62. Furthermore, the Industry Proposal provides no method for the Commission to recover a portion of the value of public spectrum pursuant to Section 309(j)(3)(C) of the Communications Act."[140] Instead, incumbent licensees who negotiate expansion rights among themselves could obtain a windfall by obtaining rights to an entire EA without having to pay for such expanded rights. We disagree with commenters who attempt to justify this potential windfall by arguing that the proposed settlement procedure complies with the directive in Section 309(j)(6)(E) for the Commission to avoid mutual exclusivity through "engineering solutions, negotiation, threshold qualifications, service regulations, and other means"[141] Section 309(j)(6)(E) requires us to adopt such methods where we find them to be "in the public interest."[142] We do not believe it is in the public interest to "resolve" the competing claims of incumbents and non-incumbents for spectrum by establishing a settlement mechanism that is limited to incumbents and excluding non-incumbents from the process.

63. The Industry Proposal would also be inconsistent with the approach we have adopted in other services where we have converted from site-by-site licensing to geographic area licensing. In our 900 MHz SMR proceeding and our recent paging proceeding, for example, we adopted similar rules for licensing on a geographic basis while protecting the existing operations of incumbent operators.[143] In neither instance did we give incumbents the unrestricted right to obtain available spectrum through a pre-auction settlement process that excluded non-incumbents. We also rejected this and similar alternatives for the upper 200 channels of the 800 MHz band.[144] For all of these reasons, we conclude that the Industry Proposal would not serve the public interest.

64. While we reject the specific settlement procedure described in the Industry Proposal, we note that many of the positive aspects of the proposal can still be accomplished through the auction process we are establishing for the lower 230 channels. For example, incumbents on these channels are free to enter into partnerships, joint ventures, or consortia for purposes of applying for EA licenses on the lower 230 channels in the areas where they currently operate. Incumbents may also negotiate transfers, swaps, partitioning arrangements, or similar agreements with respect to spectrum that is currently licensed to them. In some instances, taking these steps may result in only one entity applying for a given EA license. Where that occurs, no auction will be necessary because there will be no mutually exclusive applications to resolve. At the same time, providing all parties, incumbents and non-incumbents alike, with the *opportunity* to compete for EA licenses will ensure that the spectrum is awarded to the party that values it the most.

65. We also conclude that while geographic licensing is appropriate for the lower 230 channels, some additional flexibility is appropriate for incumbents on these channels to facilitate modifications and limited expansion of their systems. First, allowing incumbent licensees on the lower 230 channels such flexibility will facilitate the relocation of incumbent licensees on the upper 200 channels. Licensees who are faced with relocation will have a significant incentive to relocate rapidly and voluntarily if they know they will have greater flexibility to modify and expand their systems on the channels to which they are relocating. This will promote our objectives for enabling EA licensees on the upper 200 channels to make

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[140] 47 U.S.C. § 309(j)(3)(C).

[141] 47 U.S.C. § 309(j)(6)(E).

[142] *Id.*

[143] *See 900 MHz Second Report and Order*; *Paging Second Report and Order.*

[144] *See 800 MHz Report and Order*, 11 FCC Rcd at 1476-1480, ¶¶ 9-14.

flexible use of their spectrum, while also protecting the interests of incumbents who relocate.

66. In addition, affording greater flexibility to lower 230 incumbents is appropriate because these channels are subject to an application freeze and geographic licensing of these channels will not occur until after the upper 200 channel auction is concluded and incumbents have had an opportunity to relocate to the lower channels. Because the upper 200 channels will be licensed first, EA winners on these channels will obtain the ability to expand within their geographic areas earlier than lower channel licensees. Allowing lower channel incumbents limited flexibility to expand prior to the auction will help to compensate for the fact that upper 200 licensees will obtain the benefits of geographic licensing sooner.

67. Therefore, we adopt our proposal to allow incumbents on the lower 230 channels to make system modifications within their interference contours without prior Commission approval. Incumbent licensees who currently utilize the 40 dBu signal strength contour for their service area contour and 22 dBu signal strength contour for their interference contour will be permitted to utilize their existing 18 dBu signal strength contour for their interference contour as long as they obtain the consent of all affected parties to do so. *See* Section IV-B-4-a. Thus, an incumbent licensee, with the concurrence of all affected incumbents, that desires to make modifications to its existing system will be able to make such modifications such as adding new transmitters, and altering its coverage area, so long as such inumbent does not expand the 18 dBu interference contour of its system. Moreover, licensees who do not receive the consent of all incumbent affected licensees, will be able to make similar modifications within their 22 dBu signal strength interference contour. Licensees that do not desire to make modifications may also continue to operate with their existing systems. We find that this approach will not only enable incumbents to fill in "dead spots" in coverage or to reconfigure their systems to increase capacity, but will also allow for some incremental expansion of their systems.

68. In the *800 MHz Report and Order*, some commenters stated that smaller SMR entities only need to make smaller incremental changes to their service areas to better serve their customers.[145] We believe that adopting the 18 dBu standard will allow such entities to make the incremental changes they desire. At the same time, we find that the 18 dBu standard is superior to the Industry Proposal because it preserves opportunities for new entrants in areas that are currently unserved and that are not reasonably proximate to existing facilities. The 18 dBu standard is more flexible than the 22 dBu standard and will thereby increase opportunities for lower 230 incumbents to modify their existing operations to meet technological changes and market demands for service. This additional flexibility will also facilitate the relocation of incumbent SMR licensees from the upper 200 to the lower 230 channels by providing these licensees with more flexibility to modify their existing systems than they would possess if they remained on the upper 200 channels.

69. Because our prior rules governing separation of 800 MHz facilities are based on a 40/22 dBμV/m standard, we recognize that the 18 dBμV/m standard adopted here may have little practical significance in portions of the United States areas where incumbents are already operating in close proximity to one another, *e.g.*, most markets east of the Mississippi. Therefore, as discussed in Section IV-B-4-a, we will continue to use the current separation tables and short-spacing rules based on the 40/22 dBμV/m ratio to define the interference protection rights of incumbents against other incumbents, except where incumbents consent to the use of a more relaxed standard. In less densely populated areas, however, we expect the 18 dBμV/m standard to be beneficial to incumbent systems seeking greater operational flexibility. In addition, as discussed in Section IV-B-4-b, we will use the incumbent's 36 dBμV/m as opposed to 40 dBμV/m contour as the basis for protection from interference by adjacent EA

[145] *Id.* at 1477-8, ¶ 11.

licensees.

ii. Converting Site-Specific Licenses to Geographic Licenses

70. Background. In the *800 MHz Report and Order*, we allowed SMR incumbents on the upper 200 channels who did not obtain EA licenses and who were not subject to relocation to exchange their multiple site licenses for a single geographic license that would authorize operations throughout the contiguous and overlapping 22 dBμV/m contours of the incumbent's previously authorized sites.[146] We required incumbents seeking such geopgraphic licenses to make a one-time filing identifying each of their external base station sites.[147] We also required them to document that their external base stations are constructed and operational, which would prevent the EA licensee or any other incumbent from using these channels within the area designated by the geographic license.[148] In the *Second Further Notice*, we proposed to allow incumbents on the lower 230 channels to obtain geographic area licenses under the same procedures.[149]

71. Comments. PCIA supports the Commission's proposal to permit incumbent licensees on the lower 230 channels to obtain geographic licenses.[150] SMR WON also supports the proposal, although it urges the Commission to go further by adopting the Industry Proposal.[151]

72. Discussion. We will allow lower 230 channel incumbents to combine their site-specific licenses into single geographic licenses as proposed. This option will provide incumbents with the same flexibility and reduced administrative burden that geographic licensing affords to EA licensees, and will simplify the licensing process for the Commission. Because we have adopted the 18 dBu contour rather than the 22 dBu contour, where the incumbent licensee has obtained the consent of all affected parties, as the benchmark for defining an incumbent licensee's protected service area, we will use the contiguous and overlapping 18 dbu contours of the incumbent's previously authorized sites to define the scope of the incumbent's geographic license. Therefore, after the auction of the lower 230 channels has been completed, incumbents in the lower 230 channels may convert their current multiple site licenses to a single license. Incumbents seeking such reissued licenses must make a one-time filing of specific information for each of their external base station sites to update our database. Such filings should be made on FCC Form 600 and should include a detailed map of the area the system will cover. We also will require evidence that such facilities are constructed and placed in operation. Once the geographic license has been issued, facilities that are later added or modified that do not extend the licensees' 18 dBu interference contour will not require prior approval or subsequent notification under this procedure. Such facilities should not receive interference because they will be protected by the presence of the licensee's external co-channel stations. Licensees who do not receive the consent of all affected parties may also follow the same process utilizing their 22 dBu signal strength interference contour, rather than the 18 dBu contour.

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[146] *800 MHz Report and Order*, 11 FCC Rcd at 1516, ¶ 88.

