NB-DP is limited to a data modulation rate of 100 baud, communication is slow, costly, and spectrally inefficient. To increase technical flexibility for vessel operators, we proposed in the *Further Notice* to permit the use of alternative data communications protocols on NB-DP frequencies so long as the transmissions meet the present bandwidth, frequency tolerance, and emission limitations for NB-DP signals and the equipment is capable of, but not limited to, operation in accordance with the international standard protocol.[119]

46. *Comments.* All of the commenters addressing this proposal support increasing technical flexibility by permitting more expanded use of NB-DP frequencies.[120] Pin Oak Digital Corporation (PinOak), a developer of HF data services, notes that permitting the use of advanced digital communications protocols, higher data rates, and error correction techniques on NB-DP frequencies would allow maritime users to transmit and access data over long distances. PinOak also argues that such flexibility is essential in order to allow competition among HF and satellite service providers, increase maritime access to data communications, and lower communications costs for vessel operators.[121] PinOak and RTCM agree that requiring equipment to be capable of, but not limited to, operation in accordance with ITU-R Recommendation 625[122] would allow future advancements in NB-DP data communications and eliminate the need for incremental changes to the Commission's rules.[123]

47. *Decision.* We conclude that increasing technical flexibility by expanding the use of NB-DP frequencies will benefit the maritime community. Increasing flexibility will foster more efficient use of the maritime spectrum, lower communications costs for vessel operators and promote competition between high seas public coast stations and satellite service providers. Further, we conclude that requiring NB-DP equipment to be capable of operating in accordance with the international standard -- ITU-R Recommendation 625[124] -- will be sufficient to ensure compatibility among vessels on the high seas. For example, advanced data communications techniques and higher data rates may be used under ideal atmospheric conditions when both

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[119] *Further Notice* at 10 FCC Rcd 5729. These technical criteria are set forth in 47 C.F.R. §§ 80.205, 80.207, 80.209, and 80.211(f). The international standard ND-DP protocol is specified in ITU-R Recommendation 625, Direct-printing Telegraph Equipment Employing Automatic Identification in the Maritime Mobile Service.

[120] *See, e.g.*, Globe Wireless Comments at 3; MMR Comments at 13; Malloy Comments at 1; Pin Oak Comments at 4; RTCM Comments at 5.

[121] Pin Oak Comments at 4-5.

[122] *See supra* note 119.

[123] Pin Oak Comments at 4; RTCM Comments at 5.

[124] Part 80 of our Rules continues to refer to CCIR Recommendations rather than ITU-R Recommendations. In a future action, we will update our rules to make administrative changes such as updating these references to international docoments and standards. Until that time, however, the terms "CCIR Recommendation" and "ITU-R Recommendation" will be treated in this case as identical when interpreting our rules.

stations are equipped with improved NB-DP equipment. When one of the stations has standard NB-DP equipment or when atmospheric conditions limit channel quality, however, the equipment would revert to the standard mode and communicate using the same capabilities that are present today. For the reasons stated above, we will permit expanded NB-DP operations, using any data communications protocol, so long as the equipment meets the technical requirements set forth in 47 C.F.R. §§ 80.205, 207, 209, and 211(f) and is capable of, but not limited to, operation in accordance with ITU-R Recommendation 625. As in the past, we will require stations using NB-DP techniques to obtain a SELCAL[125] number from the Commission and to use it to identify transmissions on NB-DP frequencies.

(4) Trunking/narrowband

48. In the *Further Notice* we tentatively concluded that trunking technologies and alternative channel plans such as 12.5 kHz narrowband operations could increase the number of marine VHF channels and promote the efficient use of maritime spectrum.[126] The record in this proceeding indicates that the maritime community favors both of these options as future means to relieve congestion in the marine VHF band. As ACBL/WATERCOM and MMR point out, however, there are too few channels available at this time to consider mandatory trunking technologies on all VHF marine channels.[127] Therefore, based on the comments received, we will consider the use of trunking in the marine VHF band in a separate proceeding based on any applicable recommendations that are adopted by the 1997 World Radiocommunication Conference concerning narrowband maritime operations.

49. In the interim, we will allow trunking on public coast station spectrum. This action will promote more efficient use of the spectrum. We agree with the commenters that in most areas there are too few channels available to gain the increased efficiencies possible with trunking technology. Nevertheless, there may be instances where public coast station licensees find it beneficial to implement trunking. We find that it is best left to individual licensees to determine what areas may benefit from trunking technologies and which protocols best suit the needs of the maritime marketplace.

(5) Type acceptance

50. In considering flexible new technologies in the maritime service (*e.g.*, DSC, ALE,

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[125] A SELCAL number is a unique five digit identifier issued to stations using NB-DP equipment. ITU-R Recommendation 625 was developed to utilize five-digit SELCAL numbers, in lieu of call signs, to identify NB-DP transmissions. Because we are requiring each NB-DP station to be capable of operation in accordance with the international standard, each station must use a SELCAL number.

[126] *Further Notice*, 10 FCC Rcd at 5731.

[127] ACBL/WATERCOM Comments at 7; MMR Comments at 18.

advanced data communications), manufacturers may decide to design new equipment or retrofit existing radios. This section provides guidance to manufacturers and licensees in considering the Commission's equipment authorization process as it applies to these new technologies. As licensees transition to new technologies and transmitters with upgraded capabilities, a primary concern of many manufacturers is that they be able to provide continued support to their existing customer base. With respect to this proceeding, a grant of type acceptance will be required for all new equipment, including equipment used for automatic interconnection of marine radios with the PSN, as well as new DSC, ALE and NB-DP equipment. The new grant of type acceptance may cover a new transmitter design and/or upgraded units.[128] Existing equipment may have their current grant of type acceptance modified to show additional capabilities by filing a modification request. In cases where manufacturers have developed a conversion kit to upgrade existing equipment with new capabilities, we will allow field modifications to equipment currently installed. So that this equipment can be recognized as having the new capabilities, the modifying party, typically the manufacturer or its representative, must replace the existing FCC ID label with a new label that corresponds to the FCC ID of the associated new transmitter which was type accepted with the upgraded capabilities.

C. Regulatory Flexibility

(1) Coast station operator licensing

51. *Proposal and Comments.* Presently, our rules require radiotelephone coast stations operating on frequencies below 30 MHz -- excluding those in Alaska -- to be operated by an individual holding an appropriate commercial operator license issued by the Commission.[129] There is no license requirement, however, for stations in Alaska or VHF public coast stations. In the *Further Notice*, we proposed to eliminate the requirement for licensed radio operators to be on duty at radiotelephone coast stations.[130] ACBL/WATERCOM, MMR, and RTCM support our proposal and agree that operator licensing requirements for radiotelephone coast stations are unnecessary.[131] Further, MMR recommends expanding the proposed amendment to eliminate operator requirements for radiotelegraph stations. MMR argues that operators at radiotelegraph coast stations do not need to copy Morse code because computers are able to decipher the code.[132]

52. *Decision.* We are eliminating herein the requirement to have an FCC-licensed

[128] Upgraded units are those units that are converted in the field to conform to new transmitter design and performance specification.

[129] 47 C.F.R. § 80.153(b).

[130] *Further Notice*, 10 FCC Rcd at 5734.

[131] ACBL/WATERCOM Comments at 8; MMR Comments at 20; RTCM Comments at 9.

