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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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

In the Matter of	)	
	)	
Redevelopment of Spectrum to	)	
Encourage Innovation in the	)	ET Docket No. 92-9
Use of New Telecommunications	)	
Technologies	)	
	)	

To: The Commission

REPLY COMMENTS OF LOWER COLORADO RIVER AUTHORITY

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SUMMARY

The Commission should resolve the outstanding issues in this proceeding in order to facilitate timely deployment of emerging technologies without unnecessarily disrupting 2 GHz fixed microwave incumbents. The principles and protections which the Commission established in its September 1992 Order and Notice promote spectrum efficiency and marketplace principles by encouraging spectrum sharing and voluntary relocation agreements. The Commission should now establish a commencement date and length of the transition period that will further these objectives.

LCRA supports a 10-year transition period commencing upon the grant of a PCS license in each market. Only upon grant of a PCS license will sufficient knowledge and incentives for voluntary negotiations be in place. In addition, only upon that date will PCS entities and microwave entities be able to begin to determine the feasibility of spectrum sharing.

A 10-year transition period is needed in order to provide sufficient time for spectrum sharing and voluntary negotiations before involuntary relocation is permitted. During this period, the PCS market will develop, sharing techniques will improve and many uncertainties affecting PCS entities' ability to finance relocation will be resolved. Moreover, a 10-year period will provide ample time to research and study potential health hazards associated with PCS akin to concerns raised recently about cellular telephones. A shorter transition period will lead to premature displacement of microwave incumbents through the costly

and burdensome involuntary relocation procedures.

Spectrum sharing between unlicensed PCS operations and microwave licensees is not feasible, making a different transition plan necessary. The Commission should issue a further notice proposing a detailed plan for facilitating relocation of microwave incumbents on frequencies designated for unlicensed PCS.

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In the Matter of	)	
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Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies	)	ET Docket No. 92-9

To: The Commission

REPLY COMMENTS OF LOWER COLORADO RIVER AUTHORITY

The LOWER COLORADO RIVER AUTHORITY ("LCRA"), by its attorneys and pursuant to Section 1.45 of the Commission's Rules, hereby submits its Replies to Comments filed January 13, 1993, in the above-referenced proceeding. The Comments addressed a First Report and Order and Third Notice of Proposed Rule Making ("Order and Notice") in which the Federal Communications Commission ("FCC" or "the Commission") allocated 2 GHz spectrum for emerging technologies such as personal communications services ("PCS") and established a transition plan for relocating incumbent fixed microwave licensees.[1]

I. INTRODUCTION

In the September 1992 Order and Notice, the Commission adopted a transition plan for the 2 GHz band that accommodates

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[1] First Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886 (1992).

the many competing interests in this proceeding. The plan facilitates prompt deployment of PCS in the 2 GHz band while avoiding unnecessary disruption and relocation of incumbent fixed microwave licensees and minimizing necessary disruption and relocation of incumbents. The Commission should resolve the few outstanding issues -- the commencement date and length of the transition period, in particular -- so as to further ensure deployment of PCS without unnecessary disruption of 2 GHz microwave operations. In doing so, the Commission should not reopen issues about the basic concept and purpose of the transition period that already have been decided in the Order and Notice.

II. THE "TRANSITION PERIOD" IS A PERIOD OF VOLUNTARY NEGOTIATIONS DURING WHICH MICROWAVE INCUMBENTS WOULD NOT BE SUBJECT TO INVOLUNTARY RELOCATION PROCEDURES.

The primary focus of most of the comments filed in this proceeding was the length and commencement date of the "transition period" the Commission established in the September 1992 Order and Notice as part of its framework for reallocation of the 2 GHz band. Parties suggested establishing a period ranging from zero to 15 years with a commencement date ranging from adoption of the Order and Notice in September 1992 to a number of years after the grant of an emerging technology license in each market. While this disparity of views was somewhat expected, it was not expected that commenters would have equally disparate views of the concept of a "transition period" for the 2

GHz band. Indeed, many reasons cited to support a particular length of a "transition period" reveal confusion and a fundamental misunderstanding of the purpose and goals of the "transition period" the Commission established in the Order and Notice.

