PEO-SDA: UxSAI Synthetic Data Modeler AE
Q&A Telecon Transcript
08 June 2026

1. **What sensor modalities are of interest?**

The Government is interested in all relevant sensor modalities. While the program has historically focused on visible-spectrum imagery, current efforts are expanding into infrared capabilities, including SWIR, MWIR, LWIR, and visible-spectrum data.

2. Would computer vision on ATAK to detect UAS be a capability of interest?

No. This effort is focused specifically on synthetic data generation capabilities and synthetic data providers. Computer vision solutions themselves are not being solicited under this effort.

3. What types of environments are of interest for synthetic data generation?

The primary focus is maritime environments, including coastal and intercoastal regions. Environmental effects, varying look angles, and water-based operating conditions are of particular interest.

4. Is real-time capability a requirement?

Real-time capability is not a requirement; however, near real-time generation is highly desirable. Faster generation timelines are preferred because they support rapid model retraining, testing, evaluation, and deployment.

5. What is the desired altitude range for unmanned aerial system data?

The Government is interested in a variety of altitudes, with primary emphasis on approximately 3,000 feet and below. Near-horizontal observation scenarios are also of interest.

6. Is the intent to use this data only for training, or will it also be used for T&E and other purposes?

The primary intent is training; however, synthetic data may also be used for test and evaluation activities when appropriate.

7. Are you looking for video, 3D data, layered data, or a particular standard format?

The Government is primarily seeking video data at approximately 30 frames per second with associated metadata and object annotations. Offerors are encouraged to propose additional environmental metadata labels that may improve utility.

8. Can you define augment capabilities? Are you looking to build entire datasets or supplement existing datasets?

Synthetic data is expected to augment existing datasets and fill identified gaps. The Government will provide specific scenarios for evaluation and assess the quality and utility of generated data.

9. What would be the absolute game changer that sets a submission apart?

Capabilities that generate highly realistic synthetic data, address challenging environmental conditions, support edge cases, integrate easily into existing workflows, and produce results rapidly would be highly valued.

10. Are you interested in pure synthetic data or augmented imagery?

Pure synthetic data is preferred. However, augmentation capabilities may also be beneficial and should be described if available.

11. What is the ideal timeframe for synthetic data generation, and how large of a dataset is desired?

Generation speed is an important consideration. Modifications to existing scenarios are ideally completed within approximately 24 hours, while more complex scenarios may require additional time. Dataset sizes should generally be measured in thousands of images rather than hundreds.

12. Are you looking for a sole-source vendor or are partnerships acceptable?

Partnerships and subcontracting arrangements are acceptable. Collaborative solutions involving multiple organizations will be considered.

13. Would you prefer a prompt-based generation tool or a game-engine-style user interface?

The Government is open to multiple approaches. User-friendly solutions that support automation, APIs, and integration into existing workflows are preferred.

14. What is the target list?

Specific target information will not be provided during the event. Additional target information may be shared with down-selected performers.

15. Should the capability run on local hardware or in a cloud environment?

The preferred approach is operation within Government cloud environments using Government-provided resources.

16. How will synthetic data quality and fidelity be evaluated?

Evaluation will include human review, objective video-quality metrics, model performance improvements, and assessment of breadth, realism, and creativity across generated scenarios.

17. Will the Government provide ground-truth sensor data?

Ground-truth data may be provided to selected performers after down-selection. During the evaluation process, vendors should expect to receive scenario descriptions rather than source datasets.

18. Will example real-world data be provided?

No. Vendors are expected to demonstrate their ability to generate synthetic data from publicly available information and scenario descriptions.

19. What tasks and operations have the highest false-positive rate or greatest need for synthetic data?

Rare events, challenging environmental conditions, and situations where real-world data collection is limited are areas of significant interest. Maritime environmental effects that generate false detections are a key example.

20. What is the program budget?

A small stipend is anticipated during later stages of the event. The effort is designed to focus on mature capabilities and minimize development burden during the assessment process.

21. Is the event recorded?

Assessment events and vendor engagements may be recorded as part of the evaluation process and to support lessons learned.

22. If a platform supports direct interaction for data generation, would Government personnel prefer direct access?

Direct interaction with generation tools is highly desirable when practical. Integration into Government workflows is an important consideration.

