



Microsystems Technology Office
Broad Agency Announcement
Atomic-Photonic Integration (A-PhI)
HR001118S0053
July 25, 2018

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ATTACHMENT 1: Cost Volume Proposer Checklist
 ATTACHMENT 2: Proposal Summary Slide Template

PART I: OVERVIEW INFORMATION

- **Federal Agency Name:** Defense Advanced Research Projects Agency (DARPA), Microsystems Technology Office (MTO)
- **Funding Opportunity Title:** Atomic-Photonic Integration (A-PhI)
- **Announcement Type:** Initial Announcement
- **Funding Opportunity Number:** HR001118S0053
- **Catalog of Federal Domestic Assistance Numbers (CFDA):** 12.910 Research and Technology Development.
- **Dates:** (All times listed herein are Eastern Time)
 - Posting Date: July 25, 2018
 - Proposers Day: August 1, 2018
 - Abstract Due Date: August 16, 2018
 - FAQ Submission Deadline: September 20, 2018
 - Proposal Due Date: September 27, 2018
 - Estimated period of performance start: March 2019
- **Concise description of the funding opportunity:** The DARPA Microsystems Technology Office is soliciting research proposals for the development of a new class of atom-based systems utilizing integrated photonics and trapped atoms to enable high-performance, robust, portable clocks and gyroscopes.
- **Anticipated funding type:** 6.1 and 6.2
- **Anticipated Funding Available for Award:** No information will be provided to proposers.
- **Types of instruments that may be awarded:** Procurement contract, grant, cooperative agreement or other transaction.
- **Agency contact:**
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PART II: FULL TEXT OF ANNOUNCEMENT

I. Funding Opportunity Description

The Defense Advanced Research Projects Agency (DARPA) often selects its research efforts through the Broad Agency Announcement (BAA) process. This BAA is being issued, and any resultant selection will be made, using the procedures under Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016 and 2 C.F.R. § 200.203. Any negotiations and/or awards will use procedures under FAR 15.4, Contract Pricing. Proposals received as a result of this BAA shall be evaluated in accordance with evaluation criteria specified herein through a scientific review process.

DARPA BAAs are posted on the Federal Business Opportunities (FedBizOpps) website, <http://www.fbo.gov/>, and, as applicable, the Grants.gov website at <http://www.grants.gov/>. The following information is for those wishing to respond to the BAA.

The Microsystems Technology Office at DARPA seeks innovative proposals for: 1) the development of portable Photonic Integrated Circuits (PICs) to reduce the complexity of trapped-atom-based high-performance Position, Navigation, and Timing (PNT) devices; and 2) proving the feasibility and advancing the development of a trapped-atom gyroscope: a matter-wave analogue of the interferometric fiber-optic gyroscope. Proposed research should investigate innovative approaches that enable revolutionary advances in science, devices, or systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

A. Background

Position, Navigation, and Timing (PNT) is a critical resource for all Department of Defense (DoD) missions, affecting areas such as communications, navigation, reconnaissance, and electronic warfare (EW). Typically, PNT needs are met using the Global Positioning System (GPS). However, GPS signals are vulnerable to a variety of disruption methodologies, and a backup to GPS is essential. Although in the absence of GPS, tactical-grade clocks and tactical-/navigation-grade Inertial Measurement Units (IMUs) can currently provide GPS-like accuracy for the short term, longer-term, GPS-independent strategies are required.

B. Program Description

The Atomic-Photonic Integration (A-Phi) program will develop trapped-atom based, high performance PNT devices and reduce the complexity of these atomic systems using PICs. These PICs will replace the optical assembly behind atomic physics devices, while still enabling the necessary trapping, cooling, manipulation, and interrogation of atoms.

Atomic systems are the basis for the most sensitive and accurate angle sensors¹ and clocks demonstrated^{2,3,4}. Among these atomic systems, those that use trapped atoms have the potential

¹ *Classical and Quantum Gravity* 17 (12), 2385, 2000

to be made portable while still maintaining their accuracy due to the atomic trap's small size and the inherent isolation a trap offers an atomic system from the environment (especially from acceleration). Currently, these systems are large due to the complexity of the optical systems used to create the trap. Historical approaches to miniaturization of the hundreds to thousands of optical components present in these benchtop systems have relied on removing optical elements, miniaturizing the remaining elements, and then tightly integrating them in a small package. Although this has led to more compact atomic clocks and gyroscopes, the resulting systems suffer from degraded performance and a heavy reliance on maintaining very tight optical alignment, causing both poor environmental robustness and poor tolerance to design errors. The current approach makes miniaturized atomic systems difficult to manufacture at a reasonable cost.

PICs have been the subject of many recent developments, demonstrating that they can replace optical systems with readily-manufacturable and low-cost chips that have none of the alignment sensitivity of conventional free-space optics. Such examples include on-chip optical frequency combs based on microresonators⁵, optical frequency synthesis⁶, novel and efficient on-/off- chip coupling⁷, wavelength demultiplexers⁸, and on-chip phased arrays for dynamic manipulation of light fields⁹.

A-PhI aims to demonstrate that compact PICs can replace the optical bench of conventional free space optics for high-performance trapped-atom gyroscopes and trapped-atom clocks without degrading the performance of the underlying physics package. A-PhI will also demonstrate proof-of-concept trapped atom gyroscopes, a matter-wave analogue of the interferometric fiber-optic gyroscope¹⁰. This will not only lead to an unprecedented reduction in system size, but will also generate an order of magnitude improvement in angular sensitivity and dynamic range over its free-space based predecessor. The optical bench of these gyroscopes must be amenable to being replaced with a PIC device in subsequent research.

A-PhI will demonstrate the most significant technical hurdle in the development of portable, high-performance, navigation-and-timing systems: the miniaturization of the optics of atomic systems without a decrease in performance. Subsequent work will be required to incorporate the necessary compact-and-robust lasers and electronics to achieve a high-performance, portable PNT system.

C. Program Structure and Schedule

A-PhI is a two phase (base 18 months, option 18 months), three year program, which includes both proof of concept and physics integration. Quantitative and progressive measurements,

² *Phys. Rev. Lett.* **113**, 260801, 2014.

³ *Science* **358** (6359), 90, 2017

⁴ *Phys. Rev. A* **89**, 050501(R), 2014

⁵ *Optics Letters* **43**(7), 1527, 2018

⁶ *Nature* **557**, 81, 2018

⁷ *Scientific Reports* **7**, 2019, 2017

⁸ *ACS Photonics*, **5**, 301, 2018

⁹ *Opt. Lett.* **39**, 4575, 2014; *Opt. Lett.* **42**, 21, 2017; *Optics Express* **25**, 2511, 2017

¹⁰ *New J. Phys.* **17** 092002 2015; *Phys. Rev. Lett.* **99**, 173201, 2007; *Rev. Sci. Instrum.* **88**, 013102 2017; *J Phys. B.*, **50**, 6, 2017

milestones, and deliverables in each phase will assess progress towards achieving the final program objectives.

DARPA seeks innovative proposals in the following two Technical Areas (TA):

Technical Area One: Development of a photonic integrated clock prototype. Phase 1 will focus on the demonstration of PIC-based atom cooling and trapping, and the development of a low-phase-noise local oscillator. Phase 2 will focus on integration of the components (not including electronics and laser sources) and demonstration of robust clock performance.

Technical Area Two: Development of a trapped-atom gyroscope based on a Sagnac interferometer architecture. Phase 1 will focus on the development of the trapped-atom gyroscope architecture. Phase 2 will focus on scaling the trapped-atom physics architecture to a larger enclosed area with greater contrast. A follow-on BAA is expected to be issued during Phase 2, which will focus on the translation of the developed trap architectures into a PIC format. The optical bench developed in Phase 2 must, therefore, be amenable to replacement with a PIC device.

DARPA expects to fund investigation of a variety of approaches in Phase 1 of the A-Phi program, and will continue funding the most promising candidate technologies in Phase 2. While entities may submit proposals to both TA1 and TA2, individual proposals may address either TA1 or TA2, but not both Technical Areas.

D. Technical Areas

Technical Area 1: Clock

This technical area will focus on translating known trap physics to a PIC-based architecture. This will require a PIC that delivers the cooling, trapping, and clock light (as well as any re-pump light, if required). This, in turn, requires advances in larger-area on-/off-chip couplers, as well as on-chip polarization control, to allow for proper trapping, manipulation, and interrogation of atomic states. In addition, a narrow-linewidth, on-chip oscillator at the clock frequency will need to be developed.

Phase 1: Base Period (18 months)

Phase 1 will demonstrate PIC-based laser cooling and atom trapping in a configuration consistent with the clock operation proposed for Phase 2. The photonic interface's characteristics (polarization, beam spatial mode, wavelengths, orientation, etc.) should be compatible with achieving the Phase 2 metrics. A critical development in Phase 1 will be the demonstration of an on-chip oscillator (clock laser) with very low phase-noise characteristics in the optical regime. This includes the development of all the necessary components used to generate an accurate microwave output from the clock laser, which includes a fully-stabilized frequency comb.

Phase 1 requires demonstration of the following components of the physics package, but not necessarily together in a single package:

- a. Laser cooling, trapping, and all necessary optical manipulation of the proposed clock, utilizing a photonic interface.

- b. A clock laser oscillator.
- c. Components necessary to generate stable microwaves from the above clock laser.