As a threshold matter, then, it is necessary to clarify what "transition period" the Commission had in mind when it sought comment on the length and commencement date. According to the Commission, this "transition period" is to be a fixed period during which a PCS licensee[2] would determine its spectrum needs in a particular area and, if spectrum sharing were not feasible, seek access to additional spectrum by negotiating voluntary relocation agreements with fixed microwave incumbents. After expiration of the "transition period," voluntary agreements still would be permissible, but a microwave incumbent also would be subject to involuntary relocation if a PCS licensee provides "comparable alternative facilities" and full compensation. The transition period is depicted in Exhibit 1 on page 4.

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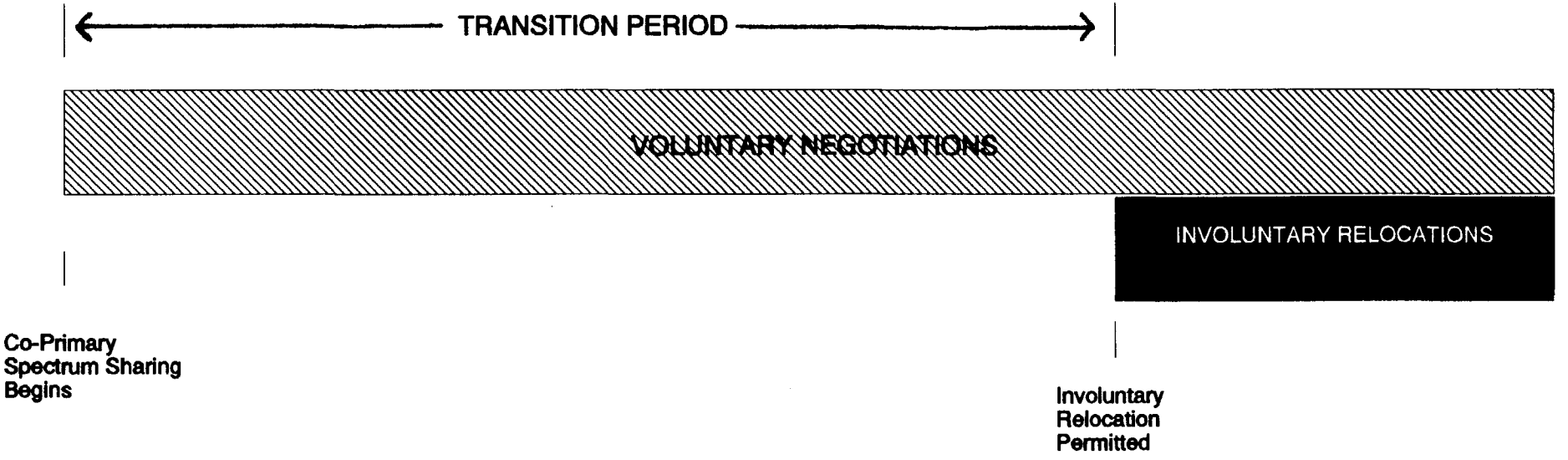
[2] The new entrant could be any emerging technology licensee, but PCS is the only specific new service currently proposed for licensing in the 2 GHz band. Notice of Proposed Rule Making and Tentative Decision, 7 FCC Rcd 5676 (1992) ("PCS Notice").

EXHIBIT 1


TRANSITION PERIOD
VOLUNTARY NEGOTIATIONS
INVOLUNTARY RELOCATIONS
Co-Primary
Spectrum Sharing
Begins
Involuntary
Relocation
Permitted

Some parties confused the time needed to actually relocate a facility as part of the transition period.[3] Relocation time, however, typically 12 to 18 months,[4] would be the same whether the relocation is voluntary or involuntary and is not a separate period in itself. Other parties urged the Commission to convert microwave incumbents to secondary status after a transition period[5] and to require microwave incumbents to pay their own costs of relocation without regard for any transition period,[6] reflecting a serious misunderstanding of what the Commission decided in the Order and Notice.

