

## memorandum

DATE: March 27, 2005

TO: Ira Keltz  
Office of Engineering and Technology

FROM: D'wana Terry  
Chief of Staff, Wireless Telecommunications Bureau

SUBJECT: Peer Review of a Report Relied Upon in the draft *Report and Order, Further Notice of Proposed Rulemaking, and Fourth Memorandum Opinion and Order* (WT Docket No. 04-344)

In this memorandum, the Wireless Telecommunications Bureau (WTB) requests a peer review, as discussed herein, of a report (and related submission) relied upon by the Commission in the above-mentioned item.

**Background.** On August 26, 2004, the Commission adopted a Notice of Proposed Rule Making (*AIS NPRM*) in WT Docket No. 04-344.<sup>1</sup> In this NPRM, the Commission proposed to designate VHF maritime Channels 87B (161.975 MHz) and 88B (162.025 MHz) on a wideband simplex basis exclusively for Automatic Identification Systems (AIS), a relatively new technology that promotes maritime safety and homeland security by facilitating Coast Guard tracking of vessels.

In response to the NPRM, MariTEL, Inc. and equipment manufacturers submitted studies into the record that purportedly demonstrate that adoption of the Commission's proposal would result in harmful interference to adjacent channel VHF public coast (VPC) station operations of such magnitude as to effectively preclude such VPC operations. These reports – a January 14, 2004 report prepared by inCode Telecom Group, Inc., and submitted by MariTEL, Inc. (the inCode Report), and a December 2, 2004 report prepared by Dorr Engineering Services, Inc., and submitted by the equipment manufacturer RF Neulink (the DESI Report) – purport to show that wideband simplex AIS communications on Channels 87B and 88B would cause a maritime data system planned by MariTEL, the licensee of all nine of the maritime VPC geographic service areas, to incur performance degradation of at least fifty percent, that could not be overcome using any available technology. MariTEL opposes the Commission's proposal for that reason.

NTIA, which supports the Commission's proposal, countered MariTEL's technical arguments by submitting a February 2004 study prepared by the Department of Defense Joint Spectrum Center (JSC Report), as well as JSC's January 27, 2005 response (JSC Response) to criticisms of that report by MariTEL (in its December 30, 2004 comments and in its March 30, 2005 and April 11, 2005 *ex parte* presentations to WTB) and the DESI Report. The JSC Report concludes that any interference incurred by MariTEL's planned maritime data system from AIS operations can be effectively mitigated through the

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<sup>1</sup> See Amendment of the Commission's Rules Regarding Maritime Automatic Identification Systems, *Memorandum Opinion and Order and Notice of Proposed Rule Making*, WT Docket No. 04-344, 19 FCC Rcd 20071, 20074 ¶ 5 (2004) (*AIS NPRM*).

use of soft decision forward error correction coding and interleaving technologies, and the need to incorporate such technologies in VPC equipment would not impose an unreasonable burden on MariTEL or other VPC licensees. The JSC Response reaffirms the JSC Report. In the draft Report and Order, Further Notice of Proposed Rulemaking, and Fourth Memorandum Opinion and Order (draft AIS Report and Order), the Commission would rely on both the JSC Report and the JSC Response in support of its decision.

**Scope of Peer Review Requested.** WTB seeks peer review of the assumptions, calculations, and methodology in the JSC Report referenced in the draft AIS Report and Order in WT Docket 04-344. We request this review to determine whether the assumptions, calculations, methodology, and conclusions therein – with consideration of the inCode Report, Maritel’s comments and *ex parte* presentations, the DESI Report, and the JSC Response – conform to generally accepted standards in the radio engineering field.

In particular, WTB seeks responses to the following questions with specific suggestions for improvement, if necessary:

1. Do the assumptions contained in the JSC Report, with consideration of the inCode Report, Maritel’s comments and *ex parte* presentations, the DESI Report, and the JSC Response, conform to generally accepted standards in the radio engineering field?
2. Do the calculations in the JSC Report, with consideration of the inCode Report, Maritel’s comments and *ex parte* presentations, the DESI Report, and the JSC Response, conform to generally accepted standards in the radio engineering field?
  - a. Are the results accurate?
  - b. If statistical methods are used, are the techniques appropriate for the problem?
  - c. If software is used, is the software appropriate for the problem and current?
3. Does the methodology contained in the JSC Report, with consideration of the inCode Report, Maritel’s comments and *ex parte* presentations, the DESI Report, and the JSC Response, conform to generally accepted standards in the radio engineering field?
4. Do the conclusions contained in the JSC Report, with consideration of the inCode Report, Maritel’s comments and *ex parte* presentations, the DESI Report, and the JSC Response, conform to generally accepted standards in the radio engineering field?
5. Are there any revisions, improvements, or extensions the reviewer recommends to ensure that the JSC Report, with consideration of the inCode Report, Maritel’s comments and *ex parte* presentations, the DESI Report, and the JSC Response, conforms to generally accepted standards in the radio engineering field?

*Requested timetable for review.* I also ask that you provide a brief written report of your review, findings and recommendations with regard to this Report by April 14, 2006. Thank for your assistance in this matter.

Attachments