In Phase 1 the clock components are not required to be integrated and therefore the physics package can consist of all separated components that are representative of those to be integrated in subsequent phases. Power conditioning, control electronics, and laser systems are not included in the physics package. If the laser requires frequency narrowing external to the laser cavity, then the components required for the narrowing should be considered part of the A-PhI physics package. Although the development of a compact atomic clock is not a part of this solicitation, the goal of the program is to enable a system where all of the components are miniaturized. Therefore the amenability of the proposed laser component to future miniaturization will be considered when evaluating the proposed solutions. Proposals should identify the lasers that will be used. At the conclusion of Phase 1: the contractor will present a detailed analysis, based on simulation and modeling, as well as Phase 1 test data, demonstrating that the technology is capable of achieving the Phase 2 program objectives. The analysis will detail the required laser intensity and frequency for each laser beam, as a function of time sequencing through the clock measurement cycle, and this should match the demonstrations on the components. The contractor will also measure the sensitivity of their oscillator with respect to acceleration, temperature, and vibration frequency.

Phase 2: Option (18 months)

Phase 2 will develop a PIC-based trapped-atom clock with both atom cooling and trapping integrated with the optical oscillators on a PIC. The final demonstration will be of an integrated physics package that meets the Phase 2 program metrics. The physics package will be tested for performance and environmental stability at a government testing facility to be determined at a future date.

The Phase 2 physics package is composed of vacuum components (pumps, atomic sources, and vapor pressure control), magnetic shielding, electric and magnetic field sources for manipulating and trapping atoms or ions, temperature sensors and actuators, all frequency references including external cavities or length standards, frequency combs (TA1), non-linear photonics (e.g. second harmonic generation), detectors, optics (to be minimized), PICs to laser cool, trap and interrogate atoms, and the optical oscillator (clock laser).

The physics package does not include rack-mounted electronics, laser sources for cooling and trapping atoms, or controls for laser modulation. It is anticipated that the PIC will be connected to the rest of the components required for clock operation via a minimum of optical fibers and electrical connections.

Technical Area 2: Gyroscope

The focus of this technical area will be to develop the appropriate trapped-atom physics for a gyroscope. This will require the creation of an atom trapping architecture that enables a confined atomic Sagnac interferometer, an atomic analog to interferometric fiber-optic gyroscope. Success will require the advancement of atom trapping techniques and the study of detrimental loss sources and interactions. Once the atomic Sagnac interferometers are developed, the trapping architecture will be reproduced with PICs. The development of PICs to trap and interrogate

atoms for gyroscope may be the subject of a future BAA and **should not** be proposed in response to the current solicitation

Phase 1: Base Period (18 months)

Phase 1 will develop and demonstrate a trapped-atom interferometer capable of being scaled to the final program goals. It is expected that the proposers will characterize and improve the atom trap properties, such as atom lifetime, matter-wave coherence time, atom-trap orientation sensitivity, as well as both the size and power required to operate the trap. Successful transition into the option period will be contingent upon meeting the metrics of Phase 1 and showing a feasible path to achieving Phase 2 metrics, especially the scaling of the area enclosed and trap operation compatible with a PIC-architecture.

Phase 2: Option 1 (18 months)

Phase 2 will develop and demonstrate trapped-atom interferometers that are consistent with a high-performance gyroscope. The enclosed area and atom trap properties will need to be improved.

Phase 3: For reference only – Not to be proposed

It is anticipated that there will be a new solicitation published during Phase 2 to translate the gyroscope trap's optical train into a PIC format. A proposer's day will be held during which the performers who have advanced into TA2 Phase 2 will present their trap requirements to the research community for incorporation into proposals submitted to the new solicitation.

Phase 3 will develop and demonstrate an integrated physics package, comprising a PIC based atom-trap gyroscope, vacuum, components for thermal control, and any magnetic shielding. The physics package's performance and environmental stability will be tested at a government testing facility to be determined at a future date. The Phase 3 metrics shown in Table 2 are intended as a guide for performance metrics during Phase 1 and 2 of TA2.

E. Program Metrics and Milestones

A-PhI program metrics are presented in Tables 1 and 2 for TA1 and TA2, respectively. Additional notes below the tables provide detail describing the metrics. All proposals should provide compelling justification for their ability to meet each metric in the proposed technical area and describe, explicitly, how these metrics will be measured.

Table 1: A-Phi Technical Area 1 Program Metrics

TA1	Phase 1 Proof of Concept	Phase 2 Integrated Physics	Notes
Demonstrations	Photonics, source, oscillator	Clock system	
Volume	½ liter Sum of components	½ liter Physics package	(1)
Max free-space optics	3	1	(2)
Power	10 W (sum of component inputs)	10 W (heat load in ½ liter)	(3)
Frequency Instability	$\sigma_y(\tau) < 1 \times 10^{-14}$ $0.01 \text{ s} < \tau < 10 \text{ s}$	$\sigma_y(\tau) < 1 \times 10^{-14}/\tau^{1/2}$ $1 \text{ s} < \tau < 100,000 \text{ s}$	(4)
Phase Noise (100 Hz offset from carrier)	$L(f) < -20 \text{ dBc/Hz}$ (optical carrier)	$L(f) < -120 \text{ dBc/Hz}$ (10 GHz carrier)	(5)
Phase Noise (10 kHz offset from carrier)	$L(f) < -60 \text{ dBc/Hz}$ (optical carrier)	$L(f) < -150 \text{ dBc/Hz}$ (10 GHz carrier)	(5)
Frequency Drift	N/A	$< 10^{-16}/\text{month}$	
Single-Frequency Output	-	10 MHz - 10 GHz	(6)
Operating temperature	0 - 50 °C Oscillator measurement	0 - 50 °C $< 1 \times 10^{-16}$ stability over 10 °C	(7)
Acceleration invariance	Measure oscillator performance under 1 g (3 tests: 0, 90, 180 degrees)	$< 1 \times 10^{-16}$ 1 g (3 tests: 0, 90, 180 degrees)	(8)
Vibration	0.01 g ² /Hz (10 Hz to 1000 Hz) Measure induced phase noise of oscillator with vibration	$< 1 \times 10^{-16}$ 0.01 g ² /Hz (10 Hz to 1000 Hz)	
Magnetic Stability	-	$< 1 \times 10^{-16} / \text{gauss}$	

Table 2: A-Phi Technical Area 2 Program Metrics

TA2	Phase 1 Proof-of-concept	Phase 2 Gyro Scaling	Phase 3 Integrated Gyro	Notes
Demonstrations	Atom Interferometer	Gyro Operation	A-Phi Gyro	
System Volume	-	½ liter (sum of components)	½ liter	(1)
Max free-space optics	-	-	1	(2)
Power	10 W (trap and laser power)	10 W (sum of components)	10 W (heat load in ½ Liter)	(3)
Sagnac Area	10 mm ² @ 10 % contrast	100 mm ² @ 80 % contrast	-	(9)
Bias Stability	-	-	<1 µdeg/hr	
Allan Deviation, σ, of phase, ϕ, or rate, Ω	$\sigma_\phi < 100 \text{ mrad} \cdot \text{s}^{1/2}$ for 1-3600 s	$\sigma_\phi < 30 \text{ mrad} \cdot \text{s}^{1/2}$ for 1-3600 s	$\sigma_\Omega < 1 \text{ µdeg/hr}^{1/2}$ for 1-3600 s	(10)
Scale Factor (SFS) or Phase repeatability	100 mrad/s 2/24/2 hr on/off/on	10 mrad/s 2/24/2 hr on/off/on	1 ppb (SFS)	(10,11)
Range of Operation	-	-	10 deg/s any orientation	
Acceleration invariance	10° tip over test	1 mrad (3 tests: 0°, 90°, 180°)	<1 µdeg/hr 1 g any direction	(8,12)
Temperature Stability	-	10 ppb/°C of interferometer area measurement	0 - 50 °C <1 µdeg/hr over 10 °C	(13)
Mechanical Vibration	-	0.01 g ² /Hz (10 Hz to 1000 Hz)	0.01 g ² /Hz (10 Hz to 1000 Hz)	
Magnetic field stability	-	-	<1 µdeg/hr for 1 gauss	

Notes:

- 1) For TA1 Phase 1 and TA2 Phase 2, volume is the sum of the separated components, representative of those to be integrated in subsequent phases, in a laboratory (optical table) configuration. The TA1 Phase 2 and TA2 Phase 3 volume is a parallelepiped contains the entire integrated physics package. The integrated physics package includes vacuum components and vacuum controllers, atomic source vapor pressure control, detectors, frequency combs, the oscillator (clock laser), laser frequency narrowing cavities, the PIC interface for cooling and trapping atoms, thermal control, and shielding. This does not include rack-mounted electronics, the laser sources for cooling and trapping atoms, or the laser modulation controls.
- 2) The ultimate vision of the program is a fully-planar and fabricatable atomic system. As such, free-space optics are defined as:

- a. Discrete optical elements, which convert an unguided, free-propagating spatial mode of light to another free-propagating spatial mode;
 - i. Examples include, but are not limited to: lenses, mirrors, prisms, and polarizers.
- b. Thin, planar-fabricated optics (e.g. meta-material lenses, micro-lens arrays, and gratings) may be excluded if they are easily integrable and significantly lower both the cost and complexity of the design.

