposes allowing LECs only a reduced amount of 2 GHz spectrum (6).

**Licensing policies:**

- Reluctantly concludes that lotteries are the only viable licensing mechanism (9).
- To limit speculation, supports postcard filing process accompanied by substantial filing fees (9).
- Supports checking the qualifications of only winning applicants and the selection of contingent lottery winners (9-10).

**CITY UTILITIES OF SPRINGFIELD, MISSOURI**  
Comments on 2 GHz Licensed PCS

**Interest:** Municipal utility.

**Band plan:**

- Urges the FCC to set aside 10 MHz of spectrum in the 2 GHz band for utility PCS use for a limited period of time (3-4 years) as PCS promises substantial advances in utility efficiency. (pp. ii, 10-12).
- The 10 MHz of spectrum for utility PCS use could be a portion of the standard 30 MHz block but an additional allocation as suggested in the Notice would be preferable. (p. 13).
  - Alternatively, the 900 MHz band or other portions of the radio spectrum could be considered to satisfy utility need. (p. 13).
- Since utility related use would not tax the capacity of a 10 MHz PCS system, it should be used for a wider array of services such as support for local governmental communications requirements. (pp. 6-7).

**Service areas:**

- Narrower geographic areas should be defined for utility PCS operators, closer to the areas served by utilities and similar to those contemplated for LECs. (p. 13).

**Local exchange carrier participation:**

- Does not object to a set aside for LECs unless utilities would be forced to compete with LECs for the same spectrum. (p. 11).

**Licensing policies:**

- If a set aside for utilities is not adopted, utilities could be given a lottery preference. (p. 10).

**Technical standards:**

- Utility usage would not conflict with the FCC's proposed technical standards for either the 2 GHz or the 900 MHz bands -- telemetry and data applications can be accomplished within the power limits specified in the Notice's proposed rules. (pp. 7-8).

**CLEAR CREEK MUTUAL TELEPHONE COMPANY**  
**MOLLALLA TELEPHONE COMPANY**  
**MONITOR COOPERATIVE TELEPHONE COMPANY**  
**MONROE TELEPHONE COMPANY**  
**MT. ANGEL TELECOMMUNICATIONS, INC.**  
**PIONEER TELEPHONE COOPERATIVE**  
**SCIO MUTUAL TELEPHONE ASSOCIATION AND**  
**YELM TELEPHONE COMPANY**  
 Comments on 2 GHz Licensed PCS

**Interest:** Rural local exchange carriers

**Service areas:**

- PCS licenses should be made available for rural carriers to serve rural areas of 10,000 or less customers. (pp. 5-6)

**Local exchange carrier participation:**

- The potential for anticompetitive conduct by LECs is minimized in rural areas where revenues are smaller and the major concern is bringing wireless services to the public. (p. 7).
- If eligibility of LECs is restricted, LECs serving 10,000 customers or less should be exempted. (p. 7)

**Licensing policies:**

- Lotteries do not serve the public interest in rural areas, since they promote speculation, driving up the cost of service. (p. 8)
- Competitive bidding does not serve the public interest in rural areas because it siphons revenues away from rural areas -- which only generate marginal revenues -- and favors deep pocket companies that may not have an interest in serving rural areas. (p. 9)
- LECs serving areas of 10,000 or less should obtain a PCS license in their serving areas by request. (p. 9)

**Regulatory status:**

- PCS should be subject to minimal regulation. (p. 10)
- Regardless of the regulatory status of PCS providers generally, cooperative rural LECs should be able to offer PCS as a private land mobile radio service if they choose, since it would allow such entities additional flexibility, and would not violate Section 332 because the exemption would be for cooperatives. (pp. 10-11)

**CNET, INC.**  
Comments on 2 GHz Licensed PCS

**Interest:** Provider of software and technical services for the wireless communications industry

**Technical standards:**

- Proposed definition of average terrain in proposed Section 99.5 (measured between 3.2 and 16 kilometers) does not reflect the small service areas that likely will characterize PCS; therefore, an alternate method of determining average terrain must be used. (pp. 2-3)
- The Commission should specify the method for calculating the 47 dBu service area boundary; alternate propagation studies for determining the geographic service area should be permitted as long as the method can be verified. (pp. 3-4)
- The proposed height-power limitations proposed in the Notice reflect high power rather than low power PCS operations; the limit instead should be set at 10 watts and 91 meters. (p.4)
- With respect to interference calculations, the Commission should adopt a methodology based upon distributing the geographic location(s) of mobile units with respect to interference into existing microwave receive facilities; supports a "centroid" methodology. (pp. 5-6)
- Aggregate EIRP for portable units should be handled in the same manner as mobile units, with possible weighting to account for attenuation due to in-building use. (pp. 6-7)