[132] MMR Comments at 20.

operator at radiotelephone coast stations. The ITU Radio Regulations do not require licensed operators at radiotelephone coast stations. Also, the Commission has rescinded similar operator requirements under the public mobile, private land mobile, private operational-fixed microwave, and personal radio services.[133] Finally, none of the commenters, including the Coast Guard, indicate that the elimination of this requirement would negatively impact safety at sea or hinder coast station operations. Therefore, we are eliminating the operator licensing requirement for all radiotelephone coast stations. In the *Further Notice*, however, we stated that we intended to retain the operator requirement at public coast stations transmitting radiotelegraph (manual Morse code). Consequently, we believe eliminating the operator requirements for radiotelegraph coast stations here, as suggested by MMR, is beyond the scope of this proceeding. We are requesting comments on this issue in the *Second Further Notice of Proposed Rule Making*.

(2) Streamlining the ship/aircraft station licensing process

53. *Proposal and Comments*. Presently, a vessel owner must list on its license application each type of radio equipment and corresponding frequency bands it intends to use on the vessel (*e.g.*, marine radio, radar, and satellite frequencies). In many cases, however, the owner purchases additional equipment during the license term. Consequently, the owner must modify its license to add the new frequencies. To streamline this process, we proposed in the *Further Notice* to amend our present ship station licensing rules to automatically authorize, upon application, the use of all marine radio frequencies normally available to vessel operators.[134] In addition, we proposed to allow a 90-day grace period following the expiration of ship and aircraft station licenses.[135] This grace period would extend the period in which a licensee can renew its license and retain the same call sign. The purpose of this proposal was to reduce regulatory burdens on both the maritime community and the Commission. The Coast Guard and RTCM support our proposal for a "blanket" authorization for ship stations.[136] Further, RTCM asks the Commission to expand the proposal to automatically authorize the use of maritime satellite frequency bands.[137] None of the commenters objected to the proposed 90-day grace period.

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[133] In GEN Docket No. 83-322, the Commission concluded that requiring licensed commercial radio operators in the Experimental Broadcast, International Broadcast, Auxiliary Broadcast, Private Land Mobile, Fixed, Personal, Domestic Public Fixed, and Cable Television Relay Services is unnecessary because it is in each licensee's best interest to ensure that a qualified individual is responsible for the operation the licensee's radio equipment. *See* Requirements for Licensed Operators in Various Radio Services, GEN Docket No. 83-322, *Report and Order*, 96 FCC 2d 1123 (1984).

[134] *Further Notice*, 10 FCC Rcd at 5734.

[135] *Id.*

[136] Coast Guard Comments at 6; RTCM Comments at 9.

[137] RTCM Comments at 9.

54. *Decision.* In a separate proceeding, we have already eliminated the licensing burden for most vessel operators by licensing by rule vessels operating domestically that are not required to carry a radio.[138] To streamline the licensing process for the remaining vessel operators (*e.g.*, commercial vessels and recreational vessels travelling internationally), we are amending our rules to provide a "blanket" authorization for vessel owners applying for ship station authorizations. As suggested by RTCM, we are including satellite frequencies in this "blanket" authorization. By this action, each applicant for a new ship station license will be automatically authorized to operate a marine VHF radio, a single-sideband radio, any type of radar or emergency position indicating radio beacon (EPIRB), on-board communications equipment, and satellite communications equipment.[139] This "blanket" authorization will also be added automatically to all present ship station licenses so there will be no need for entities to modify their licenses. Applicants must continue, however, to specifically request radiotelegraph and NB-DP authorizations in order to be issued a Morse working channel series or SELCAL number, respectively. This action eliminates the unnecessary regulatory burdens associated with updating licensing information each time new radio equipment is brought on board a vessel, as well as the administrative burdens associated with the processing of such applications.

55. We also are implementing a 90-day grace period for ship and aircraft station licenses, as proposed in the *Further Notice.* The grace period will enable ship and aircraft owners to renew their licenses up to 90 days after expiration to retain their present call signs. Presently, if a ship or aircraft station license expires, it cannot be renewed and the applicant must request a "new" station license and is issued a new call sign. This action will reduce the number of instances where vessel operators must notify other government agencies, such as the Coast Guard, concerning a change in call sign.

(3) Relaxed license-posting requirement

56. *Proposal and Comments.* Our rules presently require each vessel's ship radio station license to be posted at the principal control point of the station.[140] At the request of the Coast Guard, we proposed to permit vessel owners to alternatively keep the license anywhere on board, so long as it is available upon request. Both the Coast Guard and RTCM support this

[138] *See* Amendment of Parts 80 and 87 of the Commission's Rules to Permit Operation of Certain Domestic Ship and Aircraft Radio Stations Without Individual Licenses, *Report and Order*, WT Docket No. 96-82, 11 FCC Rcd 14849 (1996).

[139] COMSAT will continue to commission INMARSAT ship earth stations and issue maritime mobile service identities (MMSI) to vessel operators. Vessel operators will no longer be required, however, to file FCC Form 506 in order to inform the Commission of the assigned MMSI. Instead, COMSAT will inform the Commission directly concerning all MMSI assignments.

[140] 47 C.F.R. § 80.405(c).

proposal.[141]

57. *Decision.* Small commercial vessels and recreational vessels often do not have an enclosed pilot house, and thus, the station license may be subjected to harsh weather conditions in the marine environment which could eventually render it unreadable. The intent of the posting requirement found in 47 C.F.R. § 80.405(c) is to provide a means for authorized representatives of the Coast Guard, the Commission, and foreign administrations to ensure that vessels are authorized to use the radio equipment found on board. Ideally, the station license should be posted at the control point of each vessel in order to aid these regulatory bodies. It is also in the public interest, however, to ensure the readability of the document. Therefore, we will permit the ship station license to be stored away from harsh weather conditions, so long as the document remains on board and is available for inspection by authorized government representatives immediately upon request.

(4) Expanding private coast station operating authority

58. *Proposal/Comments.* A private coast station is a fixed maritime station on land that provides communications services to vessels, including docking, supplying, and towing vessels.[142] A marine utility station provides the same types of communications and services as a private coast station, except that it employs hand-held marine radios, rather than a fixed base station to communicate with vessels.[143] The only difference is that hand-held radios cannot be used under a private coast station license and a fixed transmitter with an antenna cannot be used under a marine utility station license.[144] Thus, entities often must obtain two separate licenses. In the *Further Notice*, we proposed to eliminate this unnecessary burden by authorizing hand-held marine radios under each private coast station license.[145] ACBL/WATERCOM and RTCM support our proposal.[146] Specifically, ACBL/WATERCOM notes that it is common in port areas for organizations and businesses to have a need for base and mobile stations, characteristic of both private coast stations and marine utility stations.[147]

59. *Decision.* We agree with the commenters that both base and mobile operations should be permitted under a single license. For example, a marina may wish to operate a fixed

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[141] *Further Notice*, 10 FCC Rcd at 5734; Coast Guard Comments at 6; RTCM Comments at 9.

[142] 47 C.F.R. § 80.5.

[143] 47 C.F.R. § 80.5.

[144] *See* 47 C.F.R. Part 80 subpart K.

[145] *Further Notice*, 10 FCC Rcd at 5734.

[146] ACBL/WATERCOM Comments at 10; RTCM Comments at 9.