This confusion about the "transition period" apparently stems from changes in the Commission's proposal between the time it released the first Notice of Proposed Rule Making ("First Notice") in February 1992 and adoption of the Order and Notice in September 1992. In the First Notice, the Commission proposed downgrading 2 GHz fixed microwave licensees to secondary status and giving emerging technologies exclusive primary use of the

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[3] See, e.g., Comments of NYNEX at 4. One party urged permitting new entrants to begin constructing alternative facilities even before the incumbent would be subject to involuntary relocation. Comments of Time Warner at 5.

[4] See, e.g., Comments of Utilities Telecommunications Council ("UTC") at 20; Comments of American Petroleum Institute ("API") at 6; and Comments of PCN-New York at 13.

[5] Comments of PCN-New York at 3-5.

[6] Comments of U.S. Small Business Administration at 7.

band after 10 or 15 years.[7] The proposal would have forced microwave licensees to vacate the band, with no guarantee of comparable alternative spectrum or compensation, even if no PCS entrant sought access to the occupied spectrum. With secondary status, microwave incumbents would have been subject to harmful interference and would have had no leverage to strike any relocation agreement with an emerging technology entrant.

It was this utter lack of protection for the 2 GHz microwave operations of utilities and other core industries that prompted the Commission to modify its transition plan. Most significantly, the proposal in the First Notice to automatically convert microwave licensees to secondary status was abandoned. Accordingly, comments on this issue are no longer relevant and should be ignored.

In addition, the modified transition plan abandoned the proposal for emerging technologies to have exclusive use of the 2 GHz band after a transition period. The Commission affirmatively decided that emerging technologies and fixed microwave licensees would immediately and indefinitely share the 2 GHz band.[8] The Commission stated:

> We will encourage spectrum sharing . . . [T]he feasibility of spectrum sharing between new services and fixed microwave services has not been fully determined and will depend on the technical design of individual new systems and services. . . . The success of those techniques could allow co-primary operation of

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[7] First Notice at para. 24; Order and Notice at para. 5.

[8] Order and Notice at para. 1.

> some emerging technologies with existing fixed microwave services on a noninterference basis <u>without the need for any relocation agreements</u>.[9]

Thus, rather than automatically clearing all microwave licensees from the band after a fixed period, the goal of the modified transition plan is to provide adequate time for new technology providers to meet spectrum needs through spectrum sharing and voluntary relocation agreements. The plan promotes spectrum efficiency by avoiding unnecessary relocation of fixed microwave licensees from frequencies that never may be utilized by emerging technologies. Actual spectrum demand by individual new technology licensees determines whether relocation is necessary. In addition, the plan promotes marketplace principles by letting parties voluntarily negotiate spectrum agreements without unnecessary government interference.

III. THE "TRANSITION PERIOD" SHOULD COMMENCE IN EACH MARKET UPON GRANT OF A PCS LICENSE.

A. Spectrum Sharing and Meaningful Voluntary Negotiations Can Commence Only After Grant of a PCS License.

Once the purpose and goals of the "transition period" are understood, it becomes clear that the period must commence in each market upon grant of a PCS license. Numerous parties, including LCRA, endorsed this commencement date for the

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[9] Order and Notice at para. 29 (emphasis added).

transition period.[10] In addition, the rules the Commission attached to the Order and Notice authorize voluntary negotiations by emerging technology licensees, indicating that grant of a license is essential to commencement of the transition period.[11]

Only after selection of an actual licensee, with a specific PCS technology and network design, will it be possible to determine whether existing microwave licensees in a given market will have to relocate. As the Commission stated, "[T]he feasibility of spectrum sharing between new services and fixed microwave services . . . will depend on the technical design of