**COMCAST PCS COMMUNICATIONS, INC.**  
Comments on 2 GHz Licensed PCS

**Interest:** Cable television company and cellular provider

**Band plan:**

- Recommends four allocations of 20 MHz with 20 MHz reserved for providers with limited spectrum available now. (17, 20)
- A 10 MHz LEC set-aside is unwarranted. (16)

**Amount of spectrum per licensed system:**

- 20 MHz allocations maximize competition; promote efficiency and innovation; enhance diversity; and are technically sufficient for existing and foreseeable services. (18-21)
- Spectrum swaps and intersystem operation should be encouraged to achieve integration efficiencies. (21-22)

**Service areas:**

- LATA-based licensing promotes diversity and innovation, allows economies necessary to compete with LEC services, and is familiar to the public and the industry. (23-24)
- BTAs are too small to realize economies of scale and MTAs are too large to build out in accordance with construction benchmarks and limit participation. (24)
- National licenses (even used with regional licenses) thwart robust competition because such national licensees have unfair advantages. (24-25)

**Cellular carrier participation:**

- Nonwireline companies should be eligible without limitation because they can achieve efficiencies to allow full competition with the local loop; cellular serves a different market than microcellular; and microcellular PCS cannot feasibly be offered in the cellular band. (8-11)
- Wireline companies, as their LEC affiliates, should not initially be eligible for 2 GHz licenses in-region. (12)

**Local exchange carrier participation:**

- LECs should be ineligible for PCS licenses in-region until "effective competition" has been achieved because: LECs have an interest in maintaining their monopolies; to conform with actions taken in the video dialtone and wireless cable proceedings; new providers will depend on LEC facilities; and LECs have great competitive advantages. (12-16)

**Licensing policies:**

- Modified lotteries (without contingent winners) are the best licensing vehicle because lotteries maximize diversity while reducing administrative delay. (25-26, 28)
- The FCC should: require certified financial statements showing net assets needed for construction, operation, and fees; require a build-out plan; require engineering showings to verify the technical basis for the project; and adopt short filing windows with substantial fees due upon "winning" a lottery (to be held in escrow). (26-30)
- Licensees should be required to meet strict construction timetables and transfers should not be permitted. (30-31)
- 15 year licenses with a substantial renewal expectancy are warranted. (31-33)

**Regulatory status:**

- Licensees should be permitted to opt for a particular status upon licensing. (33-34)
- Common carrier licensees should be nondominant and subject to minimal federal economic regulation, and any state policies should be preempted as necessary to ensure PCS develops free of unnecessary regulatory burdens. (34)
- If LECs are permitted to acquire PCS licenses in-region, greater regulatory oversight would be needed and all services provided by LECs should be common carrier. (35)
- Cost-based, unbundled interconnection is necessary. (36-38)

**Technical standards:**

- An FCC advisory committee is unnecessary, and industry standards groups should resolve PCS/PCS and PCS/existing user interference questions. (38-40)
- The coordination table should be extended to lower heights and powers. (41)
- Licensees should coordinate all base stations, but only stations operating at 20+ meters height and 10+ watts EIRP should be required to be specified by application. (42)

**Other issues:**

- PCS is an opportunity to create viable competition to the local exchange bottleneck. (5-8)

**COMMUNICATIONS SATELLITE CORPORATION**  
Comments on 2 GHz Licensed PCS

**Interest:** Satellite communications provider

**Band plan:**

- The Commission should immediately institute a separate proceeding to allocate the 1970-2010 MHz and 2160-2200 MHz bands to the Mobile Satellite Service. Separate allocations for satellite and terrestrial PCS would best serve users (3).
- Supports proposed 110 MHz allocation to terrestrial PCS in following pairs: 1850-1865/1930-1945 MHz, 1865-1880/1945-1960 MHz, and 1880-1895/1960-1970 MHz (5).
- While the proposed PCS allocation overlaps 5 MHz of the WARC MSS allocation at 1970-1980 MHz, COMSAT believes both groups can be accommodated (5).