The following are considered acceptable exceptions:

- c. Optics used exclusively for diagnostic purposes and that are not required to meet the program metrics.
- 3) The power is the sum of all optical and electrical power (current times voltage) input to the physics package to enable clock or gyroscope operation.
 - 4) The frequency instability in Phase 1 is that of the oscillator: the oscillator should support clock operation consistent with the Phase 2 metrics and, therefore, the performance should be consistent with the loop time of the atom in the proposed clock configuration. The Phase 2 frequency instability is the output of the integrated physics clock.
 - 5) The phase-noise spectrum of the oscillator should be consistent with the required Allan deviation of the clock. The Phase 1 metric is at an optical carrier, consistent with clock operation. The Phase 2 phase noise is measured at a down-converted 10 GHz carrier.
 - 6) Single-frequency output is to be within the range given here. It is not expected to be tunable.
 - 7) The operating temperature is specific to the oscillator in Phase 1 and includes the physics package in Phase 2. It is expected that the oscillator performance will be measured over the specified temperature range and an oscillator temperature coefficient (tempco) will be determined.
 - 8) One test is in typical orientation with a vertical axis pointing along the gravity vector. The second test would have the previously vertical axis, now pointing horizontally (90 degrees), and the third test would have the first vertical axis pointing upside down (180 degrees from the vertical). For TA1 Phase 1, the measurement is only on the oscillator.
 - 9) The area enclosed is the effective area of the interferometer, not necessarily the physical area, in which multiple traversals of the trap or high-momentum beam splitting may be used to attain the metric. For example: an interferometric fiber-optic gyroscope may use multiple turns of fiber to increase the effective area enclosed, or a ring laser gyro may use a high-finesse cavity to increase the effective area enclosed.
 - 10) Performers are expected to deliver an Allan deviation of the interferometer's phase in Phases 1 and 2. In Phase 3 performers will be expected to deliver an Allan deviation of the angle change.
 - 11) For Phase 1 and 2, performers are expected to measure the phase repeatability, or phase retrace, of the atom interferometer while operating the system for 2 hours, then turning all systems off for 24 hours, followed by operation of all systems for another 2 hours.
 - 12) Tip over test is measured as the deflection from a gravity-aligned vertical axis, and the measurement should detail and explain the interferometer response.
 - 13) In Phase 1 the temperature coefficient for the interferometer area needs to be measured, while in Phase 2 the temperature coefficient needs to meet the metric listed.

F. Deliverables

All performers shall deliver monthly financial and technical reports. All performers shall prepare and submit briefing materials and participate in monthly technical reviews, either via telecon or at the contractor's site at the discretion of DARPA. Note: items provided to the Government for independent testing will be returned to the performer if requested. All performers shall travel to, and support, semi-annual program-wide reviews at locations TBD in the continental U.S.

G. Government Furnished Property (GFP)

No GFP is explicitly offered as part of the BAA. If GFP is requested, it should be identified in the proposal, along with source description and need-by date.

II. Award Information

A. General Award Information

Multiple awards are anticipated. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation, and to make awards without discussions with proposers. The Government also reserves the right to conduct discussions if it is later determined to be necessary. If warranted, portions of resulting awards may be segregated into pre-priced options. Additionally, DARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for award. In the event that DARPA desires to award only portions of a proposal, negotiations may be opened with that proposer. The Government reserves the right to fund proposals in phases with options for continued work at the end of one or more of the phases, as applicable.

Awards under this BAA will be made to proposers on the basis of the evaluation criteria listed below (see section labeled "Application Review Information," Sec. V.), and program balance to provide overall value to the Government. The Government reserves the right to request any additional, necessary documentation once it makes the award instrument determination. Such additional information may include but is not limited to Representations and Certifications (see Section VI.B.4., "Representations and Certifications"). The Government reserves the right to remove proposers from award consideration should the parties fail to reach agreement on award terms, conditions and cost/price within a reasonable time or the proposer fails to timely provide requested additional information. Proposals identified for negotiation may result in a procurement contract, grant, cooperative agreement, or other transaction, depending upon the nature of the work proposed, the required degree of interaction between parties, whether or not the research is classified as Fundamental Research, and other factors.

Proposers looking for innovative, commercial-like contractual arrangements are encouraged to consider requesting Other Transactions. To understand the flexibility and options associated

with Other Transactions, consult <http://www.darpa.mil/work-with-us/contract-management#OtherTransactions>.

In accordance with 10 U.S.C. § 2371b(f), the Government may award a follow-on production contract or Other Transaction (OT) for any OT awarded under this BAA if: (1) that participant in the OT, or a recognized successor in interest to the OT, successfully completed the entire prototype project provided for in the OT, as modified; and (2) the OT provides for the award of a follow-on production contract or OT to the participant, or a recognized successor in interest to the OT.

In all cases, the Government contracting officer shall have sole discretion to select award instrument type, regardless of instrument type proposed, and to negotiate all instrument terms and conditions with selectees. DARPA will apply publication or other restrictions, as necessary, if it determines that the research resulting from the proposed effort will present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Any award resulting from such a determination will include a requirement for DARPA permission before publishing any information or results on the program. For more information on publication restrictions, see the section below on Fundamental Research.

B. Fundamental Research

It is DoD policy that the publication of products of fundamental research will remain unrestricted to the maximum extent possible. National Security Decision Directive (NSDD) 189 defines fundamental research as follows:

‘Fundamental research’ means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

As of the date of publication of this BAA, the Government expects that program goals as described herein may be met by proposers intending to perform fundamental research and proposers not intending to perform fundamental research or the proposed research may present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Based on the nature of the performer and the nature of the work, the Government anticipates that some awards will include restrictions on the resultant research that will require the awardee to seek DARPA permission before publishing any information or results relative to the program.

Proposers should indicate in their proposal whether they believe the scope of the research included in their proposal is fundamental or not. While proposers should clearly explain the intended results of their research, the Government shall have sole discretion to select award instrument type and to negotiate all instrument terms and conditions with selectees. Appropriate

clauses will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate. This clause can be found at <http://www.darpa.mil/work-with-us/additional-baa>.

For certain research projects, it may be possible that although the research being performed by the awardee is restricted research, a subawardee may be conducting fundamental research. In those cases, it is the awardee's responsibility to explain in their proposal why its subawardee's effort is fundamental research

III. Eligibility Information

A. Eligible Applicants

All responsible sources capable of satisfying the Government's needs may submit a proposal that shall be considered by DARPA.

1. Federally Funded Research and Development Centers (FFRDCs) and Government Entities

a) FFRDCs

FFRDCs are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they meet the following conditions: (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector. (2) FFRDCs must provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement's terms and conditions. This information is required for FFRDCs proposing to be awardees or subawardees.

b) Government Entities

Government Entities (e.g., Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations. Government entities must clearly demonstrate that the work is not otherwise available from the private sector and provide written documentation citing the specific statutory authority and contractual authority, if relevant, establishing their ability to propose to Government solicitations.

c) Authority and Eligibility

At the present time, DARPA does not consider 15 U.S.C. § 3710a to be sufficient legal authority to show eligibility. While 10 U.S.C. § 2539b may be the appropriate statutory starting point for some entities, specific supporting regulatory guidance, together with evidence of agency approval, will still be required to fully establish eligibility. DARPA will consider FFRDC and Government entity eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the proposer.

(1) Non-U.S. organizations and/or individuals may participate to the extent that such participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances.

B. Organizational Conflicts of Interest

FAR 9.5 Requirements

In accordance with FAR 9.5, proposers are required to identify and disclose all facts relevant to potential OCIs involving the proposer's organization and *any* proposed team member (subawardee, consultant). Under this Section, the proposer is responsible for providing this disclosure with each proposal submitted to the BAA. The disclosure must include the proposer's, and as applicable, proposed team member's OCI mitigation plan. The OCI mitigation plan must include a description of the actions the proposer has taken, or intends to take, to prevent the existence of conflicting roles that might bias the proposer's judgment and to prevent the proposer from having unfair competitive advantage. The OCI mitigation plan will specifically discuss the disclosed OCI in the context of each of the OCI limitations outlined in FAR 9.505-1 through FAR 9.505-4.

Agency Supplemental OCI Policy

In addition, DARPA has a supplemental OCI policy that prohibits contractors/performers from concurrently providing Scientific Engineering Technical Assistance (SETA), Advisory and Assistance Services (A&AS) or similar support services and being a technical performer. Therefore, as part of the FAR 9.5 disclosure requirement above, a proposer must affirm whether the proposer or *any* proposed team member (subawardee, consultant) is providing SETA, A&AS, or similar support to any DARPA office(s) under: (a) a current award or subaward; or (b) a past award or subaward that ended within one calendar year prior to the proposal's submission date.

If SETA, A&AS, or similar support is being or was provided to any DARPA office(s), the proposal must include:

- The name of the DARPA office receiving the support;
- The prime contract number;
- Identification of proposed team member (subawardee, consultant) providing the support; and
- An OCI mitigation plan in accordance with FAR 9.5.

Government Procedures

In accordance with FAR 9.503, 9.504 and 9.506, the Government will evaluate OCI mitigation plans to avoid, neutralize or mitigate potential OCI issues before award and to determine whether it is in the Government's interest to grant a waiver. The Government will only evaluate OCI mitigation plans for proposals that are determined selectable under the BAA evaluation criteria and funding availability.

The Government may require proposers to provide additional information to assist the Government in evaluating the proposer's OCI mitigation plan.

If the Government determines that a proposer failed to fully disclose an OCI; or failed to provide the affirmation of DARPA support as described above; or failed to reasonably provide additional information requested by the Government to assist in evaluating the proposer's OCI mitigation plan, the Government may reject the proposal and withdraw it from consideration for award.

C. Other Eligibility Criteria

1. Collaborative Efforts

Collaborative efforts/teaming are encouraged.