23. For bounding boxes, should annotations be provided in 2D or 3D coordinates?

Two-dimensional pixel-space bounding box annotations are currently desired.

24. Is synthetic imagery required for all unmanned platform variants?

The primary focus is maritime applications. Other domains may be considered in the future, but maritime use cases remain the priority.

25. Should submissions focus on EO/IR imagery or hyperspectral data?

EO/IR imagery is the primary focus. Hyperspectral capabilities are considered a positive discriminator and may enhance evaluations.

26. Are current object-detection challenges driven by lack of training data?

The objective is to improve model performance through augmentation of training data, particularly for edge cases and environmental conditions where representative data may be limited.

27. What business model is expected?

The Government seeks a performer capable of supporting the program over an extended period rather than providing a one-time deliverable.

28. What information will be provided if no Government data is released?

Additional instructions and scenario information will be provided during later down-select phases. The Government intends to evaluate the ability to generate synthetic data with minimal source material.

29. Will SOCOM accept commercial companies retaining rights to their tools?

The Government is primarily interested in rights to the generated data. Existing proprietary tools may remain under company ownership.

30. Can you speak to adversarial target behaviors?

Requirements will be determined on a case-by-case basis depending on the scenario being evaluated.

31. Are you training on videos or still images?

The operational workflow ingests video and extracts frames for training. Vendors should therefore provide both video products and associated image frames.

32. Are co-registered and pixel-aligned EO/IR datasets required?

Additional details will be provided to down-selected vendors. Current expectations focus on standard object annotations.

33. What is the value of the stipend?

The stipend amount has not yet been finalized and will depend on participation levels during later phases of the event.

34. How much weight will be placed on narrowing the sim-to-real gap?

A significant amount. Solutions that produce realistic imagery and realistic object behavior are strongly preferred.

35. What type of data is of interest? Synthetic imagery, synthetic video, synthetic metadata, or all of the above?

All of the above; the Government is primarily seeking video data at approximately 30 frames per second with associated metadata and object annotations. Offerors are encouraged to propose additional environmental metadata labels that may improve utility.

36. For white paper scoring, will emphasis be placed on generation quality, generation speed, scalability, integration capability, or another factor?

Whitepapers will be scored against the criteria called out in the RFI, with emphasis on each of the five main sections.

37. What formats are you most interested in receiving for generated outputs?

The Government is primarily seeking video data at approximately 30 frames per second with associated metadata and object annotations. Offerors are encouraged to propose additional environmental metadata labels that may improve utility.

38. We have a crowdsourced network of over one million contributors. Is externally sourced data of interest?

We are interested in capabilities proposed to best meet the need called out in our RFI, sourcing or other B2B arrangements that potentially meet that need.

39. What output format should the imagery dataset be delivered in?

The Government is primarily seeking video data at approximately 30 frames per second with associated metadata and object annotations. Offerors are encouraged to propose additional environmental metadata labels that may improve utility.

40. For EO/IR imagery, are you looking for photorealistic generation, sensor-accurate modeling, or both?

We are looking for both. Vendors will be expected to provide 30 second videos, broken up into 30 frames per second, with accompanying metadata per frame. The videos should be as photorealistic as possible.

41. Should the capability run as a standalone solution for operators?

If you have this capability, we would be very interested in hearing about it.

42. What computer vision tasks need to be supported (detection, classification, tracking, segmentation, etc.)?

We are only looking for synthetic data generation as a part of this event but this data will support CV to detect, classify, and track.

43. What is the ontology of object classes to be represented?

This will be given in additional instruction after initial downselects.

44. What platform(s) are collecting the GEOINT data?

This is NA.

45. What synthetic video duration is desired for generated scenarios?

The Government is primarily seeking video data at approximately 30 frames per second with associated metadata and object annotations. Offerors are encouraged to propose additional environmental metadata labels that may improve utility.

46. What data rights should be provided with generated synthetic datasets?

Ultimately, we would like synthetic data to be GPR.

47. Are there security clearance requirements for performers?

This event is ITAR / USPERS but may need to move up after the event to a higher classification.

48. What level of technical readiness will be weighted during evaluation?

We are not asking for providers to propose capabilities that have not yet been developed; therefore we are looking at TRL 6+.

