Broad Agency Announcement
COmpact Front-end Filters at the ElEment-level
(COFFEE)
Microsystems Technology Office
HR001121S0031
June 14, 2021

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PART I: OVERVIEW INFORMATION

- **Federal Agency Name**: Defense Advanced Research Projects Agency (DARPA), Microsystems Technology Office (MTO)
- **Funding Opportunity Title:** COmpact Front-end Filters at the ElEment-level (COFFEE)
- **Announcement Type:** Initial Announcement
- **Funding Opportunity Number:** HR001121S0031
- **Catalog of Federal Domestic Assistance Numbers (CFDA):** 12.910 Research and Technology
- **Dates:** (All times listed herein are Eastern Time)
  - Posting Date: June 14, 2021
  - Proposers Day: June 17, 2021
  - Abstract Due Date: July 19, 2021
  - FAQ Submission Deadline: August 27, 2021
  - Proposal Due Date: September 10, 2021
  - Estimated period of performance start: February 2022
- **Concise description of the funding opportunity:** The DARPA Microsystems Technology Office seeks innovative proposals in the area of RF filtering, with the specific aim to produce front-end RF filters that protect the elements of digital Active Electronically Scanned Arrays (AESAs) against interference in increasingly crowded RF spectrum environments.
- **Anticipated Funding Available for Award:** Total funding for awards under this BAA is expected to be $30.5M, approximately partitioned across two Technical Areas as follows:
  - $26M for Technical Area 1 (TA1), 3 phases, 48 months
  - $4.5M for Technical Area 3 (TA3), 2 phases, 33 months

Total funding for awards under a future BAA for Technical Area 2 is expected to be $12M, 1 phase, 18 months.

- **Anticipated individual awards**: Multiple awards are anticipated in each Technical Area.
- **Anticipated funding type:** 6.2.
- **Types of instruments that may be awarded:** Procurement contract, grant, cooperative agreement or other transaction.
- **Agency contact:**
  - Dr. Benjamin Griffin, Program Manager
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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 SAM website, under the Contract Opportunities (FBO) link, at https://sam.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 DARPA Microsystems Technology Office seeks innovative proposals in the area of microwave/millimeter wave frequency resonator and filter technologies, designs, and methods of manufacture for the purpose of providing front-end radio frequency (RF) protection to the elements of Active Electronically Scanned Arrays (AESAs). COFFEE will provide elemental protection for wideband, digital-at-every-element phased arrays against interferers which could adversely impact the operation of such arrays in congested RF environments. The proposed research will investigate innovative approaches that enable revolutionary advances in science, materials, devices, manufacturing, and systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

A. Background

Over the past decade, there has been increasing interest in wideband AESA systems with digital-at-every-element architectures. Wideband AESAs are of particular interest in multi-function arrays supporting advanced radar, electronic warfare, and communications capabilities. However, implementation of wideband receivers in AESAs currently comes with significant trade-offs. High bandwidth receivers often have limited dynamic range, leaving them vulnerable to electronic jamming. At the same time, observing more signals over a wider bandwidth demands high dynamic range.

Common receiver filter architectures dynamically tune the passband to preserve receiver sensitivity while providing rejection to interferers (i.e., out-of-band signals) when operating in congested environments. However, the area available for element-level integration decreases quadratically as frequency increases. Given the trend to digital-at-every-element, this has eliminated state-of-the-art (SoA) filter architectures as a viable option for wideband AESAs. Without integrable filter technology for wideband AESAs, gain control is typically used for element-level protection, at significant cost to receiver sensitivity.

B. Program Description

COFFEE's integrable RF filter technology addresses the combination of size, performance, and reproducibility to enable protection at every element of wideband AESAs. Such a filter technology must:

- Address all frequencies within the AESA's bandwidth (i.e., f_{min} :f_{max});
- Be physically small compared to the electromagnetic free-space half-wavelength pitch (assumes element area is $\lambda_{EM}^2/4$ where λ_{EM} is the wavelength at f_{max});
- Maintain performance (e.g., insertion loss, out-of-band rejection, selectivity, and power handling) compared to SoA non-integrable filters;
- Be manufacturable with low performance variability at each of the array elements.

COFFEE will focus on creating an integrable receiver filter technology to cover a challenging S-band through Ku-band (i.e., 2 GHz to 18 GHz) frequency range while physically bound within an 18 GHz half-wavelength array pitch (i.e., 69 mm^2).

Filtering with full coverage across the AESA bandwidth can be accomplished with a bank of switched discrete filters, with a continuously-tunable filter across a range of center frequencies, or by some combination thereof (i.e., switched tunable filters).[1] Figure 1 depicts the challenge of fitting an integrable filter technology into the lattice spacing of wideband AESA designs. Switched filter banks require large individual filter counts, as shown in Figure 2; which places a premium on exquisitely small, high performance filters and low-loss switches.[2,3] Tunable filters provide substantial size relief to individual fixed filters due to the potential for significantly lower filter counts. However, tunable filters have been challenged to maintain performance over a widely tunable range (i.e., >2:1).[4,5] COFFEE will be open to fixed or tunable approaches that meet the program metrics, to include alternative approaches to the following examples.

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[1] Hereafter, the individual filter components will simply be referred to as a "filter" or "filter technology," whereas the architecture of filters that covers the full AESA bandwidth will be referred to as the "filter architecture".

[2] I. Burke and P. Subedi, "Compact, Low Loss Switched Filter Bank Using MEMS Switches," *Microwave Journal,* vol. 62, no. 11, pp. 53-64, 2019.

[3] N. El-Hinnawy, G. Slovin, J. Rose and D. Howard, "A 25 THz Fco (6.3 fs Ron * Coff) Phase-Change Material RF Switch Fabricated in a High Volume Manufacturing Environment with Demonstrated Cycling > 1 Billion Times," in *IEEE/MTT-S International Microwave Symposium*, Los Angeles, CA, 2020.

[4] R. Aigner, "Tunable Filters? Reality Check Foreseeable Trends in System Architecture for Tunable RF Filters," *IEEE Microwave Magazine*, vol. 16, no. 7, pp. 82-88, 2015.

[5] X. Liu, "Tunable RF and microwave filters," in *IEEE 16th Annual Wireless and Microwave Technology Conference*, Cocoa Beach, FL, 2015.

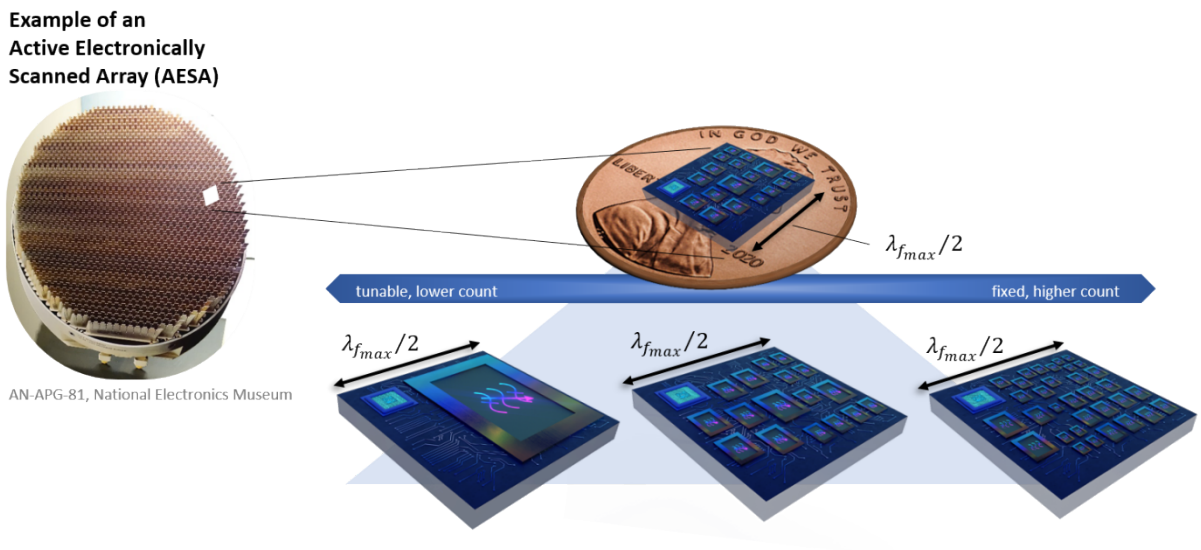

Figure 1 COFFEE will address the challenge of integrating reconfigurable front-end RF filters (including all required external components, e.g., switches, controls and routing) into the lattice spacing of wideband AESAs.