IV. Application and Submission Information

PROPOSERS ARE CAUTIONED THAT EVALUATION RATINGS MAY BE LOWERED AND/OR PROPOSALS REJECTED IF PROPOSAL PREPARATION (PROPOSAL FORMAT, CONTENT, ETC.) AND/OR SUBMITTAL INSTRUCTIONS ARE NOT FOLLOWED.

A. Address to Request Application Package

This announcement, any attachments, and any references to external websites herein constitute the total solicitation. If proposers cannot access the referenced material posted in the announcement found at www.darpa.mil, contact the administrative contact listed herein.

B. Content and Form of Application Submission

1. Abstract Format

Abstracts should follow the format described below in this section. The cover sheet should be clearly marked "ABSTRACT" and the total length of Section II should not exceed 8 pages. All pages shall be printed on 8-1/2 by 11 inch paper with type not smaller than 12 point. Smaller font may be used for figures, tables and charts. The page limitation for abstracts includes all figures, tables, and charts. No formal transmittal letter is required. All abstracts must be written in English.

Section I. Administrative

A. Cover sheet to include:

- (1) BAA number (HR001118S0053);
- (2) Technical area(s);
- (3) Lead Organization submitting abstract;
- (4) Type of organization, selected among the following categories:
Large Organization, Small Disadvantaged Organization, Other Small Organization, HBCU, MI, Other Educational, Other Nonprofit;
- (5) Proposer's internal reference number (if any);
- (6) Other team members (if applicable) and type of organization for each;

- (7) Proposal title;
- (8) Technical point of contact to include:
Salutation, last name, first name, street address, city, state, zip code (+4), telephone, fax (if available), electronic mail;
- (9) Administrative point of contact to include:
Salutation, last name, first name, street address, city, state, zip code (+4), telephone, fax (if available), electronic mail;
- (10) Total funds requested from DARPA, and the amount of cost share (if any); AND
- (11) Date proposal abstract was submitted.

(Note: An official transmittal letter is not required when submitting a Proposal Abstract.)

Section II. Abstract Details

A. Innovative Claims

Summary of innovative claims for the proposed research. This section is the centerpiece of the abstract and should succinctly describe the uniqueness and benefits of the proposed approach relative to the current state-of-art alternate approaches.

B. Technical Approach

Technical rationale, technical approach, and constructive plan for accomplishment of technical goals in support of innovative claims and deliverable production.

C. Deliverables

Deliverables associated with the proposed research and the plans and capability to accomplish technology transition and commercialization. Include in this section all proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and/or prototype. If there are no proprietary claims, this should be stated. For forms to be completed regarding intellectual property, see Section IV.B.11. There will be no page limit for the listed forms.

D. Other Research

General discussion of other research in this area.

E. Cost and Schedule

Provide a cost estimate for resources (e.g. labor, materials) and any subcontractors over the proposed timeline of the project, broken down by Government fiscal year.

F. Capabilities/Management Plan

A clearly defined organization chart for the program team which includes, as applicable: (1) the programmatic relationship of team member; (2) the unique capabilities of team members; (3) the task of responsibilities of team members; (4) the teaming strategy among the team members; and (5) the key personnel along with the amount of effort to be expended by each person during each year.

2. Full Proposal Format

All full proposals must be in the format given below. Proposals shall consist of two volumes: Volume I – Technical and Management Proposal (3 sections), and Volume II – Cost Proposal (4 sections). The submission of other supporting materials along with the proposals is strongly discouraged and will not be considered for review. All pages shall be printed on 8-1/2 by 11 inch paper with type not smaller than 12 point. Smaller font may be used for figures, tables and charts. The page limitation for full proposals includes all figures, tables, and charts. Section II of Volume I, Technical and Management Proposal, shall not exceed 35 pages. There is no page limit for Volume II, Cost Proposal. All full proposals must be written in English. Separate proposals must be submitted for each TA proposed.

A summary slide of the proposed effort, in PowerPoint format, should be submitted with the proposal. A template slide is provided as Attachment 2 to the BAA. Submit this PowerPoint file in addition to Volumes I and II of your full proposal. This summary slide does not count towards the total page count.

a. Volume I, Technical and Management Proposal

Section I. Administrative

A. Cover sheet to include:

- (1) BAA number (HR001118S0053);
- (2) Technical area(s);
- (3) Lead Organization submitting proposal;
- (4) Type of organization, selected among the following categories:
Large Organization, Small Disadvantaged Organization, Other Small Organization, HBCU, MI, Other Educational, Other Nonprofit;
- (5) Proposer's internal reference number (if any);
- (6) Other team members (if applicable) and type of organization for each;
- (7) Proposal title;
- (8) Technical point of contact to include:
Salutation, last name, first name, street address, city, state, zip code (+4), telephone, fax (if available), electronic mail;
- (9) Administrative point of contact to include:
Salutation, last name, first name, street address, city, state, zip code (+4), telephone, fax (if available), electronic mail;
- (10) Total funds requested from DARPA, and the amount of cost share (if any); AND
- (11) Date proposal was submitted.

B. Official transmittal letter.

The transmittal letter should identify the BAA number, the proposal by name, and the proposal reference number (if any), and should be signed by an individual who is authorized to submit proposals to the Government.

Section II. Detailed Proposal Information

A. Statement of Work (SOW)

In plain English, clearly define the technical tasks/subtasks to be performed, their durations, and dependencies among them. The page length for the SOW will be dependent on the amount of the effort. The SOW must not include proprietary information. For each task/subtask, provide:

1. A general description of the objective (for each defined task/activity);
2. A detailed description of the approach to be taken to accomplish each defined task/activity;
3. Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.);
4. The completion criteria for each task/activity - a product, event or milestone that defines its completion.
5. Define all deliverables (reporting, data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities; AND
6. Clearly identify any tasks/subtasks (prime or subcontracted) that will be accomplished on-campus at a university, if applicable.

*Note: Each Phase of the program must be separately defined in the SOW. Include a SOW for each subcontractor and/or consultant in the **Cost Proposal Volume**. Do not include any proprietary information in the SOW(s).*

B. Results and Technology Transfer

Description of the results, products, transferable technology, and expected technology transfer. This should also address mitigation of life-cycle and sustainment risks associated with transitioning intellectual property for U.S. military applications, if applicable. See also Section IV.B.11, "Intellectual Property."

C. Technical Approach

This section is the centerpiece of the proposal and should succinctly summarize the innovative claims for the proposed research and clearly describe the proposed approach without using any jargon. This section should demonstrate that the proposer has a clear understanding of the state-of-the-art and should provide sufficient justification for the feasibility of the proposed approach(es). This section should include a detailed technical rationale, technical approach, and constructive plan for accomplishment of technical goals in support of innovative claims and deliverable creation. For example: proposed laser systems must be amenable to replacement with a PIC device.

D. Risk Analysis and Mitigation Plan

Identify the major technical and programmatic risks in the program. Include a risk matrix. For each risk, assign a probability of occurrence on a scale of 1-10, where 10 indicates a high likelihood that the risk will impact program success, as well as an assessment of impact, also on a scale of 1-10, where 10 indicates that this risk would maximally limit the program from delivering prototypes on schedule or meeting performance objectives. For each item with

total risk (likelihood × impact) exceeding 40, include a plan for mitigating the risk and assessing risk reduction.

E. Ongoing Research

Comparison with other ongoing research indicating advantages and disadvantages of the proposed effort.

F. Proposer Accomplishments

Discussion of proposer's previous accomplishments and work in closely related research areas. The proposal should describe relevant experience and cite evidence such as publications, patents, and/or products/systems.

G. Facilities

Description of the facilities that would be used for the proposed effort.

H. Teaming

Description of the formal teaming agreements, which are required to execute this program.

I. Schedules and measurable milestones

Schedules and measurable milestones for the proposed research. (Note: Measurable milestones should capture key development points in tasks and should be clearly articulated and defined in time relative to start of effort.) Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options. Additionally, proposals should clearly explain the technical approach(es) that will be employed to meet or exceed each program metric and provide ample justification as to why the approach(es) is/are feasible. The milestones must not include proprietary information.

J. Management and Key Personnel

A management plan providing detailed information regarding how the team will be formed and managed in order to execute the proposed program plan. An organization chart for the proposed effort shall be included. Identify and provide brief biographies for key personnel who will contribute to the proposed effort and the level of effort for each.

Section III. Additional Information

Information in this section may include a brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas upon which the proposal is based. Copies of not more than three (3) relevant prior papers may be included in the submission.

b. Volume II, Cost Proposal – {No Page Limit}

All proposers, including FFRDCs, must submit the following:

Section I. Administrative

Cover sheet to include:

- (1) BAA number (HR001118S0053);
- (2) Technical area(s);
- (3) Lead Organization submitting proposal;
- (4) Type of organization, selected among the following categories:
Large Organization, Small Disadvantaged Organization, Other Small Organization, HBCU, MI, Other Educational, Other Nonprofit;
- (5) Proposer's internal reference number (if any);
- (6) Other team members (if applicable) and type of organization for each;
- (7) Proposal title;
- (8) Technical point of contact to include:
Salutation, last name, first name, street address, city, state, zip code (+4), telephone, fax (if available), electronic mail (if available);
- (9) Administrative point of contact to include:
Salutation, last name, first name, street address, city, state, zip code (+4), telephone, fax (if available), and electronic mail (if available);
- (10) Award instrument requested:
Cost-Plus-Fixed Fee (CPFF), Cost-contract—no fee, cost sharing contract—no fee, or other type of procurement contract (*specify*), Grant, Cooperative Agreement, or Other Transaction;
- (11) Place(s) and period(s) of performance;
- (12) Total proposed cost separated by basic award and option(s), if any, by calendar year and by government fiscal year;
- (13) Name, address, and telephone number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office (*if known*);
- (14) Name, address, and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office (*if known*);
- (15) Date proposal was prepared;
- (16) DUNS number;
- (17) TIN number;
- (18) CAGE Code;
- (19) Subcontractor Information;
- (20) Proposal validity period (120 days is recommended); AND
- (21) Any Forward Pricing Rate Agreement, other such approved rate information, or such documentation that may assist in expediting negotiations (if available).