[147] *Id.*

[148] *Id.*

[149] *Second Further Notice*, 11 FCC Rcd at 1598, ¶ 317.

[150] PCIA Comments at 22.

[151] SMR WON Comments at 21.

4. Co-Channel Interference Protection

a. Incumbent SMR Systems

73. Background. In the *CMRS Third Report and Order*, we concluded that, as a general matter, we would retain our existing co-channel protection rules for CMRS licensees, and that geographic area licensees would continue to be subject to existing station-specific interference criteria with respect to all incumbent co-channel stations.[152] In the *800 MHz Report and Order*, we adopted this approach for the upper 200 channels.[153] In the *Second Further Notice*, we proposed to retain the same level of co-channel protection for incumbents on the lower 230 channels that is afforded under our existing rules.[154]

74. Comments. Commenters generally agree that the same protection should be applied to all incumbents on 800 MHz SMR channels, regardless of whether they are SMR or non-SMR incumbents.[155] AMTA argues that incumbents on the lower channels should be entitled to the same degree of protection from interference as incumbents on the upper 200 channels.[156]

75. Discussion. Our interference protection proposals in the *Second Further Notice* assumed that we would use the 22 dBμV/m contour as the basis for determining the area in which lower 230 incumbents could operate.[157] As noted in Section IV-B-3-b, *supra*, we have decided instead to allow all incumbents on the lower 230 channels to use the 18 dBμV/m contour as the basis for modifying and expanding their systems, provided that they obtain the consent of all co-channel incumbents potentially affected by the use of this standard. Because the 18 dBμV/m standard gives incumbents greater flexibility to expand, we must apply stricter interference protection criteria to EA licensees to ensure that they do not interfere with incumbent operations. Specifically, we will require EA licensees either: (1) to locate their stations at least 173 km (107 miles) from the licensed coordinates of any incumbent, or (2) to comply with co-channel separation standards based on a 36/18 dBμV/m standard rather than the previously applicable 40/22 dBμV/m standard.[158] In PR Docket No. 93-60,[159] the Commission determined that a

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[152] *CMRS Third Report and Order*, 9 FCC Rcd at 8062, ¶ 145; *see* 47 C.F.R. § 90.621.

[153] *See 800 MHz Report and Order*, 11 FCC Rcd at 1516-17, ¶ 92.

[154] *See* 47 CFR § 90.621(b). It should be noted that the separation between co-channel stations varies according to location. These variations are listed in 47 C.F.R. § 90.621(b), and they apply to both the upper 200 channels and the lower 230 channels. These variations will not be changed by this Order.

[155] AMTA Comments at 28; Southern Comments at 16; UTC Reply Comments at 14; GM Comments at 4; ITA Comments at 8-9.

[156] AMTA Comments at 29.

[157] *Second Further Notice*, 11 FCC Rcd at 1597-8, ¶ 316.

[158] The 36 dBμV/m desired signal strength contour is determined from the R-6602, F(50,50) curves for Channels 7-13 in Section 73.699 of the Commission's rules (Figure 10), with a 9 dB correction factor for antenna height differential. The 18 dBμV/m undesired signal strength contour is calculated using the R-6602, F(50,10) curves for Channels 7-13 found in Section 73.699 of the Commission's rules (Figure 10a), with a 9 dB correction factor for antenna height differential.

[159] *See* Co-Channel Protection Criteria for Part 90, Subpart S Stations, PR Dkt. No. 93-60, *Report and Order*, 8 FCC Rcd 7293, ¶ 7 (1994).

protection ratio of 18 dB would result in co-channel station spacings that provide reasonable protection from co-channel interference and, at the same time, provide for efficient reuse of valuable spectrum. Thus, EA licensees are required to ensure that the 18 dBμV/m undesired signal strength contour of a proposed station does not encroach upon the 36 dBμV/m desired signal strength contour of an existing incumbent station. Furthermore, in the opposite situation, EA licensees will have their 36 dBμV/m desired signal strength contour protected with an 18 dB ratio, since the undesired signal strength contour limit for incumbents that have reached consent of all other affected parties shall be 18 dBμV/m.

76. We emphasize that this revised interference standard protects incumbents only against EA licensees, not against other incumbents. As noted above, incumbents who seek to use the 18 dBμV/m standard must obtain the consent of other affected incumbents to do so. In the absence of such consent, the protection that one incumbent must afford another continues to be governed by Section 90.621(b) of the Commission's rules, *i.e.*, incumbents must locate their stations at least 113 km (70 miles) from the facilities of any other incumbent or comply with the co-channel separation standards based on the 40/22 dBμV/m standard set forth in our prior short-spacing rules.[160]

b. Adjacent EA Licensees

77. Background. In the *800 MHz Report and Order*, we prohibited EA licensees on the upper 200 channels from exceeding a signal strength of 40 dBμV/m, unless all bordering EA licensees agreed to a higher signal strength standard as the basis for the conclusion that the co-channel interference protection obligations of geographic area licensees with respect to other geographic area licensees would be similar to those imposed in the cellular and PCS services.[161] In the *Second Further Notice*, we similarly proposed that geographic-area licensees on the lower 230 channels provide interference protection either by limiting the signal level at their service area boundaries or by negotiating some other mutually acceptable agreement with potentially affected adjacent licensees.[162]

78. Discussion. We adopt the same interference protection standards for the lower 230 channels that we previously adopted for the upper 200 channels. Thus, EA licensees on the lower 230 channels must limit their signal strength at their EA borders to 40 dBμV/m, unless affected adjacent EA licensees agree to higher signal strength. We emphasize that this rule applies only to resolving interference issues between EA licensees. Thus, an EA licensee who complies with this rule may nevertheless be required to limit its operations further in order to comply with the rules governing protection of incumbents (see Section IV-B-4-a, *infra*).

c. Emission Masks

79. Background. In the *800 MHz Report and Order*, we adopted out-of-band emission mask rules for the upper 200 channels to protect against adjacent channel interference. The emission mask standard was based on a proposal made by Ericcson and supported by Motorola. Although we noted that the emission mask standard adopted for 800 MHz SMR was different from that applicable to broadband PCS, we concluded that the modified standard was justified because it would facilitate the transition from existing rules to geographic area licensing and would encourage the development of dual mode

[160] *See* 47 C.F.R. § 90.621(b).

[161] *800 MHz Report and Order*, 11 FCC Rcd at 1518, ¶ 96.

[162] *Id.* at 1599, ¶ 318.

SMR/cellular equipment.[163]

80. Discussion. In response to a request for reconsideration from Ericcson, again supported by Motorola, we are further modifying our emission mask rule for the upper 200 channels in the accompanying *Memorandum Opinion and Order*.[164] We conclude that this rule, as modified, should also be applied to the lower 230 channels. Use of a common emission standard throughout the 800 MHz SMR band will facilitate use of common equipment and make it easier for licensees to combine upper 200 and lower 230 channels in their systems. As in the case of the upper 200 channels, application of the emission mask rule to the lower 230 channels will apply only to "outer" channels used by the licensee, *i.e.*, to channels that are creating out-of-band emissions that affect another licensee. Thus, the emission mask rules do not apply to "interior" channels in a spectrum block that do not create out-of-band emissions outside that block or on channels in the block that are used by incumbents.

5. Regulatory Classification of EA Licensees on the Lower 230 Channels

81. Background. In the *800 MHz Report and Order*, we concluded that EA licensees on the upper 200 channels would be classified presumptively as CMRS, but that a licensee that does not intend to provide CMRS may overcome this presumption by demonstrating that its service does not fall within the CMRS definition.[165] In the *Second Further Notice*, we proposed to apply the same presumption to the lower 230 channels. We tentatively concluded that most geographic licensees on the lower 230 channels were likely to provide for-profit, interconnected service, which would cause them to be classified as CMRS. We also rejected the view that the CMRS presumption should not be applied to small or local SMR systems, noting that the statutory basis for CMRS classification rests on the operational nature of the service provided, not on system size or the geographic scope of the licensee's service area.[166]

82. Comments. E.F. Johnson proposes that the Commission allow non-SMR incumbents to be eligible for EA licenses on channels for which they currently are licensed.[167] E.F. Johnson further proposes that if a non-SMR secures an EA license, it should be classified as a Private Mobile Radio Service (PMRS) provider.[168] Genesee opposes classifying lower 230 channel licensees as CMRS, contending that we have imposed this classification solely to make these channels auctionable.[169]

83. Discussion. We adopt our proposal with respect to SMR applicants who obtain EA licensees on the lower 230 channels, but modify it with respect to non-SMR applicants for EA licenses. We anticipate that most applicants for EA licenses on these channels will be SMR applicants who seek to

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[163] *Id.* at 1519-20, ¶ 101.

[164] Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Dkt. No. 93-144, *Memorandum Opinion and Order*, FCC 97-224 (July 10, 1997).

