

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

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	
Regarding Maritime Automatic	)	WT Docket No. 04-344
Identification Systems	)	
	)	
Petition for Rule Making Filed by	)	RM-10821
National Telecommunications and	)	
Information Administration	)	
	)	
Emergency Petition for Declaratory	)	
Ruling Filed by MariTEL, Inc.	)	

**COMMENTS OF MARITEL, INC.**

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## SUMMARY

In this proceeding, the Commission proposes to strip the winner of an FCC spectrum auction of the very spectrum that it purchased in that auction. Having unilaterally disavowed the framework established for selecting AIS channels set forth in the FCC's rules, the NTIA now asks the FCC to change those rules and modify MariTEL's license to achieve through the regulatory processes what it was unwilling to achieve through the good-faith negotiations required by the Commission.

The Notice of Proposed Rule Making in this proceeding, adopted at the NTIA's request, is legally and factually flawed. Even if the FCC were merely proposing to delete an amount of spectrum equivalent to what MariTEL may have reasonably believed it was required to make available to the USCG under the former Commission processes and rules, the Commission would be required to undertake the procedures specified in section 316 of the Act. It has not. Further, the FCC's proposal is significantly more than a proposal to delete from MariTEL's authorization the equivalent of two narrowband offset duplex channels, which is MariTEL's current regulatory obligation. The FCC's proposal will fundamentally affect MariTEL's ability to use the remainder of its licensed spectrum.

There are numerous solutions available to the Commission by which spectrum could be set aside for AIS without destroying MariTEL's business prospects. Those solutions include, among other things, the potential lease or purchase of MariTEL's spectrum or the adoption of a proposal under which channel 87B can be truly shared between MariTEL and Federal government users. Therefore, MariTEL vigorously opposes the plan announced in the Notice of Proposed Rule Making and requests that, if the FCC intends to proceed as proposed, procedures required by section 316 of the Act be initiated.

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To: The Commission

**COMMENTS OF MARITEL, INC.**

MariTEL, Inc. (“MariTEL”), by its attorneys and pursuant to the invitation extended by the Federal Communications Commission (“FCC” or “Commission”) in the *Notice of Proposed Rule Making* (“*Notice*”) in the above referenced proceeding,<sup>1</sup> hereby submits its comments responsive to the FCC’s proposal to designate the frequency assignment 161.975 MHz (VHF channel 87B), licensed to MariTEL, for use by Automatic Identification Systems (“AIS”).

**I. Background**

MariTEL was the largest provider of VHF Public Coast (“VPC”) services in the United States and, through various predecessors in interest, provided ship-to-shore services for over

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<sup>1</sup> *Amendment of the Commission’s Rules Regarding Maritime Automated Identification Systems; Petition For Rule Making Filed by National Telecommunications and Information Administration; Emergency Petition for Declaratory Ruling Filed by MariTEL, Inc., Memorandum Opinion and Order and Notice of Proposed Rule Making*, 19 FCC Rcd 20071 (2004) (“*Notice*”).

forty years.<sup>2</sup> In 1999 and again in 2001, MariTEL actively participated in the FCC's auctions of VPC station licenses.<sup>3</sup> As a result, MariTEL became the exclusive entity (except for site-specific incumbent licensees) authorized to operate on maritime VPC spectrum.

MariTEL is an active participant in virtually all proceedings concerning the use of spectrum designated for maritime operations. Moreover, this proceeding proposes to reallocate spectrum that is licensed to MariTEL as a result of MariTEL's participation in the FCC's auction process. The *Notice* also proposes to reject several proposals submitted by MariTEL to address the need, asserted by the National Telecommunications and Information Administration ("NTIA") and the United States Coast Guard ("USCG"), to dedicate MariTEL's channel 87B for AIS purposes. Accordingly, MariTEL has a direct interest in this proceeding and is pleased to have the opportunity to submit the following comments.

## **II. Discussion**

### **A. Introduction**

The Commission's characterization notwithstanding, this is a proceeding that seeks to strip, for the first time, the winner of an FCC spectrum auction of the rights to the spectrum it purchased in that auction. Never before has the FCC taken spectrum from an auction winner without proposing to make that auction winner whole. The FCC's action in this case, therefore,

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<sup>2</sup> As MariTEL notified the FCC, it terminated its provision of voice communications services on June 6, 2003. See "Wireless Telecommunications Bureau Seeks Comment on MariTEL, Inc. Request to Extend Construction Deadline for Certain VHF Public Coast Station Geographic Area Licenses," DA 03-1484, *Public Notice*, 18 FCC Rcd 9325 (2003) ("MariTEL Extension Request") (referencing FCC File Nos. 0001252148, 0001252177, 0001252257, 0001252325, 0001252214, 0001252280, 0001252315, and 0001252335).

<sup>3</sup> "FCC Announces the Conditional Grant of 26 VHF Public Coast Station Licenses," *Public Notice*, DA 99-195, 1999 FCC LEXIS 2251 (rel. May 21, 1999) (announcing that MariTEL was the winning bidder of nine VHF public coast licenses); "VHF Public Coast and Location and Monitoring Service Spectrum Auction Closes: Winning Bidders Announced," *Public Notice*, DA 01-1443 (rel. June 15, 2001) (announcing that MariTEL was the winning bidder of seven inland VPC licenses).

would be contrary to public policy, would undermine the integrity of the FCC's auction process, and would violate the provisions of section 316 of the Communications Act, which provides that the Commission must provide a licensee with an opportunity for a hearing prior to modification of its license.

The FCC initiated this proceeding at the request of NTIA, which asserts that channel 87B must be dedicated for use in AIS systems. NTIA made this request to the FCC because the USCG failed to follow the regulatory process established by the FCC that otherwise allows for the designation of channels for AIS use. In particular, the Commission adopted a process under which the licensees of VHF Public Coast stations would negotiate with the USCG for the USCG's use of two narrowband offset duplex channels for use in AIS systems.<sup>4</sup> MariTEL and the USCG entered into a Memorandum of Agreement ("MOA") consistent with the FCC's decisions and rules. As the FCC has noted, MariTEL terminated the MOA, as it was permitted to do, because of the USCG's incorrect (in MariTEL's view) interpretation of its rights.<sup>5</sup> MariTEL attempted to meaningfully renegotiate the terms of the MOA with the USCG and NTIA. However, as the FCC has noted, the NTIA and USCG refused to engage in such meaningful negotiations.<sup>6</sup> Instead of working within the framework established by the FCC's rules, the NTIA now asks the FCC to change those rules and modify MariTEL's license to achieve through the regulatory processes what it was unwilling to achieve through the good-faith negotiations required by the *Third Report and Order*.

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<sup>4</sup> *Amendment of the Commission's Rules Concerning Maritime Communications, Third Report and Order and Memorandum Opinion and Order*, 13 FCC Rcd 19853, 19876-77 ¶ 48 (1998) ("*Third Report and Order*").

<sup>5</sup> MariTEL was required to terminate the MOA because, among other reasons, the USCG intended to employ channel 87 for AIS in the same destructive manner that the FCC now proposes.

<sup>6</sup> *Notice* at n.134.

However, the *Notice* adopted at the NTIA's request is legally and factually flawed. Even if the FCC were merely proposing to delete an amount of spectrum equivalent to what MariTEL may have reasonably believed it was required to make available to the USCG under existing Commission processes and rules, the Commission would be required to undertake the procedures specified in section 316 of the Act. It has not. Further, as MariTEL demonstrates below, the FCC's proposal is significantly more than a proposal to simply delete from MariTEL's authorization the equivalent of two narrowband offset duplex channels, which is MariTEL's current regulatory obligation. Quite the opposite, the FCC's proposal will fundamentally affect MariTEL's ability to use the remainder of its licensed spectrum. The FCC has never before permitted the introduction of a disruptive technology such as AIS (in the configuration proposed by the FCC) without taking measures to compensate incumbent licensees. Nonetheless, that is what the FCC proposes here.

MariTEL recognizes the importance of channel 87B for AIS operations and has made numerous proposals to the USCG to demonstrate how that frequency may be provided to the USCG while fairly compensating MariTEL for the impact that such use would have on its operations. The USCG has rejected all of these proposals. Instead, the USCG, through NTIA, seeks to simply take MariTEL's spectrum. The FCC should reject this request, retain its current regulations, and direct NTIA to take one of the many other paths available to it that would enable the USCG to use channel 87B for AIS. Those paths include, among other things, the potential lease or purchase of MariTEL's spectrum or the adoption of a proposal under which channel 87B can be truly shared between MariTEL and Federal government users. Therefore, MariTEL vigorously opposes the plan announced in the *Notice* and requests that, if the FCC intends to proceed as proposed, procedures under section 316 of the Act be initiated.

**B. The FCC Incorrectly Concludes that Reallocating Channel 87B for AIS Would Have an Equivalent Impact on MariTEL as its Obligation Under Section 80.371**

**1. Introduction**

The Commission asserts that “our proposal would require MariTEL to set aside for AIS only one half of the total spectrum contemplated under section 80.371(c)(3).”<sup>7</sup> The FCC’s analysis is flawed for several reasons.

First, as demonstrated below, and as the FCC itself recognizes, it is not the simple quantity of spectrum that should be evaluated in assessing the FCC’s proposal; rather, it is the way in which the spectrum will be employed and the impact of that employment on MariTEL that must be considered.<sup>8</sup> The reallocation of channel 87B for AIS on a simplex, wideband basis will have a significantly greater impact than would the use of two narrowband offset duplex channels.

Second, the Commission’s argument overlooks the obvious – that channel 87 is unique within the VPC spectrum allocation. By modifying MariTEL’s license to delete use of channel 87, the Commission would not simply be revoking MariTEL’s ability to use what the FCC considers to be the equivalent or less of two narrowband offset duplex channels; instead, the FCC would be negating rights to a unique asset.

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<sup>7</sup> Notice at ¶ 33.

<sup>8</sup> *Id.* (“[w]e do not by this observation intend to suggest that the relative impact of the proposed AIS set-aside on MariTEL’s operations vis-a-vis a set-aside of two narrowband channel pairs can be determined conclusively by simply looking to the total amount of spectrum involved in each alternative. We recognize, for example, that the proposed use of Channel 87B on a simplex rather than a duplex basis must also be factored in, along with the fact that the use of Channel 87B will encumber three narrowband channels.”)

