Department of Defense (DoD) OSD (P&R, R&E, CIO)

REQUEST FOR INFORMATION (RFI)

Joint Modular Emitter Interface Standards (JMEIS) Project

1. Objective:

The Department of Defense (DoD) is undertaking a critical initiative known as the Joint Modular Emitter Interface Standards (JMEIS) project. The primary objective of JMEIS is to significantly enhance combat readiness capabilities across the Joint Force by enabling the rapid development, deployment and sustainment of a greater number and variety of lower-cost threat emitters. The primary benefactors of JMEIS will be acquisition agencies, major training centers, and home station training ranges. This effort aims to foster a more representative fit for purpose operational environment in preparation against emerging complex threats and peer adversaries.

Information gathered through this RFI will shape JMEIS technical direction, identify industry best practices and inform potential future solicitations. This RFI is issued solely for market research and planning. It does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. This RFI does not commit the Government to contract for any supply or service whatsoever. The DoD is not at this time seeking proposals and will not accept unsolicited proposals. Vendors are advised that the U.S. Government will not pay for any information or administrative costs incurred in response to this RFI; all costs associated with responding to this RFI will be solely at the interested party's expense. Not responding to this RFI does not preclude participation in any future RFP, if any is issued. DoD intends to use Prize Challenges and the 4023 Provision of NSC OTA for proposals going forward, starting in FY26.

This RFI is listed on the solicitations page of the members-only website for the National Spectrum Consortium. Reponses may be uploaded via the submission link on that page or sent by email to RFI@spectrumconsortium.org.

2. Background:

To effectively prepare the Joint Force for evolving global challenges, it is imperative to create highly realistic and adaptable training environments. The current limitations include high per unit cost, limited number of threat replicators, and diversity of threat emitters.

JMEIS seeks to address these limitations by developing and implementing modular, standardized interfaces for threat emitters. This approach is intended to:

- Promote interoperability and commonality across different training ranges, platforms, and Service missions.
- Leverage cutting-edge commercial and defense technologies.
- Increase the speed and flexibility of emitter development and deployment.
- Reduce the lifecycle costs associated with threat emitter systems.
- Expand the defense industrial base for emitter knowledge, development, and production.

The DoD is keenly interested in industry's insights and recommendations to ensure JMEIS architecture is robust, future-proof and aligns with the state of the art in emitter technology and modular design principles. After this RFI concludes, the DoD plans to use innovative and timely acquisition techniques to demonstrate and field prototypes, leading to higher-rate production runs.

3. Information Requested from Industry

The DoD invites industry to submit their thoughts, ideas and recommendations on a standards-based approach to threat emitters to accelerate the fielding of threat emitters, and on the current state of technology and capabilities that exist to meet JMEIS demand signal. The Government welcomes industry and academia perspectives on the following key areas related to JMEIS. Please elaborate and provide rationale when providing responses.

3.1. Threat Emitter Architecture Design

- Based on current advancements in capabilities such as Software Defined Radios (SDRs) and RF System-on-Chip (RFSoC), antenna design and related technologies:
    - What should be considered for the optimal overall threat emitter architecture? Include modular open systems architecture (MOSA) and sensor open systems architecture (SOSA) concepts.

- How can this architecture maximize realism, adaptability and cost-effectiveness for a variety of ground, surface and air training scenarios?

3.2. Enabling Rapid Prototyping

- As the DoD defines and publishes standards and modular component specifications for JMEIS, what is needed from an industry perspective to enable and accelerate rapid prototyping of new emitters and system enhancements?

3.3. Existing and Needed Standards

- What current industry or military standards are sufficient and directly applicable to the JMEIS initiative (e.g., C2 interfaces, data formats, hardware performance)?
- What new standards, if any, need to be developed to fully realize the objectives of modularity, interoperability and rapid development within the JMEIS framework?
- Would there be stakeholder interest in participating in a co-hosted Government/Industry standards workshop to develop suggested emitter standards for JMEIS? This would be similar to the 5G and mil-mil spectrum sharing standards groups with the NSC membership in the past.

3.4. Modular Components Assessment

- Are there examples where a standards-based approach was used to design, publish, and promulgate standards for spectrum dependent systems?
- Which specific modular components and threat emitter systems (e.g., RF front-ends, baseband processors, C2 interfaces, power modules) do you believe are "ready now" for integration or rapid development, and why?

3.5. Accelerating Field Prototypes

- Are there any existing impediments or bottlenecks in the current acquisition or development processes that, if removed or altered, could significantly accelerate the transition of JMEIS prototypes from development to field testing and deployment?
- Suggest operational as well as functional use cases to consider for modeling JMEIS design and performance requirements. Cases can be simple or complex, broad or narrow in mission focus.
- Are there resistance/challenges for industry to use government provided standards?

- Is there any GFE or GFI needed by industry which would aid in bringing capability to the field faster?

3.6. Performance Testing Recommendations

- What type of laboratory environment or facility would you recommend for accomplishing thorough performance testing of JMEIS prototypes before they are fielded?
- If independent verification and validation (IV&V) testing is directed or required by the Government with a specific third-party laboratory, what challenges or issues would you envision?
- Would those challenges or issues to IV&V requirements preclude your participation in a future JMEIS competitive acquisition effort?

3.7 User base

- What is your current customer / user base across the Department of Defense, if any?

4. Response Guidelines

- **Format:** Respondents may submit their ideas in any format they deem most appropriate, including:
    - White papers (up to 5 pages)
    - Presentation decks (up to 5 slides)

- **Proprietary Information:** If your response contains proprietary information, please clearly mark such information as "PROPRIETARY" on each affected page. The DoD will endeavor to protect such information to the extent permitted by law. To aid the Government, please segregate proprietary information from the overall response.

Respondents should submit their information by 22 August 2025. This RFI is listed on the solicitations page of the members-only website for the National Spectrum Consortium. Reponses may be uploaded via the submission link on that page or sent by email to RFI@spectrumconsortium.org.

- Please be advised that all submissions will become Government property and will not be returned.

- **Classified information:** If your response contains classified information (up to SECRET), you can forward the responses directly to james.e.hatfield16.civ@mail.smil.mil.

5. Questions:

Questions regarding this announcement shall be submitted in writing by e-mail to info@spectrumconsortium.org NLT 12 August 2025 at 1200 EST. Questions may be answered by email if the Government deems that the answer would better inform the potential Offerors; accordingly, questions shall NOT contain proprietary or classified information. The Government will try to address all timely questions received. The Government does not guarantee that questions received after the RFI Question deadline will be answered.

6. Use of Information

Information learned by DoD via responses to this RFI may be broadly disseminated within the Government and shared with Government support contractors as may be required in the performance of their contract. All data transmitted, received, and stored during the conduct of the RFI is the physical property of the Government. Any interest in the creation of the data is retained by the respondent. DoD will not return any information or data submitted. Participation with this RFI does not constitute any endorsement by DoD.

7. Summary

THIS IS A REQUEST FOR INFORMATION ONLY. The information provided in the RFI is subject to change and is not binding on the Government. DoD has not made a commitment to procure any of the items discussed, and release of this RFI should not be construed as such a commitment or as authorization to incur cost for which reimbursement would be required or sought. All submissions become Government property and will not be returned.

Thank you for your interest and valuable input into the JMEIS project.

DoD Point of Contact for Questions:

- Gina Tyrrell, OSD R&E Lead, regina.a.tyrrell.civ@mail.mil, 703-693-7637

- James Hatfield, Chief JMEIS Engineer, james.e.hatfield16.civ@army.mil, 256-876-2974.