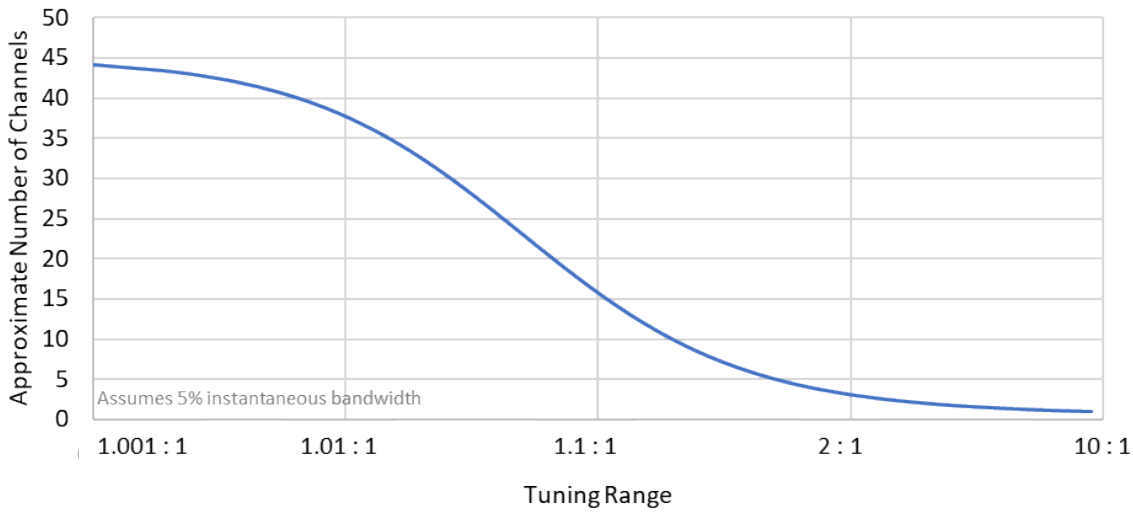

Figure 2 Approximate number of channels required to cover 2 GHz to 18 GHz as a function of individual filter tuning range.

An example of fixed frequency, integrable filters are bulk acoustic wave (BAW) RF filters, commonly operating at frequencies below 3 GHz. BAW RF filters use piezoelectric transduction to convert electromagnetic to acoustic waves, resulting in a four orders-of-magnitude decrease in wavelength due to the slower acoustic wave velocity. These extremely small, high performance filters, manufacturable at wafer scale, have been a boon for modern smartphone handsets and radios, which can have filter counts of one hundred or more. The upper frequency at which BAW filters achieve integrable performance today is 6 GHz.[6]

[6] S. Gong, R. Lu, Y. Yang, L. Gao and A. E. Hassanien, "Microwave Acoustic Devices: Recent Advances and Outlook," *IEEE Journal of Microwaves,* vol. 1, no. 2, pp. 601-609, 2021.

One type of tunable filter exploits ferromagnetic resonance in yttrium iron garnet (YIG) spheres. The resonant frequencies of YIG spheres are tuned by an external magnetic field to achieve continuous tuning from 2 GHz to 18 GHz.[7] However, YIG sphere filters lack the combination of low loss and size needed for integration into AESAs.

While acoustic and magnetic technology examples are given above, alternative approaches (e.g., N-path, evanescent cavity, colossal permittivity resonators, etc.) will be considered by the COFFEE program. The merit of the technical approach will be based on whether it can be substantiated that it will meet the overall program goals and metrics.

An example filter response with corresponding key performance metrics definitions is shown in Figure 3. Insertion loss characterizes the amount of signal lost in the passband. Bandwidth dictates the passband frequency range around the filter center frequency. Selectivity is a measure of how quickly the filter transitions from the passband to the stop-band. Out-of-band rejection is a measure of the suppression far from the passband. Another important filter characteristic is power handling, which is a measure of the maximum power level for filter distortion, saturation, or failure. Also, a filter technology needs to support uniform manufacturability that leads to low device-to-device variability between the many elements of an AESA. Details of the program metrics are further defined in the notes of Table 1.

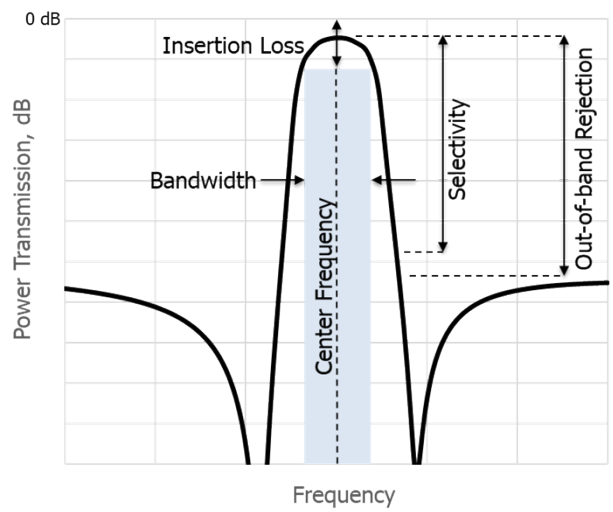

Figure 3 Example filter response and corresponding metrics.

The requisite integrable filter performance presents key Technical Challenges (TCs) which are described as follows.

TC1: Achieving acceptable filter loss across the instantaneous bandwidth at high frequency in a small footprint

The maximum tolerable insertion loss for a filter across the typical 5% AESA instantaneous bandwidth is ~2 dB. Filters with losses that exceed this amount unacceptably degrade the receiver noise figure and dynamic range.

[7] X. Liu, "Tunable RF and microwave filters," in *IEEE 16th Annual Wireless and Microwave Technology Conference*, Cocoa Beach, FL, 2015.

TC2: Achieving high power handling at high frequency in a small footprint

AESAs are subject to in-band receive signals at power levels that can reach 30 dBm per element. Power saturation of filters can shift their operating characteristics, such as increasing insertion loss within the passband. Excessive input power can also lead to irreversible device failure.

TC3: Achieving uniformity at high frequency

Accurate filter center frequencies are required to maintain filter uniformity across the many elements of an AESA. To minimize noise figure and center frequency variation across the AESA receive bandwidth, the maximum acceptable variation in filter center frequencies across the array can be no more than ~0.5%. This TC is most likely applicable to fixed-frequency filter approaches.

TC4: Fitting external tuning components within the array footprint

Tunable filters typically contain external tuning components, and these must have a form factor compatible with the small footprint required for integration at the AESA element-level. This TC is most likely applicable to tunable filter approaches.

Proposers must demonstrate their understanding of the COFFEE Technical Challenges described above and explain how their approach will address all applicable Technical Challenges in the respective phases.

COFFEE will pursue an advanced filter technology to overcome the key technical challenges. The conclusion of the program will be a demonstration of a 2 GHz to 18 GHz filter architecture to validate the scalability of the technology for application-specific maturation after the conclusion of the program. In an additional technical area, research studies into compact mm-wave resonators will be conducted to inform potential future efforts for integrable mm-wave filters. Details of the program structure are contained in the following section. DARPA expects that partnerships between the defense industrial base and the academic and small business research community may be necessary in order to achieve all program goals.