Third, the FCC's proposal disrupts the current beneficial duplex channelization structure of the VHF maritime spectrum.

Finally, the FCC's proposal ignores the benefits of the initially adopted scheme to make spectrum available for USCG use.

## **2. Channel 87B is a Unique Asset**

Channel 87 is unique because, *inter alia*, it permits licensees to employ two internationally interoperable technologies: one that can be used by traditional marine VHF radios operating on duplex channel 87 and AIS transponders that operate in the default mode on channel 87B.<sup>9</sup> Licensees may choose to employ these technologies simultaneously in the same area or individually on a geographic basis.<sup>10</sup> The Commission uniquely authorized MariTEL to shape the domestic use of channel 87, stating that “we will not designate channel 87B as an AIS channel.”<sup>11</sup> MariTEL based the submission of its winning bid for VPCs 1-9 on this commitment. The *Notice* abrogates MariTEL's unique rights to channel 87B.

## **3. The FCC's Proposal Would Eliminate the Benefits of the Current Duplex Channelization Structure**

The *Notice* also overlooks other factors that make reallocation of channel 87B different from reallocation of two narrowband offset duplex channels. For example, the Commission's

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<sup>9</sup> Under section 80.203 of the rules, licensees may also choose to employ land based VHF equipment type accepted by the FCC under either Part 90 or Part 22 of the FCC's rules.

<sup>10</sup> If using AIS technology, VPC licensees could provide a limited data communications service to AIS equipped vessels utilizing embedded AIS capability. If using non-AIS technology, VPC licensees could communicate with an AIS equipped vessel by ensuring that the vessel's AIS transponder was not operating on channel 87B and was re-tuned to an alternate channel. Also using non-AIS technology, VPC licensees could communicate with all other vessels by ensuring that such vessels do not operate in close proximity to large vessels with AIS transponders operating on channel 87B. As an example, VPC licensees could use duplex channel 87 to offer services primarily to recreational and fishing vessels while also supporting AIS messaging on channel 87B to vessels with AIS transponders.

<sup>11</sup> *Third Report and Order*, 13 FCC Rcd at 19876-77 ¶ 48.

recommendation fails to appropriately consider the impact that such a reallocation will have on the valuable duplex<sup>12</sup> channel structure of VPC spectrum.<sup>13</sup> The Commission's current rules and policies, which require MariTEL to share two narrowband offset channels, have an imperceptible impact on MariTEL, while reallocation of channel 87B would have a significant impact for the following reasons:

**Interoperability with Marine VHF Radios:**

The USCG has on many occasions referred to the value of VPC spectrum because of its interoperability with almost ten million marine VHF radios operating in U.S. waters.<sup>14</sup> However, the vast majority of all marine VHF radios are not capable of operating on VPC spectrum in the simplex mode. In fact, to do so is currently against U.S. spectrum policy. The Commission's proposal would eliminate one wideband duplex channel for use with traditional marine VHF radios today enabled for maritime voice and/or data<sup>15</sup> communications. Such a result is inconsistent with the USCG's desire to preserve the last internationally interoperable maritime

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<sup>12</sup> Duplex channels are used by coast stations in order to ensure privacy and exclusivity on a particular channel for ship to shore and shore to ship communications. Duplex operation involves the use of one frequency for transmitting and another frequency for receiving. Ship stations do not employ duplex channels to communicate with other ships because they are not equipped, as are coast stations, to receive and transmit on separate frequencies. Duplex channels are more valuable than simplex channels. This is especially true in the maritime VHF band where, other than the VPC band, there is only one duplex channel allocated domestically for maritime use.

<sup>13</sup> The following section discusses only the structural benefits of the duplex channelization scheme. MariTEL will address below the interference caused by abandoning the duplex channelization scheme for AIS simplex wideband operations.

<sup>14</sup> Comments of United States Coast Guard at p. 3 in *MariTel, Inc. and Mobex Network Services, LLC Petitions for Rule Making to Amend the Commission's Rules to Provide Additional Flexibility for AMTS and VHF Public Coast Station Licenses, Notice of Proposed Rulemaking*, 19 FCC Rcd 15255 (2004) ("Flexibility Rulemaking").

<sup>15</sup> Existing marine VHF radios can, absent AIS interference, be used for ship-shore data communications using packet data technology using hardware modems, such as those sold by Kantronics ([www.kantronics.com](http://www.kantronics.com)), and software-based modems using PC sound card technology.

radio spectrum.<sup>16</sup> In contrast, use of offset channels for AIS would not reduce the channels available to support maritime communications with the installed base of internationally interoperable marine VHF radios.<sup>17</sup>

**Near Imperceptible Impact of using Offset Channels for AIS:**

One of the most significant and often overlooked advantages of using duplex offset channels for ports and waterways safety systems (“PAWSS”) in vessel traffic systems (“VTS”) areas is the near imperceptible impact to VPC licensees. Offset channels were considered by the USCG and NTIA to be “found” spectrum whose use did not impact marine VHF public correspondence services.<sup>18</sup> In an April, 2000 technical report performed on behalf of the USCG, NTIA concluded that duplex offset channels could be used for ship-shore AIS communications if separated by roughly 20 miles from VPC coast stations operating on the adjacent, overlapping wideband duplex channels.<sup>19</sup>

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<sup>16</sup> Comments of United States Coast Guard at p. 3 in Flexibility Rulemaking (“[t]his spectrum is the only available, internationally-interoperable maritime spectrum remaining in the United States above 26 MHz. It represents the only resource available to meet both the present and the future technological and communications needs of the maritime community where interoperability with international shipping and domestic entities is needed. Accordingly, this spectrum must not be reallocated, and must be protected and kept available for its intended use - Maritime Services.”).

<sup>17</sup> Virtually none of the existing marine VHF radios are capable of operating on narrowband offset duplex channels that could otherwise be used to support AIS.

<sup>18</sup> The use of narrowband offset duplex channels was considered to be a method by which existing coast station operations, and the auctioned geographic area licensees, could operate unimpeded by AIS. The only obligation for VPC auction winners was to either coordinate the use of its channels with the USCG’s use of the offset channels or to accept the interference that may result from operating an overlapping wideband channel in close proximity to a narrowband offset channel. As a result, the entire AIS spectrum obligation could be characterized as a requirement to “coordinate” and not to “appropriate.”

<sup>19</sup> NTIA 00-376, section 5-1. NTIA also concluded that no horizontal separation was needed between base stations if VPC and AIS channels did not overlap.

Accordingly, use of offset channels for AIS enables the following advantages:

- Incumbent coast stations are not impacted. To use the designated offsets, the USCG would be required to maintain appropriate geographic separation, negotiate with the incumbent coast station concerning a more expanded use, or negotiate with MariTEL to use other channels.
- Because VPC licensees and the USCG would each be allowed to operate their respective spectrum throughout each VPC region, the parties would be required to coordinate in the deployment of shore stations.
- VPC licensees would only be required to coordinate concerning adjacent channel use of offset channels in PAWSS VTS areas because these channels would primarily be used for ship-shore AIS communications considering that non-VPC channel(s) would be used for ship-ship AIS communications.
- The introduction of simplex operations by vessels on shore station channels into the VPC spectrum allocation would be eliminated.
- The designation of narrowband offset duplex channels for AIS use does not reduce the total amount of valuable wideband duplex channels authorized for use by VPC Licensees. Wideband maritime channels are considerably more valuable than narrowband channels. Not only are wideband channels interoperable with existing marine VHF radios, they provide significant capacity advantages in data networks in comparison to narrowband channels.

**Nine Versus Eight Wideband Duplex Channels:**

The designation of narrowband offset duplex channels for AIS does not reduce the total number of wideband and/or narrowband duplex channels authorized for use by VPC licensees.

In contrast, the Commission’s suggested approach “takes” a wideband duplex channel on a near-nationwide basis from MariTEL and seeks to also take the same channel from various incumbent coast station licensees. The loss of any wideband duplex channel on a near-nationwide basis appreciably reduces the total voice or data capacity available for licensees. The table below summarizes the impact of the Commission’s proposal to take one wideband and one narrowband duplex channel away from VPC Licensees.

**Duplex Channels Available to VPC Auction Winners**

Configuration	Wideband	Narrowband	Total
Two Narrowband Duplex Channels	(9)	(15)	(24)
One Wideband Simplex Channel	(8)	(14)	(22)

The implied consolation of retaining a wideband simplex channel only restores a small fraction of the total value taken from VPC licensees. Accordingly, based on the foregoing, it is clear that the FCC’s proposal has a greater impact on MariTEL than simply the spectrum that the FCC intends to designate for AIS.

**4. The FCC’s Plan Overlooks the Benefits of the Initially Adopted Scheme to Select PAWSS Channels**

In addition to overlooking the benefits of a duplex channel scheme, the FCC’s plan also overlooks the benefit of the Commission’s initial approach to the selection of channels for USCG operations. The use of a duplex channel would provide the USCG more capacity in PAWSS

VTS areas and would provide vessel operators the inherent benefits of “wide-area AIS.”<sup>20</sup> If the FCC continues to enforce the provisions of section 80.371(b)(3), channel 88B (“AIS 2”) could serve as a ship-ship AIS channel in both domestic and international waters and, therefore, would not compromise vessel safety or homeland security.<sup>21</sup> Additionally, this approach allows superior monitoring of international AIS equipped vessels further off-shore by directing vessels in U.S. territorial waters to another AIS channel.<sup>22</sup>

The continued use of the design established by section 80.371 would benefit MariTEL as well. The FCC rules adopted immediately prior to Auction 20 specifically ensured prospective licensees that the successful bidder would have *complete utility of all its licensed 25 kHz duplex channels without any diminution of those channels due to an obligation to the Coast Guard for AIS.*<sup>23</sup> Accordingly, the FCC’s original plan would make all nine wideband duplex channels available to support VPC services. In contrast, the *Notice’s* suggested approach would eliminate

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<sup>20</sup> Use of duplex channels with shore station infrastructure naturally expands a vessel’s view to that of a shore station’s view, which is significantly larger. The expansion of a vessel’s view of traffic is particularly important to certain large PAWSS VTS or certain other port locations. At a September 16, 2004 national maritime stakeholder web/audio conference to address the use of VPC spectrum to support ship movement services, nineteen of twenty one participants preferred a “wide area” view of AIS traffic versus “line of sight.”