[147] ACBL/WATERCOM Comments at 10.

station from its business office, and additionally need to contact incoming boats using hand-held radios from the dock. Presently, this would require two different licenses, each costing $105.[148] This requirement to issue separate private coast and marine utility authorizations does not enhance spectrum management or aid enforcement efforts. Further, the eligibility requirements and channel usage rules are identical for both types of stations. Therefore, we are amending the rules to allow both fixed and mobile, including hand-held portable, operations under a private coast station license. This action eliminates the unnecessary regulatory burdens associated with entities having to obtain separate licenses for base and mobile operations as well as the administrative burdens associated with the processing of such applications. Further, this approach is consistent with our decision to permit the use of fixed, mobile, and hybrid services by other CMRS providers.[149]

(5) Unifying frequency tolerance specifications

60. *Proposal/Comments.* Presently, marine VHF transmitters type accepted for private coast base station operations must meet a more restrictive frequency tolerance specification than those type accepted for use on board ships (mobile operation) -- even when they both operate at the same transmitter power level.[150] Because marine VHF radios type accepted for use aboard ships are less expensive, we received informal requests to allow them to be used as private coast station transmitters. In the *Further Notice*, we proposed to permit VHF private coast stations that operate at less than 25 watts carrier power to use transmitters with a frequency tolerance of 10 parts per million, the same power and frequency tolerance as transmitters type accepted for ship operation.[151] The only commenter addressing this issue, RTCM, supports our proposal.[152]

61. *Decision.* We are amending the rules to permit transmitters type accepted as meeting the frequency tolerance of 10 parts per million to be used for VHF private coast transmissions, so long as the coast station operates with an output power of 25 watts or less and the transmitting antenna is less than 6 meters (20 feet) above ground level. This action will eliminate an unnecessary technical specification without increasing the potential for harmful interference to adjacent marine channels. This approach will reduce operating costs for entities such as marinas, yacht clubs, radio repair shops, and other marine businesses by eliminating the

[148] The present fee for private coast station and marine utility station licenses is $105. *See* 47 C.F.R. § 1.1102; Assessment and Collection of Regulatory Fees for Fiscal Year 1995 and Price Cap Treatment of Regulatory Fees Imposed by Section 9 of the Act, MD Docket No. 95-3, *Report and Order*, 10 FCC Rcd 13512 (1995).

[149] *See CMRS Flexibility First Report and Order*, 11 FCC Rcd at 8965.

[150] Coast station transmitters must meet a 5 parts per million frequency tolerance, while ship station transmitters must meet a 10 parts per million tolerance. *See* 47 C.F.R. § 80.209.

[151] *Further Notice*, 10 FCC Rcd at 5734.

[152] RTCM Comments at 9.

requirement to use more expensive transmitters with a more stringent frequency tolerance. Further, the ITU Radio Regulations specify a single tolerance -- 10 parts per million -- for both coast and ship operations in the VHF band.[153]

(6) Facsimile in Alaska

62. *Proposal.* In the *Further Notice*, we proposed to permit the transmission of facsimile signals over marine VHF channel 68 (156.425 MHz) between vessels and between vessels and private coast stations serving Alaskan waters.[154] Under our proposal, facsimile signals would be required to meet the same technical criteria as marine VHF voice communications.[155] Further, we proposed to automatically add marine VHF channel 68 to all current Alaskan private coast station licenses, for facsimile transmission only, without requiring each licensee to modify its authorization.[156]

63. *Comments.* All commenters addressing this issue support our proposal. The Coast Guard supports the transmission of data communications in Alaskan waters over marine VHF channels that are not used for distress or safety purposes, such as marine VHF channel 68.[157] Globe Wireless, however, asks us to expand our proposal to include marine VHF channels nationwide.[158] RTCM also acknowledges the need for marine VHF data communications in other regions, but alternatively suggests that the Commission initiate a separate proceeding to discuss this issue.[159] Similarly, the Coast Guard recommends that we consider the designation of a portion of the marine VHF channels for data communications at the same time that we consider the transition to a narrowband channel plan.[160]

64. *Decision.* Alaska has an extensive coastline with a small boating population compared to the continental U.S. For this reason, there is much less congestion on marine VHF frequencies in Alaskan waters compared to the coastlines of states such as California or Florida. Because marine VHF frequencies are generally not congested in Alaskan waters, we conclude that the public interest is served by expanding the use of a single, shared frequency -- marine VHF

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[153] *See* Radio Regulations, Appendix 7.

[154] *Further Notice*, 10 FCC Rcd at 5733.

[155] *Id.*

[156] *Id.*

[157] Coast Guard Comments at 5.

[158] Globe Wireless Comments at 5.

[159] RTCM Comments at 8.

[160] Coast Guard Comments at 5.

channel 68 (156.425 MHz) -- to include voice, facsimile, and data communications between vessels and between vessels and private coast stations. In order to protect voice communications on adjacent channels, facsimile and data transmissions must not exceed the technical requirements for marine radiotelephone communications. This flexible approach will permit stations to rapidly transmit information that would take much longer using voice communications (*e.g.*, maps showing weather and ice conditions, supply lists, vessel schedules), thus, increasing safety of life and property at sea. Further, this action will make VHF maritime communications services more accessible to persons with hearing or speech disabilities. We agree with the Coast Guard and RTCM, however, that it would be inappropriate at this time to extend this designation to stations in the continental U.S. because the marine VHF band is already highly congested in most port areas and along busy inland waterways. As suggested by the commenters, we will revisit the issue of data communications on shared marine VHF channels in a separate proceeding in the context of any recommendations made by the 1997 World Radiocommunication Conference concerning narrowband operations.

65. To reduce administrative burdens on private coast station licensees, which are often very small entities, we will automatically add marine VHF channel 68 to all current Alaskan private coast station authorizations, for facsimile and data transmissions only, without requiring each licensee to modify its license and remit a fee. In this connection, private coast stations which are presently authorized to use marine VHF channel 68 may transmit both voice and facsimile signals. All vessels that are licensed individually or by rule for marine VHF communications will also be authorized to use facsimile and data communications on channel 68 in Alaskan waters.

(7) Frequency sharing

i. Intra-service sharing of the VHF band

66. *Proposal.* The frequencies in the marine VHF (156-162 MHz) band available for communications between ships and private coast stations are currently divided into ten categories and are available to all vessels based on the type of communications being transmitted. The ten types of private communications categories, with the number of available frequencies in parentheses are: port operations (11); navigational (2); commercial (14); non-commercial (9); DSC (1); distress, safety, calling (1); inter-ship safety (1); environmental (1); maritime control (1); liaison, U.S. Coast Guard (1).[161] These categories developed over time to address the specific needs of various segments of the maritime community. Two of the largest categories are "commercial" (*e.g.*, communications on board commercial vessels for piloting, vessel movement, obtaining supplies, scheduling repairs) and "non-commercial" (e.g., recreational vessel communications concerning fuel, supplies, and berthing facilities). In the *Further Notice*, we

[161] Some of these frequencies are available on a limited basis in certain regions and for specific types of communications. *See* 47 C.F.R. § 80.373(f).

proposed to combine the commercial vessel and non-commercial vessel frequency categories to form a single "vessels operations" category to encompass all communications related to the operational needs of vessels.[162] Presently, the number of pleasure boats equipped with marine radios is rising and yet in most areas there are only six frequencies available under the non-commercial category.[163] If need be, frequencies could be designated for a specific use on a local basis rather than a nationwide basis as is done now. Our goal in introducing this proposal was to increase regulatory flexibility and reduce congestion in the marine VHF band by creating a single pool of frequencies for general purpose use. Additionally, we asked for specific comment on whether frequencies should be designated for specific regional needs, such as towing, and what impact this proposal would have on safety.[164]

