

DARPA/MTO BAA HR001117S0043
Frequently Asked Questions
September 1, 2017

Q1: Can a TA1 solution rely on intimate protocol or waveform knowledge, e.g. how to demodulate the signal?

A1: Per the BAA, during evaluation, the government team may train and evaluate your system with additional waveform types not included in the previously distributed dataset.

Q2: Should learned features include only the RF signal, or also include characteristics of the signal collection environment?

A2: The learned features should emphasize the RF signal and be robust to environmental variations. There is no requirement to detect or label environmental characteristics, but this additional capability would be positive.

Q3: Can you provide examples of “important”?

A3: The definition of importance can vary across problem sets. An incomplete list of examples are provided below. During development of your system you may create your own definitions of importance for testing.

1. Signals that are anomalous relative to the majority of other signals present
2. The presence of a repetitious GPS signal amongst non-repetitious GPS signals
3. The presence of a mobile WiFi access-point
4. The presence of communications signals in a band where only radar signals are expected (or vice versa)

Q4: Does the TA2 system need pre-programmed knowledge of common signals to understand salience (e.g. radar signal in a communications band)?

A4: No.

Q5: Can we propose to re-train the Task 2A system under several Task 2B control settings?

A5: Yes.

Q6: Will sample GFI data be available for proposal writing?

A6: No.

Q7: Is the data classified or are there any other restrictions on the data?

A7: The data is unclassified. It is unknown at this time whether any other restrictions, such as For Official Use Only (FOUO) will apply to the data sets. It is our desire to create a public dataset.

Q8: How will datasets be disseminated?

A8: At this time two dataset dissemination options are being considered:

- 1) Download via the internet
- 2) Distributed via portable (i.e. shippable) hard drives

Q9: Will TA1 datasets include data gathered over non-consecutive days, under different conditions, using different equipment, and across different locations?

A9: Yes.

Q10: Will the training data labels have errors?

A10: Yes, but no intentional errors.

Q11: What type of equipment will be used to record GFI datasets?

A11: The type of equipment used cannot be specified at this time.

Q12: What labels beyond important will be provided on TA2 GFI data?

A12: It is unknown at this time, what additional information will be provided in the in the TA2 GFI dataset.

Q13: For TA2, will signals from multiple antennas be available simultaneously?

A13: Yes, the TA3 provided hardware is expected to have multiple phase coherent receivers.

Q14: Will the training data set include all of the evaluation data?

A14: The government team will withhold some data specifically for the purpose of evaluation.

Q15: What does "streaming" data mean during online evaluation?

A15: Streaming refers to samples which are provided in real-time from a device such as a RF receiver. It does not mean that the data is hosted online.

Q16: Can the real-time constraint on Task 1A be interpreted as latency?

A16: Yes.

Q17: Without a SWAP limit on computation, why is achieving real-time an important factor for TA1?

A17: The proposed computational hardware must be affordable under the RFMLS program. Additionally many algorithmic solutions may not be able to achieve real-time simply through adding additional processors.

Q18: The TA2 P_{FA} of 0.5 seems high. Can we propose solutions that do better?

A18: Achieving the P_{FA} could be difficult due to the small fraction of signals that are important, and the desired P_D on important signals.

The metric permits one unimportant signal for every two that you declare important. You may propose solutions that do better.

Q19: Does the probability of detection metric given for TA2 apply both to anomalous as well as important signals?

A19: Yes.

Q20: How should TA1/TA2 & TA3 estimate level of effort associated with inter-TA interaction?

A20: Proposers are expected to clearly identify the tasks and level of effort associated with inter-TA interaction.

There is no restriction on TA1/TA2 and TA3 proposers discussing what the expected level of interaction is.

Q21: Is there any preference on team size?

A21: Proposers should propose what they believe is the appropriate team size and composition to address the tasks of this BAA.

Q22: Is there a definition for technology transition given that this program calls for 6.2 research?

A22: Examples of transition could include use of the technology in other research efforts as well as publication. Transition need not strictly refer to use in an operational DoD system.

Q23: Is publication about the TA3 hardware allowed?

A23: Publication restrictions related to TA3 hardware will ultimately depend on the TA3 hardware selected.