<sup>21</sup> MariTEL recognizes that designation of channel 88B is outside the scope of this proceeding, but proposes one of many possible AIS system configurations that may provide greater functionality than a system comprised of only simplex channels.

<sup>22</sup> By directing “local” AIS users to an independent channel, locally heavy traffic (such as in a congested port or waterway) would not impair shore stations’ ability to receive AIS information from vessels in international waters. Tokyo Bay is using this precise configuration, which is technically superior to problematic FATDMA schemes for the same functionality.

<sup>23</sup> VPC licensees have the ability to deploy transmitters throughout their licensed area using all 25 kHz channels and must only protect incumbent coast stations granted licenses prior to the auction.

one wideband duplex channel and “harm VPC licensees’ ability to construct wide-area systems by leaving most with no more than eight broadband channels.”<sup>24</sup>

To realize the advantages of duplex AIS applications, vessels transitioning from international to domestic waters would need to be re-tuned from wideband channel 87B to a duplex channel. This is the precise mechanism contemplated by the MOA.<sup>25</sup> This configuration would create an opportunity for MariTEL, similar to its successfully completed contract with the USCG for services in the Lower Mississippi VTS area, to support the USCG in its requirement to switch vessels to the appropriate VPC channel to support AIS. Further, this configuration would preserve the inherently valuable duplex structure of VPC spectrum noted above by eliminating the issues associated with introducing simplex operations by vessels on shore station channels into a duplex VPC band.

The FCC ignores these advantages despite the fact that the originally contemplated channel configuration has become increasingly valuable based upon vessel safety, VTS communications, vessel surveillance and interference issues. The only changed circumstance to detract from this approach is the USCG’s delay in upgrading its shore station infrastructure and unwillingness to rely upon others to help do so on an interim or long-term basis. Regrettably, the USCG made a determination not to switch vessels from internationally designated AIS channels as required by the FCC and would not fully and timely investigate the interference

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<sup>24</sup> *Third Report and Order*, 13 FCC Rcd at 19875-77 ¶¶ 46-49.

<sup>25</sup> MariTEL understands that, for technical reasons, the IALA (International Association of maritime aids to navigation and Lighthouse Authorities) now recommends against specifically retuning AIS vessels from wideband channel 87B to duplex narrowband channel 487 as called for in the MOA; however, MariTEL wishes to underscore the availability of other technically available narrowband offset channels. Regardless, even if the Commission determines that wideband channels are necessary for AIS, MariTEL would be in a better position with the use of channels 87 A/B on a wideband duplex basis rather than wideband simplex use of channel 87B, as duplex operation eliminates interference and could potentially allow MariTEL to leverage its shore station infrastructure to help switch vessels upon entry into domestic waters.

issues as recommended by the NTIA. Instead, it now asks the FCC to rescue it from its own failure to responsibly address spectrum use issues.

### **C. MariTEL Has Greater Rights to Channel 87B Than the FCC Admits**

The FCC states that MariTEL has “no vested right to the continuation without change of the VPC rules that were in effect when it formulated its bids in Auction 20”<sup>26</sup> and that “the Commission retains the power to alter the terms of existing licenses by rulemaking.”<sup>27</sup> Further, the FCC states that “we are not proposing to change the terms of any of MariTEL’s licenses, but proposing only to change the terms of the AIS set-aside codified in section 80.371(c) of the Commission’s rules” and that its “legal authority to take this action is not in issue.”<sup>28</sup> The Commission is incorrect,<sup>29</sup> and it ignores the substantial effect that its reassignment of channel 87B for AIS as proposed in the *Notice* will have to MariTEL’s interests.

Despite its characterization of the proposed action as a rule making, the Commission’s action to reallocate channel 87B from maritime VPC licensees modifies the license of only one entity – MariTEL. Accordingly, the Commission can take this action only through procedures contained in section 316 of the Act. MariTEL objects to the Commission’s suggestion that it can

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<sup>26</sup> *Notice* at ¶ 34.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> The Commission cites a number of well-known cases in support of its authority to take the actions proposed in the *Notice*. *Notice* at ¶ 34 n.149 and 151 (citing *United States v. Storer Broadcasting Co.*, 351 U.S. 192, 205 (1956); *National Broadcasting Co. v. United States*, 319 U.S. 190, 225 (1943); *Committee For effective Cellular Rules v. FCC*, 53 F.3d 1309, 1319-20 (D.C. Cir. 1995); *WBEN, Inc. v. FCC*, 396 F.2d 601, 617-18 (2d Cir. 1968); *Celtronix Telemetry, Inc. v. FCC*, 272 F.3d 585, 589 (D.C. Cir. 2002)). But these cases stand only for the proposition that the Commission may promulgate rules of general applicability that affect the conditions under which individual licensees may utilize their licensed spectrum; these cases do not support the Commission’s ability, without a hearing under section 316, to substantially modify MariTEL’s license to channel 87B and permit a subsequent use that will destroy MariTEL’s ability to use its remaining licensed spectrum.

assign channel 87B for AIS use in the manner set forth in the *Notice* without conducting a public hearing on the matter as required by 47 U.S.C. § 316, and MariTEL therefore requests that the Commission designate this matter for a public hearing as required by statute.<sup>30</sup>

The discrete, substantial, and fact-intensive dispute presented in this case is similar to those in which the courts have consistently found that the Commission must designate the matter for a hearing,<sup>31</sup> and epitomizes the basis for Congress' enactment of section 316 as amended.<sup>32</sup>

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<sup>30</sup> In fact, the Commission proposes to conduct procedures under section 316 of the Act with respect to incumbent VPC licensees. *See Notice* at ¶ 65. There is no reason that MariTEL should be treated any differently than those incumbent licensees. Prior to Auction 20, MariTEL acquired many incumbent VPC licensees who were authorized to operate on channel 87. Because MariTEL was the high bidder for VPC licenses 1-9 in Auction 20, to increase its operational flexibility and to reduce the number of authorizations it held, MariTEL cancelled its incumbent licenses or permitted them to expire. Accordingly, MariTEL will now be in a worse procedural position than incumbent VPC licensees despite the fact that it behaved exactly as the FCC's policies encouraged. This result is facially inequitable. The fact that the FCC characterizes the proposed change vis-à-vis MariTEL as merely a change in the rules is unavailing. The Commission's action would affect only one licensee – MariTEL. As noted below, under similar circumstances, courts have soundly rejected the Commission's attempt to masquerade a modification of a license as a rule making proceeding.

<sup>31</sup> *See, e.g., FCC v. National Broadcasting Co., Inc. (KOA)*, 319 U.S. 239, 245-246 (1943) (holding that, under precursor to section 316, FCC action that would “deprive KOA of what had been assigned to it, and to grant an application which would create interference on the channel given it, was in fact and in substance to modify KOA's license” and therefore required a hearing); *AMSC Subsidiary Corp. v. FCC*, 216 F.3d 1154, 1158-59 (D.C. Cir. 2000) (discussing necessity of a hearing under section 316 when Commission modifies a license); *P.R. Temmer v. FCC*, 743 F.2d 918, 927 (D.C. Cir. 1984) (“a broadcaster's unconditional license to broadcast on a given frequency is ‘modified’ if the FCC grants a license to another broadcaster on that frequency”); *Western Broadcasting Co. v. FCC*, 674 F.2d 44, 46-56 (D.C. Cir. 1982) (discussing in detail the definition of “modification” and the circumstances under which a hearing must be had under section 316); *L.B. Wilson v. FCC*, 170 F.2d 793, 803 (D.C. Cir. 1948) (precursor to section 316 “must be held to contemplate hearings before the Commission on the issue [of] modification *vel non* of an outstanding license by the granting of facilities to another station.”).

<sup>32</sup> *See* H.R. Rep. 98-356, at 16 (1983), *reprinted in* 1983 U.S.C.C.A.N. 2219, 2231-32 (“[t]he Committee intention is to make clear that parties requesting hearings under section 316 must allege ‘specific allegation’ raising a ‘substantial and material question of fact’ as to the Commission's proposed modification in order to be entitled to a hearing.”). If MariTEL's unequivocal proffer, backed up by engineering data and substantial record evidence, that the Commission's proposed action will both take from MariTEL a license for which it paid a significant amount at auction and further destroy MariTEL's interest in using its remaining

The situation is factually identical to that presented in *Western Broadcasting*, in which the D.C. Circuit held that section 316 obligated the Commission to hold a public hearing where a broadcast licensee opposed the grant of another licensee's request to relocate its broadcast tower on the basis that such relocation would cause devastating interference.<sup>33</sup> In that case, the Commission made the same argument in favor of informal action via rulemaking that it has made in the *Notice* in this case:<sup>34</sup> that there was no issue of material fact as to whether the proposed action would constitute a "modification" because, despite conflicting expert engineering data, the Commission did not feel that the problem of interference would be as detrimental as asserted.<sup>35</sup> It was on exactly this point that the D.C Circuit in *Western Broadcasting* rebuked the Commission for failing to employ the public hearing methodology anticipated by section 316:

on the facts of this case, we do not understand how the Commission could conclude that there were no substantial questions of fact to be resolved. In support of its petition, appellant submitted engineering statements prepared by the firm of Hatfield and Dawson. Intervenor then offered engineering reports prepared by Jules Cohen & Associates to dispute appellant's claim of additional interference attributable to the proposed new antenna site...The Commission obviously understood that "KOCM [was claiming] that a new method of predicting potential interference must be utilized in this case;" the Commission nevertheless concluded that no hearing was required because appellant had failed "to adequately document this different method." It is difficult to comprehend the Commission's reasoning. One of the purposes of the hearing requirement under

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licensed spectrum, then section 316 cannot be said to have any meaning or effect whatsoever despite Congress' above-referenced directive to the contrary.

<sup>33</sup> 674 F.2d at 50-53.

<sup>34</sup> Much as it did in *Western Broadcasting*, the Commission in this case claims to have considered MariTEL's engineering data and that submitted by the NTIA, and, without explanation, adopted the NTIA's analysis to support its finding that MariTEL would not be harmed by the reallocation of channel 87B (or that MariTEL could allay these problems by implementing additional technical measures). *Notice* at ¶¶ 42-48. The Commission does not offer any real explanation of the disparity between MariTEL's data and the NTIA's other than that "[t]he reports use different test methodologies." *Id.* at 42. The fact that the *Notice* seeks public comment on the Commission's findings in this regard is no cure, as mere public comment will not afford MariTEL the due process protections to which it is entitled under section 316.