Solutions that use domestic manufacturing capabilities to achieve program goals are preferred, as DARPA seeks to strengthen DoD access to differentiating technologies. Proposers should note that COFFEE technologies that exceed program metrics may be subject to export control regulation. Refer to the Controlled Unclassified Information (CUI) Guide, provided as Attachment 3 to this BAA, to determine how data and hardware will be safeguarded during the program.

C. Program Structure

The COFFEE program is a 51-month program with three technical areas. Notably*, this BAA (BAA1) solicits proposals only for Technical Area One (TA1) and Technical Area Three (TA3)*. TA1 will focus on design and development of a new class of compact, microwave resonators and their formation into integrable filters. TA1 will consist of three phases with an 18-month Phase 1

(base), 15-month Phase 2 (option), and 15-month Phase 3 (option). Not all performers in any Phase may be funded (options exercised) to continue into subsequent Phases of the program.

TA3 will extend the COFFEE effort to mm-wave frequencies (demonstrating performance at 50 GHz) and will consist of smaller research studies targeting the fundamental limits beyond the frequency range addressed in TA1. TA3 will consist of two phases operated concurrently with Phases 1 and 2 of TA1.

A second, future BAA (BAA2) soliciting proposals for Technical Area Two (TA2) is planned for release during the second half of Phase 2. In BAA2, performers will: (1) validate all Technical Challenges of BAA1 by integrating filters developed under COFFEE BAA1 into a 2 GHz to 18 GHz filter architecture and (2) demonstrate scalability with a filter tile consisting of four-by-four filter architectures. TA2 will consist of a single, 18-month phase.

A pictorial representation of the three technical areas and their relationship is shown in Figure 4.

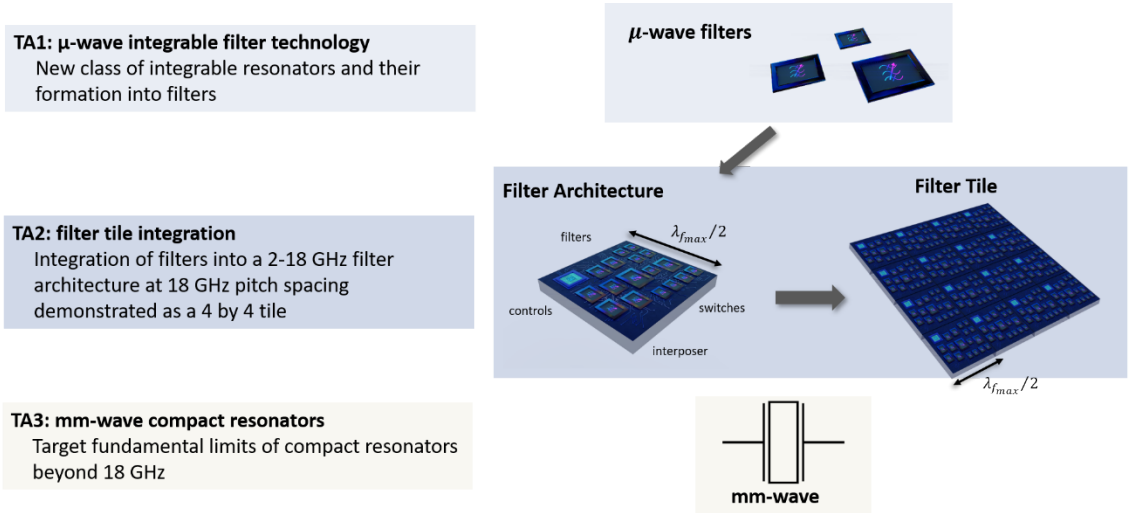

Figure 4 Overview and relationship between technical areas.

<u>A single proposal to this BAA (BAA1) may respond to either TA1 or TA3, but not both. Therefore, a proposer wishing to propose to both TAs must submit separate proposals.</u> Phase 2 and Phase 3 options may be exercised, at the Government's sole discretion, based on funding availability and on technical progress made by the performers as measured against the metrics and milestones defined in this BAA (BAA1). Figure 5 describes the timeline and phases for each Technical Area of the program.

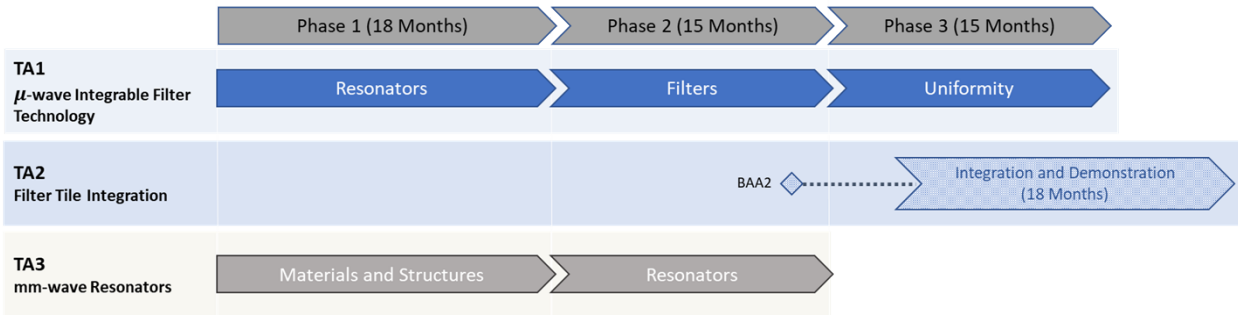

Figure 5 Phase structure and Technical Areas of COFFEE.

D. Technical Areas

COFFEE has three Technical Areas addressing various aspects of developing and integrating front-end RF filters at the AESA element-level. As previously stated, this BAA is requesting proposals only for TA1 and TA3. All discussion of TA2 is informational only to establish context regarding the full program scope. These technical areas are described as follows:

Technical Area 1 (TA1) – μ-Wave Integrable Filter Technology

This TA will focus on design and development of a new class of integrable resonators and their formation into filters. At each Phase of the program, performers will be required to demonstrate resonators and filters at specific frequencies with performance consistent with the metrics shown in Table 1. *Within their proposal*, a proposer must justify that their technology will be integrable as a filter architecture. This should be accomplished by demonstrating, either through modeling or straightforward scaling analysis, that the size scale of their technology will enable complete coverage of 2 GHz to 18 GHz, assuming 5% instantaneous bandwidth, within 18 GHz pitch spacing area (69 mm^2). As appropriate, proposers are allowed to project differences in device structure (e.g., accessing an orthogonal resonant mode) and design to cover separate frequency bands under the assumption that the projections leverage the same general technical approach. This projection is not required where simple size scaling can be used to cover all frequencies. Although a full architecture design is not required in proposal submissions to TA1, proposers must present reasonable assumptions about area requirements for integration (e.g., isolation, switches, controls, interconnect, etc.) when projecting their final device area. Presentation of such reasonable assumptions in a pie chart is appreciated. Size scaling as it relates to integration into a filter architecture will be continuously evaluated through the phases of the program as the technology matures. In addition to size, proposed approaches should also meet the power and temperature constraints listed in Table 2.

TA1 will consist of three phases.

> *Phase 1 (Base, 18 months)* will demonstrate resonators at 18 GHz with sufficient quality and energy coupling factors for low insertion loss. Refer to Table 1 for the Phase 1 filter performance metrics. In this phase, performers have the option of projecting filter performance based on modeling and simulation using measured resonator response and measurements of reasonable parasitic integration loads (e.g., electrical routing resistance and capacitance). Any de-imbedding of resonator results must be clearly stated and

justified in order to be fairly evaluated against Phase 1 metrics. Measured filter results will be viewed as more favorable when demonstrating the Phase 1 metrics.