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[10] Comments of LCRA at 14. See also Comments of Association of American Railroads at 14; Comments of UTC at 17; Comments of NYNEX at 7; Comments of American Public Power Association at 3-4; Comments of API at 9-10; Comments of National Rural Electric Cooperative Association at 9; Comments of Edison Electric Institute at 3-4; Comments of Metropolitan Water District of Southern California at 7-8; Comments of Commonwealth Edison Company at 6-7; Comments of Montana Power Company at 7-8; Comments of Questar Service Corporation at 7-8; Comments of Niagara Mohawk Power Corporation at 6-7; and Comments of Central and South West at 6-7.

[11] In the text of the Order and Notice the Commission proposes commencing the transition period on the adoption date of an order regarding rechannelization of bands above 3 GHz, but the plain language of the rules authorizes voluntary negotiations only by emerging technology licensees:

> (a) Licensees proposing to implement services using emerging technologies may negotiate with Private Operational-Fixed Microwave Service licensees in these bands for the purpose of agreeing to terms under which the existing licensees would relocate their operations . . .

Section 94.59(a) (emphasis added).

individual new systems and services."[12] Real world spectrum sharing simply cannot occur until after a PCS license is granted, and commencing the transition period before that date would be counterproductive to the goal of meeting PCS spectrum demand through sharing technologies.

Likewise, meaningful voluntary negotiations cannot occur until the parties that are to negotiate are identified. Only upon selection of a PCS licensee, with a specific plan for providing service in a defined market, will it be known what potential relocation will be negotiated. For example, five applicants for a license in any given PCS market might propose five different service plans, aimed at different user groups, utilizing different technologies. One applicant might need access to all spectrum occupied by existing microwave licensees, another might need to relocate only a few links of an existing licensee, and another might find the unoccupied spectrum sufficient to provide service throughout the licensed area. It is impossible to negotiate until these particulars are known.[13]

Not only would microwave licensees and PCS entities not know what to negotiate, but they would have no incentive to negotiate

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[12] Order and Notice at para. 29.

[13] The Commission deliberately has left open the possibility of a wide variety of services that may be offered under the PCS umbrella. See PCS Notice at para. 28. Thus, this example is extremely realistic and may be overly conservative. The wide range of PCS technologies, network designs and applications is evident from the 57 requests for pioneer's preference submitted in GEN Docket 90-314.

until a PCS license is granted.[14] It would be a waste of microwave licensees' time and resources to negotiate with any PCS advocate with only a hope of receiving a PCS license -- and there are sure to be many.[15] For PCS entities, securing an agreement provides no guarantee of a license. The Commission stated in no uncertain terms that an agreement will warrant no preference in the licensing process.[16] Presumably, the projected revenue from providing service would be the guarantee behind a PCS entity's promise to finance a microwave incumbent's relocation. A PCS entity could not make that commitment, and a microwave licensee would not rely on it, unless backed up by a license in hand.

Commencing the transition period upon grant of a license also eliminates the need to have different transition periods based on geographic area or technical considerations, as the Commission proposed. It would ensure a transition period based on actual spectrum demand in each market.

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[14] PCN-New York points to voluntary negotiations already occurring but concedes that these negotiations were driven primarily by microwave incumbents' concern with reverting to secondary status, a proposal the Commission has abandoned. Comments of PCN-New York at 3-5.

[15] The Commission said it expects to receive more applications for PCS than were filed for land mobile services on the 220 MHz band -- more than 175 nationwide and 58,000 local applications. PCS Notice at para. 84.

[16] Order and Notice at para. 24 n. 33.

B. Permitting Relocation Agreements Prior to Grant of a PCS License Will Result in Speculation, Profiteering and Other Abuses.

LCRA believes that the Commission should recognize explicitly that meaningful relocation negotiations cannot occur prior to PCS licensing. In addition, LCRA urges the Commission to go a step further and actively discourage relocation agreements prior to licensing lest the PCS licensing process become fraught with speculation, profiteering and other abuses that have been rampant in cellular and other services.

