Broad Agency Announcement

Aircrew Labor In-cockpit Automation System (ALIAS) Program

Tactical Technology Office

DARPA-BAA-14-37

May 12, 2014

Contents

Part I: Overview Information

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Tactical Technology Office (TTO)
- **Funding Opportunity Title –** Automated Labor In-cockpit Automation System (ALIAS) Program
- **Announcement Type –** Initial Announcement
- **Funding Opportunity Number –** DARPA-BAA-14-37
- **Catalog of Federal Domestic Assistance Numbers (CFDA)** – Not applicable
- **Dates**
  - Posting Date: May 12, 2014
  - Proposers' Day: May 14, 2014
  - Questions Due: June 13, 2014 at 4:00 p.m. Eastern Time
  - Proposal Due Date: July 14, 2014 at 4:00 p.m. Eastern Time

- **Concise description of the effort**: The goal of the ALIAS program is to design, develop, and demonstrate an automation toolset that enables operation of multiple types of existing manned aircraft with reduced onboard crew. ALIAS intends to foster enhanced human-machine collaboration for reduced workload, improved safety, and new mission capabilities.
- **Total amount of money to be awarded:** Up to $16.5M in Phase I (Base Period) and up to $20M in Phase II (Option)
- **Anticipated individual awards** – Multiple awards are anticipated.
- **Types of instruments that may be awarded** -- Procurement Contract or Other Transaction
- **Agency contact:**
  - The BAA Coordinator for this effort can be reached at:
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    ATTN: DARPA-BAA-14-37
    675 North Randolph Street
    Arlington, VA 22203-2114

Part II: Full Text of Announcement

I. Funding Opportunity Description

DARPA often selects its research efforts through the Broad Agency Announcement (BAA) process. The BAA will appear first on the FedBizOpps website, http://www.fbo.gov, and then the agency website, http://www.darpa.mil/Opportunities/Solicitations/TTO_Solicitations.aspx. The following information is provided to those wishing to respond to the BAA.

DARPA is seeking innovative solutions that will expand the knowledge base and design capabilities for the Aircrew Labor In-cockpit Automation System (ALIAS) program. The use of a BAA allows a wide range of innovative ideas and concepts, and proposer(s) will have the flexibility to develop a tailored program plan that best advances the ALIAS program goals.

Automation and autonomy have broad value to the Department of Defense (DoD), with the potential to (1) enhance system performance beyond human precision or capacity alone, (2) reduce costs by enabling human operators to have greater overall effect, and (3) enable new missions and capabilities, especially with reduced human exposure to dangerous or life threatening situations. A key obstacle to rapid advances in aviation automation and autonomy is the platform-centric model predominately used in acquisition, wherein major mission software and interface advances are generally associated with the expensive development of new platforms.

ALIAS seeks to break the hard link between new platform developments and new interfaces or automation-enabled capabilities. ALIAS attempts to leverage existing aviation assets to help develop new operational capabilities and enable reduced operational costs, facilitating major automation advances without high platform-specific modification costs. By divorcing the operator interface from a specific set of legacy hardware, the high costs associated with human operator training and currency could be greatly reduced. Furthermore, although envisioned as an automation system, ALIAS could reduce the barrier to entry in development and experimentation of autonomy in DoD systems by providing a framework that is easily extensible to mission applications. ALIAS envisions a partitioned model where new software or algorithmic capabilities can be incrementally introduced without major impact to a host aircraft, potentially permitting the licensing of trusted automation capabilities through incrementally vetted behaviors.

The objective of the ALIAS program is to develop and insert new automation into existing aircraft in order to enable operation with reduced onboard crew.

Considerable advances have been made in aircraft automation systems over the past 50 years. These advances have enabled reduced pilot workload, improved mission prosecution, and improved flight safety. Similarly, unmanned aircraft have developed and leveraged new automation systems to permit operation via remote crew. At the same time, large aircraft are capital-intensive developments generally subject to rigorous safety and reliability standards. The

expense of new developments limits the rate at which new automation or autonomy capabilities can be developed, tested, and fielded.

