

Amendment 0003  
ONR BAA Announcement Number 13-018

Spectral and Reconnaissance Imagery for Tactical Exploitation (SPRITE)

1). The purpose of this amendment is to replace the language in Section IV under paragraph 2a White Papers with the following:

**a. WHITE PAPERS**

**White Paper Format**

- Paper Size - 8.5 x 11 inch paper
- Margins - 1 inch
- Spacing - single spaced
- Font - Times New Roman, 12 point
- Max. Number of Pages permitted: 10 pages (excluding cover page, resumes, bibliographies, and table of contents)
- Copies - One (1) electronic copy in Adobe PDF or Word 2007 uploaded to the ONR ISR 30a website provided below. The subject line of the form should read "ONR BAA 13-018 White Paper Submission."

**NOTE:**

- 1. Do not send hardcopies of White Papers (including Facsimiles) as only electronic submissions will be accepted and reviewed;**
- 2. ZIP files are acceptable.**
- 3. Do not send password protected files.**

2). The purpose of this amendment is to respond to questions.

Questions and Responses are provided as follows:

**Question 1:** When writing the BAA white paper, is the required "Operational Naval Concept" section written around the individual task submitted or is it written at the SPRITE System level?

**Response 1:** The white paper should address how the proposed task enables a SPRITE Operational Naval Capability.

**Question 2:** On page 3 of the solicitation, the document says the SWIR sensor is to be compatible with the RQ-21A turret made by Insitu. Do you have actual specifications for SWAP envelope for this turret? Could you direct me to a person that would have this information?

**Response 2:** To write a white paper it should be sufficient to know that the payload weight is limited to not more than 30 pounds, and the overall peak power draw must be less than 350W

**Question 3:** What are the payload volume requirements?

**Response 3:** The payload is limited to 30lbs or less and energy dissipation must be less than 350W. Payload volume is to fit within the available payload spaces onboard an RQ-21A aircraft.

**Question 4:** In the 6km swath collection mode of the spectral sensor, what is the assumed flight or ground collection speed?

**Response 4:** The flight and ground collection speed is assumed to remain constant during the mission and is the same as for the circular (persistent) collection mode.

**Question 5:** What is the required field of view of the inspection sensors (both RGB/panchromatic and spectral sensors)?

**Response 5:** As stated in the BAA, the FOV is a 4 km radius for all wide area sensors .

**Question 6:** What is the required frame rate of the inspection sensors (both RGB/panchromatic and spectral sensors)?

**Response 6:** No frame rate is specified as there are several different technical means to generate the inspection imagery (RGB and/or spectral). Providers are expected to propose frame rates for their inspection technology and to discuss how those proposed rates would support their overall system CONOPS.

**Question 7:** Is the sensor always operated in a nominally nadir pointing configuration? What are the field of regard requirements? How far from nadir?

**Response 7:** The Field of Regard can be calculated from a nominal flight altitude, the nominal flight orbit radius (for wide area persistent imaging), and nominal bank angle arguments. For the alternate linear-flight mode, the spectral wide-area sensor is desired to be able to collect a swath centered on nadir.

**Question 8:** Does the full 4km diameter AoP need to be covered when operating from an altitude significantly less than 10,000 ft AGL? How far from nadir?

**Response 8:** The BAA only identified AoP at 10,000 ft, and these can vary at other altitudes; Implementations that can maintain the FOV at lower altitudes will be looked upon favorably.

**Question 9:** Application and Submission Process - Third Paragraph states: “Each White Paper should state that it is submitted in response to this BAA and cite the particular sub-section (task) of the Research Opportunity Description that the white paper is primarily addressing.”

Under Task 1 of the BAA, there are four sub-tasks that can be bid. If we bid three of the four sub-tasks (WAA Sensor, Spectral Sensor, Inspection Sensor), is a separate white paper required for each of the three sub-tasks or can we submit one white paper covering all three sub-tasks?

**Response 9:** The BAA was broken out into 3 tasks and states: “Offerors may choose to propose separately to any individual task, to a subset of tasks, or to all the tasks. Offerors desiring to submit a proposal for multiple or all tasks should submit a separate white paper for each individual task as well as a short (5 pages or less) white paper describing the overall capability. If multiple tasks are proposed, the overall capability white paper must describe any synergies that result from performing those multiple tasks. “

As previously published in Amendment 2, while white papers need to address tasks, performers are free to team with other performers in order to offer task level solutions.

It sounds as though you considering proposing to all of Task 1 – hence that would be one white paper.

**Question 10:** Reference BAA amendment 1, page 6, paragraph 2, lines 1-3. The reference sentence states: “It is anticipated that a focal plane array (FPA) will be needed to enable an average 0.30 m or better ground sample distance (GSD) from a 10,000 foot above ground level (AGL) flight altitude across a 4 km diameter Area of Persistence (AoP).”