49. What resolution requirements exist for generated imagery?

This will be given in additional instruction after initial downselects.

50. Is panchromatic imagery required?

No.

51. Is the white paper limited to two pages total?

The whitepaper is limited per SWX instruction but additional charts, appendices, etc. are acceptable.

52. Who will own intellectual property developed during performance?

SWX typically runs their events with limited IP but the Government/UxSAI is seeking GPR synthetic data/synthetic data modeling capability for the final downselect and additional work with the selected performer.

53. What role will the Program Office play after performer selection?

The intent is for UxSAI to downselect capability that can be brought into our software architecture to train our CV models, via follow-on effort where the capability will be further tailored to Program needs.

54. Are there preferred synthetic data generation methodologies?

We are interested in understanding the best of breed synthetic data generation methodologies relevant to our capability needs; novel approaches are of interest but recall we will be executing T&E on any data provided as a result of event milestones, so performance is important to us. Additional instruction will be provided after the second downselect for performers to engage in T&E.

55. Are there preferred simulation engines or environments?

We are interested in understanding the best of breed synthetic data generation methodologies relevant to our capability needs; novel approaches are of interest but recall we will be executing T&E on any data provided as a result of event milestones, so performance is important to us. Additional instruction will be provided after the second downselect for performers to engage in T&E.

56. What level of maritime environmental fidelity is expected?

Vendors will be expected to produce a variety of maritime scenarios, including open ocean and littoral environments.

57. Are there preferred metadata standards or annotation schemas?

Vendors are expected to propose metadata fields they feel that they can accurately and consistently populate. Field describing environmental conditions, such as weather or lighting conditions, are highly desired.

58. What synthetic-to-real data ratio is envisioned for future training datasets?

This is highly dependent on the specific objects. Some object may have rich and diverse training datasets; others may have no or extremely limited data.

59. Are there specific target classes that are higher priority than others?

Specific target classes will be described during the additional instructions phase for selected vendors.

60. Is synthetic data expected to support detection only, or classification and tracking as well?

Synthetic data will further train our CV models for detect, classify, track.

61. Will vendors be expected to demonstrate measurable model performance improvements?

We are interested in model performance improvements and would view this as a highly relevant argument for a capability being proposed.

62. Are there minimum realism or fidelity thresholds required?

No.

63. What validation methods are preferred for synthetic data?

We have a holistic evaluation prepared including human review, model performance, and objective realism metrics through the usage of toolkits such as VBench. However, we expect vendors to describe their own evaluation methods in their proposal.

64. Which edge cases are considered highest priority?

Specific target classes will be described during the additional instructions phase for selected vendors.

65. Will multi-sensor fusion applications be supported?

In the future we will be interested in incorporating multi-sensor fusion, so if a solution can support this future state, we would like to hear more about it.

66. Is synchronized EO/IR generation required?

No, but if this is a capability you have, please describe it.

67. What deployment architecture is envisioned for future capabilities?

A Kubernetes deployment.

68. Will performers be expected to provide datasets, tools, or both?

Performers will be expected to provide the tools to generate the videos. However, if you have datasets, please describe them.

69. Are cloud-native solutions preferred?

The expected solution should be able to run within our environment with our allocated GPUs.

70. Will sustainment and long-term support be required?

We desire additional follow-on effort with the selected performer as a result of this event, to help us shape an enduring capability that UxSAI can utilize beyond the period of that additional follow-on effort.

71. Are there cybersecurity requirements beyond those already stated?

We will assess proposals based on the criteria shared in the RFI SOFWERX has released.

72. How will scalability be evaluated?

Scalability with be in part evaluated by the amount and time to generate videos.

73. What future use cases beyond maritime computer vision are being considered?

In the future we will have to support additional SOF components and their modalities of interest.

74. Are there additional sensor modalities planned for future phases?

Not yet, this depends on which component we work with next but right now we are focused on a maritime environment.

75. Will future efforts expand beyond maritime operational environments?

Future expansion will depend on which component the program works with next; the current focus remains on a maritime environment.

76. Are there any additional considerations offerors should address in their white papers that were not discussed during the teleconference?

Part of this event is to better understand what type of capability is available in the market, and we would like to have a stronger understanding of this as well as novel approaches resulting from this SOFWERX engagement.