67. *Comments.* Most commenters addressing this issue, including the Coast Guard, favor the creation of a vessel operations category on a regional basis where appropriate in lieu of a nationwide redesignation.[165] For example, ACBL/WATERCOM argues that allowing recreational boaters to use commercial frequencies nationwide would compromise safety for commercial vessels along busy waterways where commercial channels are already congested.[166] The Coast Guard, however, supports the establishment of a vessel operations frequency category on a regional basis.[167] The Coast Guard suggests that the Commission, through its local offices, establish advisory committees in order to determine the feasibility of this approach on a regional basis.[168]

68. *Decision.* To ensure the safety of life and property at sea, it is imperative that our maritime service rules enable boaters to establish and maintain adequate communications with other boaters and shore-based facilities. In this connection, we must weigh the need for additional recreational channels against the risk of causing harmful interference to commercial operations in busy ports. As ACBL/WATERCOM points out, commercial vessels use all available channels in a great number on busy ports and waterways to ensure safe transport of passengers, crew, and cargo. Therefore, we conclude that the creation of a single vessel operations category to replace the commercial/non-commercial designations is not feasible on a national level at this time.

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[162] *Further Notice*, 10 FCC Rcd at 5730.

[163] 47 C.F.R. § 80.373(d).

[164] *Further Notice*, 10 FCC Rcd at 5730.

[165] *See, e.g.*, Maritime Navigation Safety Association (MNSA) Comments at 1; GulfCoast Transit Comments at 1; National Ocean Industries Association Comments at 1; RTCM Comments at 6; Coast Guard Comments at 4.

[166] ACBL/WATERCOM Comments at 5.

[167] Coast Guard Comments at 4.

[168] Coast Guard Comments at 4. *See also*, MariTEL Reply Comments at 11.

69. We conclude, however, that the current allotment of VHF marine frequencies for non-commercial operations cannot fulfill the growing communications demands of the recreational boating community. Further, we agree with the Coast Guard that this issue should be addressed at the local level, in order to identify areas where recreational vessels require additional channels and the commercial channels are not congested. Therefore, we are adopting rules that provide for the joint use of VHF frequencies on a regional basis by commercial and non-commercial vessels based on the recommendations of the Coast Guard. Because the Coast Guard maintains offices in all major port areas, we believe it is the most appropriate party to provide initial recommendations for regional changes in the use of marine frequencies. Further, this approach ensures that any redesignation of the VHF marine channels is closely monitored by the Coast Guard. Thus, we are amending 47 C.F.R. § 0.331 to authorize the Chief, Wireless Telecommunications Bureau (Bureau), upon Coast Guard request, to designate shared commercial/non-commercial channels on a regional basis. This approach will allow the Commission to quickly act to reduce congestion in the marine VHF band by redistributing the radio traffic regionally. Further, this approach is consistent with our recent decision allowing the Bureau to act on Coast Guard requests concerning Vessel Traffic Services (VTS) system protection areas.[169]

ii. Maritime mobile sharing of private land mobile frequencies

70. *Proposal.* In the *Further Notice*, we proposed to allow maritime users to share a total of 400 kilohertz of private land mobile radio (PLMR) service spectrum.[170] This spectrum would consist of 200 kilohertz from the Railroad Radio Service and 200 kilohertz from the Motor Carrier Radio Service. To protect land mobile operations, we proposed to make most of the frequencies available only to public coast stations for paired, duplex operation consistent with land mobile use.[171] Additionally, we proposed to allow inter-ship, low power operations on three frequencies.[172] Further, we proposed to use the same co-channel separation criteria that we adopted for land mobile sharing of maritime frequencies.[173] We also proposed to limit public coast station use of these frequencies to locations within 16 km of the U.S. coastline or any

[169] The Commission stated that it will rely on Coast Guard recommendations concerning the designation of radio protection areas for mandatory VTS systems and the establishment of marine channels as VTS frequencies for these areas. *See* Amendment of Part 80 of the Rules Concerning U.S. Coast Guard Vessel Traffic Services (VTS) Systems in Sault Ste. Marie, Michigan; San Francisco, California; and Morgan City, Louisiana, WT Docket No. 95-132, *Report and Order*, 11 FCC Rcd 12942 (1996).

[170] *Further Notice,* 10 FCC Rcd at 5731.

[171] *Id.*

[172] *Id.*

[173] *Id.* at 5752.

navigable waterway.[174] Finally, we proposed to permit licensees to use frequencies 12.5 kHz offset from the shared frequencies, provided that such licensees are also licensed for channels on each side of the offset frequency.[175]

71. *Comments.* The comments on this issue are divided between the maritime and PLMR communities. The Coast Guard, ACBL/WATERCOM, MMR and RTCM support our proposal.[176] ACBL/WATERCOM states that the Commission's decision in the *First Report and Order* to allow PLMR sharing of maritime channels justifies a reciprocal agreement.[177] The Coast Guard notes, however, that any such sharing arrangement must include safeguards to ensure that marine communications will not interfere with railroad safety communications.[178] MMR states that maritime sharing of these frequencies should be contingent on a requirement to operate with a channel bandwidth of 12.5 kHz.[179]

72. The Association of American Railroads (AAR), frequency coordinator for the Railroad Radio Service, and the American Trucking Association (ATA), frequency coordinator for the Motor Carrier Radio Service, oppose our sharing proposal.[180] AAR and ATA argue that PLMR channels are already congested in the geographic regions where sharing would be most likely, *e.g.,* major shipping and rail centers.[181] AAR further claims that limiting maritime operations to within 16 km of navigable waterways would not protect railroad operations because railroads commonly run parallel to rivers and other waterways and because railroad operations are highly concentrated in major port cities.[182] AAR suggests that congestion in the maritime service be addressed through the introduction of more spectrum efficient technologies, similar to

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[174] *Id.* at 5731.

[175] *Id.*

[176] ACBL/WATERCOM Comments at 8; Coast Guard Comments at 5; MMR Comments at 19; RTCM Comments at 7.

[177] *See, e.g.*, Comments of ACBL/WATERCOM at 8. In the *First Report and Order* in this proceeding, the Commission decided to permit inter-service sharing of maritime frequencies with private land mobile users. *See First Report and Order*, 10 FCC Rcd at 8420.

[178] Coast Guard Comments at 5.

[179] MMR Comments at 19.

[180] AAR Comments at 5; ATA Comments at 3.

[181] *Id.*

[182] AAR Comments at 6.

the Commission's approach for the PLMR bands.[183] Alternatively, ATA suggests that our proposal can be better accomplished by sharing channels allocated to PLMR services that do not have a heavy coastal presence, such as the Special Industrial Radio Service.[184] Responding to comments critical of their position, AAR states that the justification in the *First Report and Order* for land mobile sharing of maritime channels does not hold true for railroads.[185] Moreover, AAR asserts that it did not join in the request for maritime channels, nor does it intend to make use of any maritime channels for the same safety concerns addressed in response to this proposal.[186] Finally, Globe Wireless proposes that the Commission begin a negotiated rule making to formulate a mutually agreeable sharing arrangement between maritime and land mobile users.[187]

73. *Discussion.* We are not adopting the proposed rules regarding maritime sharing of land mobile frequencies at this time. Our proposal to permit the shared use of Railroad and Motor Carrier Radio Service channels by maritime users was based on the following premises: 1) certain channels assigned to the PLMR service domestically are allocated internationally to the maritime service;[188] and 2) an examination of our licensing database found that few PLMR licensees were operating at fixed locations within 80 km of the U.S. coastline.[189] Since the time of this proposal, however, the Commission introduced a narrowband channel plan into the PLMR bands, proposed various methods to introduce market forces into the PLMR bands, and consolidated the PLMR services in order to introduce more flexibility.[190] We continue to believe that increased sharing and flexibility promote spectrum efficiency and expedite market entry of new services. In this case, however, we believe it is premature to adopt rules permitting the sharing of land mobile frequencies by maritime operations until a final decision concerning the introduction of market-based forces into the PLMR is made.