In addition, reference BAA amendment 1, page 6, paragraph 3, lines 8-11. The reference sentence states:”In addition, during straight-line flight at 10,000' AGL altitude, it is desired that the spectral sensor be capable of collecting spectral imagery for a 6 km or greater cross-track swath width at 0.60 m or better GSD (nadir). “

Please clarify if the average 0.30 m GSD is intended to be a true average across the Area of Persistence or is this intended to be a nadir definition similar to what is called out for the spectral sensor.

**Response 10:** The 30 cm GSD requested is a true average over the area of persistence.

**Question 11:** Reference BAA amendment 1, page 3, bulleted list at bottom of page. The reference bulleted list states: “To address some of the embedded technical challenges Offerors may propose:

- Large format, small pixel pitch SWIR focal plane arrays
- Approaches to the simultaneous collection of spectral signatures for areas (vice lines)
- ...”

Please clarify the meaning/intent of the second bullet, particularly the use of the word “simultaneous” and the reference to “vice lines.” Specifically, does the Government desire the simultaneous collection of all seven spectral bands over the entire area? Or does the Government desire to eliminate line scanner technologies?

**Response 11:** Additional BAA references in this context include:

“...monitoring of spectral targets moving at up to highway speeds have additional value” pg. 4

“Thus, spectral systems are desired that enable the generation of spectral data having enough temporal fidelity to enable association of a measured spectrum to a vehicle-sized (4 door passenger sedan) ground object moving at a speed of up to 60 miles/hr.” pg. 6

“It is also desired to develop spectral imaging sensor solutions that will enable collection of spectral data on ground objects moving at a ground speed of up to 60 mph.” pg. 10

Offerors are encouraged to propose architectures that make use of all sensor modalities available on the payload to provide solutions that enable the desired capability.

**Question 12:** Page 19 requires submittals to be uploaded to specified ONR website, and further specifies the content of the "subject line of the email." The upload form is pasted below and no field is titled "subject." In which field are the specified words to be inserted? Also, please confirm that I can submit all four papers (three white papers and the additionally required document) in one zipped upload.

**Response 12:** We regret the error – this is being corrected. The paragraph should have said: Copies - One (1) electronic copy in Adobe PDF or Word 2007 uploaded to the ONR ISR 30a website provided below. The Purpose field of the form should read: "ONR BAA 13-018 White Paper Submission." This field could also be used to specify the task addressed.

You can submit the documents together as one zipped file, but please clearly identify what is included in the zip file in the Document Type and Document Description fields so we can verify we received what you uploaded. If you prefer to have separate confirmation emails, you will have to upload them individually.

**Question 13:** Since all white papers shall be uploaded to the ISR Upload Site, is there any issue with including FOUO, ITAR restricted data in our white paper.

**Response 13:** The site is a restricted, limited access, safe upload site for our proposals - access is only to ISR Program Management. All restricted or ITAR data should be properly marked, as always.

**Question 14:** Can you let us know the estimated time phasing of the three tasks? Will they start all together or will Task 1 be front loaded while the other Tasks initiate sequentially?

**Response 14:** There is a yearly SPRITE budget projection provided on page 16 of the BAA. It is anticipated that Offerors will propose time phasing of tasks within this overall budget envelope.

**Question 15:** Can you let us know rough plans regarding the ratio of the funding of the three tasks? For example, Task 1 may get 50% and the other two tasks get approximately 25%?

**Response 15:** This cannot be determined until the proposed solutions are received and evaluated.

**Question 16:** Are you available for a short call to discuss these questions?

**Response 16:** Even though the White Papers will be received on 12-AUG discussions cannot take place until after the review process has been completed. Any potential discussion will be limited for clarification purposes if needed after white paper evaluations are complete.

If you have specific questions you may submit them via email, realizing questions and answers will have to be posted as an amendment to the BAA for all interested parties to review. You may want to visit the FBO site and review the last amendments as you may find the answers already posted.

**Question 17:** Can the UAV fly at a 1 km radius (or even 0.5 km) from center or does it have to be at the 2 km radius on the outer periphery?

**Response 17:** The UAV could fly at a smaller radius, but would not be advisable to plan on flying at either extreme continuously. Offerors can assume, and identify, a midway radius for their proposed solution.

**Question 18:** Can we assume that the Boeing Insitu RQ-21A Integrator flies at its cruise speed of 55 knots, or would it's top speed of 80 knots be more appropriate?

**Response 18:** Offerors can assume a cruising speed for design purpose. Offerors invited to provide full proposals should identify their assumptions and identify any risks associated with diverging from these assumptions.