<sup>35</sup> *Id.* at ¶ 46.

section 316 would be to permit a party to explain and verify engineering calculations with respect to claims of alleged modifications. It is no answer for the Commission, in the face of highly disputed factual questions, to summarily dismiss a claim that otherwise raises a legally cognizable issue under section 316 merely because the Commission remains "puzzled" by the claim.<sup>36</sup>

The issue of assigning channel 87B for AIS as proposed by the Commission presents the same possibility of harmful interference as that presented in *Western Broadcasting*, the parties have submitted similarly conflicting expert engineering data relating to interference as did the parties in *Western Broadcasting*, and the Commission should therefore designate the matter for a hearing as the D.C. Circuit required it to do in that case. "If anything, this case highlights rather well the reasons why a hearing should have been held: the contesting parties have relied on factual assertions that are flatly contradictory; there are difficult and confusing technical issues to be resolved; [and] there is a serious dispute over the proper methodology to be used in measuring interference."<sup>37</sup> Because the question of assigning channel 87B for AIS involves only two parties and a discrete set of highly technical and hotly contested facts, this situation would be best handled in an adjudication under section 316.<sup>38</sup>

Further, the Commission has not taken steps in this proceeding, as it has in others, to protect MariTEL at the outset from the effects of what will otherwise constitute a modification of its license. For example, in *AMSC Subsidiary Corp.*, the D.C. Circuit found that the Commission had not *de facto* modified appellant's license by authorizing subsequent uses because the Commission's grant to those subsequent licensees was "expressly conditioned on their operating

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<sup>36</sup> 674 F.2d at 51-52 (citations omitted).

<sup>37</sup> *Id.* at 52.

<sup>38</sup> See *WBEN v. United States*, 396 F.2d 601, 618 (2d Cir. 1968) ("[a]djudicatory hearings serve an important function when the agency bases its decision on the peculiar situation of individual parties who know more about this than anyone else.").

‘on a non-interference basis’” with the original licensee.<sup>39</sup> However, in the *Notice*, the Commission has not suggested conditioning the reallocation of channel 87B on NTIA’s or the Coast Guard’s non-interference with MariTEL’s remaining VPC spectrum licenses. Any argument that this case does not present a modification subject to adjudication under section 316 is therefore unavailing.

The Commission’s argument that its proposal constitutes only a modification to its rules and not to MariTEL’s license is similarly flawed. The Commission’s rules contain a mechanism for MariTEL’s designation of two narrowband offset channels for use by the USCG. A modification of that mechanism may be acceptable; however, the FCC has instead proposed to summarily eliminate MariTEL’s rights to its licensed spectrum. The difference between a change in the rules and the Commission’s proposal is meaningful, and requires that the FCC undertake the procedures contained in section 316 of the Act to proceed.<sup>40</sup>

Even if the FCC held the authority to change its regulations in the manner it suggests in the *Notice* (instead of modifying MariTEL’s license, which is actually what the FCC proposes), doing so in this instance would be contrary to the public interest. The FCC initiated this proceeding only because the USCG failed to observe the processes contained in section 80.371 of the FCC’s rules. Those processes specifically contemplate that use of spectrum for AIS would be negotiated between the USCG and the VPC licensee. In this instance, MariTEL and the USCG negotiated such an agreement, and MariTEL has remained willing to re-negotiate the

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<sup>39</sup> 216 F.3d at 1159.

<sup>40</sup> See *Committee For Effective Cellular Rules v. FCC*, 53 F.3d 1309, 1318 (D.C. Cir. 1995) (“the FCC cannot, merely by invoking its rulemaking authority, avoid the adjudicatory procedures required for granting and modifying *individual* licenses.”) (emphasis in original). As discussed in note 29, *supra*, the Commission’s citation in the *Notice* to cases upholding its authority to make rules of general applicability does not support its ability to single out and take assigned frequencies away from MariTEL and give them to another party without following established procedures under section 316.

agreement. As the FCC has stated repeatedly, it will not insert itself in parties' commercial affairs, even when those affairs affect the use of FCC licensed spectrum.<sup>41</sup> The FCC has taken a different approach here, without justification. Contrary to its precedent, it should not adopt a regulatory solution to what is, in effect, a commercial dispute. MariTEL's auction behavior, contrary to the FCC's assertion, was based on the assumption that it would be required to share with the USCG two narrowband offset channel pairs, and that these channels would be selected based on good faith negotiations, not the regulatory solution that the FCC now proposes.<sup>42</sup>

Even if the FCC has the authority (which MariTEL believes it does not) to unilaterally modify licenses secured through the auction process, it should not as a matter of public policy do so here. Over the past several years, the domestic telecommunications industry has been beset by a series of financial difficulties.<sup>43</sup> A decision that establishes the precedent that the Commission may delete spectrum from a licensee's authorization without a hearing or compensation will destroy any faith that the financial markets may have in the

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<sup>41</sup> See, e.g., *Applications of Vodafone AirTouch, Plc and Bell Atlantic Corporation et al. For Consent to Transfer of Control or Assignment of Licenses and Authorizations, Order On Further Reconsideration*, 17 FCC Rcd 10998, 11000 ¶ 6 (2000) (discussing Commission's unwillingness to address private contractual disputes); *Pueblo MSA Limited Partnership, et al.*, 15 FCC Rcd 5439, 5441 ¶ 4 (2000) ("to the extent that Petitioners had private contractual disputes with CommNet...Petitioners were not foreclosed by the staff's decision from seeking appropriate remedies through civil litigation. We find Petitioners' continued attempt to pursue these disputes through the Commission's assignment and transfer review process to be without foundation or merit.").

<sup>42</sup> The rules provide a mechanism for proceeding if the USCG and the VPC licensee are unable to agree on the channels to be designated for use by the USCG. Under those circumstances, the FCC is required to select the two narrowband offset channels. MariTEL proposed that the FCC adopt this approach in the current case and the FCC has refused to do so. Accordingly, the proposed rules depart dramatically from any reasonable expectation that MariTEL may have had regarding its obligation to make spectrum available to the USCG.

<sup>43</sup> See, e.g., Kevin Fitchard, Ed Gubbins, Dan O'Shea, and Vince Vattore, "Industry Queasy About '04 Rebound," *Telephony*, August 16, 2004, at 15 (discussing "three year slump" in telecommunications industry); "Telecom Industry Begins Rebound," *Fiber Optics Weekly*, April 16, 2004.

telecommunications industry. Investors cannot reasonably be expected to provide capital to companies whose assets may be taken without compensation. If, as the FCC asserts, it can take spectrum from MariTEL in this case, it can take spectrum from any other auction winner who is providing service. Such a result is simply untenable and should be rejected as a matter of public policy.

**D. The FCC Should Not Eliminate US223**

The Commission proposes to eliminate note US 223 to the Table of Frequency Allocations. Note US223 permits the use of channel 88 for public correspondence in areas north of Line A. In its Memorandum Opinion and Order in this proceeding, the FCC specifies procedures under which MariTEL could continue to employ channel 88 and observed that “we do not anticipate that NTIA would withhold consent to such proposed MariTEL operations [on channel 88B] unreasonably.”<sup>44</sup> In light of its decision in the Memorandum Opinion and Order, the FCC’s proposal is, at best, curious. In order to preserve the rights that the the Commission recognizes that MariTEL continues to have, Note US223 should be retained. MariTEL agrees that it should be modified to reflect the fact that MariTEL has the right to use channel 88B so long as it coordinates its use of the channel with NTIA and so long as no harmful interference is caused to AIS operations.

**E. Interference Matters**

As the FCC accurately observes, its proposal goes well beyond simply providing the USCG with spectrum as contemplated by the Commission’s licensing scheme. Instead, the FCC would permit the use of AIS technology on a simplex basis by vessels on the base station “side” of what is otherwise a duplex channel pair. The introduction of AIS technology in this

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<sup>44</sup> *Notice* at n.131.

configuration will severely damage MariTEL's ability to use its spectrum. The FCC's attempt to demonstrate the purportedly insignificant impact on MariTEL is replete with misconception and error. Adoption of the FCC's approach, even if technically feasible, would result in MariTEL being able to use less than the full capacity of the spectrum it obtained at auction.

**1. The Use of FEC Codes and Interleaving is Not Currently Required to Utilize Maritime Spectrum**

In support of its assertion that MariTEL should have expected to adopt the use of advanced technologies designed to overcome various interferers in the marine communications environment, the Commission cites the NTIA's characterization of alleged findings of the Radio Technical Commission for Maritime Services ("RTCM").<sup>45</sup> The FCC's characterization of the RTCM findings is incorrect for several reasons. First, RTCM's "voluntary VHF receiver recommendations" are based on a limited survey of two maritime RF environments located on major waterways based on specific complaints from mariners in those areas. (The survey excludes results from the open sea or from port areas.) The survey observes strong land-based interferers along these particular waterways with enough power to desensitize VHF receivers.<sup>46</sup> Contrary to the FCC's suggestion, RTCM's solution to overcome this "harsh RF environment"

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<sup>45</sup> Notice at ¶ 45.

<sup>46</sup> In comments to the overall survey findings, RTCM SC117 states that "[t]he survey indicated the likely sources of interference to maritime VHF receivers were a mixture of signals from various high-powered transmitters located in close proximity to the navigable waterways. Of signals measured, more than 1/3 produced large power levels ranging from -40dBm up to -10dBm at the test receiver's input. Generally, signals greater than -40dBm are capable of generating in-band nonlinear reactions, such as desensitization or intermodulation in a susceptible receiver's input. The recommended long-term solution relies on making VHF radiotelephones available in the marketplace featuring robust receiver designs. A receiver design standard for marine VHF equipment would be needed that emphasizes reducing the receiver susceptibility to intermodulation interference." RTCM SC117 page 1 paragraph 4 & 5.

does not contemplate implementation of FEC codes or block interleaving.<sup>47</sup> Instead, RTCM recommends increasing receiver rejection<sup>48</sup> to compensate for out-of-band interference in these limited environments.<sup>49</sup> It is misleading and inaccurate to reference an industry study defining the scope and definition of locally concentrated “harsh maritime RF conditions” and infer a technical solution different than the study conclusions recommends.<sup>50</sup> MariTEL agrees with the RTCM conclusion that simple RF filtering is the best technique to mitigate “out-of-band” interference sources (such as paging, NOAA weather and land mobile transmissions), and has found this approach to be very effective in practice.<sup>51</sup> MariTEL strongly rejects the NTIA’s assertion, which is not supported by RTCM’s recommendation, that FEC Codes and block interleaving are required to operate in the current maritime RF environment.