Attachment 1, the Cost Volume Proposer Checklist, must be included with the coversheet of the Cost Proposal.

Section II. Detailed Cost Information (Prime and Subcontractors)

The proposers', to include eligible FFRDCs', cost volume shall provide cost and pricing information (See Note 1), or other than cost or pricing information if the total price is under the referenced threshold, in sufficient detail to substantiate the program price proposed (e.g., realism and reasonableness). In doing so, the proposer shall provide, for **both the prime and each**

subcontractor, a “Summary Cost Breakdown” by phase and performer fiscal year, and a “Detailed Cost Breakdown” by phase, technical task/sub-task, and month. The breakdown/s shall include, at a minimum, the following major cost items along with associated backup documentation:

Total program cost broken down by major cost items:

A. Direct Labor

A breakout clearly identifying the individual labor categories with associated labor hours and direct labor rates, as well as a detailed Basis-of-Estimate (BOE) narrative description of the methods used to estimate labor costs;

B. Indirect Costs

Including Fringe Benefits, Overhead, General and Administrative Expense, Cost of Money, Fee, etc. (must show base amount and rate);

C. Travel

Provide the purpose of the trip, number of trips, number of days per trip, departure and arrival destinations, number of people, etc.;

D. Other Direct Costs

Itemized with costs; back-up documentation is to be submitted to support proposed costs;

E. Material/Equipment

(i) For IT and equipment purchases, include a letter stating why the proposer cannot provide the requested resources from its own funding.

(ii) A priced Bill-of-Material (BOM) clearly identifying, for each item proposed, the quantity, unit price, the source of the unit price (i.e., vendor quote, engineering estimate, etc.), the type of property (i.e., material, equipment, special test equipment, information technology, etc.), and a cross-reference to the Statement of Work (SOW) task/s that require the item/s. At time of proposal submission, any item that exceeds \$1,000 must be supported with basis-of-estimate (BOE) documentation such as a copy of catalog price lists, vendor quotes or a written engineering estimate (additional documentation may be required during negotiations, if selected).

(iii) If seeking a procurement contract and items of Contractor Acquired Property are proposed, exclusive of material, the proposer shall clearly demonstrate that the inclusion of such items as Government Property is in keeping with the requirements of FAR Part 45.102. In accordance with FAR 35.014, “Government property and title,” it is the Government’s intent that title to all equipment purchased with funds available for research under any resulting contract will vest in the acquiring nonprofit institution (e.g., Nonprofit Institutions of Higher Education and Nonprofit Organizations whose primary purpose is the conduct of scientific research) upon acquisition without further obligation to the Government. Any such equipment shall be used for the conduct of basic and applied scientific research. The above transfer of title to all equipment purchased with funds available for research under any resulting contract is not allowable when the acquiring entity is a for-profit organization;

however, such organizations can, in accordance with FAR 52.245-1(j), be given priority to acquire such property at its full acquisition cost.

F. Consultants

If consultants are to be used, proposer must provide a copy of the consultant's proposed SOW as well as a signed consultant agreement or other document which verifies the proposed loaded daily / hourly rate and any other proposed consultant costs (e.g. travel);

G. Subcontracts

Itemization of all subcontracts. Additionally, the prime contractor is responsible for compiling and providing, as part of its proposal submission to the Government, subcontractor proposals prepared at the same level of detail as that required by the prime. Subcontractor proposals include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements. If seeking a procurement contract, the prime contractor shall provide a cost reasonableness analysis of all proposed subcontractor costs/prices. Such analysis shall indicate the extent to which the prime contractor has negotiated subcontract costs/prices and whether any such subcontracts are to be placed on a sole-source basis.

All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime, which cannot be uploaded to the DARPA BAA website (<https://baa.darpa.mil>, BAAT) or Grants.gov as part of the proposer's submission, shall be made immediately available to the Government, upon request, under separate cover (i.e., mail, electronic/email, etc.), either by the proposer or by the subcontractor organization. This does not relieve the proposer from the requirement to include, as part of their submission (via BAAT or Grants.gov, as applicable), subcontract proposals that do not include proprietary pricing information (rates, factors, etc.).

A Rough Order of Magnitude (ROM), or similar budgetary estimate, is not considered a fully qualified subcontract cost proposal submission. Inclusion of a ROM, or similar budgetary estimate, may result in the full proposal being deemed non-compliant or evaluation ratings may be lowered;

H. Cost-Sharing

The amount of any industry cost-sharing (the source and nature of any proposed cost-sharing should be discussed in the narrative portion of the cost volume); AND

Note 1:

(a) "Cost or Pricing Data" as defined in FAR 15.403-4 shall be required if the proposer is seeking a procurement contract per the referenced threshold, unless the proposer requests and is granted an exception from the requirement to submit cost or pricing data. Per DoD Class Deviation 2018-O0012, dated 13 April 2018, the threshold for obtaining certified cost and pricing data is \$2,000,000. Per DFARS 215.408(5), DFARS 252.215-7009, Proposal Adequacy Checklist, applies to all proposers/proposals seeking a FAR-based award (contract).

(b) In accordance with DFARS 215.403-1(4)(D), DoD has waived cost or pricing data requirements for nonprofit organizations (including educational institutions) on cost-reimbursement-no-fee contracts. In such instances where the waiver stipulated at DFARS

215.403-1(4)(D) applies, proposers shall submit information other than cost or pricing data to the extent necessary for the Government to determine price reasonableness and cost realism; and cost or pricing data from subcontractors that are not nonprofit organizations when the subcontractor's proposal exceeds the cost and pricing data threshold at FAR 15.403-4(a)(1).

(c) Per Section 873 of the FY2016 National Defense Authorization Act (Pub L. 114-92), "Pilot Program For Streamlining Awards For Innovative Technology Projects," small businesses and nontraditional defense contractors (as defined therein) are alleviated from submission of certified cost and pricing data for new contract awards valued at less than \$7,500,000. In such instances where this "waiver" applies, proposers seeking a FAR-based contract shall submit information other than certified cost or pricing data to the extent necessary for the Government to determine price reasonableness and cost realism; and certified cost or pricing data from subcontractors that are not small businesses or nontraditional defense contractors when such subcontract proposals exceed the cost and pricing data threshold at FAR 15.403-4(a)(1).

(d) "Cost or pricing data" are not required if the proposer proposes an award instrument other than a procurement contract (i.e., cooperative agreement, grant, or other transaction).

Note 2:

Proposers are required to provide the aforementioned cost breakdown as an editable MS Excel spreadsheet, inclusive of calculations formulae, with tabs (material, travel, ODC's) provided as necessary. The Government also requests and recommends that the Cost Proposal include MS Excel file(s) that provide traceability between the Bases of Estimate (BOEs) and the proposed costs across all elements and phases. This includes the calculations and adjustments that are utilized to generate the Summary Costs from the source labor hours, labor costs, material costs, etc. input data. It is requested that the costs and Subcontractor proposals be readily traceable to the Prime Cost Proposal in the provided MS Excel file(s) – although this is not a requirement, providing information in this manner will assist the Government in understanding what is being proposed both technically and in terms of cost realism. NOTE: If the PDF submission differs from the Excel submission, the PDF will take precedence.

Section III. Other Transaction Request, if applicable

All proposers requesting an OT must include a detailed list of milestones. Each milestone must include the following:

- Milestone description
- Completion criteria
- Due date
- Payment/funding schedule (to include, if cost share is proposed, awardee and Government share amounts)

It is noted that, at a minimum, milestones should relate directly to accomplishment of program technical metrics as defined in the BAA and/or the proposer's proposal. Agreement type, expenditure or fixed-price based, will be subject to negotiation by the Agreements Officer. Do not include proprietary data.

Section IV. Other Cost Information

Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates.

The cost proposal should include identification of pricing assumptions of which may require incorporation into the resulting award instrument (i.e., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter Experts, etc.).

The proposer should include supporting cost and pricing information in sufficient detail to substantiate the summary cost estimates and should include a description of the method used to estimate costs and supporting documentation.

Cost proposals submitted by FFRDC's (prime or subcontractor) will be forwarded, if selected for negotiation, to their sponsoring organization contracting officer for review to confirm that all required forward pricing rates and factors have been used.

3. Proprietary Information

Proposers are responsible for clearly identifying proprietary information. Submissions containing proprietary information must have the cover page and each page containing such information clearly marked with a label such as "Proprietary" or "Company Proprietary." Note, "Confidential" is a classification marking used to control the dissemination of U.S. Government National Security Information as dictated in Executive Order 13526 and should not be used to identify proprietary business information.

4. Security Information

a. Unclassified Submissions

DARPA anticipates that submissions received under this BAA will be unclassified. However, should a proposer wish to submit classified information, an *unclassified* email must be sent to the BAA mailbox notifying the Technical Office PSO of the submission and the below guidance must be followed.