The Commission, Department of Commerce and Congress repeatedly have pointed out the evils and economic cost of spectrum policies that permit "private markets" in which access to spectrum is bought and sold.[17] In the broadcast services, applicants seeking large settlements to withdraw their applications and rampant license "trafficking" led to reform of comparative hearing and settlement procedures and enactment of anti-trafficking rules. In the cellular service, numerous lottery winners with no serious intention of operating a cellular system quickly sold their licenses for millions of dollars, prompting widespread cries for new licensing procedures. The Commission's receipt of nearly 60,000 applications for a new land mobile service at 220 MHz signaled that similar speculation is on

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[17] Emerging Telecommunications Technologies Act of 1991: Hearings on H.R. 531 Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce, 102d Cong., 1st Sess. (October 9, 1991) (testimony of Robert A. Mosbacher, Secretary of Commerce; testimony of Alfred C. Sikes, FCC Chairman).

the horizon when those licenses are awarded.

These abuses occur because spectrum licensing policies permit speculators with no interest in actually providing service to engage in market transfers of spectrum rights. The Congressional Budget Office described the phenomenon as follows:

> Private firms or individuals obtain access to the spectrum resource at little or no cost, and often do nothing to contribute to the value of that access before profiting from its sale.[18]

A similar phenomenon is likely to occur with PCS if pre-licensing agreements are permitted. Speculators, with no guarantee of (and perhaps no interest in) obtaining a PCS license, could negotiate relocation agreements with microwave incumbents and then sell "relocation options" at a profit to the entity ultimately awarded the license.[19] If spectrum sharing is not possible and relocating microwave incumbents is essential, the PCS licensee will be forced to pay a premium for the "relocation option," burdening the licensee with additional costs that ultimately will be passed on to consumers.

The Commission should act affirmatively to prevent such profiteering in the licensing of PCS and other emerging

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[18] "Auctioning Radio Spectrum Licenses," Congressional Budget Office Study (March 1992).

[19] PCN-New York argues that pre-licensing negotiations "will assist the incumbent user in defining with specificity the requirements for its relocated network." Comments of PCS-New York at 14. However, this reasoning ignores the reality that the specifics of spectrum sharing and relocation needs could vary dramatically depending on the specific technology and network design of the entity ultimately awarded the PCS license.

technologies. Commencing the transition period upon grant of a PCS license and discouraging relocation agreements prior to licensing will go a long way toward achieving this objective.

IV. COMMENCING TRANSITION PERIOD ON ALTERNATIVE DATES PRIOR TO GRANT OF PCS LICENSES WOULD BE INCONSISTENT WITH PURPOSES AND GOALS OF THE TRANSITION PERIOD.

The timeline in Exhibit 2 on page 14 depicts the various alternative dates that parties recommended for commencement of the transition period, including (a) September 1992, the date the Commission adopted the Order and Notice;[20] (b) the date the Commission will adopt an order on rechannelization of the bands above 3 GHz;[21] (c) the date the Commission will adopt an order establishing the "transition period";[22] and (d) the date the Commission will adopt an order establishing rules for PCS licensing.[23] None of these alternatives is a logical commencement date. As Exhibit 2 indicates, the knowledge and incentives for voluntary negotiations are triggered only upon grant of a PCS license.