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<sup>47</sup> If the RF environment is as harsh as suggested by the NTIA, the RTCM standard should have adopted technology similar to that used in APCO’s Project 25 standard for maritime voice applications. The RTCM did not adopt that or similar technology.

<sup>48</sup> Increasing receiver rejection is simply a filtering technique whereby the impact of out-of-band interference is reduced to the receiver via increased filtering. External filtering components, such as bandpass or lowpass filters, can have the same technical impact as that recommended by RTCM.

<sup>49</sup> The fact that the RTCM standard is voluntary is proof that the recommendation is applicable only in a very small percentage of locations, potentially only on inland waterways, and that the associated technology is not required in the majority of maritime areas. One particular radio that performed comparatively well in the survey simply employed a “local / distant switch” to engage a filter when in locally isolated harsh RF locations and to disengage the filter during normal operation.

<sup>50</sup> RTCM SC117 claims that equipment designed to this voluntary standard will “operate normally” in over 95% of such harsh RF environment area. Considering that the conditions for the survey’s “harsh RF environments” occurs only in locally isolated inland waterways in close proximity to paging, NOAA weather and land mobile transmitters, MariTEL concludes that the SC117 recommendation is not applicable to high seas communications. MariTEL’s operational experience supports this conclusion.

<sup>51</sup> Filtering techniques are highly effective when the out-of-band interferer is sufficiently removed (minimally more than 200 kHz) from the VPC receiver, as is the case with paging, NOAA weather, and land-mobile transmissions. Filtering techniques, however, are not effective when the interferer is too close to the receiver channel (generally less than 200kHz) due to the tendency of filters to impact several hundred kHz of spectrum on either side of the filter target.

In support of its conclusion that MariTEL should employ FEC codes and block interleaving to eliminate the harmful effects of AIS technologies, the Commission asserts that these techniques are used by public safety entities in the land mobile services.<sup>52</sup> However, maritime communications for safety and navigation purposes, such as channel 16 voice, DSC and AIS, are effective without adopting public safety-like technologies.<sup>53</sup> These systems have been adopted by international standard-setting bodies with extensive USCG / NTIA involvement to operate optimally on maritime frequencies with the highest level of reliability around the world. These standards, in many cases, have specifically rejected the use of FEC codes and block interleaving for the maritime RF environment<sup>54</sup> and instead selected more technically appropriate solutions. Because maritime safety and navigation system technology have largely rejected FEC and block interleaving as unnecessary for maritime communications services, the FCC cannot now argue that commercial service providers<sup>55</sup> should reasonably be required to deploy such techniques.

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<sup>52</sup> Notice at ¶ 47.

<sup>53</sup> Contrary to the NTIA's assertion, in the absence of simplex AIS, neither Digital Selective Calling (“DSC”) digital distress messages, channel 16 voice communications, nor AIS use the public safety-equivalent FEC and block interleaving technologies that are now being suggested for commercial operators. First, the term “forward error correction” used in DSC distress calling is a “repeat of data” indicator (ITU-R M.825-3 page 13 section 2) and is necessary to “avoid call collision and the loss of acknowledgements” (ITU-R M.541-8 section 3.1.3.1) on the “uncoordinated” DSC RF channel itself. The NTIA’s assertion that DSC “forward error correction” is used to overcome a “congested signal environment” is false. Moreover, despite the fact that APCO25 land-mobile radio technology has been available for years, channel 16 continues to operate effectively on decades-old FM technology. Finally, the inclusion of FEC codes in AIS technology was considered but rejected (ITU-R M.1371-1 section 2.8).

<sup>54</sup> As stated above, the inclusion of FEC codes in AIS technology was considered but rejected (ITU-R M.1371-1 section 2.8).

<sup>55</sup> It is well understood that commercial systems can be much less reliable than safety or navigation systems. It is therefore difficult to understand why commercial operators should reasonably be expected to adopt technologies that public safety systems have rejected as not necessary when operating in the same general radiofrequency conditions (absent simplex AIS).

The foregoing notwithstanding, the Commission’s tentative decision that MariTEL should “adopt state-of-the-art wireless data technologies”<sup>56</sup> to operate in the maritime environment is unprecedented and, in any case, overly punitive. As discussed above, current users of the maritime spectrum find no need to adopt state-of-the-art technologies to fully use the maritime spectrum.<sup>57</sup> If, however, the Commission now finds it reasonable to impose, post - auction, additional burdens on the licensee,<sup>58</sup> these additional burdens should not be of the magnitude to “limit the licensed VPC spectrum available for MariTEL's proposed data offerings to any greater degree than would the designation of two narrowband offset channels,”<sup>59</sup> “unfairly undermine MariTEL’s reasonable investment-backed expectations”<sup>60</sup> or “undermine the integrity of the auction process.”<sup>61</sup> However, the Commission’s plan to impose added regulatory burdens through the requirement to implement state-of-the-art technologies as the only means of overcoming AIS interference does all of these things.

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<sup>56</sup> *Notice* at ¶ 47.

<sup>57</sup> APCO25 and similar systems capable of operating in very harsh RF environments have been available for years; however, there has been no movement in the maritime industry to adopt these technologies on even a limited scale. The maritime industry, with the exception of recommending increased filtering in some locally isolated inland waterways, has used principally the same technologies for more than a decade. It is abundantly clear that the maritime community sees no value in the increased cost and performance of “state-of-the-art” technologies.

<sup>58</sup> The Commission suggests that, in order to resolve the interference problems that reallocation of channel 87B will produce, MariTEL should adopt “state of the art technology in order to operate at the minimum throughput levels it believes are essential for commercial success” by employing FEC codes and block interleaving technology. *Notice* at ¶ 47. But each of these “fixes” imposes additive costs, they are not easy to accomplish, and are not now and may not become practically available to MariTEL at all.

<sup>59</sup> *Notice* at ¶ 49.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

The Commission is insensitive to the added cost of these new regulations to the maritime community, and dramatically underestimates the financial impact to the maritime operator, the maritime user, and ultimately to the success or failure of these services in the marketplace. The Commission seemingly concludes that these added regulations will not have a significant impact on MariTEL's planned service offerings or affect the success of MariTEL's services in the marketplace.

Contrary to the FCC's assumptions, MariTEL estimates the cost of deploying a data system capable of satisfactorily operating on roughly 50% of MariTEL's licensed channels<sup>62</sup> would be up to ten times the cost of a comparable system in the absence of simplex AIS.<sup>63</sup> This increased cost significantly increases the cost of MariTEL's services, thereby directly reducing the adoption of these services and the likelihood of commercially successful products.

The Commission furthermore underestimates the cost of overcoming AIS interference to MariTEL's operations. The NTIA refers to FEC codes and block interleaving techniques in a general "one-size-fits-all" manner, which is misleading. These techniques are best understood as one of several system variables which can be customized based on the specific RF environment.<sup>64</sup> In effect, the poorer the radiofrequency environment, the more coding and interleaving is required.<sup>65</sup>

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<sup>62</sup> When located on a vessel equipped with and AIS transmitter.

<sup>63</sup> MariTEL can only consider the deployment of currently available technologies to meet its May 2006 service obligation. New technologies could be developed specifically to overcome AIS interference, but these technologies require time and money to develop and are not expected to be available to reasonably meet MariTEL's regulatory build-out obligation.

<sup>64</sup> When FEC codes are employed, each packet is transmitted with an essential "spare parts" package designed to replace parts that may become damaged in transit. FEC codes therefore directly reduce the throughput of a system because "spare parts" compete directly with "good data" to be included in the packet. If part of the message is lost during transit, the RF receiving modem looks to the "spare parts" to reconstruct the packet before requesting a retransmission of

Introduction of simplex AIS technology in the VPC receiver band creates an environment so harsh that coding and interleaving techniques would eliminate the potential use of many of MariTEL's planned data services. As MariTEL demonstrates above, there is no identified need for FEC codes and interleaving techniques in the normal maritime RF environment.<sup>66</sup> The JSC Report, however, concludes that, through coding and interleaving, the negative effects of AIS technology could be alleviated. However, although not recognized by the Commission, the JSC Report identifies only a *theoretical* error coding scheme that could potentially eliminate AIS interference. The JSC's identified solution also results in channel throughput loss of greater than 50%<sup>67</sup> and exceeds, by far, the coding and interleaving requirements of public safety wireless data systems. Even after identifying the need for a significantly disruptive FEC code and interleave scheme, the JSC report cannot guarantee its conclusions without "further studies."<sup>68</sup> Regardless of the preliminary nature of the JSC Report's findings, the Commission should not even consider adopting a scheme that would mandate a 50% loss of channel throughput to overcome simplex AIS interference. Such a result would be overly punitive and would

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the packet. FEC implementations are best understood as a tradeoff between sending "spare parts" or retransmitting corrupted packets, both of which directly reduce throughput.

<sup>65</sup> Higher levels of coding and interleaving directly reduces throughput.

<sup>66</sup> The *Notice* suggests, based upon an NTIA cover letter, that "[g]iven the congested radio environment in the VHF band, MariTEL would likely need to employ these mitigation techniques even if no AIS operations were present." *Notice* at ¶ 46. But the reality is that no such mitigation technique is currently being used to remedy common interference. Quite simply, there is no need today for the use of FEC codes or interleaving in the maritime spectrum.

<sup>67</sup> JSC report Page 2-8 concludes that a Reed-Soloman (31, 19) RS FEC code, interleave depth of 16 will eliminate AIS interference with minimal antenna separation. The suggested FEC code alone reduces channel throughput by roughly 40% with block interleaving minimally adding 10% additional reduction in throughput based on transmission size.

<sup>68</sup> JSC report Page 3-2. Recommendations include building devices to the recommended design and testing them in a real world environment to see how they will perform.

significantly limit the type of services MariTEL can offer the maritime community<sup>69</sup> and the number of subscribers MariTEL can reasonable expect to support on its deployed network. This regulatory action is of a sufficient magnitude to dramatically limit the usefulness of licensed VPC spectrum available for MariTEL's proposed data offerings, and thereby unfairly undermines MariTEL's reasonable investment-backed expectations.