[165] *800 MHz Report and Order*, 11 FCC Rcd at 8057, ¶ 131.

[166] *Id.* at 1600, ¶ 322.

[167] E.F. Johnson Comments at 8.

[168] *Id.*

[169] Genesee Comments at 6.

provide interconnected service, thus meeting the statutory definition of CMRS. Therefore, we will presumptively classify SMR winners of EA licenses as CMRS providers. However, we will allow SMR applicants and licensees to overcome this presumption by demonstrating that their service does not meet the CMRS definition. This is consistent with our approach to broadband PCS and other services. We reject Genesee's contention that we have illegitimately used CMRS classification as a basis for auctioning the lower 230 channels. In fact, the issue of regulatory classification under Section 332 of the Act is irrelevant to the issue of auctionability, which turns on the factors enumberated in Section 309(j) of the Act. We address the issue of auctionability elsewhere in this order and decline to revisit it here.

84. In the *Memorandum Opinion and Order* adopted today, we determine that non-SMRs as well as SMRs will be eligible to obtain EA licenses on the 150 General Category channels.[170] While we expect most EA licenses to be sought by SMR providers, we agree with E.F. Johnson that where an EA license is obtained by a non-SMR operator, the CMRS presumption is inapplicable. Thus, in the event that EA licenses are awarded to Public Safety, Industrial/Land Transportation, or Business[171] licensees, such licensees will be classified as PMRS providers.

C. Relocation of Incumbents from the Upper 200 Channels

1. Comparable Facilities

85. Background. In the *800 MHz Report and Order*, we determined that incumbents on the upper 200 channels would not be subject to mandatory relocation unless the EA licensee provided the incumbent licensee with "comparable facilities."[172] In the *800 MHz Second Further Notice*, we tentatively concluded that "comparable facilities" must provide the same level of service as the incumbents' existing facilities. Under our proposed definition of comparable facilities, a relocated incumbent would: (a) receive the same number of channels with the same bandwidth; (b) have its entire system relocated, not just those frequencies desired by a particular EA licensee; and, (c) once relocated, have the same 40 dBu service contour as its original system.[173] We also tentatively concluded that an EA licensee's relocation obligations to an incumbent would not require the EA licensee to replace existing analog equipment with digital equipment if an acceptable analog alternative existed that satisfied the comparable facilities definition.[174] We indicated that if an incumbent desired to upgrade to a digital system, it would be required to bear the additional costs associated with the upgrade. We therefore proposed that in such circumstances, the cost obligation of the EA licensee would be the minimum cost the incumbent would incur if it sought to replace, but not upgrade, its system.[175]

86. Comments. Commenters generally support our tentative conclusion that comparable facilities

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[170] *Memorandum Opinion and Order* at ¶¶ 100-102.

[171] Although Business Radio licensees below 800 MHz may be classified as CMRS, Business Radio licensees above 800 MHz are precluded from providing for-profit service, and therefore are classified as PMRS. *See* 47 C.F.R. § 90.617.

[172] *800 MHz First Report and Order*, 11 FCC Rcd 1508, ¶ 74.

[173] *Id.* at 1586, ¶ 283.

[174] *Id.* at 1587, ¶ 284.

[175] *Id.*

should provide the same level of service as the incumbents' existing facilities.[176] Many commenters also urge us to provide a clearer definition of the term "system" for purposes of determining what facilities the EA licensee is responsible for relocating.[177] SMR WON argues that a system should be defined to include (1) separately licensed facilities that use a common switch or a tandem of switches, and (2) facilities (not commonly switched) that are used to offer subscribers geographic coverage options on commonly owned or commonly managed systems.[178] SMR WON argues that from the customers' perspective, these arrangements constitute single "systems" that provide the customer with increased geographic flexibility and coverage options. CTI similarly argues that many wide-area SMR systems are comprised of facilities individually licensed to multiple licensees that operate on an integrated basis.[179] These parties argue that an EA licensee should retune all channels which compromise an integrated system, regardless of whether one or more parties hold the underlying licenses.[180] CTI contends that otherwise an EA licensee could "cherry-pick" more desirable channels, or disrupt an incumbent's network by relocating only a few channels.[181]

87. Other commenters argue for a more restrictive definition of a "system." Nextel, for example, argues that a system should be defined as only those base station(s) located in the EA and only those mobiles that regularly operate on those stations.[182] Pittencrief adds that a system should not be defined to cover more than an EA, and that multiple base stations should not be treated as a system if the base stations serve different mobile units.[183] GP seeks clarification of whether relocating an "entire system" requires changes to the user control and mobile units.[184]

88. Commenters also request that we expand our criteria for determining comparable facilities to include factors such as serviceability, signalling capacity, baud rate, access time, bandwidth, equivalent co-channel separation and equivalent performance at the same antenna height and power, and compatibility with the multi-channel system at the incumbent's original location.[185] Others argue that we should require an EA licensee to replace existing analog equipment with digital equipment, or that we should evaluate

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[176] *See e.g.*, AMTA Comments at 14-15; ITA Comments at 15;

[177] AMTA Comments at 15; ICE Comments at 4-5; ITA Comments at 10; Duke Power Comments at 6; PCI Comments at 7.

[178] SMR WON Comments at 35-37.

[179] CTI Comments at 6; *see also* ICE Comments at 6.

[180] CTI Comments at 6.

[181] CTI Comments at 6. *See also* ICE Comments at 6.

[182] Nextel Comments at 22, Southern Reply at 9; *see also* Duke Power Comments at 6 (all incumbent radio units, including control and base station facilities should be reprogrammed or recrystallized at the EA's expense.)

[183] PCI Comments at 7.

[184] GP and Partners Comments at 2.

[185] Ericsson Comments at 2; CICS at 4; Dow Reply at 9; Genesee Comments at 3; ITA Comments at 10; U.S. Southern Reply at 9; Sugar Comments at 10.

relocated systems based on the 22 dBu contour rather than the 40 dBu contour of the original system.[186]

89. Discussion. We adopt our proposed definition of "comparable" facilities, with certain clarifications discussed below. In general, we define comparable facilities as facilities that will provide the same level of service as the incumbent's existing facilities. We also agree with commenters that being provided with comparable facilities requires that the change be transparent to the end user to the fullest extent possible.[187] However, our definition does not require an EA licensee to upgrade the incumbent's facilities. As we proposed, EA licensees will not be required to replace existing analog equipment with digital equipment when there is an acceptable analog alternative that satisfies the comparable facilities definition. Thus, under these circumstances the cost obligation of the EA licensee will be the minimum cost the incumbent would incur if it sought to replace, but not upgrade, its system.

90. We agree with many of commenters' suggestions for further refining the factors that are used to define comparable facilities. We conclude that the determination of whether facilities are comparable should be made from the perspective of the end user. To this end, we identify four factors -- *system, capacity, quality of service,* and *operating costs* -- that are relevant to this determination. We emphasize that these factors are only relevant to determining what facilities the EA licensee must provide to meet the requirements for mandatory relocation; we reiterate that incumbents and EA licensees are free to negotiate any mutually agreeable alternative arrangement.

a. System

91. To meet the comparable facilities requirement, an EA licensee must provide the relocated incumbent with a comparable system. We believe the term "system" should be defined functionally from the end user's point of view, *i.e.*, a system is comprised of base station facilities that operate on an integrated basis to provide service to a common end user, and all mobile units associated with those base stations.[188] We agree with SMR WON that this definition can include multiple-licensed facilities that share a common switch or are otherwise operated as a unitary system, provided that an end user has the ability to access all such facilities.[189] We also agree with SMR WON and AMTA that a "system" may cover more than one EA if its existing geographic coverage extends beyond the EA borders. We reject Nextel and Pittencrief's suggestions that we define "system" more narrowly. In our view, a narrower definition would impair the flexibility of incumbents to continue meeting their customer's needs.

b. Capacity

92. To meet the comparable facilities requirement, an EA licensee must relocate the incumbent to facilities that provide equivalent channel capacity. We define channel capacity as the same number of channels with the same bandwidth that is currently available to the end user. For example, if an

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[186] Digital Comments at 6; SMR Systems Comments at 7; Southern Reply at 9; CellCall Reply at 7.

[187] SMR Systems Inc. Comments at 7.

[188] System comparability includes stations licensed on a secondary, non-protected basis. An incumbent that is licensed on a secondary basis at the time of notification must receive at least the equivalent type of license.