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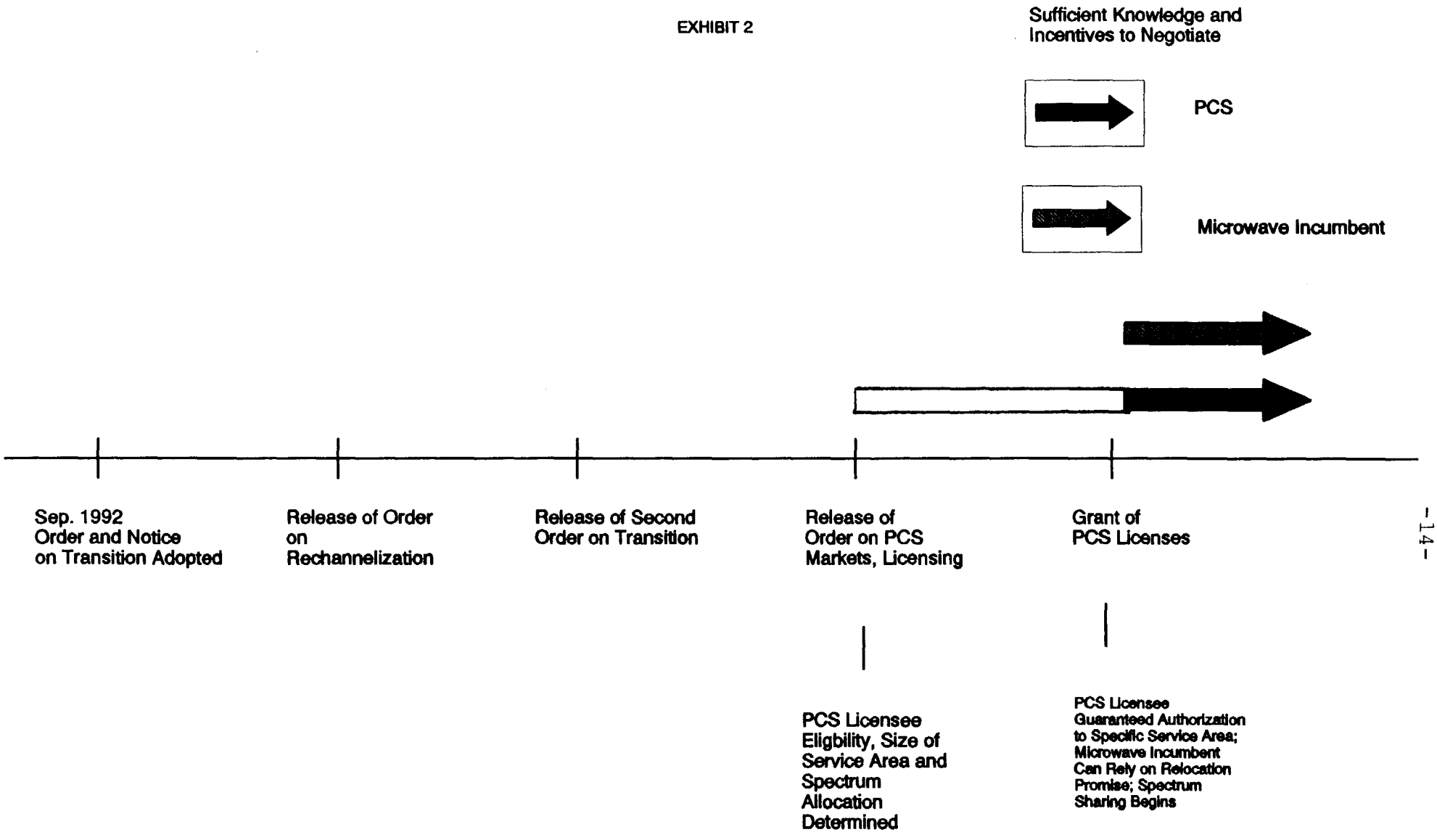
[20] Comments of American Personal Communications ("APC") at 7.

[21] Order and Notice at para. 27; Comments of Time Warner at 17 (earlier of adoption of rechannelization plan or order on PCS licensing in GEN Docket 90-314); and Comments of United States Telephone Association at 3.

[22] Comments of Telephone and Data Systems at 2 (effective date of Second Report and Order in this proceeding).

[23] Comments of Time Warner at 17 (earlier of adoption of rechannelization plan or order on PCS licensing in GEN Docket 90-314).