The ALIAS program envisions a tailorable, drop-in, removable kit that enables the addition of high levels of automation into existing aircraft. Specifically, ALIAS intends to control sufficient functionality to enable management of all flight activities, including failure of aircraft systems, and permit an operator to act as a monitor with the ability to intervene, allowing the operator to focus on higher level mission objectives.

Operation of multi-crew aircraft with variably reduced onboard crew is a considerable challenge. Multiple crew positions are generally implemented when the operating workload exceeds the reasonable capability of a single operator or when mission safety considerations mandate the redundancy of additional crew members. Interactions of skilled multi-crew operator teams can be highly complex. At the same time, there is considerable potential payoff to robustly achieving the vision of variably crewed operations, including reduced training and operating costs, and freeing aircraft operators from low level tasks to enhance their overall mission capability. The ALIAS vision contemplates a reliable, extensible, portable automation system that acts as a layer of middleware between an operator and the aircraft. This general vision would permit the flexible exploration and development of new paradigms for human-machine interaction that are required to achieve the reduced crew operations objective. The functional vision is displayed in Figure 1.

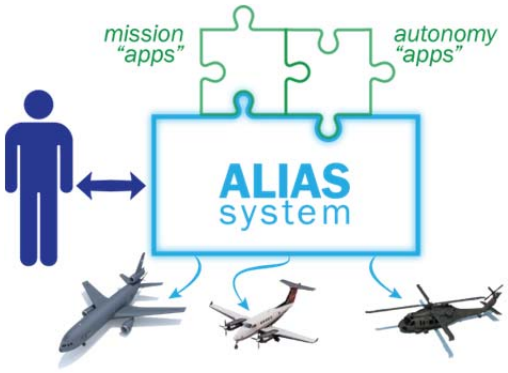

Figure 1. ALIAS Functional Vision

As an automation system, ALIAS should be capable of executing a planned mission from takeoff to landing, even in the face of contingency events such as aircraft system failures. For the purposes of ALIAS demonstration planning, the considered mission set should be consistent with logistics or intelligence, surveillance, and reconnaissance (ISR) type missions, generally planned at the waypoint level. ALIAS system attributes, such as persistent state monitoring and rapid procedure recall, provide a means to further enhance flight safety. Coordinated response to a broad range of system failures, such as those documented in operations, procedures, or training manuals, is envisioned. ALIAS should present a high-level, latency-tolerant interface to a human supervisor to enable operation and foster effective human-machine collaboration. For example, voice and tablet interfaces are viewed as appropriate to support supervisor-ALIAS interaction. In DARPA's vision, ALIAS should also serve as a platform that could host additional mission capability-specific autonomy applications.

DARPA has identified three critical technology areas that will be the focus of this program:

(1) Minimally invasive interfaces from an ALIAS system to existing aircraft. It is anticipated that the ALIAS system will need to operate aircraft functions in order to provide for automated operation over the entire flight period. Systems that are generally confined to the cockpit support the vision of ALIAS portability. This vision foresees rapid installation and subsequent removal of the ALIAS system without impact to host aircraft flightworthiness and certification.
(2) Knowledge acquisition. To support rapid adaptation of the ALIAS toolkit across different aircraft in a short amount of time, it is anticipated that the ALIAS system would benefit from the use of existing procedural and flight mechanics information or models about the host aircraft. Rapid and verifiably complete knowledge acquisition and codification will be critical to adapting an ALIAS system to various specific aircraft types.
(3) Human interface. A vision for ALIAS is that the human operator provides high-level input appropriate for replanning and mission-level supervision, and is not engaged in lower-level flight maintenance tasks that demand constant vigilance. Workload throughout basic missions, including reaction to contingency scenarios, should not exceed operator capability.

It is expected that successfully achieving the ALIAS program goals will require multidisciplinary performer teams who are executing integrated system developments that feature advancements across all three technology areas.