[189] However, our definition does not extend to facilities that are operationally separate. For example, if a subscriber on one system has the ability to roam on a neighboring system, we would not define the two facilities as part of a common "system." In addition, our definition does not include managed systems that are comprised of individual licenses.

incumbent's system consists of five 50 kHz (two 25 kHz paired frequencies)channels, the replacement system must also have five 50 kHz channels. If a different channel configuration is used, it must have the same overall capacity as the original configuration. We agree with commenters that comparable channel capacity requires equivalent signaling capability, baud rate, and access time.[190] In addition, the geographic coverage of the channels must be coextensive with that of the original system.

c. Quality of Service

93. Comparable facilities must provide the same quality of service as the facilities being replaced. We define quality of service to mean that the end user enjoys the same level of interference protection on the new system as on the old system.[191] In addition, where voice service is provided, the voice quality on the new system must be equal to the current system. Finally, we consider reliability of service to be integral to defining quality of service. We measure reliability as the degree to which information is transferred accurately within the system. Reliability is a function of equipment failures (e.g. transmitters, feed lines, antennas, receivers, battery back-up power, etc.) and the availability of the frequency channel due to propagation characteristics (e.g. frequency, terrain, atmospheric conditions, radio-frequency noise, etc.) For digital data systems, this will be measured by the percent of time the bit error rate exceeds the desired value. For analog or digital voice transmissions, we will measure the percent of time that audio signal quality meets an established threshold. If analog voice system is replaced with a digital voice system the resulting frequency response, harmonic distortion, signal-to-noise ratio, and reliability will be considered.

d. Operating Costs

94. Another factor in determining whether facilities are comparable is operating costs. We define operating costs as costs that affect the delivery of services to the end user. If the EA licensee provides facilities that entail higher operating cost than the incumbent's previous system, and the cost increase is a direct result of the relocation, the EA licensee must compensate the incumbent for the difference. We anticipate that costs associated with the relocation process will fall into several categories. First, the incumbent must be compensated for any increased recurring costs associated with the replacement facilitates (e.g. additional rental payments, increased utility fees). Second, increased maintenance costs must be taken into consideration when determining whether operating costs are comparable.[192] For example, maintenance costs associated with analog systems may be higher than the costs of digital equipment because manufacturers are producing mostly digital equipment and analog replacement parts can be difficult to find.

95. While we conclude that EA licensees should be responsible for increased operating costs caused by relocation, we note that identifying whether increased costs are attributable to relocation becomes more difficult over time. Therefore, we will not impose this obligation indefinitely, but will end

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[190] Ericsson Comments at 2; Southern Reply Comments at 9.

[191] *See* CICS at 4; Duke at 6.

[192] Duke Comments at 6; Ericsson Comments at 3; UTC Reply Comments at 9.

the EA licensee's obligation to pay increased costs five years after relocation has occurred.[193] We believe this appropriately balances the interests of EA licensees and relocated incumbents.

2. Cost-Sharing

a. Sharing Relocation Costs on a *Pro Rata* Basis

96. Background. In the *First Report and Order*, we concluded that the mandatory relocation mechanism will consist of two phases.[194] The first phase is a one-year period that will allow parties to negotiate voluntarily. Because the first phase is voluntary, EA licensees are not required to collectively negotiate with the incumbent unless they provide notice within 90 days of the release of the Public Notice commencing the voluntary negotiation period.[195] Once notice is given, the incumbent may require all EA licensees who provided notice to negotiate collectively. We concluded that most incumbents will elect to require all notifying EA licensees to negotiate collectively during the voluntary negotiation period to accommodate system-wide relocation agreements.[196] We tentatively concluded that the elaborate cost-sharing plan we adopted for broadband PCS is unnecessary for the relocation process in the 800 MHz SMR bands.[197] Because the licensing of PCS bands was staggered, a cost-sharing plan was required to ensure all microwave incumbents and PCS licensees who relocated microwave incumbents were made whole. However, all applicants for 800 MHz SMR licenses should receive their licenses at approximately the same time and therefore we proposed not to adopt a comprehensive cost-sharing plan, but instead require EA licensees to share the relocation costs on a *pro rata* basis, unless all affected EA licensees and the incumbent agreed to a different cost-sharing arrangement.[198] We concluded that this would allow EA licensees to accelerate the speed of deployment of wide-area SMR service to the public.[199]

97. Comments. Several commenters support the distribution cost method adopted by the Commission which requires all EA licensees who have timely notified the incumbent of their intention to relocate the incumbent to share the costs of relocating the incumbent to comparable facilities.[200] However, several commenters believe that the Commission's PCS cost-sharing rules are a good first step,

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[193] This approach is consistent with the approach we have adopted for microwave relocation. *See* Amendment to the Commission's Rules Regarding A Plan for Sharing the Costs of Microwave Relocation, WT Docket No. 95-157, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8825, ¶ 31 (1996).

[194] *800 MHz Report and Order*, 11 FCC Rcd at 1509, ¶ 77.

[195] *Id.*

[196] *Second Further Notice*, 11 FCC Rcd at 1581, ¶ 269.

[197] *Id.*

[198] *Id.*

[199] *Id.*

[200] *See 800 MHz Report and Order*, 11 FCC at 1510, ¶ 78 and *Second Further Notice*, 11 FCC Rcd at 1580 ¶ 269. AMTA Comments at 9; Genesee Comments at 2; CellCall Reply Comments at 4; UTC Reply Comments at 6.

but argue that the Commission must go further.[201] Fresno argues that the experience in PCS demonstrates the necessity of adopting detailed cost sharing rules.[202] Other commenters argue that more rules are necessary to ensure that EA licensees can successfully clear channels for exclusive use.[203] In addition, several commenters support a process that does not allow EA licensees to stall or delay other EA licensees's plans.[204] Pittencrief and AMTA agree that EA licensees should negotiate promptly, but realize the difficulty of getting all affected EA licensees and incumbents to agree to a relocation plan in light of different licensees's business timetables.[205]

98. Several commenters propose that if all affected EA licensees cannot negotiate a relocation agreement, that those EA licensees who are willing to relocate the incumbent to "comparable facilities" be allowed to do so, but have the ability to "step into the shoes" of the incumbent.[206] Commenters propose that by stepping into the shoes of the incumbent, an EA licensee would succeed to all of the incumbents rights and obligations for blocks licensed to non-notifying EA licensees.[207] Nextel believes that stepping into the shoes of the incumbent will keep those EA licensees who cannot or will not participate in the relocation process from impeding the relocation process.[208] Pittencrief proposes that those EA licensees who subsequently benefitted from the relocation, but did not participate, would be required to compensate the first EA licensee for the actual cost of relocating the incumbent.[209] Pittencrief believes that allowing EA licensees to step into the shoes of the incumbent will allow EA licensees who are prepared to relocate the incumbent to do so without the delay of those EA licensees who are not prepared.[210] Pittencrief argues that this proposal provides an "adequate resolution" in the event the negotiations between EA licensees break-down and will result in the quick deployment of service to the public.[211]

99. Discussion. We adopt an approach that is similar to our PCS microwave relocation rules. We conclude that, absent an agreement among EA licensees who are prepared to relocate the incumbent, all EA licensees who benefit from the relocation of the incumbent must share the relocation costs on a *pro rata* basis. Although several commenters believe that the Commission should adopt detailed rules for sharing relocation costs among multiple EA licensees, we do not believe that detailed rules are necessary

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[201] Fresno Comments at 15; Nextel Comments at 18; SMR WON Reply Comments at 12.

[202] Fresno Comments at 15.

[203] Nextel Comments at 18; SMR WON Reply Comments at 12.

[204] Nextel Petition at 11-12; Pittencrief Comments at 4-5; Nextel Comments at 18; Dow Chemical Telecommunications Corp. ("Dow") Reply Comments at 4.

[205] PCI Comments at 4-5; AMTA Comments at 10-11.

[206] PCI Comments at 5; AMTA Comments at 11; CellCall Comments at 4; Nextel Comments at 20; CellCall Reply Comments at 4.

[207] *Id.*

[208] Nextel Comments at 20; Nextel Petition at 12-13.

[209] PCI Comments at 5.

[210] *Id.*

[211] *Id.* at 6.

since all EA licensees will be licensed at approximately the same time.[212] However, we do not believe that all EA licensees will notify incumbents of their intention to relocate within 90 days of the release of the Public Notice announcing the commencement of the voluntary negotiation period because they may not be ready or capable of relocating an incumbent and, therefore will not participate in the relocation process. Those non-notifying EA licensees, however may subsequently determine that those channels relocated out of their EA by other EA licensees are necessary for their use. Therefore, EA licensees who relocate the incumbent will obtain a right to reimbursement from non-notifying EA licensees who want to benefit from the relocation. We believe that allowing all EA licensees who relocate the incumbent a right to reimbursement is necessary to avoid a "free-rider" problem by those EA licensees who did not provide notification, but subsequently benefit from the relocation. We also believe that reimbursement rights will ensure that the incumbent is relocated as a whole and not on a piece-meal basis.