**Technical standards:**

- The Commission should ensure technical compatibility and interoperability between terrestrial and satellite PCS systems (3).
- The Commission should clarify that standards adopted in this proceeding do not necessarily apply to satellite PCS or to PCS at the international level (5).
- The Commission should adopt flexible standards so as not to constrain development (6).
- Mobile operation of licensed devices should be restricted so that mobiles can transmit only under the control of the base station as this results in the most efficient use of limited spectrum (6-7).

**Other issues:**

- Supports handling terrestrial and satellite PCS issues in separate proceedings (2).

**COMSEARCH**  
Comments on 2 GHz Licensed Devices

**Interest:**

- Comsearch provides frequency coordination services to the microwave and mobile radio industries.

**Band plan:**

- Supports three PCS licensees with 40 MHz apiece -- Block A: 1850-1870/1930-1950 MHz; Block B: 1870-1890/1950-1970 MHz; and Block C: 1890-1910/1970-1990 MHz. (p. 4)

**Cellular and local exchange carrier participation:**

- States that the PCS process should be open and available to every entity that is capable of constructing a service and offering competitive service. (p. 8)

**Licensing policies:**

- Supports the use of a postcard lottery scheme where winning applicants are provided proper amounts of time to complete financial and technical portions of their applications. States that requiring financial and technical showings with each application places financial burdens on applicants that may discourage entrepreneurs. (p. 7,8)
- Believes that applicants should be required to specify base station locations and technical operating parameters when filing the technical portion of their applications in order to facilitate frequency coordination with the incumbent microwave users. (p. 9)
- Would prohibit winning applicants from transferring their licenses during the entire construction period. (p. 8)

**Plan for relocation of existing users:**

- States that many 2 GHz microwave paths are designed with fade margins exceeding 40 dB, which gives rise to high path availability figures that may be difficult to duplicate at higher frequencies even while using reliability improvement techniques. (p. 4,5)
- The PCS and microwave industries should be allowed to negotiate acceptable reliability standards. (p. 5)
- States that, if the relocated path operates with lesser reliability, the PCS licensee should be allowed to

pursue other alternatives rather than relocating the microwave path back to its original facilities. (p. 5)

**Technical standards:**

- Believes that EIA/TIA Bulletin TSB10-E is applicable to interference between PCS and microwave. The Commission should recommend that all interference analysis and frequency coordination between PCS and microwave should use this bulletin as a guideline. (p. 10,11)
- Notes that TIA working group TIA TR14.11 is rewriting the EIA/TIA bulletin to accommodate interference criteria for PCS and microwave and that the new version will reflect decision reached by microwave and PCS industry representatives. (p. 10)

**Other issues:**

- Does not agree that there is adequate spectrum for PCS support services and urges the Commission to adopt a channelization scheme for the 37.0-39.5 GHz frequency band that facilitates PCS network interconnections. (p. 6,7)

**CONCORD TELEPHONE COMPANY**  
Comments on 2 GHz Licensed PCS

**Interest:** Rural local exchange carrier

**Band plan:**

- Create four or five licensed PCS allocations, with more than 110 MHz in aggregate. (p. 2)

**Service areas:**

- Use MSA/RSA licensing to broaden entry, increase small business (less than 500 employees) participation, foster innovation, and speed service to less dense areas. (pp. 3-4)

**Local exchange carrier participation:**

- LECs should be allowed to participate in order to have access to the fullest range of transmission technologies, regardless of whether they have cellular holdings or not. (p. 4)

**Licensing policies:**

- Favors comparative hearings, but understands the resource constraints of the Commission. (pp. 4-5)
- Recommends adopting reformed lotteries: short filing windows, strict entry criteria (e.g., limiting each entity to one filing per license area), restrictions on resale, technical showings within several days of lottery selection, firm financial commitments, fair and reasonable construction benchmarks, and just filing fees. (p. 5)

**Technical standards:**

- Supports federally protected right of interconnection with the PSTN, and believes interconnection should be provided on equal terms and conditions. (p. 5)

**CORPORATE TECHNOLOGY PARTNERS**  
 Comments on 2 GHz Licensed PCS

**Interest:** New technology proponent

**Band plan:**

- The entire band should be allocated to a group of licensees who would negotiate specific rights among themselves; i.e., no specific frequency blocks. Using Interference-Sensing Code Division Multiple Access ("ISCDMA") technology, each could provide service using the entire band. ISCDMA avoids uneven use of spectrum within markets and uneven numbers of fixed users between blocks of spectrum. (pp 7-8, 16-17)
- Supports 80 MHz frequency pairing. (p. 12)
- No "unlicensed device" allocation is needed. (pp. 17-18)