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[183] AAR Comments at 10. Transition to more efficient technology in the PLMR bands was ordered in the *Refarming Report and Order*, 10 FCC Rcd at 10076.

[184] ATA Comments at 3.

[185] *First Report and Order*, 10 FCC Rcd at 8422.

[186] AAR Reply Comments at 3.

[187] Globe Wireless Reply Comments at 3.

[188] *See* Radio Regulations, Appendix 18.

[189] *Inquiry,* 7 FCC Rcd at 7868.

[190] *See Refarming Report and Order*, 10 FCC Rcd at 10107; *Refarming Second Report and Order.*

IV. SECOND FURTHER NOTICE OF PROPOSED RULE MAKING

A. VHF public coast station spectrum

1. Current licensing process

74. Unlike most other CMRS providers, VHF public coast stations do not provide communications within Commission-defined service areas, such as Cellular Geographic Service Areas or Rand McNally's Major and Basic Trading Areas (MTAs and BTAs).[191] Rather, each service area is applicant-defined based on predicted signal strength over the waterway to be served.[192] The size of each station's service area also determines the mileage separation between co-channel assignments. Using a conservative estimate, service areas for VHF band public coast stations extend 20 to 30 miles from the transmitter.

75. Further differentiating public coast stations from the majority of other CMRS providers is the small number of channels allocated to such operations. Presently, there are only nine channels ("working frequencies") in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands assignable to VHF public coast stations for public correspondence. Along the Canadian border even fewer channels are available for U.S. stations.[193] Specifically, north of Line A,[194] there are generally only five channels off the Maine coast and on the waters of the Great Lakes and the St. Lawrence Seaway,[195] and there are only five primary channels and three supplementary channels on the waters of western Washington State.[196] In the past, a public coast station was initially assigned a single channel for exclusive use within its service area. An additional channel was assigned if certain loading criteria were met.[197] As discussed *supra*, we are eliminating the loading requirements in this proceeding in

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[191] *See* 47 C.F.R. §§ 22.911, 24.102, and 24.202. *See also* Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, pp. 36-39.

[192] *See* 47 C.F.R. Subpart P.

[193] *See* 47 C.F.R. § 80.371(c). In addition, VHF Channel 88 may be authorized within 120 km (75 miles) of the Canadian border on the Great Lakes, the St. Lawrence Seaway, and the Puget Sound and the Strait of Juan de Fuca and its approaches.

[194] *See* 47 C.F.R. § 2.1.

[195] The U.S. channels are VHF Channel 84, 25, 86, 87, and 28. (Channel 28 is also assignable to Canadian stations within the frequency coordination zone, following successful coordination with the United States.) In addition, VHF channel 26 is shared between the U.S. and Canada and VHF channel 88 is also assignable to United States stations within the frequency coordination zone, following successful coordination with Canada.

[196] The primary VHF channels are 24, 25, 26, 28, and 88. The supplementary channels are 25, 85, and 87.

[197] *See supra* note 45.

order to facilitate the development of automated systems.[198]

2. Proposed geographic service areas

76. Because loading criteria will no longer limit public coast stations to only one or two channels, we anticipate receiving a large number of applications for new licenses and modifications to existing licenses. In cases where two or more proposed service areas overlap, however, such applications would be considered mutually exclusive and would be resolved through competitive bidding procedures as described in paragraph 123, *infra*. The Commission has concluded in other services that geographic area licensing provides significant advantages over site-based licensing for entities providing subscriber-based services because of the greater operational flexibility it gives licensees and the greater ease of administration for the Commission.[199] Similarly, we believe that continuing the current "service area" based licensing approach, which assigns channels and resolves mutually exclusive applications on a "per station" basis, is no longer feasible because it would greatly delay assignment of the remaining channels and place undue administrative burdens on the public and the Commission. Further, such an approach will make it extremely difficult for a single entity to obtain enough geographically and spectrally contiguous stations to develop an automated coastal system.

77. In order to establish a comprehensive and consistent regulatory scheme that enhances maritime communications, we propose a transition from the site-specific "service area" based licensing scheme to geographic area licensing. We tentatively conclude that such an approach would speed assignment of the remaining channels, greatly reduce processing burdens for the public and the Commission, and facilitate the development of automated coastal systems. Additionally, it would eliminate inefficiencies arising from the intricate web of relationships created by site-specific authorization and enhance regulatory symmetry among CMRS providers.[200]

78. We propose to divide the nation's coastline into nine regions, based on U.S. Coast Guard Districts (Districts), as codified in 33 C.F.R. Part 3 and listed below.[201] We believe that the Districts provide a sufficient amount of contiguous coastline to foster local as well as regional coast station systems. Further, the Districts reflect regional trading and vessel movement patterns

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[198] *See supra* para. 17.

[199] *See, e.g.*, *SMR Third Report and Order*, 9 FCC Rcd at 8044.

[200] *See, e.g.*, Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Notice of Proposed Rule Making* (*Paging Systems Notice*), 11 FCC Rcd 3108.

[201] *See* 33 C.F.R. §§ 3.05-1, 3.25-1, 3.35-1, 3.40-1, 3.45-1, 3.55-1, 3.65-1, 3.70-1, and 3.85-1 and Appendix C.

similar to the way that MTAs and BTAs frame economic boundaries for terrestrial CMRS services.

Proposed Regions (Coast Guard District)

Northern Atlantic (*1st*)	Gulf of Mexico (*8th*)
Mid-Atlantic (*5th*)	Northern Pacific (*13th*)
Southern Atlantic (*7th*)	Southern Pacific (*11th*)
Great Lakes (*9th*)	Alaska (*17th*)
Hawaii (*14th*)	

79. We seek comment on our proposal to use a geographic area licensing approach for VHF public coast spectrum. To the extent that commenters oppose use of a geographic licensing approach, we ask them to discuss what changes, if any, should be made to our current rules in order to achieve the goals we have identified in our proposed transition to another licensing approach. We also seek comment on whether the Districts listed above provide an appropriate basis for defining the service areas used in a geographic licensing approach. We ask commenters to discuss alternative service area definitions and the advantages and disadvantages associated with using such alternatives.

3. Treatment of incumbent licensees

80. In tandem with our geographic licensing proposal, we must assess the potential impact on incumbents currently licensed to operate on VHF public coast station spectrum on a "per station" basis. There are over 300 VHF public coast stations currently providing public correspondence service to vessel owners along the coastline of the United States. Because these stations provide a vital, internationally allocated link between vessels at sea and the PSN, we tentatively conclude that the public interest would be best served by providing for their continued operation while, at the same time, reducing implementation barriers for regional licensees. Therefore, we propose that each incumbent licensee continue to be authorized to operate under the terms of its current station license to serve vessels and units on land within its service area. To this end, we propose to rely on the co-channel protection criteria found in 47 C.F.R. § 80.773, which specifies a 12 dB ratio of desired to undesired signal strength within the service area of the incumbent licensee.

