



DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG-2025-0098]

Cooperative Research and Development Agreement (CRADA) – “Very High Frequency Data Exchange System (VDES) Satellite Connectivity and Service”

AGENCY: Coast Guard, Department of Homeland Security.

ACTION: Notice of Intent; request for comments.

SUMMARY: The United States Coast Guard (USCG) is announcing its intent to enter into a Cooperative Research and Development Agreement (CRADA) with SPACE NORWAY to test and evaluate the suitability of implementing a VDES satellite (VDE-SAT) component for USCG operations. In addition, the USCG also invites other potential non-Federal participants, who have the interest and capability to bring similar contributions to this type of research, to consider submitting proposals for consideration in similar CRADAs.

DATES: Your comments and related material must reach the USCG on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.]

ADDRESSES: You may submit comments identified by docket number USCG-2025-0098 using the Federal portal at <http://www.regulations.gov>. See the “Public Participation and Request for Comments” portion of the SUPPLEMENTARY INFORMATION section for further instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions about this notice of intent, or wish to submit proposals for future CRADAs, contact Mr. James Spilsbury, Technical Point of Contact, U.S. Coast Guard Research and Development Center, 1 Chelsea Street, New London, CT 06320, telephone 860-271-2600, email RDC-info@uscg.mil.

SUPPLEMENTARY INFORMATION:

I. Table of Abbreviations

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| AIS | Automatic Identification System |
| CRADA | Cooperative Research and Development Agreement |
| DHS | Department of Homeland Security |
| MSI | Maritime Safety Information |
| RDC | Coast Guard Research and Development Center |
| VDES | Very High Frequency Data Exchange System |
| VDE-SAT | Very High Frequency Data Exchange System Satellite |
| VHF | Very High Frequency |
| U.S.C. | United States Code |
| USCG | United States Coast Guard |

II. Background and Purpose

The United States Coast Guard (USCG) is investigating the Very High Frequency (VHF) Data Exchange System (VDES) and impacts on the Automatic Identification System (AIS). The volume of marine vessels using the AIS has been increasing since its inception in 2000. This increase is resulting in overloading of the two channels that carry the AIS transmissions. In response to this overloading of AIS, international organizations like the International Telecommunication Union, the International Maritime Organization, and the International Association of Marine Aids to Navigation and Lighthouse Authorities are developing the next generation AIS – called VDES. VDES will increase the number of channels available and utilize terrestrial and satellite communication for the exchange of safety and navigation information. VDES is a technological concept utilizing terrestrial and satellite radio communication links in the VHF maritime mobile band to facilitate globally interoperable digital data exchange between ships, between ships and shore, between ships and satellite, and between satellite and ships.

To date, the USCG has conducted extensive work and established a robust test environment for AIS and VDES which includes communications base stations near the USCG Research and Development Center (RDC) in the vicinity of New London, CT. This CRADA will leverage RDC's terrestrially based test network of VDES base and mobile stations to demonstrate the capabilities and limitations of transmitting maritime safety information (MSI) on the satellite channels of VDES (VDE-SAT) as compared to the current AIS satellite channels.

The CRADA will cover the cooperative testing of the VDE-SAT equipment, platforms, and satellite data services. The CRADA will be used to determine how VDE-SAT could be implemented to support multiple USCG core mission areas for shore-side and shipboard use under a variety of scenarios. Technology researched, tested, and prototyped will adhere to all active USCG, Federal Communications Commission (FCC), and National Telecommunications and Information Administration (NTIA) standards and regulations.

The USCG seeks to continue its investigation of VDES, focusing on the evaluation of the VDE-SAT component and how the system may be able to expand VDES coverage beyond the range of terrestrial VDES sites for enhanced maritime domain awareness. This investigation will evaluate the capabilities and limitations of using VDES to communicate Application Specific Messages or similar MSI (that is, International Hydrographic Organization S-124 based) with vessels operating in polar regions, offshore, or other inshore regions with limited to no VHF coverage (for example, Western Rivers).

Our desire is to identify non-federal partners that can successfully provide access to VDES satellites for test and evaluation purposes.

III. Public Participation and Request for Comments

We request public comments on this notice. Although we do not plan to respond to comments in the *Federal Register*, we will respond directly to commenters and may modify our proposal in response to received comments.