**Service areas:**

- Licensing areas should be based on LATAs, since PCS will be an extension of the local exchange system. (p. 19)
- National license areas would be particularly bad, since it would allow one competitor to close out all others (p. 19)

**Cellular carrier participation:**

- Cellular carriers and their affiliates should be barred from in-region PCS for competitive reasons and because no economies of scope exist. (pp. 20-21)
- There should be no de minimis overlap exemption because cellular carriers could discriminate by unfairly pricing switch access. (p. 21)

**Local exchange carrier participation:**

- There are no economies of scope for LECs. (p. 21)
- LECs will use PCS only as "secondary" to landline service and should be allowed to enter only if they commit to active marketing and equal access. (p. 22)

**Licensing policies:**

- Lotteries preferred over auctions with licensing policies encouraging continued PCS development: pre-qualifying PCS developers (e.g., the 57 companies qualifying for pioneer's preference comment) and requiring others comply to with an initial financial, technical, and business showing; using preferences for PCS developers; or designating some spectrum as a "PCS developer block." (pp. 14-15)

- If licensing is done by auction, fixed regions must be utilized to enable adequate assessment of value; the top two bids should be discarded (i.e., winner pays the third bid); sealed bids should be employed; all bids should be accepted at once; and PCS developers should be given an advantage by allowing matching bids, bidding for larger areas of the country, or by allowing PCS developers to pay the bid out of future cash flow. (pp. 19-20, 24)
- No limits on the total number of licenses held should exist for PCS developers; all others should be restricted to a total of three licenses. (p. 22)
- Favors anti-speculation rules (e.g., requiring 75 percent coverage before any transfers and high filing fees. (p. 23)

#### Regulatory status:

- PCS should be common carrier, but, since it is difficult to separate inter- and intra-state components, state regulation should be preempted. (p. 25)

#### Plan for relocation of existing users:

- ISCDMA shares with existing users, and no relocation is needed. (p. 18-19)

#### Technical standards:

- PCS to microwave interference: TSB10E should be applied; straight power addition is appropriate; the power and height limits proposed should be adopted; the power and height limits need not be those of cellular; and the coordination distances proposed are proper. (pp. 6-7)
- PCS to PCS interference: No inter-PCS interference guidelines are needed if the FCC uses ISCDMA, since all operators use the whole allocation at any given point. (pp. 7-8)
- Interoperability/roaming: The FCC should not grant only a single license to achieve interoperability and roaming. Instead, it should consider granting national licenses to coalitions of companies, which together agree to provide interoperability and roaming, or grant no national licenses, but encourage interoperability in other ways. (p. 11, 15)
- Height/power limits: ISCDMA operates at 10 mW, and has numerous advantages detailed in Exhibit C. (p. 12)
- Interconnection: FCC should guarantee right of interconnection and set rates -- cellular interconnection rates include too much profit margin for LECs. (pp. 25-26)

**COX ENTERPRISES, INC.**  
 Comments on 2 GHz Licensed PCS

**Interest:** Cable television company tentatively granted a pioneer's preference

**Band plan:**

- Licensed blocks of 40 MHz each, with the entire remaining 1850-1990 MHz band for reserve spectrum. (p. 10)
- Allocating 10 MHz to LECs for wireless tails is an unjustified spectrum set aside, will not encourage "PCS friendly" interconnection (e.g., cellular), 1850-1990 MHz spectrum is better used to address capacity constraints that face new entrants, and LECs have incentives to provide AIN and interconnection for PCS without a set aside. (pp. 20-21)

**Amount of spectrum per licensed system:**

- The FCC should assign licenses of 40 MHz each, with appropriate accommodations for access to additional spectrum if capacity is constrained. (pp. 6-7)
- Spectrum comparability with cellular is not the issue; the issue is how much spectrum is required to compete viably with LEC local loop services. (p. 7)
- Spectrum will be heavily constrained by the presence of existing users, many of whom will never be subject to involuntary relocation. (pp. 8-9)
- 40 MHz blocks also avoid difficulties in negotiating with incumbent users, avoiding 3 party negotiations. (p. 8)
- Assigning too many licenses, as shown by the UK experience, is not necessarily in the public interest. (pp. 4-6)