81. Under this proposal, regional licensees would be required to afford interference protection to incumbents. The proposed protection obligations are similar to those proposed and

implemented in other services.[202] In turn, we propose to protect regional licensee operations by allowing each incumbent licensee to renew, transfer, assign, or modify its license in any manner so long as such modifications do not extend its service area. Proposed modifications that would extend an incumbent's service area or request the use of additional frequencies would be contingent upon an agreement with each affected regional licensee. This treatment of incumbent licensees would further the public interest by promoting the continued operation of stations upon which the public relies for ship-to-shore communications and facilitating the rapid deployment of regional systems in areas already served by public coast stations. We tentatively conclude, however, that there is no need to provide special consideration for incumbent licensees in our competitive bidding procedures for the public coast service. We propose to allow any eligible entity, including incumbents, to bid for regional licenses. We note that in those cases where an incumbent is not awarded a regional license, under our proposal the incumbent may be able to expand its system by negotiating a partitioning or disaggregation agreement with the regional licensee.

82. Because our regional licensing proposal would permit licensees to place stations in land-locked as well as coastal areas, we believe that our definition of "incumbent" should include PLMR licensees authorized on marine VHF public correspondence frequencies in areas far from waterways. For example, in the *First Report and Order* in this proceeding, the Commission decided to permit PLMR eligibles in the Industrial and Land Transportation (I/LT) services to share public correspondence channels on a primary basis at least 116 kilometers (72 miles) from navigable waterways and existing public coast stations.[203] Other PLMR licensees have also been authorized by waiver to share these maritime frequencies in land-locked areas. The Commission has permitted such inter-service sharing in order to provide relief to PLMR licensees in areas where PLMR frequencies are unavailable due to congestion. Because these PLMR licensees operate far from waterways, we tentatively conclude that their continued operation does not present a barrier to the development of coastal systems and that they should be classified as incumbent licensees. We seek comment from both the maritime and private land mobile communities concerning the general treatment of incumbent licensee and the following questions.

(a) Are the proposed interference protection criteria sufficient to govern the use of public correspondence channels by regional licensees in inland areas? Should the criteria be

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[202] *See, e.g.*, Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, and Implementation of Sections 3(n) and 322 of the Communications Act, GN Docket No. 93-252, *Second Order on Reconsideration and Seventh Report and Order* (*SMR Order*), 11 FCC Rcd 2639 (1995).

[203] *First Report and Order*, 10 FCC Rcd at 8419. As noted *supra*, the Commission's recent action consolidating the PLMR services does not alter the type of PLMR licensees eligible to share maritime frequencies. *See Refarming Second Report and Order*.

revised to reflect the fact that signals will travel over land rather than water? If so, how?

(b) Should incumbent public coast station licensees be afforded additional interference protection in order to permit them to expand operations?

(c) Should mobile-to-mobile communications be permitted in coastal areas and/or inland areas? If so, what additional measures must be taken to protect incumbent stations?

4. Licensing

83. We are proposing to license presently unassigned VHF public coast station spectrum on a regional basis. In order to promote the rapid deployment of automated systems, we are proposing to authorize a single regional licensee to operate on all unassigned public correspondence frequencies within its District for a ten-year license term. We propose this licensing approach for several reasons. There are only a limited number of channels allocated for VHF public coast station use. At most, there are only ten channels available for assignment at any site. In ports where incumbent public coast station licensees already operate, however, there may be less than five channels available. Dividing the limited number of available channels in each District among multiple licensees would limit development of multi-channel systems and be administratively burdensome to implement due to the erratic nature of incumbent licensees' service areas. Additionally, the competitive state of the coastal marketplace already enables vessel operators operating along the coast to choose among a number of other CMRS providers including cellular, PCS, SMR, and satellite communications. These services have been extremely competitive in some coastal markets, often contributing to the closure of VHF public coast stations.[204] Thus, we tentatively conclude that the coastal marketplace will ensure competition among CMRS providers without introducing multiple regional licensees in each District. Finally, authorizing one license in each District for use of up to ten channels is consistent with the Commission's treatment of other CMRS providers. For example, each 900 MHz band SMR licensee in a MTA[205] is assigned a ten-channel block of frequencies.[206]

84. We believe that any new maritime licensing scheme should increase flexibility for licensees, eliminate unnecessary regulatory burdens, and promote the delivery of innovative telecommunications services, to the extent that it does not pose a threat to safety of life and property at sea. In this connection, we propose to permit each regional licensee to place stations

[204] As of March 28, 1996, forty-three VHF public coast stations had closed since 1991. In their closure filings, many licensees cite cellular competition as the primary reason for discontinuance of service. *See, e.g.*, Application for authority to close VHF-FM public coast station WHG-964, North Huntington, Pennsylvania, and Application for authority to close VHF-FM public coast station KLU-836, Freedom, Pennsylvania, *Order and Authorization*, DA 92-1219, (released Sept. 17, 1992).

[205] *See supra* note 191.

[206] 47 C.F.R. § 90.617(d). *See also SMR Order*, 11 FCC Rcd at 2639.

anywhere within its region to serve vessels or units on land, so long as marine-originating traffic is given priority and incumbent operations are protected. Outside the service areas of incumbent licensees, the regional licensee would be authorized on all public correspondence frequencies[207] and would be required to afford interference protection to any nearby co-channel incumbent operations. Inside the service areas of incumbent licensees the regional licensee would be authorized only on those channels not presently assigned to an incumbent. All base stations and land units would be blanket licensed under the regional license. Under our proposal, regional licensees still would be required to individually license any base station that: (1) requires the submission of an Environmental Assessment under 47 C.F.R. § 1.1307; (2) requires international coordination; or (3) would affect the radio frequency quiet zones described in 47 C.F.R. § 80.21. We tentatively conclude that this simplified approach toward initial licensing and subsequent system modification will (1) increase operational flexibility, resulting in faster, more responsive service to the public and (2) substantially reduce administrative burdens on both licensees and the Commission. Further this approach is consistent with how we handle geographic licensing in other commercial services, both mobile and fixed.[208]

85. To assist regional licensees in consolidating spectrum, we also propose that: (1) if an incumbent fails to construct, discontinues operations, or otherwise has its license terminated by the Commission, the spectrum covered by the incumbent's authorization would automatically revert to the regional licensee,[209] and (2) if a licensee negotiates to acquire an incumbent station by assignment or transfer, the assignment or transfer will presumptively be considered in the public interest. An incumbent would of course be permitted to assign its existing license to any qualified entity whether or not that entity is the regional licensee. Where an incumbent licensee's protected service area is located entirely or partially within a geographic area partitioned by the regional licensee, a cancelled or terminated incumbent license would still revert to the regional licensee, unless designated otherwise in a partitioning agreement. We tentatively conclude that granting these rights to regional licensees would give them greater flexibility in managing the spectrum and establishing coastal and wide-area systems. We seek comment on these proposals.

86. In addition, we note that the VHF public coast spectrum is close in proximity to spectrum allocated for public safety uses -- specifically, public safety services are allocated

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[207] In some areas near the Canadian border, there are fewer channels than elsewhere.

[208] For example, the Commission has defined geographic service areas for cellular, PCS, and SMR licensees.