100. The *pro rata* formula will be based on the number of channels being relocated out of each EA. Several commenters support this proposal, because the relocation process is likely to involve multiple EA licensees and one incumbent.[213] Therefore, the cost-sharing formula will determine the costs for relocating the incumbent's system out of each EA. We believe that determining the relocation costs for each EA will allow those EA licensees who participate in the relocation process to easily determine their cost obligation and their reimbursement share from later entrant EA licensees who did not participate. We believe that such a formula will negate the need for a complicated plan. The new formula is:

$$Ci = Tc \times \frac{Chj}{TCh}$$

Ci	equals the amount of reimbursement
Tc	equals the actual cost of relocating the incumbent
TCh	equals the total number of channels that are being relocated
Chj	equals the number of channels that each respective EA licensee will benefit from

101. We believe the formula provides an effective and straightforward means of determining a participating EA licensee's cost obligation and the reimbursement shares for later entrant EA licensees. This formula is essential to make cost-sharing administratively feasible and fair for those EA licensees who participate in the relocation process and those who choose not to.

102. The formula is similar to the formula adopted for sharing the relocation costs of microwave incumbents, but it does not take into account depreciation for the costs of reimbursing EA licensees who participated in the relocated process. Instead, non-notifying EA licensees who subsequently decide to use the channels or area of their EA that an incumbent was relocated out of must fully reimburse those participating EA licensees prior to testing. Similar to our decision in the microwave relocation proceeding, EA licensees who relocate channels that benefit other EA licensees and are fully outside of their market, should be entitled to full reimbursement of compensable costs for relocating that portion of the incumbent that are either fully outside their market area or licensed EA. However, because we realize that a non-notifying EA licensee may not decide to use those channels or serve the area of their EA that

[212] Fresno Comments at 15.

[213] AMTA Comments at 9-10; Genesee Comments at 2; CellCall Reply Comments at 4; UTC Reply Comments at 6. The *pro rata* formula requires those EA licensees who participate in the relocation process to share the costs for relocating those channels that are located in a non-notifying licensee's EA.

was once occupied by an incumbent, we conclude that ten years from the date of the Public Notice commencing the voluntary negotiation period, reimbursement rights will sunset.

103. The following is an example of how the formula will work: In October 1997, EA licensees A, B, and C each notify the incumbent in a timely manner that they are prepared to relocate the incumbent. EA licensee D does not provide notification to the incumbent. The incumbent decides to compel simultaneous negotiations among EA licensees A, B, and C. As a result, EA licensees A, B, and C fully relocate the incumbent. The total costs for relocating the incumbent is $100,000. There were 60 channels that EA licensees A, B, C, and D can use as a result of the relocation. The channels located in each EA are as follows: EA A has 25 channels; EA B has 15 channels; EA C has 10 channels; and EA D has 10 channels. For this example, we will calculate the formula for determining the costs share of EA licensee B. As a result, Chj = 25, because that is the number of channels that EA licensee B will benefit from. The total number of channels that were relocated is 60 and, therefore TCh = 60. In addition, Tc equals $100,000, because that is the total costs of relocating the incumbent. The calculation of licensee B's reimbursement payment is as follows:

$$\$25{,}000 = \$100{,}000 \times \frac{25}{60}$$

Thus, licensee B pays $25,000. Licensee A would pay $41,666.66, licensee C would pay $16,666.66 and licensee D would pay $16,666.66. Therefore, licensee D will be obligated to reimburse licensees A, B, and C $16,666.66 if licensee D subsequently decides to use the channels in EA D. This amount must be equally divided among EA licensees A, B, and C. All three licensees will trigger a right to reimbursement from licensee D and will have the right to collect their share of the costs prior to licensee D commencing with testing.

104. We decline to adopt the proposals of commenters that would allow EA licensees who relocate the incumbent to step into the shoes of the incumbent.[214] We realize that not all EA licensees will provide notice, even though there are sufficient incentives to do so. However, we do not believe it would be appropriate to allow an EA licensee who is prepared to relocate the incumbent to succeed to all of the rights and obligations of that incumbent.[215] In essence, suceeding to the rights and obligations of the incumbent would allow EA licensees to attain a de facto license for parts of an EA that they were not the high bidder for at auction. Therefore, we believe that all EA licensees who benefit initially or subsequently from the relocation of an incumbent should share the costs of the relocation on a *pro rata* basis. To accomplish this, EA licensees who relocate the incumbent will obtain a right to reimbursement from non-notifying EA licensees who subsequently decide to use the channels that were relocated. Therefore, we have designed a two-step process that will allow a participating EA licensee to obtain a reimbursement right and collect the initial costs for relocating channels outside of their EA.

b. Triggering a Reimbursement Right

105. Background. In the *Second Further Notice of Proposed Rule Making*, we tentatively concluded that an EA licensee who negotiates a relocation agreement that benefits one or more other EA

[214] AMTA Comments at 11; CellCall Comments at 4; Nextel Comments at 20; Pittencrief Comments at 5; CellCall Reply Comments at 4.

[215] *See* PCI Comments at 5; AMTA Comments at 11; CellCall Comments at 4; Nextel Comments at 20; CellCall Reply Comments at 4.

licensees should obtain a right to reimbursement of a share of the relocation costs.[216] We sought comment on how such rights should be created procedurally so parties who obtain those rights could enforce them and collect reimbursement from EA winners who benefited from the relocation.[217]

106. Comments. UTC supports adopting a cost-sharing formula under which EA licensees that relocate portions of incumbent systems outside their license blocks may seek reimbursement from other EA licensees that benefit from the relocation.[218] CICS also supports the proposal to provide reimbursement rights to EA licensees who negotiate a relocation agreement that benefits other EA licensees.[219] CICS believes that the Commission should use the reimbursement rights guideline developed in the microwave relocation docket.[220]

107. SMR WON, AMTA, and Nextel believe that an EA licensee willing to relocate an incumbent should be allowed to do so without being delayed by an EA licensee who cannot or does not want to relocate the incumbent.[221] They believe that EA licensees who decide to relocate an incumbent should receive a right to reimbursement, because such licensee will have to relocate the entire system and will therefore relocate channels benefitting EA licensees who decide not to relocate the incumbent.[222] Other commenters agree that an EA licensee should have this flexibility, and urge the Commission to allow an EA licensee who relocates an incumbent to succeed to all rights held by the incumbent.[223]

108. AMTA believes that one or more EA licensees will not be prepared to negotiate collectively with other EA licensees or decide not to retune a particular incumbent's channels. Therefore, AMTA encourages the Commission to prohibit EA licensees who do not participate in the collective negotiation process from invoking mandatory negotiations or any of the provisions provided for in the relocation guidelines.[224]

109. Discussion. Commenters, although supportive of the Commission's proposal to allow EA licensees who negotiate a relocation agreement the right to reimbursement from EA licensees who benefitted,[225] did not specifically address how such right should be created.[226] We believe that a right to

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[216] *Second Further Notice*, 11 FCC Rcd 1582, ¶ 273.

[217] *Id.*

[218] UTC Comments at 7.

[219] CICS Comments at 5.

[220] *Id.*

[221] SMR WON, AMTA, and Nextel Joint Reply Comments at 12-13.

[222] *Id.*

[223] PCI Comments at 5; CellCall Reply Comments at 4; SMR WON, AMTA, and Nextel Joint Reply Comments at 12-13.

[224] AMTA Comments at 11.

[225] *Second Further Notice*, 11 FCC Rcd 1582, ¶ 273.

[226] *Id.*

reimbursement can easily be triggered by the procedures we adopted in the *First Report and Order*.[227]

110. In the *First Report and Order*, we developed a notification procedure that requires an EA licensee to file a copy of the relocation notice and proof of the incumbent's receipt of the notice to the Commission within ten days of receipt.[228] Because notification affects an EA licensee's right to relocate an incumbent, we believe that such notification should also be the first step in triggering an EA licensee's reimbursement right. We believe the second step of triggering a reimbursement right is signing a relocation agreement with the incumbent. Thus, if an EA licensee timely notifies an incumbent of its intention to relocate, and subsequently negotiates and signs a relocation agreement with the incumbent, the EA licensee will have triggered its right to reimbursement from EA licensees who benefitted.