Finally, the Commission trivializes the impact of introducing coding and interleaving on MariTEL's plan to implement a data offering. In addition to the commercial and technical challenges described above, MariTEL has yet to find a commercially available product that successfully prevents simplex AIS interference.<sup>70</sup> On the other hand, there are several commercial equipment options available if the commission enforces duplex AIS transmissions. The absence of commercially available equipment will impede MariTEL's ability to meet a May, 2006 build-out obligation. The Commission, in effect, proposes to allow a new source of interference into MariTEL's receive band which, when implemented, eliminates MariTEL's use of commercially available equipment to overcome the new interference on many of its licensed channels.

## **2. AIS Interference Impacts Data Systems to a Higher Degree Than Voice Systems**

The Commission requests comments on what it believes are the differing conclusions of the JSC and inCode reports. Contrary to the FCC's assertions, MariTEL believes the two reports

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<sup>69</sup> Higher throughput applications have much higher profit margins than low throughput applications which can be provided by many other providers in a competitive environment.

<sup>70</sup> Despite JSC's claims that FEC coding and block interleaving can eliminate AIS interference, and despite MariTEL's RFI (Request For Information) to the Public Safety Industry, we have yet to find a manufacturer whose commercially available product will overcome AIS interference. Public safety vendors have stated that the JSC study did not consider the critical variable of receiver desensitization in its model, and that the study otherwise calls for FEC and block interleaving techniques more expansive than those typically implemented in Public Safety systems.

show significant similarities. Specifically, the Commission does not acknowledge the correlation between the JSC Report's theoretical bit-error-rate (BER) calculations and the inCode Report's findings of a 50% reduction in throughput for a comparable environment. For a data system, the use of an averaged BER is deceiving because AIS interference causes either 100% BER when transmitting or 0% BER when not transmitting. The resultant impact on data equipment is the loss of information when AIS is transmitting and conversely no loss of data when AIS is not transmitting. For these reasons, an averaged BER is not a good indicator of the impact of AIS interference to data systems. Instead, the JSC Report should have calculated the Packet-Error-Rate (PER)<sup>71</sup> to support the Commission's desire to more easily compare theoretical modeling results to real-world tests.

Furthermore, the FCC does not recognize the fundamental differences between voice and data systems in conducting its analysis of the JRC and inCode reports. Voice systems are real-time systems which can operate "normally" even in the presence of lost information caused by significant BER. Wireless data systems, conversely, employ stringent rules to insure that all transmitted information is correctly received and that corrupted information is identified and re-transmitted correctly.<sup>72</sup> The inCode report correctly shows the impact to a commercially available wireless data system operating in close proximity to a simplex AIS system. The

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<sup>71</sup> Packet Error Rate (PER) represents the number of packets expected to be lost, therefore needing to be re-transmitted, in a particular RF environment. PER should be strictly minimized because of the enormous impact packet loss has to a system.

<sup>72</sup> The time required to recover from a corrupted packet can exceed 100X the time to transmit a good packet, depending on the specific data re-transmission scheme employed. Because of the impact to system performance – including capacity, throughput and latency – minimizing the number of packet retransmissions on a system is one of the most critical components of system design.

approximately 50% reduction in system throughput is a direct result of packet loss and retransmission caused by AIS interference.<sup>73</sup>

The JSC Report does not discuss or predict the impact on a data system of AIS interference. Instead, it simply proposes methods by which a data system could possibly overcome AIS interference. MariTEL therefore believes, for the reasons discussed above, that the BER calculations of the JSC report and the findings of the inCode report are complementary when considering the unique aspects of AIS interference to a wireless data system.

### **3. The Use of Simplex Operations in a Duplex Channelization Scheme is Particularly Destructive**

Because of the high degree of potential harm that the introduction of AIS technology in a wideband simplex configuration could inflict on MariTEL, the Commission requests comments on the potential impact on MariTEL's business of adopting these proposals.<sup>74</sup> MariTEL believes the JSC and inCode reports show similar results with regard to the destructive impact of simplex AIS. The JSC Report uses theoretical modeling to predict the impact of simplex AIS transmissions on adjacent and adjoining channel receivers, then calculates the antenna separation required to eliminate interference for each configuration.<sup>75</sup> The inCode study reports the results of simplex AIS interference to commercially available data equipment,<sup>76</sup> then (similar to the JSC Report) calculates the antenna separation needed to eliminate interference from the AIS transmitter. While individual calculations differ, the combined results show a consistent interference pattern with exponentially higher interference to channels closest to simplex AIS

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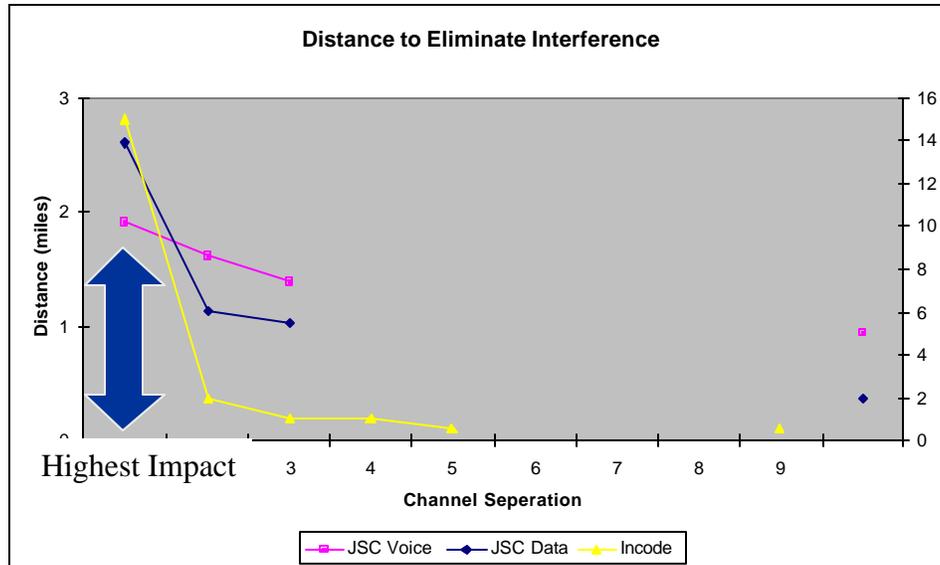
<sup>73</sup> The periodic nature of AIS transmissions is highly disruptive to a data system where AIS interference is causing packet loss. In such a scenario, the data system spends as much time recovering from corrupted packets as it does sending un-corrupted packets.

<sup>74</sup> *Notice at ¶ 49.*

<sup>75</sup> JSC-PR-04-007 pages 2-3,4 & 5.

<sup>76</sup> NL6000 and type accepted AIS unit.

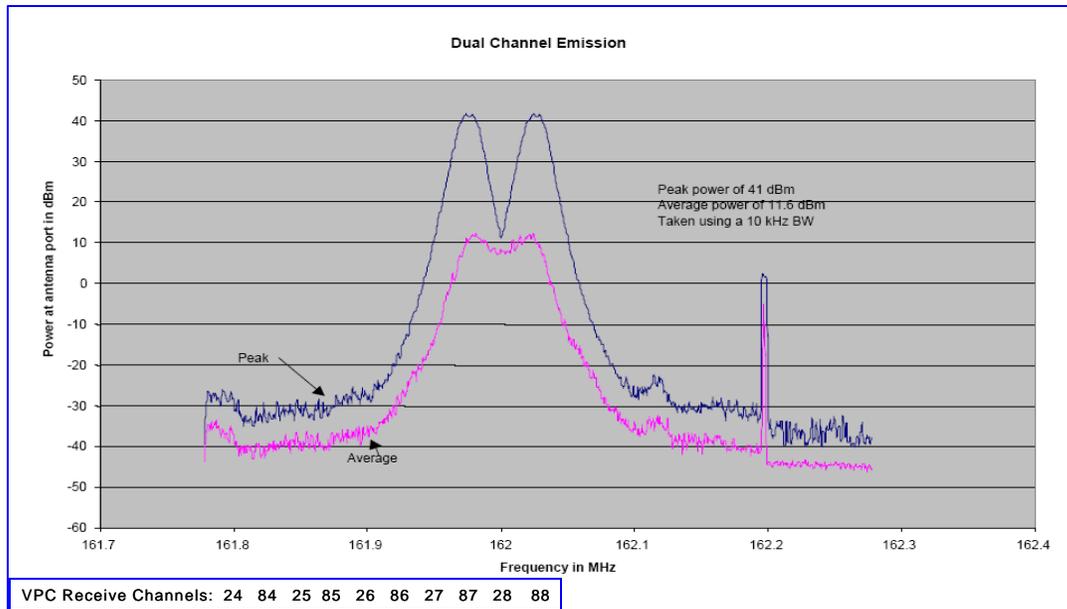
transmissions and increasingly diminished interference further away in spectrum, as shown in the following chart:<sup>77</sup>



Based on this interference profile, it is clear that channels closest to a simplex AIS transmitter naturally receive higher levels of interference than channels farther away. Therefore, receivers operating multiple channels away will perform much better than receivers operating on channels adjacent and adjoining, in this case, an AIS transmitter. This observation is true of any transmitter / receiver combination and underscores the superior nature of VPC duplex channel pairs as opposed to simplex use of the same spectrum. Based on these observations, it is impossible to conclude that simplex AIS causes no more interference to receivers in the VPC band than a duplex AIS implementation. To the contrary, the record shows that simplex AIS impacts adjacent and adjoining channels with exponentially higher interference compared with duplex implementation on the same channel.

<sup>77</sup> In the chart, JSC data is plotted in reference to the left and inCode data is plotted in reference to the right Y-axis.

The impact of simplex operations can also be understood by examining the transmitter mask characteristics of approved AIS equipment.<sup>78</sup>



Compared to the current maritime duplex operating environment, operations on channels adjacent and adjoining AIS transmissions will consistently experience abnormally high levels of interference<sup>79</sup> causing reduced receiver range, desensitization or intermodulation in the receiver, or in some cases permanent damage to equipment operating in MariTEL’s receive band.<sup>80</sup> While

<sup>78</sup> Figure B-6, “Dual Channel Emission,” from JSC-PR-04-007.