[209] This is consistent with the Commission's treatment of other geographic licensing processes. *See, e.g., SMR Order,* 11 FCC Rcd at 2639; *Paging Systems Notice*, 11 FCC Rcd at 3108; Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, and Implementation of Sections 3(n) and 322 of the Communications Act, GN Docket No. 93-252, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 10 FCC Rcd 6884 (1995), (*SMR Second Report and Order and Second Further Notice of Proposed Rule Making*).

approximately 4 megahertz of spectrum in the 150-160 MHz band.[210] We further note our continuing commitment to take measures to ensure that the current and future communications needs of the public safety community are addressed. Notably, in its Final Report, the Public Safety Wireless Advisory Committee recommended several ways in which the immediate and future needs of the public safety community through the year 2010 could be satisfied including (1) the provision of additional spectrum, (2) improved interoperability, (3) more flexible licensing policies, (4) increased sharing of spectral and other resources, (5) greater use of commercial services, and (6) alternative methods for funding public safety communications.[211] In this connection, we seek comment on whether there are any steps that the Commission should take to facilitate use of this spectrum by public safety entities. In particular, there may be opportunities for public safety entities to share public coast spectrum in land-locked areas, far from navigable waterways. We ask commenters to discuss the specific public safety uses that can be implemented in this spectrum and to identify any operational limitations associated thereto in order to protect the current and future maritime operations in the band.

87. In proposing a geographic licensing approach, we must also consider the issue of co-channel interference protection obligations of regional licensees. Accordingly, we propose to establish interference protection criteria for co-channel licensees at the regional borders and clarify operations along international borders. Consistent with current VHF public coast operations, we propose to prohibit regional licensees and incumbents from exceeding a field strength of +5 dBu (decibels referenced to one microvolt per meter) at their service area boundaries,[212] unless the bordering regional licensee or incumbent agrees to a higher field strength. We also propose to authorize the use of VHF public coast spectrum in areas along the Great Lakes, St. Lawrence Seaway, and the coastal waters of Washington pursuant to coordination with Industry Canada, as outlined in the Canada/U.S.A. channel agreements found in 47 C.F.R. § 80.57. In this connection, we believe that applicants are in the best position to assess the affects of any limitations on the use of channels when valuing those geographic areas for competitive bidding purposes. This approach provides licensees the ability to operate their systems up to the borders of their service areas, while also providing protection to adjacent operations. We seek comment on these proposals and the following:

(a) The proposed regions define where stations may be placed on land by each regional licensee. There may be circumstances, however, where a licensee wishes to place stations offshore (*e.g.*, platforms in the Gulf of Mexico). How should the Commission assign the use of frequencies in such offshore areas? Should a separate region be established to license certain offshore areas such as the Gulf of Mexico, similar to our approach in establishing a Gulf

[210] 47 C.F.R. Part 90 Subpart B.

[211] *See* Public Safety Wireless Advisory Committee Final Report at pages 3-4.

[212] This limitation is based on the current standards found in 47 C.F.R. Subpart P for computing public coast station VHF coverage.

of Mexico service area in the Wireless Communications Service (WCS)?[213]

(b) The proposed +5 dBu field strength limit is based on the current ratio of desired to undesired signal strengths for VHF public coast stations (47 C.F.R. § 80.773) and represents an "interference" contour, rather than a "service contour." Alternatively, what would be the advantages and disadvantages of adopting a +17 dBu field strength limit as a "service contour" at the regional borders and requiring co-channel licensees to negotiate with one another to avoid harmful interference? What effect would this have on incumbent licensees? In either case, should the Commission adopt separate field strength limits for coastal and land-locked areas, and if so, why and what should they be?

5. Regional coverage requirements

88. We propose to require construction by VHF public coast regional licensees and solicit comment on an appropriate requirement. One option would be to require provision of substantial service to their service areas within 10 years. Licensees failing to demonstrate that they are providing substantial service would be subject to forfeiture of their licenses. For the WCS we adopted substantial service as our construction requirement based upon 'the unique circumstances in which WCS licenses are being awarded and the strict technical requirements necessary to prevent interference."[214] We stated that a demonstration of coverage to 20 percent of the population within a licensee's service area at the ten-year mark could constitute substantial service, although we also stated that a lesser showing could suffice.[215] We seek comment on adoption of a "substantial service" test in this service and on an appropriate safe-harbor. Alternatively, we request comment on leaving unchanged the current construction requirement; or a construction requirement in between these two alternatives, such as requiring coverage of at least 20 percent of the population or 50 percent of navigable waterways within the region within five years. Commenters should address such factors as whether the licensee is offering a specialized or technologically sophisticated service that does not require a high level of coverage to be of benefit to customers,[216] and whether the licensee's operations serve niche

[213] The Commission designated a separate Regional Economic Area Grouping (REAG) and Major Economic Area (MEA) for the WCS covering the Gulf of Mexico. *See* 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 (released Feb. 19, 1997) (*WCS Report and Order*). *See also*, Cellular Service and Other Commercial Mobile Radio Services in the Gulf of Mexico, WT Docket No. 97-112, *Second Further Notice of Proposed Rule Making*, FCC 97-110, _ FCC Rcd _ (released Apr. 16, 1997).

[214] *WCS Report and Order* at paras. 111-115.

[215] *Id.*

[216] We have taken this approach in the past with respect to other services. *See SMR Second Report and Order and Second Further Notice of Proposed Rule Making*, 10 FCC Rcd 6884 (1995) at ¶ 4.

markets or focus on serving populations outside of areas served by other licensees.[217] We also ask commenters to discuss whether "substantial service" should be different in the context of providing service to waterways as compared to service inland.

89. We believe that a construction requirement can promote efficient use of the spectrum, encourage the provision of service to rural, remote and insular areas and prevent the warehousing of spectrum.[218] Because public coast regional licensees will have the flexibility to serve waterways as well as inland areas, we request specific comment on whether our construction requirement should be different for waterways than for land. If different, what is the reason for the difference and what should the requirements be?

90. Section 309(j)(4)(B) of the Communications Act requires the Commission to employ performance requirements such as deadlines or coverage rules to prevent the warehousing of spectrum.[219] We note that regardless of the specific construction requirement we ultimately adopt, the construction requirements could be reviewed in the future if we receive complaints or if our own monitoring initiatives or investigations indicate that a reassessment is warranted. We also propose to reserve the right to impose additional, more stringent construction requirements on regional licenses in the future in the event of actual anticompetitive or rural service problems and if more stringent construction requirements can effectively ameliorate those problems.

6. Partitioning and Disaggregation

91. We recently adopted a *Report and Order* revising the geographic partitioning and spectrum disaggregation rules for broadband PCS.[220] The broadband PCS rules expand the option of partitioning to all eligible entities and permit disaggregation in the near term.[221] Consistent with these broadband PCS rules, we propose to permit partitioning and disaggregation for the public coast service. We tentatively conclude that combined partitioning and disaggregation should be permitted and the Commission's current partial assignment procedures should govern

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[217] *See* Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool -- Implementation of Sections 3(n) and 322 of the Communications Act, GN Docket No. 93-252, *Third Order on Reconsideration,* FCC 95-429, 11 FCC Rcd 1170 (released Oct. 20, 1995) at ¶ 2.

[218] *See e.g., WCS Report and Order* at ¶ 113.

[219] 47 U.S.C. § 309(j)(4)(B).