111. In addition, because notification is the first step in establishing a reimbursement right for an EA licensee, we believe that such notification should also establish an obligation for those EA licensees who benefited from the relocation. We believe that an EA licensee who is sincere about using the channels in its EA will provide notice to the incumbent of its intention to relocate the incumbent. We agree with AMTA that EA licensees who do not participate in the relocation process should be prohibited from invoking mandatory negotiations or any of the provisions of the Commission's mandatory relocation guidelines.[229]

112. Therefore, if an EA licensee timely notifies an incumbent of its intention to relocate, but during the voluntary negotiation period decides not to participate in the relocation process, such EA licensee will be obligated to reimburse those EA licensees who have triggered a reimbursement right. EA licensees who do not provide notice to the incumbent, but subsequently decide to use the channels in the EA will be required to reimburse, outside of the Commission's mandatory relocation guidelines, those EA licensees who have established a reimbursement right. We believe that this procedure strikes a fair balance between EA licensees who relocate incumbents and those EA licensees who decide not to relocate incumbents.

c. Compensable Costs

113. Background. In the *Second Further Notice*, we indicated that relocation costs could be divided into two categories: (1) the actual costs of relocating an incumbent licensee to comparable facilities, and (2) premium payments or payments above the cost of relocating an incumbent licensee to comparable facilities. In the *Second Further Notice*, we tentatively concluded that premium payments should not be reimbursable.[230] We indicated that premium payments may be made to accelerate the relocation process for the benefit of the EA licensee.[231] We also indicated that other EA licensees who will not actively participate in the relocation negotiations will not benefit from being first to market, and therefore should not be required to contribute to premium payments.

114. Comments. Southern argues that costs above actual relocation costs should also be

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[227] *See 800 MHz Report and Order*, 11 FCC Rcd at 1510, ¶ 78.

[228] *Id.*

[229] *See* AMTA Comments at 11.

[230] *Second Further Notice*, 11 FCC Rcd at 1581, ¶ 272.

[231] *Id.*

reimbursable, because but for the fact that incumbents are being relocated, these costs would not be incurred.[232] U.S. Sugar believes that all fees which are reasonable and incurred as a direct result of the relocation, should be reimbursable.[233] CellCall and Nextel do not believe that premium payments should be reimbursable.[234]

115. Commenters almost uniformly agree that relocation costs should not be limited to an itemized list, because actual costs may or may not include each of the relocation costs itemized by the Commission.[235] Commenters believe that specific items should be listed as compensable including: marketing and educating new costumers about the relocation,[236] replacing customer equipment,[237] loss of business,[238] configuration of antennas,[239] increased rent space,[240] legal and consulting fees,[241] other retuning costs,[242] administrative costs,[243] increased operating costs related to reprogramming,[244] and adverse tax consequences.[245] Several commenters also believe that actual costs

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[232] Southern Comments at 20.

[233] U.S. Sugar Comments at 11.

[234] CellCall Reply Comments at 5; Nextel Comments at 22.

[235] *See e.g.* ITA, Telephone Maintenance Frequency Advisory Committee Joint Comments at 9; Nextel Comments at 23; SMR Systems Comments at 4.

[236] Digital Comments at 4; Fresno Comments at 8; SMR systems Comments at 4; CellCall Reply Comments at 10.

[237] AMTA Comments at 12; Digital Comments at 4; Ericsson Comments at 3; Duke Comments at 6; CellCall Comments at 10; Sierra Comments at 1; SMR Systems Comments at 4.

[238] Digital Comments at 4; SSI Comments at 4; Southern Comments at 20; SMR Systems Comments at 4; CellCall Reply Comments at 10.

[239] AMTA Comments at 12; Fresno Comments at 9; Genessee Comments at 2; Southern Comments at 20. Genessee and Fresno urges the Commission to include additional antenna towers as a compensable costs.

[240] Fresno Comments at 9; Genessee Comments at 2; SMR WON Comments at 37.

[241] Digital Comments at 4; Genessee Comments at 2; SMR Systems Comments at 4; U.S. Sugar Comments at 11.

[242] AMTA Comments at 12; Southern Reply Comments at 10; Genessee Comments at 2; Nextel Comments at 23; Sierra Comments at 1; SMR WON Comments at 37. Genessee urges the Commission to include overtime expenses for retuning. Nextel believes that retuning costs should be included as compensable, because in some situations the relocation may require nothing more than retuning. SMR WON believes that actual costs should also include user equipment, redundant facilities or services required to build out a parallel system, such as buildings, backhaul facilities, and related costs such as the need for new environmental impact statements as required for government sites.

[243] Digital Comments at 4; CellCall Reply Comments at 10; Fresno Comments at 8; SMR Systems Comments at 4. Fresno urges the Commission to require reimbursement for the management of the relocation and any other administrative costs reasonably attributable to relocation.

[244] CellCall Comments at 10; Fresno Comments at 9; Sierra Comments at 1.

should include the simultaneous operation of the old system and new system until the reliability of the new system is tested and confirmed.[246]

116. Ericsson believes that the Commission's current policy on replacement costs does not consider the decreasing costs of digital systems.[247] Therefore, Ericsson and U.S. Sugar urge the Commission to acknowledge that replacing analog equipment with digital equipment is not necessarily more costly.[248] Ericsson also requests the Commission to clarify the term "replacement costs" of a system so it is defined in the context of the cost to replace a system at today's cost rather than the depreciated value of the equipment.[249]

117. Discussion. We agree with those commenters who believe that premium payments should not be reimbursable and therefore adopt our proposal that reimbursable costs will be limited to the actual costs of relocating the incumbent.[250] We believe that EA licensees who have an incentive to be first to market will have a need to accelerate the relocation process. We agree with those commenters that believe other EA licensees will not receive the same advantage and therefore should not be required to contribute to premium payments. Therefore, we conclude that reimbursement rights will only apply to actual relocation costs.

118. In the *Second Further Notice*, we tentatively concluded that actual relocation costs will include, but not be limited to: SMR equipment; towers and/or modifications; back-up power equipment; engineering costs; installation; system testing; FCC filing costs; site acquisition and civil works; zoning costs; training; disposal of old equipment; test equipment; spare equipment; project management; and site lease negotiation.[251] Commenters generally supported the list proposed, but were concerned that the list did not address other cost factors related to relocation.[252] We agree with those commenters who argue that there are other factors related to the relocation process and therefore conclude that this list should be illustrative, and not exhaustive. However, because we want to encourage a fast relocation process free of disputes, we believe that the bulk of compensable costs should be tied as closely as possible to actual equipment costs. Based on this goal, we believe that subsequent EA licensees should only be required to reimburse EA relocators for incumbent transaction expenses that are directly attributable to the relocation, subject to a cap of two percent of the "hard costs" involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses.

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[245] Fresno Comments at 8.

[246] CICS Comments at 3-4; ITA Comments at 9; SMR Systems, Inc, Comments at 4-5; Southern Reply Comments at 10; SMR Systems Comments at 5. SMR system believes that the Commission should establish a trial period of one year that would be reimbursable.

[247] Ericsson Comments at 4.

[248] Ericsson Comments at 4; U.S. Sugar Comments at 12. U.S. Sugar urges the Commission to recognize the increased costs of operating analog equipment in what is becoming a digital world.

[249] Ericsson Comments at 4.

[250] Nextel at 22; CellCall Reply at 5.

[251] *800 MHz Report and Order*, 11 FCC Rcd at 1582, ¶ 272.

[252] *See e.g.* SMR Systems, Inc. Comments at 4.

This restriction on the reimbursement of transaction fees corresponds to the restriction we adopted with respect to PCS reimbursement of incumbent transaction expenses for cost-sharing during any time period -- voluntary, mandatory, or involuntary.[253] Therefore, we adopt the same restriction for purposes of this cost-sharing plan. However, EA licensees are not required to pay for transaction costs incurred by EA licensees during the voluntary or mandatory periods once the involuntary period is initiated, or for fees that cannot be legitimately tied to the provision of comparable facilities.

119. In addition, we believe that actual costs should also include costs directly related to a seamless transition. In the *First Report and Order*, we concluded that during the involuntary negotiation period, the EA licensee must conduct the relocation in such a fashion that there is a "seamless" transition from the incumbents "old" frequency to its "new" frequency.[254] We agree with ITA and SMR Systems that it may be necessary to operate the old system and the new system simultaneously to ensure a seamless transition.[255] We want to encourage EA licensees and incumbents to exercise flexibility when negotiating a relocation agreement, but we also want to ensure that the incumbent is made whole, and is relocated without a substantial disruption in service. We also recognize that alternative means may be agreed upon to avoid a substantial disruption in service. Therefore, we will require that any costs directly associated with a seamless transition will be considered actual costs and, therefore reimbursable.

d. Payment Issues

120. Background. In the *Second Further Notice*, we sought comment on when reimbursement payments should be due.[256] Specifically, we asked commenters to address whether such payments should be due when the benefitting EA licensee began to use the particular frequency or when the EA licensee commenced testing of its wide-area system in the EA.

121. Comments. Fresno believes that the Commission should define payment obligations by defining when the EA licensee who relocated the incumbent, benefits other EA licensees.[257] Fresno believes that some EA licensees may decide not to use the channels that were relocated.[258] Therefore, Fresno believes that reimbursement payments should not be due until the EA licensee who conducted relocation commences with operation on the cleared frequencies.[259] Fresno believes that this procedure will limit the ability of an EA licensee seeking reimbursement from imposing unnecessary costs on an EA

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[253] *800 MHz Report and Order*, 11 FCC Rcd at 1501, ¶ 21.