<sup>79</sup> RTCM SC117 and the AIS specification (IEC 61993-2) both test receivers to -107 dBm receiver sensitivity based on expected channel characteristics in the VPC receive band. Specifically, absent enforced vessel installation guidelines to restore the current expectation of -107 dBm channel receiver sensitivity, VPC receivers could, under certain instances, regularly experience interference levels above -15 dBm, however, under any circumstance will experience interference levels well in excess of the expected -107 dBm current environment, thereby impacting receiver performance.

<sup>80</sup> Receivers are designed to operate “normally” in a particular RF environment reflected by their design sensitivities. RTCM SC 117 provides a receiver standard capable of useful reception in over 95% of “harsh maritime environments.” RTCM’s study found that power over -40dBm is capable of generating in-band nonlinear reactions, such as desensitization or intermodulation in a susceptible receiver’s input. Comparably, at 10 feet separation between AIS transmitter and VPC receiver, AIS transmission violates the SC117 receiver standard by over 40 dBm or power in

some channels are clearly more affected than others, all of MariTEL's receive channels experience destructive levels of RF interference, as opposed to current levels of RF in the absence of simplex AIS, and interference levels significantly above any contemplated by existing maritime receiver standards.<sup>81</sup> Further, as demonstrated above, despite the low duty cycle of AIS transmissions, the impact to wireless data systems is devastating.

Finally, the Commission concludes that MariTEL should be expected to adopt "state-of-the-art" technology to operate "in a spectrum environment posing a significant interference challenge even in the absence of AIS."<sup>82</sup> MariTEL contends that the need for state-of-the-art technology in the maritime band, absent simplex AIS, is baseless and without justification. As noted above, this technology is not even employed by public safety users in the maritime band. The Commission's proposal to increase the cost of MariTEL's operations by requiring the adoption of non-existent, state-of-the-art technologies is therefore unjustified.

#### **4. The FCC Cannot Impose Technical Solutions that Do Not Yet Exist**

Even if the technical solutions proposed by the FCC were possible (MariTEL claims that they are not), as MariTEL points out above, there is no evidence that these solutions are available today or will be available any time in the near future. The FCC's reauthorization of channel 87B for AIS as proposed would therefore amount to a *de facto* revocation of MariTEL's VPC licenses as the reauthorization would cause devastating interference for which no practical solution exists.

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excess of +15 dBm. At these power levels, it is likely that some VPC equipment will be permanently damaged.

<sup>81</sup> See IEC 1097-7 Shipborne VHF Radiotelephone Transmitter and Receiver – Operational and Performance Requirements, Methods of Testing and Required Test Results, and RTCM SC 117.

<sup>82</sup> Notice at ¶ 47.

As discussed above, MariTEL has been unable to find a commercially available product that successfully prevents simplex AIS interference. This reality contrasts sharply with the Commission’s casual dismissal of MariTEL’s well-documented (and, on this record, irrefuted) interference concerns. In a frequency coordination proceeding such as this one, it would be arbitrary and capricious for the Commission to go forward with its proposal lacking evidence that there were producers “willing and able” to produce substantially-conforming equipment to combat interference.<sup>83</sup> The Commission’s wholesale reliance upon NTIA’s unsupported – and untrue – implication that there are existing, ready-to-use solutions to MariTEL’s stated interference problems is hardly “a reasonable conclusion having ample support in the record,” and therefore in this case the FCC may not proceed with an approach that requires the use of technology that is neither developed nor proven.<sup>84</sup>

**5. The “Right of Innocent Passage” Does Not Support the FCC’s Argument that Interference Would be Caused to MariTEL in Any Case**

In support of its contention that MariTEL should be required to accept interference from AIS transmitters on international vessels, the FCC asserts that those vessels would cause harmful interference to MariTEL in any case, reducing the purported impact on MariTEL from a domestic allocation of channel 87B for AIS. This assertion is incorrect. First, the FCC overstates the right of innocent passage vis-à-vis an administration’s ability to protect against

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<sup>83</sup> See *Telocator Network of America v. FCC*, 691 F. 2d 525, 541 (D.C. Cir. 1982) (“[w]e do not condone the Commission’s cavalier handling of this point; lacking, perhaps, the ‘courage of its convictions,’ the Commission not only opened itself to accusations of capriciousness but also made itself look somewhat absurd.”).

<sup>84</sup> *Id.* In *Telocator*, the D.C. Circuit rebuffed a challenge to the FCC’s implementation of new spectrum-sharing rules for land mobile radio. The court’s decision rested in large part upon the FCC’s ability to document that the “technical cornerstone” of its sharing plan – *i.e.*, the means by which interference could be avoided – “could be accomplished through currently available technology” and “was feasible in light of the availability of the requisite equipment.” *Id.* at 540. The Commission has made no such showing in this case.

harmful interference resulting from the use of spectrum in a manner that is incompatible with domestic allocations. The right of innocent passage may permit the passage of ships through United States territorial waters, but, as the FCC itself recognizes, that right is not superior to the United States' ability to enforce its domestic telecommunications policies. To the contrary, the Constitution of the International Telecommunications Union ("ITU") specifically allows administrations to enforce domestic telecommunications regulations that are not inconsistent with international regulations.<sup>85</sup> In this case, international regulations specifically envision the potential for use of channels other than channel 87B for AIS.<sup>86</sup> Therefore, FCC action prohibiting use of channel 87B by international vessels would be completely consistent with international regulations and would not violate the right of innocent passage.<sup>87</sup>

Regardless, MariTEL would overwhelmingly prefer limited, relatively low power interference<sup>88</sup> from vessels exercising the right of innocent passage or vessels operating on channel 87B prior to being switched to duplex operation over consistent, high power

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<sup>85</sup> The preamble to the ITU Constitution specifically recognizes "the sovereign right of each State to regulate its telecommunication." ITU Constitution Preamble. This includes the right to adopt restrictions on foreign telecommunications operators so long as such restrictions are not more severe than the ITU's regulations.

<sup>86</sup> See *Third Report and Order*, 13 FCC Rcd at 19876 ¶ 47 and n.153 ("WRC-97 set aside Channels 87B (161.975 MHz) and 88B (162.025 MHz) for AIS, but provided that, where those frequencies are unavailable, other frequencies may be used. Channel 87 (including Channel 87B) is currently allocated to VHF public correspondence, and Channel 88B is allocated to Government non-military agencies.") (citing Final Acts of WRC-97 (amending ITU Radio Regulations App. S18 n.1)).

<sup>87</sup> Such a prohibition would also be completely consistent with the Communications Act. Section 306 of the Act explicitly states that foreign ships in U.S. waters must transmit "only in accordance with such regulations designed to prevent interference" as the Commission may promulgate. 47 U.S.C. § 306.

<sup>88</sup> Vessels exercising the right of innocent passage will be relatively small in number and generally not significantly closer than 12 nautical miles from the US shoreline. Further, once vessels transition to duplex operation all interference stops.

interference from every vessel equipped with AIS in U.S. waters.<sup>89</sup> Under any analysis, simplex transmissions in the midst of the VPC receiver band in all US waters causes exponentially more interference to VPC receivers compared with duplex use of the same channel. In other words, MariTEL's analysis shows that requiring vessels to transmit on duplex AIS frequencies in U.S. territorial waters will have a comparatively insignificant effect on end users – and on MariTEL – than would the reallocation of channel 87B for simplex AIS.

**6. The FCC's Desire That the USCG Cooperate to Resolve Harmful Interference is Unrealistic**

The *Notice* encourages the USCG and MariTEL to cooperate in an effort to avoid interference to and from AIS. It states that if any disagreements should arise, either party could request the FCC's assistance. It asks whether there are specific actions it could take to facilitate collaboration. MariTEL wishes it could be as optimistic as the FCC in expecting the USCG to cooperate in the use of AIS technology. However, the USCG has established a pattern, recognized by the FCC, of not cooperating with MariTEL. Moreover, once channel 87B has been authorized for AIS use, the Commission will have little incentive or ability to resolve harmful interference from simplex operations on channel 87B. Indeed, the *Notice* itself is strong evidence that the Commission will facilitate the use of AIS at virtually any cost.

Therefore, if the Commission ultimately decides to proceed with its proposal, it must recognize the impact of its actions on end users and VPC licensees due to substantial RF interference, expected loss of throughput, and financial loss. The Commission may require the USCG to negotiate with MariTEL and incumbent licensees regarding the resolution of harmful

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<sup>89</sup> Compared to duplex transmissions, simplex transmissions impact adjacent and adjoining channels in addition to its specified transmission channel. With the number of vessels carrying AIS expected to expand rapidly over the next few years, the interference to the VPC receiver band is exponentially greater using simplex versus duplex AIS transmissions.

interference caused by AIS transmissions; however, those agreements must be reached *before* the rules designating channel 87B for AIS become effective. If the FCC permits the use of channel 87B for AIS without such an agreement, as the USCG has already demonstrated, it will simply proceed with its plans regardless of its regulatory obligations. The only meaningful way to ensure USCG cooperation is to either impose a coordination scheme or require a coordination agreement prior to the designation of channel 87B for AIS.

MariTEL is mindful that the USCG's failure to engage in meaningful negotiations has created the need for a regulatory solution to a commercial dispute, and that the FCC would not be anxious for the parties to repeat history. However, MariTEL is hopeful that, if the FCC is engaged in the negotiation process and prohibits the use of channel 87B for AIS prior to the parties' reaching a coordination agreement, there will be a better result than that which resulted in the termination of the MOA.

#### **7. The FCC Should Require USCG Compensation to Remedy Harmful Interference**

The FCC inquires whether MariTEL should be compensated in some fashion if the FCC proceeds with its plan. MariTEL believes that there are at least two bases under which it should be compensated. First, the FCC's action represents a taking under the Fifth Amendment, which can only be accomplished with just compensation. As the U.S. Supreme Court has made clear, a government regulation that prohibits the beneficial use<sup>90</sup> of private property violates the Fifth

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<sup>90</sup> See *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1019 (1992) (“there are good reasons for our frequently expressed belief that when [a property owner] has been called upon to sacrifice all economically beneficial uses in the name of the common good, that is, to leave his property economically idle, he has suffered a taking.”).