Security classification guidance and direction via a Security Classification Guide (SCG) and/or DD Form 254, "DoD Contract Security Classification Specification," will not be provided at this time. If a determination is made that the award instrument may result in access to classified information, a SCG and/or DD Form 254 will be issued by DARPA and attached as part of the award.

b. Classified Submissions

Classified submissions shall be transmitted in accordance with the following guidance. Additional information on the subjects discussed in this section may be found at <http://www.dss.mil/>.

If a submission contains Classified National Security Information as defined by Executive Order 13526, the information must be appropriately and conspicuously marked with the proposed classification level and declassification date. Similarly, when the classification of a submission is in question, the submission must be appropriately and conspicuously marked with the proposed classification level and declassification date. Submissions requiring DARPA to make a final classification determination shall be marked as follows:

“CLASSIFICATION DETERMINATION PENDING. Protect as though classified _____ (insert the recommended classification level, e.g., *Top Secret, Secret or Confidential*).”

NOTE: Classified submissions must indicate the classification level of not only the submitted materials, but also the classification level of the anticipated award.

Proposers submitting classified information must have, or be able to obtain prior to contract award, cognizant security agency approved facilities, information systems, and appropriately cleared/eligible personnel to perform at the classification level proposed. All proposer personnel performing Information Assurance (IA)/Cybersecurity related duties on classified Information Systems shall meet the requirements set forth in DoD Manual 8570.01-M (Information Assurance Workforce Improvement Program).

When a proposal includes a classified portion, and when able according to security guidelines, we ask that proposers send an e-mail to HR001118S0053@darpa.mil as notification that there is a classified portion to the proposal. When sending the classified portion via mail according to the instructions, proposers should submit six (6) hard copies of the classified portion of their proposal and two (2) CD-ROMs containing the classified portion of the proposal as a single searchable Adobe PDF file. Please ensure that all CDs are well-marked. Each copy of the classified portion must be clearly labeled with HR001118S0053, proposer organization, proposal title (short title recommended), and Copy _ of _.

Proposers choosing to submit classified information from other collateral classified sources (i.e., sources other than DARPA) must ensure (1) they have permission from an authorized individual at the cognizant Government agency (e.g., Contracting Officer, Program Manager); (2) the proposal is marked in accordance with the source Security Classification Guide (SCG) from which the material is derived; and (3) the source SCG is submitted along with the proposal.

Confidential and Secret Information

Use transmission, classification, handling, and marking guidance provided by previously issued SCGs, the DoD Information Security Manual (DoDM 5200.01, Volumes 1 - 4), and the National Industrial Security Program Operating Manual, including the Supplement Revision 1, (DoD 5220.22-M and DoD 5200.22-M Sup. 1) when submitting Confidential and/or Secret classified information.

Confidential and Secret classified information may be submitted via ONE of the two following methods:

- Hand-carried by an appropriately cleared and authorized courier to the DARPA CDR. Prior to traveling, the courier shall contact the DARPA Classified Document Registry (CDR) at 703-526-4052 to coordinate arrival and delivery.

OR

- Mailed via U.S. Postal Service (USPS) Registered Mail or USPS Express Mail. All classified information will be enclosed in opaque inner and outer covers and double-wrapped. The inner envelope shall be sealed and plainly marked with the assigned classification and addresses of both sender and addressee.

The inner envelope shall be addressed to:

Defense Advanced Research Projects Agency
ATTN: Program Security Officer, MTO
Reference: HR001118S0053
675 North Randolph Street
Arlington, VA 22203-2114

The outer envelope shall be sealed with no identification as to the classification of its contents and addressed to:

Defense Advanced Research Projects Agency
Security & Intelligence Directorate, Attn: CDR
675 North Randolph Street
Arlington, VA 22203-2114

Top Secret Information

Use classification, handling, and marking guidance provided by previously issued SCGs, the DoD Information Security Manual (DoDM 5200.01, Volumes 1 - 4), and the National Industrial Security Program Operating Manual, including the Supplement Revision 1, (DoD 5220.22-M and DoD 5200.22-M Sup. 1). Top Secret information must be hand-carried by an appropriately cleared and authorized courier to the DARPA CDR. Prior to traveling, the courier shall contact the DARPA CDR at 703-526-4052 to coordinate arrival and delivery.

Sensitive Compartmented Information (SCI)

SCI must be marked, managed and transmitted in accordance with DoDM 5105.21 Volumes 1 - 3. Questions regarding the transmission of SCI may be sent to the DARPA Technical Office PSO via the BAA mailbox or by contacting the DARPA Special Security Officer (SSO) at 703-812-1970.

Successful proposers may be sponsored by DARPA for access to SCI. Sponsorship must be aligned to an existing DD Form 254 where SCI has been authorized. Questions regarding SCI sponsorship should be directed to the DARPA Personnel Security Office at 703-526-4543.

Special Access Program (SAP) Information

SAP information must be marked in accordance with DoDM 5205.07 Volume 4 and transmitted by specifically approved methods which will be provided by the Technical Office PSO or their staff.

Proposers choosing to submit SAP information from an agency other than DARPA are required to provide the DARPA Technical Office Program Security Officer (PSO) written permission from the source material's cognizant Special Access Program Control Officer (SAPCO) or designated representative. For clarification regarding this process, contact the DARPA Technical Office PSO via the BAA mailbox or the DARPA SAPCO at 703-526-4102.

Additional SAP security requirements regarding facility accreditations, information security, personnel security, physical security, operations security, test security, classified transportation plans, and program protection planning may be specified in the DD Form 254.

NOTE: prior to drafting the submission, if use of SAP Information Systems is to be proposed, proposers must first obtain an Authorization-to-Operate from the DARPA Technical Office PSO (or other applicable DARPA Authorization Official) using the Risk Management Framework (RMF) process outlined in the Joint Special Access Program (SAP) Implementation Guide (JSIG), Revision 3, dated October 9, 2013 (or successor document).

5. Disclosure of Information and Compliance with Safeguarding Covered Defense Information Controls

The following provisions and clause apply to all solicitations and contracts; however, the definition of "controlled technical information" clearly exempts work considered fundamental research and therefore, even though included in the contract, will not apply if the work is fundamental research.

DFARS 252.204-7000, "Disclosure of Information"

DFARS 252.204-7008, "Compliance with Safeguarding Covered Defense Information Controls"

DFARS 252.204-7012, "Safeguarding Covered Defense Information and Cyber Incident Reporting"

The full text of the above solicitation provision and contract clauses can be found at

<http://www.darpa.mil/work-with-us/additional-baa#NPRPAC>.

Compliance with the above requirements includes the mandate for proposers to implement the security requirements specified by National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, "Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations" (see <https://doi.org/10.6028/NIST.SP.800-171r1>) that are in effect at the time the BAA is issued.

For awards where the work is considered fundamental research, the contractor will not have to implement the aforementioned requirements and safeguards; however, should the nature of the work change during performance of the award, work not considered fundamental research will be subject to these requirements.

6. Human Research Subjects/Animal Use

Proposers that anticipate involving Human Research Subjects or Animal Use must comply with the approval procedures detailed at <http://www.darpa.mil/work-with-us/additional-baa>.

7. Approved Cost Accounting System Documentation

Proposers that do not have a Cost Accounting Standards (CAS) complaint accounting system considered adequate for determining accurate costs that are negotiating a cost- type procurement contract must complete an SF 1408. For more information on CAS compliance, see <http://www.dcaa.mil/cas.html>. To facilitate this process, proposers should complete the SF 1408 found at <http://www.gsa.gov/portal/forms/download/115778> and submit the completed form with the proposal. To complete the form, check the boxes on the second page, then provide a narrative explanation of your accounting system to supplement the checklist on page one. For more information, see (http://www.dcaa.mil/preaward_accounting_system_adequacy_checklist.html).

8. Section 508 of the Rehabilitation Act (29 U.S.C. § 749d)/FAR 39.2

All electronic and information technology acquired or created through this BAA must satisfy the accessibility requirements of Section 508 of the Rehabilitation Act (29 U.S.C § 794d)/FAR 39.2.

9. Grant Abstract

Per Section 8123 of the Department of Defense Appropriations Act, 2015 (Pub. L. 113-235), all grant awards must be posted on a public website in a searchable format. To comply with this requirement, proposers requesting grant awards must submit a maximum one (1) page abstract that may be publicly posted and explains the program or project to the public. The proposer should sign the bottom of the abstract confirming the information in the abstract is approved for public release. Proposers are advised to provide both a signed PDF copy, as well as an editable (e.g., Microsoft word) copy. Abstracts contained in grant proposals that are not selected for award will not be publicly posted.

10. Small Business Subcontracting Plan

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. § 637(d)) and FAR 19.702(a)(1), each proposer who submits a contract proposal and includes subcontractors might be required to submit a subcontracting plan with their proposal. The plan format is outlined in FAR 19.704.

11. Intellectual Property

All proposers must provide a good faith representation that the proposer either owns or possesses the appropriate licensing rights to all intellectual property that will be utilized under the proposed effort.

a. For Procurement Contracts

Proposers responding to this BAA requesting procurement contracts will need to complete the certifications at DFARS 252.227-7017. See www.darpa.mil/work-with-us/additional-baa for further information. If no restrictions are intended, the proposer should state “none.” The table below captures the requested information:

Technical Data Computer Software To be Furnished With Restrictions	Summary of Intended Use in the Conduct of the Research	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(NARRATIVE)	(LIST)	(LIST)	(LIST)

b. For All Non-Procurement Contracts

Proposers responding to this BAA requesting a Grant, Cooperative Agreement, Technology Investment Agreement, or Other Transaction for Prototypes shall follow the applicable rules and regulations governing these various award instruments, but, in all cases, should appropriately identify any potential restrictions on the Government’s use of any Intellectual Property contemplated under the award instrument in question. This includes both Noncommercial Items and Commercial Items. Proposers are encouraged use a format similar to that described in Paragraph a. above. If no restrictions are intended, then the proposer should state “NONE.”