[254] *Id.* at 1510, ¶ 79

[255] CICS Comments at 3-4; ITA Comments at 9; SMR Systems Comments at 4-5; Southern Reply Comments at 10.

[256] *Second Further Notice*, 11 FCC Rcd at 1583, ¶ 273.

[257] Fresno Comments at 15.

[258] *Id.* at 15-16.

[259] *Id.* at 15.

licensee who benefited.[260] Genessee believes that a portion of the payments should be held in escrow prior to the time the frequencies are free and clear.[261] Genessee believes that once the frequencies have been cleared, the final reimbursement payment should be made.[262]

122. In situations where an incumbent self-relocates and seeks reimbursement, Keller believes that payments should be due when the incumbent licensee commences testing on its new frequencies, because if the reimbursement payments were to be triggered by the progress of the EA licensee, the incumbent licensee would experience a financial drain without knowing when it would be reimbursed.[263]

123. Discussion. We partially agree with Genessee and conclude that reimbursement payments should be due when the frequencies of the incumbent have been cleared. We also agree with Fresno that an EA licensee may choose not to use the frequencies in a particular EA. Therefore, it is the EA licensee who must, within 90 days of the release of the Public Notice announcing the commencement of the voluntary negotiation period, decide whether they intend to participate in the mandatory relocation process.

124. We believe that an EA licensee who provides notification is sincere of its intention to use the frequencies in the EA and therefore, concluded *supra*, that once an EA licensee notifies an incumbent of its intention to relocate the incumbent, the EA licensee will be obligated to pay its share of reimbursement. However, EA licensees who have triggered an obligation should not be required to submit payment until the channels they have been licensed for are available for use. Therefore, we conclude that payments will not be due until the incumbent has been fully relocated and the frequencies are free and clear. We believe this procedure strikes a clear balance between those EA licensees who negotiate a relocation agreement and those EA licensees who want the use of the frequencies, but decide not to negotiate a relocation agreement.

125. Because non-notifying EA licensees will not receive the benefit of the Commission's relocation guidelines, they will be required to reimburse those EA licensees who have triggered a reimbursement right. Therefore, we conclude that non-notifying EA licensees who subsequently decide to use the channels, should be required to submit payment to those EA licensees who have triggered a reimbursement right prior to commencing testing of their system. We believe this strikes a fair balance between the EA licensee who has benefited a non-notifying EA licensee and the non-notifying EA licensees right to use those channels within its licensed EA. In addition, we believe that this will create an incentive for both parties to expedite negotiations among themselves.

3. Resolution of Disputes that Arise During Relocation

126. Background. In the *Second Further Notice*, we tentatively concluded that incumbents and EA licensees should attempt initially to resolve disputes arising over the amount of reimbursement

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[260] *Id.*

[261] Genessee Comments at 3.

[262] *Id.*

[263] Keller Comments at 5.

required amongst themselves.[264] We also encouraged parties to use expedited alternative dispute resolution ("ADR") procedures, such as binding arbitration or mediation.[265] We proposed that parties should use ADR procedures over relocation agreements (including disputes over the comparability of facilities and the requirement to negotiate in good faith).[266] We also sought comment on whether industry trade associations, the FCC's Compliance and Information Bureau ("CIB"), or third parties should be designated as arbiters for such disputes.[267]

127. Comments. Several commenters support the use of alternative dispute resolution (ADR) procedures to resolve disagreements between EA licensees and incumbents over the terms and conditions of relocation and reimbursement during the negotiation periods.[268] UTC believes that ADR should be encouraged during the voluntary negotiation period and required during the mandatory period.[269]

128. Some commenters believe generally the FCC or specifically the FCC's CIB should resolve disputes.[270] Several commenters oppose industry trade associations as arbiters for relocation, because they are political entities representing differing interests.[271] Sierra and SMR WON do not support industry trade associations or the FCC as an arbitrator.[272] Several commenters believe that the arbiter should be an independent third party, chosen by the parties and all ADR decisions should be appealable to the Commission.[273] AMTA urges the Commission to designate multiple arbiters to ensure that parties have

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[264] *Second Further Notice*, 11 FCC Rcd at 1582, ¶ 276.

[265] *Id.*

[266] *See* Use of Alternative Dispute Resolution Procedures in Commission Proceedings and Proceedings in which the Commission is a Party, *Initial Policy Statement and Order*, 6 FCC Rcd at 5669 (1991). Information regarding the use of alternative dispute resolution is available from the Commission's Designated ADR Specialist, ADR Program, Office of the General Counsel, Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.

[267] *Second Further Notice*, 11 FCC Rcd at 1583, ¶ 278.

[268] AMTA Comments at 14; Keller Comments at 5; UTC Comments at 8. Keller believes that the Commission should establish policies that do not allow room for delay. Keller believes that if disputes are not handled quickly and the reimbursee fails to cooperate, the Commission should have the authority to summarily revoke the reimbursee's license and forfeit the auction payment.

[269] E.F. Johnson Comments at 5; UTC Comments at 8.

[270] E.F. Johnson Comments at 5; Genessee Comments at 3. Genessee believes the FCC's CIB could resolve disputes, but believes that an independent third party arbitrator should be appointed with the consent of AMTA, PCIA, SMR WON, and ITA.

[271] Digital Comments at 5; SMR Systems Comments at 6; E.F. Johnson Comments at 5; Fresno Comments at 16-17; Sierra Comments at 2; UTC Reply Comments at 7; SMR WON Comments at 40. Digital and SMR systems believe that CIB should be the designated arbiter because the appearance of impropriety or partiality of a trade association is enough to taint the entire arbitration process.

[272] Sierra Comments at 2; SMR WON Comments at 41.

[273] Nextel Comments at 23; CellCall Reply Comments at 12; SMR WON, AMTA and Nextel Joint Reply Comments at 13-14; UTC Comments at 9 and Reply Comments at 7. Nextel and UTC suggest that arbitration could be conducted by a trade association.

a choice.[274]

129. Discussion. Commenters strongly support the Commission's proposal to use ADR procedures when disputes arise as to the amount of reimbursement required and the relocation negotiations (including disputes over comparability of facilities and the requirement to negotiate in good faith). We agree with those commenters who believe that the use of ADR procedures will help resolve disputes in a timely fashion,[275] while conserving Commission resources. In addition, we believe that the rapid resolution of disputes will speed the development of wide-area systems, and therefore will ultimately benefit the public. Therefore, to the extent that disputes cannot be resolved among the parties, we strongly encourage parties to use expedited ADR procedures. ADR procedures provide several alternative methods such as binding arbitration, mediation, or other ADR techniques. Because we are encouraging parties to use ADR procedures, we do not need to designate an arbiter to resolve the disputes as some commenters suggest.[276] As several commenters pointed out, the choice of arbiter should be a decision left to the parties.[277]

130. We encourage parties to use ADR procedures prior to seeking Commission involvement and caution that entire resolution of disputes by the Commission will be time consuming and costly to the parties. In addition, we emphasize that parties who neglect their obligation to satisfy a reimbursement right will be subject to the full realm of Commission enforcement mechanisms.

4. Administration of the Cost-Sharing Plan

131. Background. In the microwave relocation cost-sharing plan we established two clearinghouses to administer the cost-sharing plan.[278] We concluded that it was essential for the plan to be administered by the industry and sought proposals from parties who were willing to act as an administrator.[279] On August 14, 1996, acting pursuant to delegated authority, the Wireless Telecommunications Bureau designated the Personal Communications Industry Association (PCIA) and the Industrial Telecommunications Associations, Inc. (ITA) as the clearinghouses that will administer the Commission's cost-sharing plan under the microwave relocation procedures for the 2 GHz band.[280]

132. Discussion. We believe that the cost-sharing plan we have adopted for 800 MHz SMR does not require us to designate an administrator. We believe that an administrator was necessary to administer the cost-sharing plan under the microwave relocation procedures because of the complexity of the plan. We do not believe that the cost-sharing plan we have adopted for 800 MHz SMR is as complex and

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[274] AMTA Comments at 14.

[275] Nextel Comments at 23; UTC Reply Comments at 6; E.F. Johnson at 4.

[276] *See e.g.*, Nextel Comments at 23; CellCall Reply Comments at 12; SMR WON Reply Comments at 13.

[277] *See e.g.*, CellCall Reply Comments at 12; SMR WON, AMTA, and Nextel Joint Reply Comments at 13-14.

[278] *800 MHz Report and Order*, 11 FCC Rcd 1512, ¶ 81.

[279] *Id.*

[280] Amendment of the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, *Memorandum Opinion and Order*, DA 96-1298 (rel. August 14, 1996).

therefore decline to designate a clearinghouse to administer the cost-sharing plan. However, we will not prohibit an industry supported, not-for-profit clearinghouse from being established for purposes of administering the cost-sharing plan under the 800 MHz relocation procedures.