Phase 2 (Option, 15 months) will integrate the resonators developed during Phase 1 into low insertion loss filters demonstrated at 8, 12, and 18 GHz. This phase also focuses on constructing filters with high power handling and, as required, integrable tuning, in accordance with the metrics indicated in Table 1. Metrics will be evaluated against measured filter performance.

Phase 3 (Option, 15 months) will demonstrate repeatable manufacturability with low device-to-device variability and more rigorous goals for power handling as shown in Table 1. Metrics will be evaluated against measured filter performance.

Table 1 TA1 COFFEE Filter Metrics

TA1 Metrics	Phase 1† Resonators	Phase 2 Filters	Phase 3 Uniformity	Notes
Filter Center Frequencies, f_c (GHz)	18	8, 12, 18	8, 12, 18	1
Maximum Filter Insertion Loss, dB	<3	<2	<2	2
Instantaneous Bandwidth, % of f_c	>4%	>5%	>5%	2,3
Out-of-Band Rejection, dBc	>20	>30	>30	4
Selectivity, dBc	>15	>20	> 20	5
In-band power handling, dBm	>10	>20	>30	6
In-band / Out-of-band IIP3, dBm	>0 / 30	>10 / 40	>10 / 40	7
Maximum frequency variability, % of nominal	--	--	0.5%	8
Maximum Filter Area, mm^2	--	<69/N	<69/N	9

†*In Phase 1, performers have the option of projecting filter response, based on simulations using measured resonator response and measured parasitic integration loads (e.g., electrical routing resistance and capacitance). Phases 2 and 3 metrics will be evaluated against measured filter performance.*

1) In Phases 2 and 3, a tunable filter that can cover either or all three frequencies in one device is an acceptable demonstration without creating further redundancy. Otherwise, distinct filters at all three frequencies must be demonstrated in Phases 2 and 3.
2) Insertion loss is defined as the greatest loss at any frequency falling within the instantaneous bandwidth (see Figure 3).
3) Instantaneous fractional bandwidth is constrained to <8%.
4) Out-of-band rejection is measured at five instantaneous bandwidths from center frequency.
5) Selectivity is measured at one instantaneous bandwidth from center frequency.
6) In-band power handling metric denotes maximum input power with 20% duty cycle. Power handling will be gauged on measurable deterioration in filter insertion loss and bandwidth following a 1-hour burn-in.
7) The input third-order intercept point (IIP3) is measured using two tones in the passband / stopband, respectively.
8) Maximum center frequency variability demonstrated over at least sixteen filter parts.
9) Area of an individual filter, including tuning elements, if applicable, where N is the number of filters required to cover the 2 GHz to 18 GHz bandwidth for the instantaneous bandwidth and given filter tuning range capability. Note that area is calculated from the two longest dimensions of the filter. Please see Table 2 for further details required in area calculations.

Table 2 TA1 Constraints for COFFEE Filter Prototypes

TA1 Constraints	
Projected Filter Architecture Area, mm^2*	69
Projected Filter Architecture Power Consumption, mW	<20
Filter Temperature Coefficient of Frequency, ppm/°C	<100

** Projected filter architecture area should include basic calculations of the number of filters, N, required to cover 2 GHz to 18 GHz and the projected area of each filter. Filter area must include external components required for individual filter tuning if applicable. Although a full architecture design is not required in proposal submissions to this BAA, proposers should provide an abbreviated discussion of how they anticipate their filter technology will be integrated into a filter architecture and include projected area allocated towards as-needed external components (e.g., switches, controls, interconnect, etc.). Pie charts of area allocation are appreciated.*

(For reference only. Not to be proposed)
Technical Area 2 (TA2) – Filter Tile Integration

It is anticipated that TA2 will integrate 2 GHz to 18 GHz filters with as-needed external components (e.g., switches, controls, interconnects, interposer, etc.) into a filter architecture and demonstrate it as a four-by-four element filter tile. It is anticipated that a second, future BAA (BAA2) will be announced during TA1 Phase 2 to call for proposals to integrate successes from Phases 1 and 2. TA2 will culminate with delivery of the filter tile which will validate the potential for scalable manufacturing. The intention is for the TA2 effort to be operated in parallel with TA1 Phase 3.

Technical Area 3 (TA3) – mm-Wave Compact Resonators

TA3 extends the COFFEE effort to mm-wave bands, specifically targeting resonators at 50 GHz. It will consist of smaller two-phase research studies to target the fundamental limits beyond the frequency range addressed in TA1. TA3 will be operated in parallel with TA1. End of Phase metrics are contained in Table 3.

Phase 1 (base, 18 months) will focus on material and fabrication challenges to form new resonators operating at mm-wave frequencies.

Phase 2 (option, 15 months) will focus on demonstrating high performance, compact resonators.

Table 3 TA3 COFFEE Resonator Metrics

TA3 Metrics	Phase 1 Materials/Structures	Phase 2 Resonators	Notes
Filter Center Frequency, f_c (GHz)	50	50	1
Quality Factor (Q)	>200	>500	2
Energy Coupling Factor (%)	>5%	>10%	3
Maximum Dimension (mm)	<0.3	<0.3	

1) Devices that can demonstrate frequency tuning anywhere above 18 GHz band will be considered, however metrics will be evaluated at 50 GHz.
2) Quality factor is defined as the ratio of energy stored to energy dissipated per cycle in the resonator.
3) Energy coupling factor is the ratio of energy stored in the resonator to the energy applied.

E. Schedule/Milestones

COFFEE TA1 and TA3 are expected to begin in Q2FY22, with three phases of TA1 being conducted over 48 months and two phases of TA3 being conducted over 33 months. A mandatory program kickoff meeting will be held to present the technical approaches, discuss technical and programmatic items of concern, and interact with the government team and other program performers. The end of each phase represents a major technical milestone in the program. End-of-phase review meetings will be scheduled approximately one month before the end of each phase's period of performance. These meetings will be used to communicate the technical progress made, particularly with respect to the metrics, during the entire phase. Technical progress towards the goals of the program represents the major deciding factor in funding decisions for the subsequent phase, and will be monitored through quarterly teleconference calls and occasional site visits by the DARPA program manager along with other members of the government team. A summary of the entire program schedule is presented in Figure 5.

Technical Area 1 Schedule and Milestones

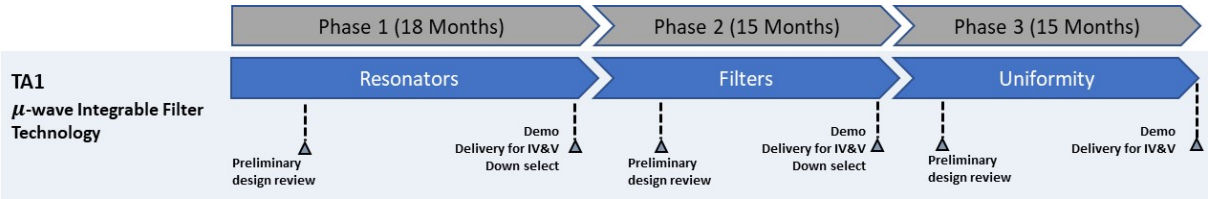

Figure 6 TA1 schedule overview; see text bullets below for specifics

The following program milestones are applicable to Technical Area 1:

- A program kickoff meeting to be held at program start
- A preliminary design review of the hardware demonstration of each phase, including a detailed analysis of components under development including materials, structures, fabrication methods, external component requirements, etc., occurring within three months of each phase kickoff
- Demonstration of all technical metrics of each phase, approximately one month prior to the end of each period of performance
- Delivery of three Phase 1 resonators for IV&V approximately one month prior to the end of the Phase 1 period of performance
- Delivery of three Phase 2 filters for each frequency for IV&V approximately one month prior to the end of the Phase 2 period of performance
- Delivery of ten Phase 3 filters for each frequency for IV&V approximately one month prior to the end of the Phase 3 period of performance