12. Patents

Include documentation proving your ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the DARPA program. If a patent application has been filed for an invention that your proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, you may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: (1) a representation that you own the invention, or (2) proof of possession of appropriate licensing rights in the invention.

13. System for Award Management (SAM) and Universal Identifier Requirements

All proposers must be registered in SAM unless exempt per FAR 4.1102. FAR 52.204-7, “System for Award Management” and FAR 52.204-13, “System for Award Management Maintenance” are incorporated into this BAA. See <http://www.darpa.mil/work-with-us/additional-baa> for further information.

International entities can register in SAM by following the instructions in this link:

https://www.fsd.gov/fsd-gov/answer.do?sysparm_kbid=dbf8053adb119344d71272131f961946&sysparm_search=KB0013221.

14. Funding Restrictions

Not applicable.

C. Submission Information

DARPA will acknowledge receipt of all submissions and assign an identifying control number that should be used in all further correspondence regarding the submission. DARPA intends to use electronic mail correspondence regarding HR001118S0053. Submissions may not be submitted by fax or e-mail; any so sent will be disregarded.

Submissions will not be returned. An electronic copy of each submission received will be retained at DARPA and all other non-required copies destroyed. A certification of destruction may be requested, provided the formal request is received by DARPA within 5 days after notification that a proposal was not selected.

All administrative correspondence and questions on this solicitation, including requests for clarifying information on how to submit an abstract or full proposal to this BAA should be directed to HR001118S0053@darpa.mil. DARPA intends to use electronic mail for correspondence regarding HR001118S0053. Proposals and abstracts may not be submitted by fax or e-mail; any so sent will be disregarded. DARPA encourages use of the Internet for retrieving the BAA and any other related information that may subsequently be provided.

1. Submission Dates and Times

For consideration during the initial round of selections, proposers are required to follow the deadlines specified below. Proposers are warned that the likelihood of available funding is greatly reduced for proposals submitted after the initial closing date deadline.

a. Abstract Due Date

Abstracts must be submitted to DARPA/MTO on or before 1:00 PM, Eastern Time, August 16, 2018. Abstracts received after this time and date may not be reviewed.

b. Full Proposal Date

The full proposal must be submitted via the DARPA BAA website on or before 1:00 p.m., EST September 27, 2018 in order to be considered during the initial round of selections; however, proposals received after this deadline may be received and evaluated up to five months (150 days) from date of posting on FedBizOpps. Full proposals submitted after the due date specified in the BAA or due date otherwise specified by DARPA after review of proposal abstracts may be selected contingent upon the availability of funds. Proposers are warned that the likelihood of available funding is greatly reduced for proposals submitted after the initial closing date deadline. Failure to comply with the submission procedures may result in the submission not being evaluated.

c. Frequently Asked Questions (FAQ)

DARPA will post a consolidated Question and Answer (FAQ) document on a regular basis. To access the posting go to: <http://www.darpa.mil/work-with-us/opportunities>. Under the HR001118S0053 summary will be a link to the FAQ. Submit your question/s by e-mail to HR001118S0053@darpa.mil. In order to receive a response sufficiently in advance of the proposal due date, send your question/s on or before 1:00 PM, Eastern Time, September 20, 2018.

2. Abstract Submission Information

Proposers are strongly encouraged to submit an abstract in advance of a full proposal in order to provide potential proposers with a rapid response and to minimize unnecessary effort in proposal preparation and review. DARPA will acknowledge receipt of the submission and assign a control number that should be used in all further correspondence regarding the abstract.

All abstracts sent in response to HR001118S0053 shall be submitted via DARPA's BAA Website (<https://baa.darpa.mil>). Visit the website to complete the two-step registration process. Submitters will need to register for an Extranet account (via the form at the URL listed above) and wait for two separate e-mails containing a username and temporary password. After accessing the Extranet, submitters may then create an account for the DARPA BAA website (via the "Register your Organization" link along the left side of the homepage), view submission instructions, and upload/finalize the abstract. Proposers using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; it is highly advised that submission process be started as early as possible.

All abstracts submitted electronically through the DARPA BAA Submission website must be uploaded as zip files (.zip or .zipx extension). The final zip file should only contain the document(s) requested herein and must not exceed 50 MB in size. Only one zip file will be accepted per abstract; abstracts not uploaded as zip files will be rejected by DARPA.

NOTE: YOU MUST CLICK THE 'FINALIZE PROPOSAL ABSTRACT' BUTTON AT THE BOTTOM OF THE CREATE PROPOSAL ABSTRACT PAGE. FAILURE TO DO SO WILL RESULT IN YOUR ABSTRACT NOT BEING OFFICIALLY SUBMITTED TO THIS BAA AND THEREFORE NOT BEING REVIEWED.

Please note that the DoD-issued certificate associated with the BAA website is not recognized by all commercial certificate authorities, resulting in untrusted connection errors/messages. You can either bypass the warning (possibly by adding <https://baa.darpa.mil> to your listed of trusted sites, or darpa.mil as a trusted domain), or visit DISA's site to download the Root Certificate Authority (CA): <http://dodpki.c3pki.chamb.disa.mil/rootca.html>.

Technical support for DARPA's BAA Website may be reached at BAAT_Support@darpa.mil, and is typically available during regular business hours, (9:00 AM - 5:00 PM EST Monday - Friday).

Note: DO NOT SUBMIT ABSTRACTS TO GRANTS.GOV.

3. Proposal Submission Information

The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be included into a single proposal. Proposals not meeting the format described in the BAA may not be reviewed.

a. For Proposers Requesting Grants or Cooperative Agreements:

Proposers requesting grants or cooperative agreements must submit proposals through one of the following methods: (1) electronic upload per the instructions at <https://www.grants.gov/applicants/apply-for-grants.html>; or (2) hard-copy mailed directly to DARPA. If proposers intend to use Grants.gov as their means of submission, then they must submit their entire proposal through Grants.gov; applications cannot be submitted in part to Grants.gov and in part as a hard-copy. Proposers using Grants.gov do not submit hard-copy proposals in addition to the Grants.gov electronic submission.

Submissions: Proposers must submit the three forms listed below.

SF 424 Research and Related (R&R) Application for Federal Assistance, available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_SF424_2_0-V2.0.pdf. *This form must be completed and submitted.*

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 U.S.C. A§ 1681 Et. Seq.), the Department of Defense is using the two forms below to collect certain demographic and career information to be able to assess the success rates of women who are proposed for key roles in applications in science, technology, engineering, or mathematics disciplines. Detailed instructions for each form are available on Grants.gov.

Research and Related Senior/Key Person Profile (Expanded), available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_KeyPersonExpanded_2_0-V2.0.pdf. *This form must be completed and submitted.*

Research and Related Personal Data, available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_PersonalData_1_2-V1.2.pdf. *Each applicant must complete the name field of this form, however, provision of the demographic information is voluntary. Regardless of whether the demographic fields are completed or not, this form must be submitted with at least the applicant's name completed.*

Grants.gov requires proposers to complete a one-time registration process before a proposal can be electronically submitted. If proposers have not previously registered, this process can take between three business days and four weeks. For more information about registering for Grants.gov, see www.darpa.mil/work-with-us/additional-baa. See the Grants.gov registration checklist at <http://www.grants.gov/web/grants/register.html> for registration requirements and instructions.

Once Grants.gov has received a proposal submission, Grants.gov will send two email messages to advise proposers as to whether or not their proposals have been validated or rejected by the system; IT MAY TAKE UP TO TWO DAYS TO RECEIVE THESE EMAILS. The first email will confirm receipt of the proposal by the Grants.gov system; this email only confirms receipt, not acceptance, of the proposal. The second will indicate that the application has been successfully validated by the system prior to transmission to the grantor agency or has been rejected due to errors. If the proposal is validated, then the proposer has successfully submitted their proposal. If the proposal is rejected, the proposed must be corrected and resubmitted before DARPA can retrieve it. If the solicitation is no longer open, the rejected proposal cannot be resubmitted. Once the proposal is retrieved by DARPA, the proposer will receive a third email from Grants.gov. To avoid missing deadlines, proposers should submit their proposals in advance of the final proposal due date with sufficient time to receive confirmations and correct any errors in the submission process through Grants.gov. For more information on submitting proposals to Grants.gov, visit the Grants.gov submissions page at: <http://www.grants.gov/web/grants/applicants/apply-for-grants.html>.

Proposers electing to submit grant or cooperative agreement proposals as hard copies must complete the same forms as indicated above.

b. For Proposers Requesting Contracts or Other Transaction Agreements

Proposers requesting contracts or other transaction agreements must submit proposals via DARPA's BAA Website (<https://baa.darpa.mil>). Note: If an account has already been created for the DARPA BAA Website, this account may be reused. If no account currently exists for the DARPA BAA Website, visit the website to complete the two-step registration process. Submitters will need to register for an Extranet account (via the form at the URL listed above) and wait for two separate e-mails containing a username and temporary password. After accessing the Extranet, submitters may then create an account for the DARPA BAA website (via the "Register your Organization" link along the left side of the homepage), view submission instructions, and upload/finalize the proposal. Proposers using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; it is highly advised that submission process be started as early as possible.