Amendment absent the payment of just compensation.<sup>91</sup> Under the court's reasoning in *Loretto*, the AIS carriage requirement amounts to a taking of Channel 87 since the carriage requirement totally voids MariTEL's investment-backed expectations in the commercial use of Channel 87<sup>92</sup> by permanently physically occupying Channel 87 with Coast Guard's caused or mandated harmful interference.<sup>93</sup> Such a taking of MariTEL's property can be made only upon payment of just compensation to MariTEL.<sup>94</sup>

Second, even if the FCC's action were not a taking under the Fifth Amendment, it would be consistent with the Commission's past practices to require the government to compensate MariTEL for the harmful interference that will be caused by AIS. As demonstrated herein, it is incontrovertible that AIS technology will result in destructive interference to MariTEL. Even if the scope of that interference is not apparent today, the sound engineering presented by MariTEL demonstrates that interference will occur. In the FCC's 800 MHz re-banding proceeding, the Commission is requiring Nextel to pay for the harmful interference caused by its introduction of iDEN technology (particularly on low-site, low power basis) in the 800 MHz bands. Nextel is being required to pay for the relocation of incumbent licensees in order to reconfigure the band in a manner designed to prevent harmful interference to non cellularized systems. The FCC

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<sup>91</sup> See, e.g., *Loretto v. Teleprompter Manhattan CATV Corp. et al.*, 458 U.S. 419, 426-27 (1982) (holding that, while even extensive regulation of private property is allowable in the public interest, governmental action that prohibits beneficial use of property is a taking, and requires just compensation) (citing *Penn Central Transportation Co. v. New York City*, 438 U.S. 104, 127-128 (1978)).

<sup>92</sup> *Id.* at 426.

<sup>93</sup> *Id.* at 426-27. Electromagnetic radio spectrum is as much a finite, tangible, physical property as land—its quantity is clearly defined, and separate physical portions are allocated and assigned by the Federal Communications Commission in order to eliminate interference problems that decrease the value of spectrum overall. The interference resulting from the AIS carriage requirement would render channel 87 unusable as much as a local ordinance prohibiting the use of beachfront property. See *Lucas*, 505 U.S. at 1003.

<sup>94</sup> *Id.* at 441.

should take the same approach here. It should require the Coast Guard, which demands the use of channel 87B for AIS operations, to pay for the harmful interference that will be caused by the introduction of that technology. Like its willingness to cooperate to resolve harmful interference, MariTEL is not optimistic that the USCG will cooperate to pay the costs associated with resolving the harmful interference that will be caused to MariTEL by AIS. Therefore, it is critical that any changes to the rules contemplated by this proceeding not take effect until such time as the cost of resolving the interference problem is fixed and MariTEL has been compensated for those costs. The Commission has found, and the D.C. Circuit has upheld, that it possesses the authority to allocate the relocation costs associated with license modifications among the affected licensees.<sup>95</sup>

This approach is also consistent with that taken by Congress when it determined that Federal agencies should be compensated when they vacate spectrum ultimately designated for use by commercial entities.<sup>96</sup> In this instance, it is the Federal government that has caused the loss, or at least diminution of value, of a private entity's spectrum. Therefore, consistent with the approach taken by Congress, the Federal government should compensate MariTEL for the loss of its spectrum, the reduction in the spectrum's value, or the cost to remedy the interference that will be caused by the introduction of AIS technology.

#### **F. The Commission Unreasonably Rejects the Sharing Proposal**

In assessing alternatives to reallocating channel 87B for AIS operations, the FCC analyzes several proposals submitted by MariTEL. MariTEL no longer believes that its proposal to act as a frequency coordinator for channel 87B is optimal. However, it continues to assert that

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<sup>95</sup> See, e.g. *Improving Public Safety Communications in the 800 MHz Band, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, 19 FCC Rcd 14969, 5011-12 ¶ 66 (2004) (citing *Teledesic, LLC v. FCC*, 275 F.3d 75 (D.C. Cir. 2001)).

<sup>96</sup> See 47 U.S.C. § 923 (g)(1)(A) and (B).

its proposal to share channel 87B is a meaningful way to resolve this matter. The FCC asserts that the proposal to share channel 87B is not feasible because MariTEL also requested shared use of channel 88B, and the FCC, in the Memorandum Opinion and Order, rejected MariTEL's claim to use channel 88B. However, there is no reason that the FCC could not require the shared use of channel 87B even if channel 88B may not be shared.

The FCC is also concerned that MariTEL's sharing proposal may not be technically feasible. MariTEL has demonstrated that the time slot sharing proposal is workable and requests that its prior submissions on this matter be included herein by reference. The Commission seems to be principally concerned about MariTEL's channel loading / slot sharing proposal without recognizing that the exact approach is currently under development for second-generation AIS devices.<sup>97</sup> The parties that oppose the technical component of MariTEL's proposal presuppose an erroneous technical approach, rather than considering already accepted approaches for similarly performing AIS equipment.<sup>98</sup> The parties opposing MariTEL's technical approach should bear the burden of demonstrating why this proposal, which would otherwise satisfy both MariTEL and the USCG, is not technically feasible.

The FCC states that its most significant concern regarding the sharing proposal is the restricted access to AIS data. If the FCC adopted MariTEL's sharing proposal, MariTEL would agree to the use of AIS data by others on a non-commercial basis. That is, MariTEL does not object to other parties receiving AIS data. It also does not object to the USCG and any other government entity using AIS data for safety and security purposes. It also does not object to, for

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<sup>97</sup> Class B AIS units operate conceptually in the same manner as that proposed by MariTEL. Class B units share the AIS slots with Class A units and shore stations as a "polite" secondary user of the channel. Several technical approaches are used to insure "politeness," including voluntarily limiting transmissions when channel loading is above a defined threshold.

<sup>98</sup> MariTEL proposes that compliance with its sharing capabilities be tested in accordance with pending IEC test standards targeted at second generation AIS devices of similar capabilities.

example, pilot associations, in cooperation with the USCG, using AIS data for safety and security purposes. However, MariTEL wishes to restrict the use and transmission of AIS data in two ways. First, it wishes to prohibit any entities other than the USCG or its partners from transmitting on channel 87B. Second, it wishes to prohibit the use of AIS data for anything other than safety and security purposes. Under MariTEL's plan, it would have the exclusive ability to transmit AIS information for commercial purposes on channel 87B. Similarly, MariTEL would have the exclusive ability to make AIS data available to others for commercial purposes.

MariTEL's proposal would not inhibit the use of AIS data for safety and security purposes. Instead, it will ensure that MariTEL receives the benefit of being the high bidder for channel 87, by being able to uniquely provide commercial AIS services. MariTEL's ability to transmit commercial AIS traffic on channel 87B and to make AIS information available to others will promote AIS technology more quickly and more effectively than the USCG's delayed introduction of this technology. Accordingly, the FCC should reconsider the merits of MariTEL's proposal to permit the shared use of channel 87B.<sup>99</sup>

## **G. Other Matters**

### **1. MariTEL's Use of Channel 87B for AIS Transmissions**

The Commission asks whether MariTEL should be permitted to use channel 87B for the purpose of providing AIS-related services. As noted above with respect to MariTEL's sharing proposal, MariTEL strongly believes that it should be permitted to use channel 87B to transmit

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<sup>99</sup> MariTEL notes that the FCC declined to address the technical parameters of AIS devices. MariTEL has, as the FCC contemplated it might, submitted a petition for reconsideration of the FCC's decision adopting standards for AIS equipment. MariTEL, Inc., *Petition for Reconsideration of Amendment of Parts 13 and 80 of the Commission's Rules Concerning Maritime Communications; Petition for Rule Making Filed by Globe Wireless, Inc.; Amendment of the Commission's Rules Concerning Maritime Communications, Second Report and Order, Sixth Report and Order, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 3120 (2004) submitted December 12, 2004.

AIS data.<sup>100</sup> As the FCC notes and as MariTEL pointed out in the February 12, 2004 letter cited by the FCC, there are a wide variety of commercial uses for AIS data. MariTEL secured rights to channel 87 at auction and should, at a minimum, be permitted to retain any residual rights to the channel if it is dedicated for use by AIS. Because only MariTEL was the high bidder for the channel 87 spectrum, only MariTEL should be permitted to retain these residual rights. As noted in MariTEL's original sharing proposal, MariTEL's use of channel 87B will not interfere with use of channel 87B by the USCG or its partners for transmission of AIS data for safety or security purposes.

## **2. Geographic Shared Use of Channel 87B**

The FCC proposes that channel 87B not be designated for AIS use in inland VPCs. MariTEL agrees. The Commission's principal rationale for designating channel 87B for AIS is for USCG operations in support of maritime safety and security. Similarly, the FCC wishes to ensure that vessels operating on an international basis are able to transmit AIS data on channel 87B. While MariTEL continues to question the Commission's rationale, the Commission has expressed no reason why the designation of channel 87B should extend to inland VPCs. By definition, inland VPCs contain no navigable waterways. Therefore, designation of channel 87B for AIS in inland VPCs would be wasteful.

## **3. Deletion of Channels 87 and 88 from Section 80.371 of the Rules**

The Commission notes that in order to effectuate its plan to permit channels 87B and 88B to be used for AIS on a wideband simplex basis, it must modify its regulations which otherwise require the use of channels 87 and 88 in duplex mode only. MariTEL has noted above the

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<sup>100</sup> MariTEL expects that if the FCC permits full access to reception of AIS data MariTEL would be permitted, like any other entity, to receive AIS transmissions. Accordingly, MariTEL assumes that the FCC only questions the transmission, and not reception, of AIS data on channel 87B.

devastating impact that the use of channels 87B and 88B will have on MariTEL if the channels are operated on a simplex basis. However, if the FCC proceeds with its proposal, it must not delete channels 87 and 88 from section 80.371 of the rules. First, MariTEL will continue to be permitted to use channel 87A in any case. Second, MariTEL has proposed several scenarios under which it would continue to have full or partial (either on a time or geographic basis or both) use of channel 87B. Therefore, the FCC should continue to include channel 87B in section 80.371 of its rules, annotated as appropriate to indicate the type of use that VPC licensees are permitted to make of the channel.

Similarly, the Memorandum Opinion and Order in this proceeding established that MariTEL retained residual rights, subject to coordination with NTIA, to channel 88B. Therefore, channel 88B should also continue to be referenced in section 80.371, subject to any restrictions on its use.

### **III. Conclusion**

MariTEL, Inc. hereby submits the foregoing Comments and asks that the FCC take actions consistent with the views expressed herein.

Respectfully submitted,

**MariTEL, Inc.**

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