Technical Area 3 Schedule and Milestones

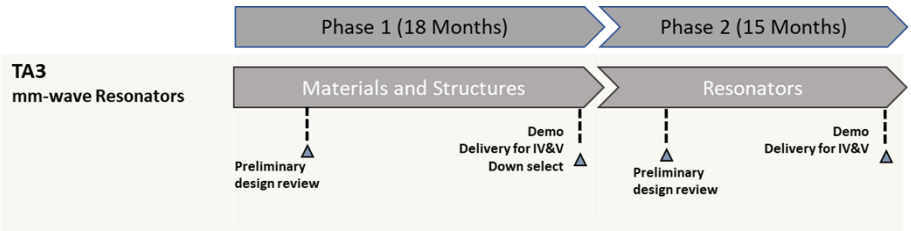

Figure 7 TA1 schedule overview; see text bullets below for specifics

The following program milestones are applicable to Technical Area 3:

- A program kickoff meeting to be held at program start
- A preliminary design review of the hardware demonstration of each phase, including a detailed analysis of components under development including materials, structures, fabrication methods, etc., occurring within three months of each phase kickoff
- Demonstration of all technical metrics of each phase, approximately one month prior to the end of each period of performance
- Delivery of three Phase 1 resonators for IV&V approximately one month prior to the end of the Phase 1 period of performance
- Delivery of three Phase 2 resonators for IV&V approximately one month prior to the end of the Phase 2 period of performance

F. Deliverables

All performers shall deliver detailed spend plans (or detailed program plans for fixed-price award instruments) at program kickoff and execution of subsequent option awards, quarterly technical status reports in slide presentation format, monthly technical updates, and monthly financial reports including updated commitments and expenditures. Performers shall prepare and submit briefing materials and participate in quarterly progress reviews, either via teleconference or at the performer's site at the discretion of DARPA. All performers shall participate in and support program-wide reviews held at least annually and scheduled at the Program Manager's discretion. All performers should be prepared to respond to off-schedule delivery of technical updates and summary slides at the DARPA Program Manager's request.

Upon the completion of each phase, performers in Technical Area 1 must provide to the Government an end-of-phase Final Technical Report that includes:

a) A description of the resonator principle of operation (Phase 1) or description of the filter principle of operation (Phases 2 and 3)
b) Simulations used to model device performance (including source code)
c) Method of resonator or filter construction
d) Component lab test results
e) Charts and explanations of how well the resonators and filters under development met, exceeded, or fell short of specified program metrics (as described in Table 1 and Table 2).

Upon the completion of each phase, performers in Technical Area 3 must provide to the Government an end-of-phase Final Technical Report that includes:

a) A description of the resonator principle of operation
b) Simulations used to model device performance (including source code)
c) Method of resonator construction

d) Resonator lab test results
e) Charts and explanations of how well the resonators under development met, exceeded, or fell short of specified program metrics (as described in Table 3).

Other negotiated deliverables specific to the objectives of the individual efforts also may be included. These may include registered reports, experimental protocols, publications, data management plan, intermediate and final versions of software libraries, code, and APIs, including documentation and user manuals, and/or a comprehensive assemblage of design documents, models, modeling data and results, and model validation data.

End-of-phase deliverables for each TA are described in Table 4.

Table 4 Deliverables by End of Phase

	Phase 1	Phase 2	Phase 3
TA1	• Written report on resonator principle of operation, simulations used to model device performance , resonator design, construction, materials, operation, experimental data, component lab test results and performance according to defined TA1 metrics and constraints in Table 1 and Table 2 • Charts and explanations of how well the resonators under development met, exceeded, or fell short of specified program metrics • Three probeable, die-level resonators delivered to the government for IV&V*	• Written report on filter principle of operation, simulations used to model device performance, filter design, construction, materials, operation, experimental data, component lab test results and performance according to defined TA1 metrics and constraints in Table 1 and Table 2. Reporting must include an assessment of manufacturability ahead of Phase 3 • Charts and explanations of how well the filters under development met, exceeded, or fell short of specified program metrics • Three probeable, die-level filters at each frequency (i.e., 8, 12, and 18 GHz) delivered to the government for IV&V*	• Written report on improved filter design, on filter principle of operation, , simulations used to model device performance, construction, materials, operation, experimental data, component lab test results, performance, and manufacturability according to defined TA1 metrics and constraints in Table 1 and Table 2 • Charts and explanation of how well the filters under development met, exceeded, or fell short of specified program metrics • Ten probeable, die-level filters at each frequency (i.e., 8, 12, and 18 GHz) delivered to the government for IV&V
TA3	• Written report on mm-wave resonator principle of operation, simulations used to model device performance, resonator design, construction, materials, operation, experimental data, resonator lab test results and performance • Charts and explanations of how well the resonators under development met, exceeded, or fell short of specified program metrics • Three die-level resonators delivered to the government for IV&V	• Written report on mm-wave resonator principle of operation, simulations used to model device performance, resonator design, construction, materials, operation, experimental data, resonator lab test results and performance • Charts and explanations of how well the resonators under development met, exceeded, or fell short of specified program metrics • Three die-level resonators delivered to the government for IV&V	NA

*Die-level devices with standard probe layouts matched to 50 ohms and/or packaged devices with connections impedance matched to 50 ohms are required for IV&V.

Additionally, in all Technical Areas, hardware will be submitted for independent verification and validation (IV&V) by the National Institute of Standards and Technology (NIST) one month before the conclusion of each phase. Sufficient documentation and support for testing at a government lab will be submitted with the IV&V hardware. Furthermore, all design files will be delivered to the Government team at the end of each phase to include, but not limited to mechanical drawings, schematic and layout databases of chips, and packages and circuit boards (as applicable).

G. Government Furnished Equipment/Property/Information

No Government Furnished Equipment, Property, or Information will be provided in this effort.

H. Intellectual Property

Any proposed use of intellectual property (patents, proprietary information, etc.) should be clearly identified in the proposal. Identify all intellectual property claims to future results, prototypes, and deliverables. Explain how these claims may limit the Government use of the technology developed under the COFFEE program or development of derivative technologies. For forms to be completed regarding intellectual property, see Section IV.B.11 and 12. If there are no intellectual proprietary claims, this should be stated.

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 solicitation 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 solicitation, the Government expects that program goals as described herein may be met by proposed efforts for fundamental research and non-fundamental research. Some 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 anticipated type of proposer (e.g., university or industry) and the nature of the solicited work, the Government expects 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 determine whether the proposed research shall be considered fundamental and to select the award instrument type. Appropriate language will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate. This language 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 to be performed by a potential awardee is non-fundamental research, its proposed subawardee's effort may be fundamental research. It is also possible that the research performed by a potential awardee is fundamental research while its proposed subawardee's effort may be non-fundamental research. In all cases, it is the potential awardee's responsibility to explain in its proposal which proposed efforts are fundamental research and why the proposed efforts should be considered 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 solicitation 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, that (a) cites the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and (b) certifies the FFRDC's compliance with the associated FFRDC sponsor agreement's terms and conditions. These conditions are a requirement 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 and compete with industry. This information is required for Government Entities proposing to be awardees or subawardees.

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.

2. Other Applicants

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 solicitation. 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 solicitation 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. Cost Sharing/Matching

Cost sharing is not required; however, it will be carefully considered where there is an applicable statutory condition relating to the selected funding instrument. Cost sharing is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

For more information on potential cost sharing requirements for Other Transactions for Prototype, see http://www.darpa.mil/work-with-us/contract-management and https://acquisitioninnovation.darpa.mil.

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

All submissions, including abstracts and proposals must be written in English with type not smaller than 12-point font. Smaller font may be used for figures, tables, and charts. Copies of all documents submitted must be clearly labeled with the DARPA BAA number, proposer organization, and proposal title/proposal short title.