EXHIBIT 2


Sufficient Knowledge and Incentives to Negotiate
PCS
Microwave Incumbent
Sep. 1992 Order and Notice on Transition Adopted
Release of Order on Rechannelization
Release of Second Order on Transition
Release of Order on PCS Markets, Licensing
Grant of PCS Licenses
PCS Licensee Eligbility, Size of Service Area and Spectrum Allocation Determined
PCS Licensee Guaranteed Authorization to Specific Service Area; Microwave Incumbent Can Rely on Relocation Promise; Spectrum Sharing Begins

American Personal Communications ("APC") asserts that the "appropriate and equitable" date for commencement of the transition period is September 1992, the date the Commission adopted the Order and Notice establishing its modified transition plan. As justification for this date, APC states the following: "That is the date on which incumbent microwave licensees effectively were put on notice that involuntary relocation would, in fact, be required."[24] This statement makes little sense and, more significantly, misconstrues the Commission's policy. Involuntary relocation may not, in fact, be required of all microwave licensees. It is precisely the purpose of the transition period to avoid unnecessary involuntary relocation if PCS spectrum needs can be met through spectrum sharing and voluntary agreements. In fact, APC has been the most ardent advocate of PCS-microwave spectrum sharing throughout this proceeding and repeatedly has stated to the Commission and Congress that few, if any, fixed microwave incumbents will have to be relocated.[25] Thus, it is most unusual that APC now attempts to justify a premature commencement of the transition period by pointing to microwave licensees being on notice of mandatory involuntary relocation.

In any event, it simply makes no sense to commence the transition period several months ago. As discussed in Section

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[24] Comments of APC at 7 (footnote omitted).

[25] Only in its comments supporting a 40 MHz spectrum allocation for PCS has APC receded even slightly from its prediction about the success of spectrum sharing.

III, PCS entities and microwave licensees do not have adequate knowledge or incentives to negotiate at this time. APC's recommendation appears to be little more than a thinly veiled attempt to promote an early commencement of the transition period.

Numerous parties criticized as illogical the proposal to commence the transition period upon adoption of a rechannelization plan for the higher bands. This date, as well as the date of adoption of a second order on this transition plan, is defective for the same reasons the date proposed by APC is defective: Insufficient knowledge and incentives for negotiations will be in place at that time.

Time Warner proposes commencing the transition period upon adoption of an order establishing rules for PCS licensing. This date is somewhat more plausible than the other pre-licensing dates because the PCS order presumably will define PCS market size, establish the size of PCS spectrum blocks and determine who is eligible to hold a PCS license. This information will provide PCS entities that are eligible some useful information for negotiations, but the most vital information -- who gets a PCS license in each market -- still will be missing. The picture simply will not be complete until PCS licenses are awarded.

V. COMMENCING TRANSITION PERIOD UPON BONA FIDE REQUEST FOR RELOCATION BY PCS LICENSEE IS ACCEPTABLE IF TIED TO A 10-YEAR TRANSITION PERIOD.

Several parties proposed commencing the transition period on

the date a PCS licensee makes a bona fide request for relocation.[26] Unlike all the alternative dates prior to grant of a PCS license, this commencement date is consistent with the purpose of the transition period. Spectrum sharing would be possible and sufficient knowledge and incentives for voluntary negotiations would be in place at the time of a bona fide request by a PCS licensee. Accordingly, LCRA would support this commencement date as long as it is tied to a 10-year transition period, as discussed in Section VI.[27]

It should be noted, however, that commencing the transition period on the date of a licensee's bona fide request poses some administrative problems. Most significantly, it would place a double burden on the parties and the Commission by requiring a determination of whether a request is bona fide and then resolution of differences on cost and comparable alternatives. There could be several requests made to each incumbent microwave licensee, requiring numerous findings of whether a request is bona fide. Commencing the transition period upon grant of a PCS license, on the other hand, would not require a subjective determination of numerous commencement dates. Nonetheless, starting the transition period on the date of a PCS licensee's bona fide request for relocation is superior to all alternative

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[26] See, e.g., Comments of GTE Service Corporation at 4-6; Comments of Cox Enterprises at 5-6; and Comments of Southwestern Bell at 7-8.