**Service areas:**

- Supports MTAs as offering the best compromise, promoting speed of deployment, and avoiding fragmentation and consolidation costs. (pp. 12-13)
- Non-uniform licensing (one nationwide and two regionals) disadvantages non-nationwide licensees. (p. 13)
- National licenses would allow a single licensee too much power to dictate standards. (p. 11)

**Local exchange carrier participation:**

- LECs should be barred within their service areas to promote competition with the local exchange monopolies. (pp. 16-17)

- LECs affiliated with cellular carriers should be barred in the areas where the affiliate provides cellular services. (pp. 18-19)
- Non-structural safeguards do not work. (p. 19)
- LECs do not have economies of scope and will compete with PCS in the local loop. (p. 20).

#### Licensing policies:

- Comparative hearings are the only means of assuring qualified licensees (p. 22), but if lotteries are nonetheless used, significant reforms are needed, including technical and legal criteria and stringent financial showings (letters of credit or escrows). (pp. 22-23)

#### Plan for relocation of existing users:

- Expresses concern that relocation not delay the advent of PCS (one solution is Cox's reserve band -- UTC's 10 year period is unworkable though) and believes costs should be limited to relocation costs. (pp. 13-15)
- Urges the Commission to consider anti-speculation rules that address the possibility that third parties may acquire "relocation options." (pp. 15-16)

#### Technical standards:

- Full (even interconnection features not provided to other LEC subsidiaries), fair and cost-based (not "no less favorable") interconnection is critical to PCS. (pp. 23-25)
- The FCC should use PCS as a means to open up LEC competition through adopting cost-based network unbundling, number portability, co-carrier compensation and equal access to LEC signalling systems and information databases. (p. 23)
- The FCC should require reciprocal compensation for termination. (p. 23)
- Uniform standards are needed for intersystem operability, intersystem (e.g., cellular A/B switches) compatibility, and technical standards. (pp. 26-29)

#### Other issues:

- The FCC should not encourage high power cellular "look-alikes" but rather develop the full potential of PCS as a competitor to the local loop. (p. 4)

**DBX CORPORATION**  
Comments on 2 GHz Licensed PCS

**Interest:** Entrepreneurial telecommunications firm

**Band plan:**

- Spectrum allocated to Extended Network PCS should be from one of the following bands: 1850-1865/1930-1945 MHz, 1865-1880/1945-1960 MHz, 1880-1895/1960-1975 MHz, 1895-1910/1975-1990 MHz (11).

**Amount of spectrum per licensed system:**

- Spread spectrum technology could permit more than one provider to serve essentially the same area using the same spectrum (10).
- Suggests allocating 30 MHz to accommodate Extended Network PCS. This amount of spectrum is necessary to license a large number of Extended Network PCS providers and to permit the accommodation of microwave users (10-11).

**Service areas:**

- The Commission should license at least one "extended" PCS network that would consist of integrated and compatible, strategically located and geographically discrete service areas that would provide PCS at multiple points throughout the country. This concept does not contemplate the establishment of ubiquitous national coverage (2-4).

**Licensing policies:**

- Recommends that the Commission adopt the following eligibility requirements for Extended Network PCS licensees: (1) demonstration that the applicant's proposal is designed to meet the needs of highly mobile users, and (2) proposal to serve at least 200 transmitting stations in at least 30 states (13).
- Recommends that licensees of Extended Network PCS be required to file annual reports certifying that at least 70 percent of the traffic on their system (in minutes) is interexchange. Licensees who fall below the 70 percent threshold for more than two out of every three years would forfeit their licenses (13-14).
- Applications for Extended Network PCS systems should be granted on a first-come, first-served basis. Applicants would be required to submit an engineering demonstration

that their proposals would not cause interference to existing Extended Network PCS facilities. (14)

- If mutually exclusive applications are filed on the same day, the Commission should grant all such applications with the condition that each applicant coordinate its system to prevent interference (15).
- To minimize speculation, the Commission should require applications to include financial information similar to that required for PLMS applications in the 220-222 MHz band and engineering information sufficient to demonstrate the technical viability of the proposal (16).
- The Commission should adopt construction benchmarks. Each Extended Network PCS licensee should be required to construct and operate 30 percent of their proposed stations within 2 years of grant, 60 percent within 3 years, and 95 percent within 5 years. Also, a licensee should be required to construct and place in operation at least 200 base stations in at least 30 states within the first 5 years or automatically forfeit its license (13, 16).
- The Commission should prohibit the transfer of an Extended Network PCS license for 5 years (16-17).
- The Commission should adopt ten year license terms and strong renewal expectancies (17).