1. Abstract Format

Proposers are strongly encouraged to submit an abstract in advance of a full proposal. 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 for TA1 abstracts and 5 pages for TA3 abstracts**.

Proposers should not submit to more than one Technical Area in a single abstract. Proposers who wish to submit to more than one Technical Area must submit a separate abstract for each individual Technical Area. Abstracts should include all phases described herein for the associated Technical Area.

Section I. Administrative

A. Cover sheet to include:
(1) BAA number (HR001121S0031);
(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.

D. 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.

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. Section II of Volume I, Technical and Management Proposal, **shall not exceed 25 pages for TA1 proposals and 20 pages for TA3 proposals**. The page limitation for full proposals includes all figures, tables, and charts. There is no page limit for Volume II, Cost Proposal.

Proposers should not propose to more than one Technical Area in a single proposal. Proposers who wish to propose to more than one Technical Area must submit a separate full proposal for each individual Technical Area. Proposals must include all phases described herein for the associated Technical Area.

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

<u>Section I. Administrative</u>

A. Cover sheet to include:

(1) BAA number (HR001121S0031);
(2) Technical area;
(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. Executive Summary

Summarize the technical approach, anticipated performance, and expected outcomes of the proposed effort. The executive summary should be concise and to the point. Tables, graphs, and diagrams can be used as supplemental material along with narrative to convey the information.

B. 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 and metrics in support of innovative claims and deliverable creation. The proposal must provide a detailed analysis of how the proposed approach will meet the DARPA metrics and goals.

For TA1 proposals, the Technical Approach must:

- State assumptions and rationale of the proposed filter technology as a filter architecture to cover 2 GHz to 18 GHz within the 69 mm^2 area, including basic calculations of the number of filters, area of external components required for individual filter tuning (if applicable), and a projection of area allocated towards as-needed external components (e.g., switches, controls, interconnect, etc.). Pie charts of area allocation are appreciated.
- Explicitly state how the Technical Approach will address all applicable Technical Challenges stated in the Program Description to achieve the metrics in Table 1 within the constraints in Table 2. Proposers should provide a justification for any claim that a Technical Challenge stated in the Program Description is *not* applicable to their specific Technical Approach.
- Although a full architecture design is not required in proposal submissions to this BAA, proposers should provide an abbreviated discussion of how they anticipate their filter technology will be integrated into a filter architecture, including initial projection and identification of as-needed external components (e.g., switches, controls, interconnect, etc.) anticipated to meet the cover the overall 2 GHz to 18 GHz.
- Clearly state and justify any proposer-defined metrics.

For TA3 proposals, the Technical Approach must:

- Explicitly state how the Technical Approach will achieve the metrics in Table 3.
- Clearly state and justify any proposer-defined metrics.

C. 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 (see Table 3); 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).*

D. 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.

E. 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.

F. National Security Impact Statement

To reduce the potential for unintended foreign access to critical U.S. national security technologies developed under this effort, proposals shall describe:

- How the proposed work contributes to U.S. national security and U.S. technological capabilities. The proposer may also summarize previous work that contributed to U.S. national security and U.S. technological capabilities.
- Plans and capabilities to transition technologies developed under this effort to U.S. national security applications and/or to U.S. industry. The proposer may also discuss previous technology transitions to the benefit of U.S. interests.

- Any plans to transition technologies developed under this effort to foreign governments or to companies that are foreign owned, controlled or influenced. The proposer may also discuss previous technology transition to these groups.
- How the proposer will assist its employees and agents performing work under this effort to be eligible to participate in the U.S. national security environment.

G. Vision for Technology Transition and Manufacturing

Address how technologies developed under the effort may be matured and made available to commercial users and the defense industrial base after the conclusion of the program. This section should describe:

- Plans and capabilities to transition technologies developed under this effort to U.S. national security applications and/or to U.S. industry. The proposer may also discuss previous technology transitions to the benefit of U.S. interests.
- Technology readiness level (TRL) estimation and discussion of the expected activities required to advance the maturity of the end-of-program hardware.
- 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." If there are no proprietary claims, this should be stated.
- Technical elements of the proposed solution that support the ability to scale up manufacturing to future volumes of 1,000 to >10,000 units per year. This discussion should also identify the critical components or processes, if any, that will require the use of non-domestic sources, and project how these elements could be on-shored or otherwise incorporated into a secure supply chain for the DoD.
- Manufacturing readiness level (MRL) estimation and discussion of the expected activities required to advance the maturity of the end-of-program fabrication and assembly processes.

H. Ongoing Research

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

I. Proposer Accomplishments

Discussion of proposer's previous accomplishments and work in closely related research areas.

J. Facilities and Equipment

Description of the facilities and equipment that would be used for the proposed effort and how they will support meeting program metrics.

K. Teaming

Describe the formal teaming arrangements which will be used to execute this effort. Describe the programmatic relationship between investigators and the rationale for choosing this teaming strategy. Present a coherent organization chart and integrated management strategy for the program team. For each person, indicate: (1) name, (2) affiliation, (3) abbreviated listing of all technical area tasks they will work on with roles, responsibilities, and percent

time indicated, (4) discussion of the proposers' previous accomplishments, relevant expertise and/or unique capabilities.

L. Security Management

Describe security management architecture and/or approach for the proposed effort. Detail unique additional security requirements information system certification expertise for controlled unclassified information (CUI) or classified processing, OPSEC, program protection planning, test planning, transportation plans, work being performed at different classification levels, and/or utilizing test equipment not approved at appropriate classification level (may not be applicable for fundamental research).

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 (HR001121S0031);
(2) Technical area;
(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) An itemization of any information technology (IT) purchase, as defined by FAR 2.101 – Documentation supporting the reasonableness of the proposed equipment costs (vendor quotes, past purchase orders/purchase history, detailed engineering estimates, etc.) shall be provided, including a letter stating why the proposer cannot provide the requested resources from its own funding for prime and all sub-awardees.

(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 $2,000 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, <u>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.</u> Subcontractor proposals include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements. <u>If seeking a procurement contract, the prime contractor shall provide a cost reasonableness analysis of all proposed subcontractor costs/prices.</u> 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-conforming 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).

I. Fundamental Research

Written justification required per Section II.B, "Fundamental Research," pertaining to prime and/or subcontracted effort being considered Contracted Fundamental Research.

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).

Note 2:
Proposers requesting an Other Transaction who meet the definition of "nontraditional defense contractor," as defined at 10 U.S. Code § 2302(9), should submit information similar to "data other than certified cost or pricing data," as defined at FAR 2.101, to the maximum extent possible to allow for the Government to evaluate cost realism. Proposers (to include subcontractors) who do not meet the definition of a nontraditional defense contractor (who are, therefore, considered a traditional defense contractor) shall submit "data other than certified cost or pricing data." It is incumbent on a proposer requesting an Other Transaction to provide an adequate amount of cost information needed in order for the Government to be able to evaluate cost realism. Failure to provide an adequate amount of cost information will result in the proposal being deemed non-conforming.

Note 3:
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.

Note 4:
The Government strongly encourages that proposers use the provided MS Excel™ DARPA Standard Cost Proposal Spreadsheet in the development of their cost proposals. A customized cost proposal spreadsheet may be an attachment to this solicitation. If not, the spreadsheet can be found on the DARPA website at http://www.darpa.mil/work-with-us/contract-management (under "Resources" on the right-hand side of the webpage). All tabs and tables in the cost proposal spreadsheet should be developed in an editable format with calculation formulas intact to allow traceability of the cost proposal. This cost proposal spreadsheet should be used by the prime organization and all subcontractors. In addition to using the cost proposal spreadsheet, the cost proposal still must include all other items required in this announcement that are not covered by the editable spreadsheet. Subcontractor cost proposal spreadsheets may be submitted directly to the Government by the proposed subcontractor via e-mail to the address in Part I of this solicitation. **Using the provided cost proposal spreadsheet will assist the Government in a rapid analysis of your proposed costs and, if your proposal is selected for a potential award, speed up the negotiation and award execution process**.