[220] Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees, WT Docket No. 96-148, Implementation of Section 257 of the Communications Act -- Elimination of Market Entry Barriers, GN Docket No. 96-113, *Report and Order and Further Notice of Proposed Rule Making*, FCC 96-474 (released Dec. 20, 1996) ("*Broadband R&O*"). "Partitioning is the assignment of geographic portions of the . . . license along geopolitical or other boundaries. Disaggregation is the assignment of discrete portions or 'blocks' of spectrum licensed to a geographic licensee or qualifying entity." *Id.* at para. 1, n.2.

[221] *Id. passim.*

such requests. This approach would afford parties flexibility to design the types of agreements they desire while advancing the goals of providing competitive service offerings, encouraging new market entrants, and ensuring quality service to the public. Further, we propose that partitionees and disaggregatees hold their licenses for the remainder of the original licensee's term and have a renewal expectancy. We tentatively conclude that this approach would prevent licensees from using partitioning and disaggregation to circumvent our established license term rules. Additionally, by limiting the license term of the partitionee or disaggregatee, we ensure that there will be maximum incentive for parties to pursue available spectrum as quickly as practicable , thus expediting the delivery of service to the public. We seek comment on these proposals and tentative conclusions.

92. In the *Broadband R&O*, the Commission concluded that relaxing the partitioning and disaggregation rules will help to (1) remove potential barriers to entry thereby increasing competition; (2) encourage parties to use spectrum more efficiently; and (3) speed service to unserved and underserved areas.[222] Consistent with this decision, we propose, for the public coast service, to allow all regional licensees to partition and/or disaggregate at any time to any entity eligible for a public coast station license. We note that small businesses[223] and others may face certain barriers to entry into the provision of spectrum-based services, such as private coast station, which, we believe, may be addressed by changes in our partitioning rules. Providing licensees with the flexibility to partition their geographic service areas would create smaller areas that could be licensed to small businesses, including those entities which previously may not have had the resources to participate successfully in spectrum auctions. Further, we propose to permit disaggregation of any amount of spectrum, without a requirement that the disaggregator retain a minimum amount of spectrum. This approach gives flexibility to licensees to design agreements that encourage a wider range of services. We seek comment on these tentative conclusions. In particular, commenters are invited to address whether our partitioning and disaggregation scheme will help eliminate market entry barriers for small businesses pursuant to Section 257 of the Communications Act of 1934, as amended.[224]

93. We seek comment on what the respective obligations of the participants in a partitioning or disaggregation arrangement should be, and whether each party should be required to guarantee all or a portion of the partitioner's original auctions-related obligation (*e.g.*, payment and build-out obligations) in the event of default or bankruptcy by any of the parties to the partitioning arrangement. We seek comment on whether the partitioner should have a continuing obligation with respect to the entire initial geographic area. Alternatively, should the parties have available a choice of options, ranging, for example, from an accelerated payment based on purchase price to a guarantee for a larger payment by one party in the event another party

[222] *Id.* at para. 13.

[223] We seek comment *infra* on whether, and how, we should define "small business" in the context of the public coast service. *See infra* para. 125.

[224] 47 U.S.C. § 257.

defaults? Parties are invited to comment on whether the partitioning parties should be able to determine which party has a continuing obligation with respect to the original licensed area. We pose additional questions *infra* in our discussion regarding competitive bidding provisions and, *e.g.*, small business licensees.[225]

94. We also seek comment on the type of unjust enrichment requirements that should be placed as a condition for approval of partitioning and disaggregation arrangements, *e.g.*, an application for a partial transfer of a license owned by a qualified small business to a non-small business. We tentatively conclude that these unjust enrichment provisions would include accelerated payment of any bidding credit that we may adopt for small businesses, unpaid principal, and accrued unpaid interest, and would be applied on a proportional basis. To the extent that we adopt installment payment financing for the public coast service, we seek comment on how to adjust installment payments owed by partitioning and disaggregating licensees. This approach would help to ensure that large companies do not become the unintended beneficiaries of special provisions meant for smaller firms, such as bidding credits and installment payments. Further, we believe that such a requirement would strike the proper balance between promoting economic opportunities for small businesses while preventing abuse of our benefits intended for these entities. We seek comment on how such unjust enrichment amounts should be calculated, especially in light of the difficulty of devising a methodology or formula that will differentiate the relative market value of the opportunities to provide service to various partitioned areas within a geographic or market area. We seek comment on whether we should consider the price paid by the partitionee in determining the percentage of the outstanding principal balance to be repaid. Finally, in the event that restrictions are placed on the assignment or transfer of "complete" public coast station licenses awarded pursuant to special provisions, should we similarly restrict the partitioning of such licenses when the partitionee is not within the definition of an entity eligible for such special provisions? At some point (*e.g.*, a term of years), should such restriction be removed and the unjust enrichment provisions apply on a proportional basis?

95. We tentatively conclude that our proposals to permit partitioning and disaggregation in the manner described above would allow the public coast spectrum to be used most efficiently, speed service to unserved or underserved areas, and facilitate competition. We solicit comment on this analysis of the intended effects of our proposals.

7. Technical flexibility

96. The basic channelization for VHF public coast station spectrum is set forth in the ITU Radio Regulations as 25 kHz. Presently, AMTS public coast stations (216-220 MHz band), which do not utilize internationally standardized maritime channels, are authorized to use narrowband technologies in addition to the 25 kHz channel plan set forth by the rules. AMTS licensees may use frequencies offset from assignable channels provided that such licensees are

[225] Paragraph 125, *infra*.

also licensed for channels on each side of the offset frequency.[226] Since narrowband operation in the AMTS was first authorized in 1989,[227] we have not received any complaints of harmful interference due to such operation. Therefore, we propose that each regional licensee, as well as incumbent licensees, be authorized to use narrowband technologies, in the same manner as AMTS stations. We seek comment on this proposal and the following:

(a) What would be the advantages and/or disadvantages of not specifying a narrowband channel plan? What technologies and/or channel plans have been used by AMTS licensees to successfully implement narrowband technologies in the maritime environment?

(b) What would be the long-term consequences of permitting public coast stations serving U.S. waterways to deviate from narrowband channel plans that may be adopted in the future by the international maritime community?

(c) Should the Commission permit greater levels of technical flexibility at stations that are far from navigable waterways and do not serve vessels?

(d) What other provisions should be considered in order to promote the efficient use of the VHF public coast station spectrum and enhance licensees' abilities to respond to market demands?

8. Operational flexibility

97. The present rules governing VHF public coast station spectrum already provide a great deal of operational flexibility for licensees. For example, the rules governing public coast stations allow licensees to provide interconnected radiotelephone service to ship and aircraft stations, to communicate with a designated station at a remote fixed location where other communication facilities are not available, and to transmit meteorological information and navigational warnings. AMTS coast station licensees are also permitted to communicate with stations on fixed platforms located in the Gulf of Mexico. Further, the rules adopted herein permit public coast station licensees to serve units on land so long as they afford priority to marine-originating communications and the antenna height of each land-unit is limited to 6.1 meters (20 feet) above ground level.

98. In the *First Report and Order and Further Notice of Proposed Rule Making* in WT Docket 96-6, we concluded that broadband and narrowband CMRS licensees should have

[226] *See* 47 C.F.R. § 80.385(b).

[227] *See* Amendment of the Maritime Service Rules to Permit Operation on Frequencies Offset from Assigned AMTS Channels, FCC 89-193, *Order*, 4 FCC Rcd 5221 (1989).