We encourage you to submit comments in response to this notice of inquiry through the Federal Decision Making portal at <https://www.regulations.gov>. To do so, go to <https://www.regulations.gov>, type USCG-2025-0098 in the search box and click "Search." Next, look for this document in the Search Results column, and click on it. Then click on the Comment option. In your submission, please include the docket number for this notice of inquiry and provide a reason for each suggestion or recommendation. If your material cannot be submitted using <https://www.regulations.gov>, contact the person in the FOR FURTHER

INFORMATION CONTACT section of this document for alternate instructions. To view documents mentioned in this notice of inquiry as being available in the docket, find the docket as described in the previous paragraph, and then select “Supporting & Related Material” in the Document Type column. Public comments will also be placed in our online docket and can be viewed by following instructions on the <https://www.regulations.gov> Frequently Asked Questions webpage. We review all comments received, but we may choose not to post off-topic, inappropriate, or duplicate comments that we receive.

We accept anonymous comments. Comments we post to <https://www.regulations.gov> will include any personal information you have provided. For more about privacy and submissions in response to this document, see DHS’s eRulemaking System of Records notice (85 FR 14226, March 11, 2020).

IV. Discussion

CRADAs are authorized under 15 U.S.C. 3710a. A CRADA promotes the transfer of technology to the private sector for commercial use, as well as specified research or development efforts that are consistent with the mission of the Federal parties to the CRADA. The Federal party or parties agree with one or more non-Federal parties to share research resources, but the Federal party does not contribute funding.

CRADAs are not procurement contracts. Care is taken to ensure that CRADAs are not used to circumvent the contracting process. CRADAs have a specific purpose and should not be confused with procurement contracts, grants, and other type of agreements.

Under the proposed CRADA, the USCG Research and Development Center (RDC) will collaborate with one or more non-Federal participants. Together, the USCG RDC and the non-Federal participant will evaluate the suitability of VDE-SAT technology in a shore-side and shipboard environments to support USCG missions.

We anticipate that the USCG's contributions under the proposed CRADA will include the following:

1. Provide appropriate staff with pertinent expertise to take the lead in accomplishing the required tasks; collaborate with selected non-Federal participants to evaluate the suitability of VDES Satellite for future implementation by maritime authorities;

2. Provide information regarding the USCG's interest in the VDE-SAT technology needed for creating the test plan, and co-design specific operational test scenarios, bringing in real-world maritime expertise;

3. Obtain, transport, and provide all of the ensemble items to be used during the testing;

4. Provide personnel support to non-Federal participant to assist with setting up and execute testing in accordance with the agreed upon test plan;

5. Work with non-Federal participant to develop a final report, which will document the methodologies, findings, conclusions, and recommendations of this CRADA work.

We anticipate that the non-Federal participants' contributions under the CRADA will include the following:

1. Provide appropriate staff with pertinent expertise to support the above-mentioned tasks;

2. Provide all necessary facility resources and services needed to access VDES satellite services during the demonstration and testing including but not limited to satellites with VDES-capable payloads;

3. Provide technical support for all technology demonstrations and proposed test plans;

4. Provide technical data for the equipment, software, and services to be utilized;

5. Provide shipment and delivery of any equipment required to conduct evaluations, demonstrations, and test events as described in the CRADA;

6. Provide travel and associated personnel and other expenses, as required, for subject work;

7. Provide test data upon completion of testing.

The USCG reserves the right to select for CRADA participants all, some, or no proposals submitted for this CRADA. The USCG will provide no funding for reimbursement of proposal development costs. Proposals and any other material submitted in response to this notice will not be returned. Proposals submitted are expected to be unclassified and have no more than five single-sided pages (excluding cover page, DD 1494, JF-12, etc.).

The USCG will select proposals at its sole discretion based on:

1. How well they communicate an understanding of, and ability to meet, the proposed CRADA's goal; and
2. How well they address the following criteria:
 - a. Technical capability to support the non-Federal party contributions described, and
 - b. Resources available for supporting the non-Federal party contributions described.

Currently, the USCG is considering SPACE NORWAY, for participation in this CRADA. This consideration is based on SPACE NORWAY briefings to the USCG and its ability to support demonstrations and test scenarios. However, we do not wish to exclude other viable participants from this or future similar CRADAs.

This is a technology suitability effort. The goal of this CRADA is to evaluate the suitability of USCG and other maritime authorities of implementing VDES satellite technology for shore-side and shipboard environments. Special consideration will be given to small business firms/consortia, and preference will be given to business units located in the U.S. This notice is issued under the authority of 5 U.S.C 552(a).

M. P. Chien,

Captain, Commanding Officer,

U.S. Coast Guard Research and Development Center.

[FR Doc. 2025-11491 Filed: 6/20/2025 8:45 am; Publication Date: 6/23/2025]