Any questions pertaining to use of the DARPA Standard Cost Proposal Spreadsheet, to include permitted changes and prohibited changes thereto, should be directed to costproposal@darpa.mil. Please read the instructions provided within the DARPA Standard Cost Proposal Spreadsheet, "General" tab, to include the General Spreadsheet Instruction document

embedded therein. It is very important that proposers not make changes to the format of the spreadsheet where specifically instructed not to do so.

Section III. Other Transaction Request, if applicable

All proposers requesting an Other Transaction (OT) must include a detailed list of payment milestones (Milestone Plan). Each milestone must include the following:

- Milestone description
- Completion/Exit criteria (to include identifying all associated data deliverables excluding those specifically providing project status)
- Due date
- Payment/funding schedule (to include, if cost share is proposed, awardee and Government share amounts)
- For each data deliverable, identify the proposed Government data rights (keeping in mind how each data deliverable will need to be used by the Government given the goals and objectives of the proposed project)

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. Program Security Information

Proposers should include with their proposal any proposed solution(s) to program security requirements unique to this program. Common program security requirements include but are not limited to: operational security (OPSEC) contracting/sub-contracting plans; foreign participation or materials utilization plans; program protection plans (which may entail the following) manufacturing and integration plans; range utilization and support plans (air, sea, land, space, and cyber); data dissemination plans; asset transportation plans; classified test activity plans; disaster recovery plans; classified material / asset disposition plans and public affairs / communications plans.

b. Controlled Unclassified Information (CUI)

For Unclassified proposals containing controlled unclassified information (CUI), applicants will ensure personnel and information systems processing CUI security requirements are in place.

i. CUI Proposal Markings

If an unclassified submission contains CUI or the suspicion of such, as defined by Executive Order 13556 and 32 CFR Part 2002, the information must be appropriately and conspicuously marked CUI in accordance with DoDI 5200.48. Identification of what is CUI about this DARPA program will be detailed in a DARPA CUI Guide and will be provided as an attachment to the BAA or may be provided at a later date.

ii. CUI Submission Requirements

Unclassified submissions containing CUI may be submitted via DARPA's BAA Website (https://baa.darpa.mil) in accordance with Section IV.C.2. of this BAA.

Proposers submitting proposals involving the pursuit and protection of DARPA information designated as CUI must have, or be able to acquire prior to contract award, an information system authorized to process CUI information IAW NIST SP 800-171 and DoDI 8582.01.

c. 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.

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.

Submissions containing both classified information and CUI must be appropriately and conspicuously marked with the proposed classification level as well as ensuring CUI is marked in accordance with DoDI 5200.48.

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).

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.

When a proposal includes a classified portion, and when able according to security guidelines, we ask that proposers send an e-mail to HR001121S0031@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 HR001121S0031, proposer organization, proposal title (short title recommended), and Copy _ of _.

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: HR001121S0031
  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).

SAP IT disposition procedures must be approved in accordance with the DoD CIO Memorandum of April 20, 2020[8].

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.

[8] The title of this memorandum is CUI and the memo is classified SECRET//HANDLE VIA SPECIAL ACCESS CHANNELS ONLY. This memorandum may be provided under separate cover.

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://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-171r2.pdf) and DoDI 8582.01 that are in effect at the time the solicitation 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 Subjects Research (HSR)/Animal Use

Proposers that anticipate involving human subjects or animals in the proposed research must comply with the approval procedures detailed at http://www.darpa.mil/work-with-us/additional-baa, to include providing the information specified therein as required for proposal submission.

7. Approved Cost Accounting System Documentation

Proposers that do not have a Cost Accounting Standards (CAS) compliant 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 is a large business concern and seeking a procurement contract that has subcontracting possibilities is required to submit a subcontracting plan with their proposal. The plan format is outlined in FAR 19.704. As of the date of publication of this BAA, per FAR 19.702, the threshold for submission of a small business subcontracting plan is $700,000 (total contract amount including options).

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 solicitation. 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/sys_attachment.do?sys_id=c08b64ab1b4434109ac5ddb6bc4bcbb8.

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 HR001121S0031. 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 HR001121S0031@darpa.mil. DARPA intends to use electronic mail for correspondence regarding HR001121S0031. 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

a. Abstract Due Date

Abstracts must be submitted to DARPA/MTO on or before 04:00 PM, Eastern Time, 19 July 2021. Abstracts received after this time and date may not be reviewed.

b. Full Proposal Date

Full proposals must be submitted to DARPA/MTO on or before 04:00 PM, Eastern Time, 10 September 2021, in order to be considered during the single round of selections. Proposals received after this deadline will not be reviewed.

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 HR001121S0031 summary will be a link to the FAQ. Submit your question/s by e-mail to HR001121S0031@darpa.mil. In order to receive a response sufficiently in advance of the proposal due date, send your question/s on or before 04:00 PM, Eastern Time, 27 August 2021.

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 HR001121S0031 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): https://public.cyber.mil/from-iase/.

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 (DARPA-preferred); 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: In addition to the volumes and corresponding attachments requested elsewhere in this solicitation, proposers must also submit the three forms listed below.
Form 1: 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. § 1681 et.seq.), the Department of Defense (DoD) is collecting 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. In addition, the National Defense Authorization Act (NDAA) for FY 2019, Section 1286, directs the Secretary of Defense to protect intellectual property, controlled information, key personnel, and information about critical technologies relevant to national security and limit undue influence, including foreign talent programs by countries that desire to exploit United States' technology within the DoD research, science and technology, and innovation enterprise. This requirement is necessary for all research and research-related educational activities. The DoD is using the two forms

below to collect the necessary information to satisfy these requirements. Detailed instructions for each form are available on Grants.gov.
Form 2: 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.*
The Research and Related Senior/Key Person Profile (Expanded) form will be used to collect the following information for all senior/key personnel, including Project Director/Principal Investigator and Co-Project Director/Co-Principal Investigator, whether or not the individuals' efforts under the project are funded by the DoD:

- Degree Type and Degree Year.
- Current and Pending Support, including:
    - A list of all current projects the individual is working on, in addition to any future support the individual has applied to receive, regardless of the source.
    - Title and objectives of the other research projects.
    - The percentage per year to be devoted to the other projects.
    - The total amount of support the individual is receiving in connection to each of the other research projects or will receive if other proposals are awarded.
    - Name and address of the agencies and/or other parties supporting the other research projects
    - Period of performance for the other research projects.

Additional senior/key persons can be added by selecting the "Next Person" button at the bottom of the form. Note that, although applications without this information completed may pass Grants.gov edit checks, if DARPA receives an application without the required information, DARPA may determine that the application is incomplete and may cause your submission to be rejected and eliminated from further review and consideration under the solicitation. DARPA reserves the right to request further details from the applicant before making a final determination on funding the effort.
Form 3: 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 Technology Investment Agreements

Proposers requesting Technology Investment Agreements (TIA) awarded under 10 U.S.C. 2371 must include the completed form indicated below. This requirement only applies only to those who expect to receive a TIA as their ultimate award instrument.
The National Defense Authorization Act (NDAA) for FY 2019, Section 1286, directs the Secretary of Defense to protect intellectual property, controlled information, key personnel, and information about critical technologies relevant to national security and limit undue influence, including foreign talent programs by countries that desire to exploit United States' technology within the DoD research, science and technology, and innovation enterprise. This requirement is necessary for all research and research-related educational activities. The DoD is using the form below to collect the necessary information to satisfy these requirements.
The Research and Related Senior/Key Person Profile (Expanded) form, available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_KeyPersonExpanded_2_0-V2.0.pdf, will be used to collect the following information for all senior/key personnel, including Project Director/Principal Investigator and Co-Project Director/Co-Principal Investigator, whether or not the individuals' efforts under the project are funded by the DoD:

- Degree Type and Degree Year.
- Current and Pending Support, including:
    - A list of all current projects the individual is working on, in addition to any future support the individual has applied to receive, regardless of the source.
    - Title and objectives of the other research projects.
    - The percentage per year to be devoted to the other projects.
    - The total amount of support the individual is receiving in connection to each of the other research projects or will receive if other proposals are awarded.
    - Name and address of the agencies and/or other parties supporting the other research projects
    - Period of performance for the other research projects.