D. BETRS Eligibility on the Upper 200 Channels

133. Background. Under Section 90.621(h) of the Commission's rules, certain of the upper 200 channels are available on a co-primary basis to stations in the Basic Exchange Telecommunications Radio Service ("BETRS").[281] In the *Second Further Notice*, we proposed that BETRS no longer be authorized on 800 MHz SMR frequencies because there were few BETRS facilities licensed on these frequencies and such licensing was inconsistent with the goals of geographic area licensing.[282]

134. Comments. AMTA supports the Commission's proposal because BETRS licensees have exhibited little interest in using these frequencies.[283] Puerto Rico Telephone Company (PRTC) states that there are no suitable alternative channels for BETRS in Puerto Rico and that preventing them from applying for 800 MHz authorizations could jeopardize their providing universal service to the island.[284] PRTC claims that phone penetration in Puerto Rico is 71 percent and that without the use of BETRS, it will not be able to deploy service to the rest of the island's population.[285]

135. Discussion. As we did in our *Paging Second Report and Order*, we do not believe it is necessary to continue separate primary licensing of BETRS facilities on 800 MHz SMR frequencies. Under the rules adopted in our *CMRS Flex Report and Order*, all CMRS providers, including SMRs, may provide fixed services of the type provided by BETRS licensees.[286] In addition, entities seeking to offer BETRS on 800 MHz SMR frequencies will be able to obtain spectrum through geographic area licensing. We see no basis for distinguishing BETRS from other services that use 800 MHz SMR spectrum to provide commercial communications service to subscribers.

136. As we noted in our *Paging Second Report and Order*, we recognize that BETRS primarily serves rural, mountainous, and sparsely populated areas that might not otherwise receive basic telephone service. However, according to our records, there are few BETRS facilities licensed on 800 MHz SMR frequencies.[287] Furthermore, our records show no BETRS facilities licensed in Puerto Rico. Therefore,

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[281] 47 C.F.R. § 90.621(h). Channels 401-410, 441-450, 481-490, 521-530, and 561-570 are available to BETRS. *See also* 47 C.F.R. § 22.757.

[282] *800 MHz SMR Report and Order*, 11 FCC Rcd at 1588, ¶ 288. Additionally, we suspended further acceptance of applications for BETRS facilities on these channels. *Id.*

[283] AMTA Comments at 17.

[284] PRTC Comments at 2-4.

[285] *Id.* at 3-4.

[286] *See* Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services, WT Docket No. 96-6, *First Report and Order and Notice of Proposed Rulemaking*, 11 FCC Rcd 8965, 8974, ¶ 19 (1996) (*CMRS Flex Report and Order*).

[287] According to our licensing records, as of November 13, 1996, there were only eleven BETRS authorizations in the 800 MHz service, and all of them were located in the State of Alaska.

we disagree with PRTC that eliminating separate primary licensing of BETRS facilities on 800 MHz SMR frequencies will negatively affect phone penenetration in Puerto Rico. More importantly, concerns about the delivery of service to rural and other high cost areas are currently being addressed in our ongoing rulemaking proceeding examining universal service issues.[288] We also note that BETRS has other frequencies available to it under Part 22.[289] In light of the limited demand for these channels by BETRS licensees, and the alternatives available for providing telecommunications service in sparsely populated areas, we conclude that continued licensing of 800 MHz channels to BETRS on a co-primary basis is not necessary.

137. We will, however, allow BETRS licensees to obtain new sites and channels in the 800 MHz band on a secondary basis. If any EA licensee subsequently notifies the BETRS licensee that a secondary facility must be shut down because it may cause interference to the EA licensee's existing or planned facilities, the BETRS licensee must discontinue use of the particular channel at that site no later than six months after such notice.

E. Partitioning and Disaggregation for 800 MHz and 900 MHz Licensees

1. Background

138. In the *Second Further Notice* in this proceeding, we sought comment on a proposal to allow partitioning[290] of lower 230 channel licenses to rural telephone companies (rural telcos), and to expand partitioning of upper 200 channel licenses to entities other than rural telcos.[291] We proposed to allow entities other than rural telcos to acquire partitioned licenses in the upper 200 channel blocks in either of two ways: (1) they may form bidding consortia to participate in auctions, and then partition the license won among consortia participants; or (2) they may acquire partitioned 800 MHz SMR licenses from other licensees through private negotiation and agreement whether before or after the auction.[292] We sought comment on the conditions by which EA licensees on the upper 200 channels should be allowed to partition their license areas, whether to require that upper 200 channel licensees retain a minimum portion of their service area and whether such licensees should be required to satisfy applicable construction and coverage requirements prior to being allowed to partition.[293] In addition, with respect to the lower 80 and General Category channels, we sought comment on whether we should extend partitioning options to entities other than rural telephone companies as we proposed to do for the upper 200 channels.[294]

139. In addition, in the *Second Further Notice*, we tentatively concluded that EA licensees should

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[288] *See* Federal-State Joint Board on Universal Service, CC Docket No. 96-45, *Notice of Proposed Rulemaking and Order Establishing Joint Board*, 11 FCC Rcd 18092 (1996).

[289] *See* 47 C.F.R. § 22.757.

[290] "Partitioning" is the assignment of geographic portions of a license along geographic boundaries.

[291] *Second Further Notice*, 11 FCC Rcd 1578 -1580 & 1631, ¶¶ 257 - 268 & 402-403.

[292] *Id.* at 1580, ¶ 267.

[293] *Id.* at 1631, ¶ 403.

[294] *Id.* at 1631, ¶ 402- 403.

be allowed to disaggregate[295] spectrum to enable these licensees to manage their spectrum blocks more effectively and efficiently.[296] We sought comment on this tentative conclusion and whether there should be a minimum amount of spectrum that upper 200 channel licensees should be required to retain and whether such licensees should be required to satisfy applicable construction and coverage requirements before being allowed to disaggregate.[297] We also sought comment on the conditions by which EA licensees in the upper 200 channels should be allowed to disaggregate their spectrum.[298]

140. On September 30, 1996, American Mobile Telecommunications Association, Inc. (AMTA) filed a Petition for Rulemaking (Petition) requesting the Commission to initiate a rulemaking proceeding to modify the 900 MHz SMR rules to expand geographic partitioning to include all 900 MHz MTA SMR licensees and to permit spectrum disaggregation. Because of the overlap of issues raised in AMTA's Petition and those being considered in this proceeding and, in order to adopt a uniform set of rules to govern partitioning and disaggregation in the SMR service, the Commission incorporated AMTA's Petition into this proceeding and issued a Public Notice[299] seeking comments on AMTA's Petition. Ten parties filed comments in response to the *AMTA Public Notice* and three parties filed reply comments. A list of the parties filing comments and reply comments is attached hereto as Appendix A.

141. Following the issuance of the *Second Further Notice* and the filing of AMTA's Petition, on December 20, 1996, we adopted more flexible partitioning and disaggregation rules for the broadband Personal Communications Service ("PCS") and Wireless Communications Service (WCS).[300] We found in those proceedings that adopting more flexible partitioning and disaggregation rules will permit licensees in those services to respond to market-driven demands for service and will eliminate artificial barriers to entry that serve no public benefit and that interfere with licensees' ability to respond to market forces and demands.[301] We believe that it is appropriate, at this time, to follow the general framework established in the broadband PCS and WCS proceedings and to design flexible partitioning and disaggregation rules for all licensees in all SMR channel blocks. We believe that adding such flexibility to the SMR rules will result in more efficient use of SMR spectrum by allowing licensees to transfer part of their spectrum to a party that more highly values it while promoting competition by increasing the number of providers of SMR service. In addition, adopting flexible partitioning and disaggregation rules for the SMR service may

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[295] "Disaggregation" is the assignment of discrete portions or "blocks" of spectrum licensed to a geographic licensee or qualifying entity.

[296] *Id.* at 1579, at ¶ 261.

[297] *Id.* at 1579, ¶¶ 261- 263.

[298] *Id.* at 1580, ¶ 268.

[299] *See* American Mobile Telecommunications Association, Inc. Files Petition for Rulemaking to Expand Geographic Partitioning and Spectrum Disaggregation Provisions for 900 MHz SMR (RM-8887), *Public Notice*, DA 96-1654 (October 4, 1996) (*AMTA Public Notice*).

[300] *See* Geographic Partitioning and Disaggregation by Commercial Mobile Radio Service Licensees, WT Docket No. 96-148, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 96-474 (December 20, 1996) (*PCS Partitioning and Disaggregation Report and Order*); Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), GN Docket No. 96-228, *Report and Order*, FCC 97-50 (February 19, 1997) (*WCS Report and Order*).

[301] *See PCS Partitioning and Disaggregation Report and Order* at ¶ 3; *WCS Report and Order* at ¶ 96.