[27] GTE and Southwestern Bell support a 10-year transition period commencing upon the date of a bona fide request for relocation.

dates prior to grant of a PCS license.

VI. INVOLUNTARY RELOCATION SHOULD BE PERMITTED TEN YEARS AFTER GRANT OF A PCS LICENSE IN EACH MARKET.

LCRA supports a rolling transition period expiring 10 years after the date a PCS license is granted in each market. The many uncertainties about the PCS market and spectrum sharing technologies make it imprudent to permit involuntary relocation without a sufficiently long transition period. Ten years will provide sufficient time for the PCS market to develop, spectrum sharing technologies to improve and microwave licensees to determine their needs relative to co-primary sharing of the band. Any period less than 10 years would frustrate the goal of the transition period -- meeting PCS spectrum needs through sharing and voluntary negotiations.

A. A 10-Year Transition Period Will Provide Time for Liberation of Federal Government Spectrum that Will Minimize the Need for Involuntary Relocations.

LCRA, and the vast majority of commenters in this proceeding, consistently have stated that the availability of federal spectrum either for emerging technologies or as a home for displaced 2 GHz microwave licensees would minimize the need for costly and problematic relocation to bands above 3 GHz. Enormous pressure is building to make significant federal spectrum available for commercial uses in the next few years. The "Emerging Telecommunications Technologies Act," which calls

for reallocation of underutilized federal government spectrum, has been introduced in both the House and Senate.[28] The measure received wide support in the 102d Congress, was passed by the House, but was held up in the Senate over a provision authorizing spectrum auctions. The current Congress is considering a compromise provision on auctions, vastly improving chances for enactment this session.

Although the 200 MHz of federal spectrum targeted by the bill would be reassigned over a period of 10 years or more, the bill requires at least 30 MHz to be made available immediately. Thus, it would be ill-advised to rush to relocate 2 GHz microwave licensees if federal spectrum makes that costly and burdensome action unnecessary. A 10-year transition period would enable PCS and microwave licensees to realize the full relief provided by federal government spectrum.

B. A 10-Year Transition Period Will Ensure That Spectrum Demands Match Market Realities as the PCS Market Develops.

Fueling the intense demand for spectrum for PCS are extraordinarily "bullish" projections that PCS will be a "$195 billion international industry"[29] serving more than 60 million customers within 10 years.[30] But if these rosy scenarios fail

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[28] H.R. 707, S. 335.

[29] Comments of APC, GEN Docket 90-314, filed November 9, 1992, at 2.

[30] PCS Notice at para. 26.

to materialize, PCS licensees may be burdened with enormous debt from premature microwave relocations that they later cannot afford to retire. Such a debt overhang might make a speculative PCS bubble more likely to burst. The economic health of the PCS industry will suffer if licensees are needlessly highly leveraged and forced to charge excessive rates or go out of business.

A transition period of 10 years will help ensure that decisions to relocate microwave incumbents are based on the realities of the PCS market as it develops and not on projections that turn out to be marketing hype rather than economic fact. Any number of unknown factors affecting PCS spectrum demand and the economic viability of the fledgling industry may surface as the market develops. The following are a few issues now known to present sufficient uncertainty about the profitability of PCS to make it unwise to rush into massive involuntary relocations.

1. Mobile Telephones May Pose Serious Health Risks.

The recent news about the possible health risks from using cellular telephones raises serious questions that could affect consumer demand for PCS. Following publicity of a lawsuit claiming that cellular telephones cause cancer, it became clear that scientific research about the safety of mobile telephones "is incomplete and inconclusive."[31] Scientists at the National Cancer Institute, the Food and Drug Administration ("FDA") and

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[31] Meyers and Meyers, "All the Facts on Cellular Phones, Please," N.Y. Times, Feb. 7, 1993, Business Section at 13, col. 4.