All unclassified full proposals submitted electronically through the DARPA BAA website must be uploaded as zip files (.zip or .zipx extension). The final zip file should not exceed 50 MB in size. Only one zip file will be accepted per submission and submissions not uploaded as zip files will be rejected by DARPA.

NOTE: YOU MUST CLICK THE ‘FINALIZE FULL PROPOSAL’ BUTTON AT THE BOTTOM OF THE CREATE FULL PROPOSAL PAGE. FAILURE TO DO SO WILL RESULT IN YOUR PROPOSAL NOT BEING OFFICIALLY SUBMITTED TO THIS BAA AND THEREFORE NOT BEING REVIEWED.

Classified submissions and proposals requesting assistance instruments (grants or cooperative agreements) should NOT be submitted through DARPA's BAA Website (<https://baa.darpa.mil>), though proposers will likely still need to visit <https://baa.darpa.mil> to register their organization (or verify an existing registration) to ensure the BAA office can verify and finalize their submission.

Please note that the DoD-issued certificate associated with the BAA website is not recognized by all commercial certificate authorities, resulting in untrusted connection errors/messages. You can either bypass the warning (possibly by adding <https://baa.darpa.mil> to your listed of trusted sites, or arpa.mil as a trusted domain), or visit DISA's site to download the Root Certificate Authority (CA): <http://dodpki.c3pki.chamb.disa.mil/rootca.html>.

Technical support for DARPA's BAA Website may be reached at BAAT_Support@darpa.mil, and is typically available during regular business hours (9:00 AM - 5:00 PM EST, Monday - Friday).

c. Classified Submission Information

See Section IV.B.4, “Security Information,” for guidance on submitting classified abstracts and proposals.

4. Other Submission Requirements

Not applicable.

V. Application Review Information

A. Evaluation Criteria

Proposals will be evaluated using the following criteria, listed in descending order of importance:

1. Overall Scientific and Technical Merit

The proposed technical team has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed deliverables clearly defined such that a final outcome that achieves the goal can be expected as a result of award. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

The proposed technical approach is innovative, feasible, achievable, and complete.

The proposer clearly demonstrates its capability to transition the technology to the research, industrial, and/or operational military communities in such a way as to enhance U.S. defense. In addition, the evaluation will take into consideration the extent to which the proposed intellectual property (IP) rights structure will potentially impact the Government's ability to transition the technology.

The proposed schedule aggressively pursues performance metrics in the shortest timeframe and accurately accounts for that timeframe. The proposed schedule identifies and mitigates any potential schedule risk.

The proposer's prior experience in similar efforts clearly demonstrates an ability to deliver products that meet the proposed technical performance within the proposed budget and schedule. The proposed team has the expertise to manage the cost and schedule. Similar efforts completed/ongoing by the proposer in this area are fully described including identification of other Government sponsors.

2. Potential Contribution and Relevance to the DARPA Mission

The potential contributions of the proposed effort are relevant to the national technology base. Specifically, DARPA's mission is to make pivotal early technology investments that create or prevent strategic surprise for U.S. National Security.

Proposers should highlight the contribution of their proposed research to the DARPA mission. Proposers should also describe previous efforts and their impact on DARPA's mission and on U.S. National Security, as relevant. A history of transitioning government-funded technologies to supporting national interests will impact scores positively, while transitioning government-funded technology or related technologies to foreign entities or through foreign influence will negatively impact evaluation scores.

3. Cost Realism

The proposed costs are realistic for the technical and management approach and accurately reflect the technical goals and objectives of the solicitation. The proposed costs are consistent with the proposer's Statement of Work and reflect a sufficient understanding of the costs and level of effort needed to successfully accomplish the proposed technical approach. The costs for the prime proposer and proposed subawardees are substantiated by the details provided in the proposal (e.g., the type and number of labor hours proposed per task, the types and quantities of materials, equipment and fabrication costs, travel and any other applicable costs and the basis for the estimates).

It is expected that the effort will leverage all available relevant prior research in order to obtain the maximum benefit from the available funding. For efforts with a likelihood of commercial application, appropriate direct cost sharing may be a positive factor in the evaluation. DARPA recognizes that undue emphasis on cost may motivate proposers to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. DARPA discourages such cost strategies.

B. Review and Selection Process

1. Review Process

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations based on the evaluation criteria listed in Section V.A, and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals.

DARPA will conduct a scientific/technical review of each conforming proposal. Conforming proposals comply with all requirements detailed in this BAA; proposals that fail to do so may be deemed non-conforming and may be removed from consideration. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

Award(s) will be made to proposers whose proposals are determined to be the most advantageous to the Government, all factors considered, including the potential contributions of the proposed work to the overall research program and the availability of funding for the effort.

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations based on the evaluation criteria listed above and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals. Pursuant to FAR 35.016, the primary basis for selecting proposals for acceptance shall be technical, importance to agency programs, and fund availability. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

2. Handling of Source Selection Information

DARPA policy is to treat all submissions as source selection information (see FAR 2.101 and 3.104), and to disclose their contents only for the purpose of evaluation. Restrictive notices notwithstanding, during the evaluation process, submissions may be handled by support contractors for administrative purposes and/or to assist with technical evaluation. All DARPA support contractors performing this role are expressly prohibited from performing DARPA-sponsored technical research and are bound by appropriate nondisclosure agreements.

Subject to the restrictions set forth in FAR 37.203(d), input on technical aspects of the proposals may be solicited by DARPA from non-Government consultants/experts who are strictly bound by the appropriate non-disclosure requirements.

3. Federal Awardee Performance and Integrity Information (FAPIIS)

Per 41 U.S.C. 2313, as implemented by FAR 9.103 and 2 CFR § 200.205, prior to making an award above the simplified acquisition threshold, DARPA is required to review and consider any

information available through the designated integrity and performance system (currently FAPIIS). Awardees have the opportunity to comment on any information about themselves entered in the database, and DARPA will consider any comments, along with other information in FAPIIS or other systems prior to making an award.

VI. Award Administration Information

A. Selection Notices

1. Abstracts

DARPA will respond to abstracts with a statement as to whether DARPA is interested in the idea. If DARPA does not recommend the proposer submit a full proposal, DARPA will provide feedback to the proposer regarding the rationale for this decision. Regardless of DARPA's response to an abstract, proposers may submit a full proposal. DARPA will review all full proposals submitted using the published evaluation criteria and without regard to any comments resulting from the review of an abstract.

2. Proposals

As soon as the evaluation of a proposal is complete, the proposer will be notified that (1) the proposal has been selected for funding pending contract negotiations, in whole or in part, or (2) the proposal has not been selected. These official notifications will be sent via email to the Technical POC identified on the proposal coversheet.

B. Administrative and National Policy Requirements

1. Meeting and Travel Requirements

All key participants are required to attend the program kickoff meeting. Performers should also anticipate regular program-wide PI Meetings and periodic site visits at the Program Manager's discretion. For budgeting purposes, assuming two meeting per year one on the east coast and one on the west coast.

2. FAR and DFARS Clauses

Solicitation clauses in the FAR and DFARS relevant to procurement contracts and FAR and DFARS clauses that may be included in any resultant procurement contracts are incorporated herein and can be found at www.darpa.mil/work-with-us/additional-baa.

3. Controlled Unclassified Information (CUI) on Non-DoD Information Systems

Further information on Controlled Unclassified Information on Non-DoD Information Systems is incorporated herein can be found at www.darpa.mil/work-with-us/additional-baa.

4. Representations and Certifications

If a procurement contract is contemplated, prospective awardees will need to be registered in the SAM database prior to award and complete electronic annual representations and certifications consistent with FAR guidance at 4.1102 and 4.1201; the representations and certifications can be found at www.sam.gov. Supplementary representations and certifications can be found at <http://www.darpa.mil/work-with-us/additional-baa>.

5. Terms and Conditions

A link to the DoD General Research Terms and Conditions for Grants and Cooperative Agreements and supplemental agency terms and conditions can be found at <http://www.darpa.mil/work-with-us/contract-management#GrantsCooperativeAgreements>.

C. Reporting

The number and types of reports will be specified in the award document, but will include as a minimum monthly technical and financial status reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed on before award. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. A Final Report that summarizes the project and tasks will be required at the conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle.

D. Electronic Systems

6. Wide Area Work Flow (WAWF)

Unless using another means of invoicing, performers will be required to submit invoices for payment directly via to <https://wawf.eb.mil>. Registration in WAWF will be required prior to any award under this BAA.

7. i-Edison

The award document for each proposal selected for funding will contain a mandatory requirement for patent reports and notifications to be submitted electronically through i-Edison (<https://public.era.nih.gov/iedison>).

VII. Agency Contacts

Administrative, technical or contractual questions should be sent via e-mail to HR001118S0053@darpa.mil. All requests must include the name, email address, and phone number of a point of contact.

The technical POC for this effort is:

Dr. John Burke
DARPA/MTO
ATTN: HR001118S0053
675 North Randolph Street
Arlington, VA 22203-2114

VIII. Other Information

A. Proposers Day

The A-Phi Proposers Day will be held on August 1, 2018 in Arlington, Virginia. Advance registration is required for both the physical meeting. See DARPA-SN-18-69 posted at www.fbo.gov for all details. Attendance at the A-Phi Proposers Day is not required to propose to this solicitation.

B. Protesting

For information concerning agency level protests see <http://www.darpa.mil/work-with-us/additional-baa#NPRPAC>.