Additional senior/key persons can be added by selecting the "Next Person" button at the bottom of the form. Note that, although applications without this information completed may pass Grants.gov edit checks, if DARPA receives an application without the required information,

DARPA may determine that the application is incomplete and may cause your submission to be rejected and eliminated from further review and consideration under the solicitation. DARPA reserves the right to request further details from the applicant before making a final determination on funding the effort.

c. 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 darpa.mil as a trusted domain), or visit DISA's site to download the Root Certificate Authority (CA): https://public.cyber.mil/from-iase/.

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).

d. 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 approach is innovative, feasible, achievable, and complete.
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.

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.

The proposer clearly demonstrates its plans and capabilities to contribute to U.S. national security and U.S. technological capabilities. The evaluation will consider the proposer's plans and capabilities to transition proposed technologies to the research, industrial, and/or operational military communities in such a way as to enhance U.S. defense.. The evaluation may consider the proposer's history of transitioning or plans to transition technologies to foreign governments or to companies that are foreign owned, controlled, or influenced. The evaluation will also consider the proposer's plans and capabilities to assist its employees and agents to be eligible to participate in the U.S. national security environment. 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. Finally, the evaluation will consider the proposer's use of domestic manufacturing capabilities.

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

DARPA will conduct a scientific/technical review of each conforming proposal. Conforming proposals comply with all requirements detailed in this solicitation; 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 conforming full proposals 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.

2. Solicitation Provisions and Award Clauses, Terms and Conditions

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) and Controlled Technical Information (CTI) on Non-DoD Information Systems

Further information on Controlled Unclassified Information identification, marking, protecting and control, to include processing on Non-DoD Information Systems, is incorporated herein and can be found at www.darpa.mil/work-with-us/additional-baa.

4. Representations and Certifications

In accordance with FAR 4.1102 and 4.1201, proposers requesting a procurement contract must complete electronic annual representations and certifications at https://www.sam.gov/.
In addition, all proposers are required to submit for all award instrument types supplementary DARPA-specific representations and certifications at the time of proposal submission. See http://www.darpa.mil/work-with-us/reps-certs for further information on required representation and certification depending on your requested award instrument.

5. Terms and Conditions (for grants and cooperative agreements only)

For terms and conditions specific to grants and/or cooperative agreements, see the DoD General Research Terms and Conditions (latest version) at http://www.onr.navy.mil/Contracts-Grants/submit-proposal/grants-proposal/grants-terms-conditions and the supplemental DARPA-specific terms and conditions 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 financial status reports and quarterly technical briefing material or report. 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

1. 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.

2. i-Edison

The award document for each proposal selected for funding will contain a mandatory requirement for invention disclosures (and associated elections, confirmatory instruments, etc.) and patent reports to be submitted electronically through i-Edison (https://public.era.nih.gov/iedison).

3. DARPA Vault

The award instrument for each proposal selected for funding will contain a mandatory requirement for submission of all data deliverables, to include technical and financial status reports, electronically through the DARPA Vault, a web-based data repository.

4. DARPA Embedded Entrepreneur Initiative (EEI)

Awardees pursuant to this solicitation may be eligible to participate in the DARPA Embedded Entrepreneur Initiative (EEI) during the award's period of performance. EEI is a limited scope program offered by DARPA, at DARPA's discretion, to a small subset of awardees. The goal of DARPA's EEI is to increase the likelihood that DARPA-funded technologies take root in the U.S. and provide new capabilities for national defense. EEI supports DARPA's mission "to make pivotal investments in breakthrough technologies and capabilities for national security" by accelerating the transition of innovations out of the lab and into new capabilities for the Department of Defense (DoD). EEI investment supports development of a robust and deliberate Go-to-Market strategy for selling technology to government and commercial markets and positions DARPA awardees to attract U.S. investment. The following is for informational and planning purposes only and does not constitute solicitation of proposals to the EEI.

There are three elements to DARPA's EEI: (1) A Senior Commercialization Advisor (SCA) from DARPA who works with the Program Manager (PM) to examine the business case for the awardee's technology and uses commercial methodologies to identify steps toward achieving a successful transition of technology to the government and commercial markets; (2) Connections to potential industry and investor partners via EEI's Transition Working Groups; and (3) Additional funding for awardees to hire an embedded entrepreneur to achieve specific commercialization milestones and work towards the delivery of a robust transition plan for both defense and commercial markets. This embedded entrepreneur's qualifications should include business experience within the target industries of interest, experience in commercializing early stage technology, and the ability to communicate and interact with technical and non-technical stakeholders. Funding for EEI is typically no more than $250,000 per awardee over the duration of the award. An awardee may apportion EEI funding to hire more than one embedded entrepreneur, if achieving the milestones requires different expertise that can be obtained without exceeding the awardee's total EEI funding. The EEI effort is intended to be conducted concurrent with the research program without extending the period of performance.

EEI Application Process:

After receiving an award under the solicitation, awardees interested in being considered for EEI should notify their DARPA Program Manager (PM) during the period of performance. Timing of such notification should ideally allow sufficient time for DARPA and the awardee to review the awardee's initial transition plan, identify commercial milestones to deliver under EEI, modify the award, and conduct the work required to achieve such milestones within the original award period of performance. These steps may take 18-24 months to complete, depending on the technology. If the DARPA PM determines that EEI could be of benefit to transition the technology to product(s) the Government needs, the PM will refer the performer to DARPA's Commercial Strategy team.

DARPA's Commercial Strategy team will then contact the performer, assess fitness for EEI, and in consultation with the DARPA technical office, determine whether to invite the performer to participate in the EEI. Factors that are considered in determining fitness for EEI include DoD/Government need for the technology; competitive approaches to enable a similar capability or product; risks and impact of the Government's being unable to access the technology from a sustainable source; Government and commercial markets for the technology; cost and affordability; manufacturability and scalability; supply chain requirements and barriers; regulatory requirements and timelines; Intellectual Property and Government Use Rights, and available funding.

Invitation to participate in EEI is at the sole discretion of DARPA and subject to program balance and the availability of funding. EEI participants' awards may be subsequently modified bilaterally to amend the Statement of Work to add negotiated EEI tasks, provide funding, and specify a milestone schedule which will include measurable steps necessary to build, refine, and execute a Go-to-Market strategy aimed at delivering new capabilities for national defense. Milestone examples are available at: https://www.darpa.mil/work-with-us/contract-management

Awardees under this solicitation are eligible to be considered for participation in EEI, but selection for award under this solicitation does not imply or guarantee participation in EEI.

VII. Agency Contacts

Administrative, technical or contractual questions should be sent via e-mail to HR001121S0031@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. Benjamin Griffin, Program Manager
BAA Coordinator: HR001121S0031@darpa.mil
DARPA/MTO
ATTN: HR001121S0031
675 North Randolph Street

Arlington, VA 22203-2114

VIII. Other Information

A. Proposers Day

The COFFEE Proposers Day will be held on June 17, 2021 virtually. Advance registration is required for the webcast. See DARPA-SN-21-30 posted at https://sam.gov for all details. Attendance at the COFFEE 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.