**Regulatory status:**

- As with satellite earth stations, the Commission should preempt state and local zoning regulations pertaining to Extended Network PCS. Because of the large number of transmitters required for these systems, applying for necessary state and local zoning approval could significantly delay implementation of the service (18-19).

**Technical standards:**

- The Commission should designate a standards committee to propose technical standards for Extended Network PCS licensees. This committee would meet every seven years (12).

0 0-64

**PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA**  
Comments on 2 GHz Licensed PCS

**Interest:** State regulatory agency

**Regulatory status:**

- States that FCC should treat any PCS that is generally available to the public as common carrier service; FCC's interpretation of 47 U.S.C. § 332(c) is too broad. Cites legislative history in support of proposition that PCS, where used as a substitute for the local exchange telephone network, should be subject to common carrier rate regulation by the states just as cellular service is subject to state regulation. (pp. 2-4).
- Asserts that state regulation of intrastate rates for interconnection or service to the public should not be preempted. (p. 4). States that it is inequitable and anticompetitive to preempt state regulation of PCS while state regulation of cellular service is permitted. (p. 4).

**EDISON ELECTRIC INSTITUTE**  
Comments on 2 GHz Licensed PCS

**Interest:** Association of United States investor-owned electric utilities whose members use private microwave telecommunications facilities licensed in the 1850-2200 MHz (2 GHz) band

**Technical standards:**

- Emphasizes that it is essential that the Commission adopt spectrum-sharing standards between PCS and microwave operations that protect existing microwave licensees from interference. (p. 2).
- States that PCS/microwave interference standards must, at a minimum, ensure electric utilities interference protection that is equal to or better than the current level of protection; urges Commission to adopt interference standards consistent with those being developed by Telecommunications Industry Association's Committee TR14.11. (p. 3).
- Supports Commission's proposed interference calculations and methodology, and states that they are in no way overly conservative. (p. 3).
- States that Commission should adopt policies that are, at a minimum, consistent with the "transition framework" recently adopted in the First Report and Order and Third Notice of Proposed Rule Making in ET Docket No. 92-9. (p. 4).
- Supports lengthy voluntary negotiation period between incumbent 2 GHz microwave users and PCS licensees. Believes that marketplace forces and arms-length negotiations are the only equitable means of ensuring a smooth transition. (pp. 5-6).

0 0-66

**ELECTROMAGNETIC ENERGY POLICY ALLIANCE**  
Comments on 2 GHz Licensed PCS

**Interest:** Association of users and manufacturers of equipment that emits nonionizing radio frequency energy.

**Technical standards:**

- The basis for the FCC's radio frequency exposure standards should be the most recent standard adopted by the Institute of Electrical and Electronics Engineers (IEEE), since this standard reflects a scientific consensus in the U.S. (pp. 1-2).

**ERICSSON CORPORATION**  
Comments on 2 GHz Licensed PCS

**Interest:** Manufacturer of telecommunications equipment.

**Band plan:**

- Recommends two licensed PCS providers per market, in light of the U.K.'s experience. (pp. 7-8).
- Urges FCC to reserve unallocated 40 MHz (assuming two 25 MHz licensees per market). (p. 9).

**Amount of spectrum per licensed system:**

- An initial frequency block of 25 MHz per operator is appropriate, since cellular operators use 25 MHz. (pp. 8-9).

**Regulatory status:**

- FCC should strive to create a level playing field between existing cellular operators, licensed PCS operators and private carriers, treating similarly situated service providers in the same fashion. (p. 27).

**Technical standards:**

- FCC should require that digital technology be used for PCS. (p. 4).
- PCS industry will be adversely impacted if FCC refuses to adopt basic technology standards or promote voluntary industry standards; FCC's proposed block allocation scheme will not accommodate a variety of duplex technologies without additional FCC direction. (pp. 11-15).
- FCC's low power proposal for power limits on licensed PCS is more appropriate than the high power proposal. (pp. 15-17).
- The methods proposed in the Notice for determining interference to OFS by PCS facilities should be revised. (pp. 17-20).

**Other:**

- FCC and industry should opt for lower power PCS systems to reduce possible health hazards and should continue to monitor studies on the subject. (pp. 28-29).