DARPA envisions an aggressive forty three (43) month schedule with frequent evolutionary demonstration events. The intent of this aggressive program schedule is to ensure that technology maturation activities are appropriately focused and programmatic risk is limited to those new and enabling technologies that are required to meet program goals.

DARPA anticipates up to $16.5M for Phase I awards, estimated to be sufficient for three Phase I system efforts. DARPA further anticipates that up to $20M may be available for Phase II (option) awards. DARPA estimates that Phase II activity and flight demonstration may cost $10M – $15M for a performer team to complete Phase II demonstration objectives. The Government retains the right to select all, some, one, none or portions of Phase II option proposals to support promising further technology developments or support transition of technology developed in Phase I.

DARPA is interested in interdisciplinary research activities that would culminate in a series of progressive system demonstrations, beginning with ground demonstration (Phase I), progressing to flight (Phase II), porting to a different aircraft type on the ground (Phase II), and culminating with a robust demonstration across an entire flight (Phase III). DARPA is interested in full ALIAS system solutions in response to this BAA, which outline a path to these integrated demonstrations.

The Government will use a phased acquisition approach for the ALIAS program under this BAA. At this time, DARPA is soliciting proposals for Phase I (Base) and Phase II (Option). Phase III concepts and information are being requested at a rough order of magnitude (ROM) level. If the Government elects to continue the program into Phase III, the Government may

request Phase II prime performers to update their proposals for Phase III based on the results of their Phase II activities. Such requests and proposal guidance may be provided toward the end of Phase II.

A. Program Goals

DARPA's system vision for the ALIAS program is depicted in Figure 2.

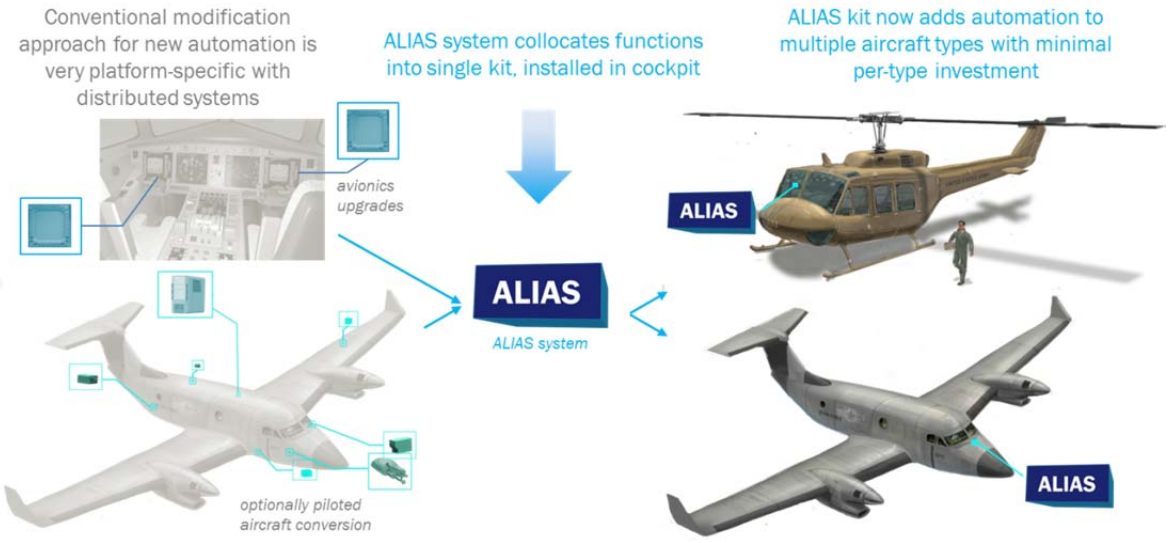

Figure 2. ALIAS System Vision

The ALIAS program seeks to (1) develop a robust architecture to support the vision of ALIAS portability across aircraft types and roles, (2) develop technologies to effectively interface with existing aircraft, capture knowledge about aircraft, and interface with human operators and (3) incrementally demonstrate elements of the ALIAS capability vision.

By the end of Phase III, it is expected that program events will have demonstrated system portability across aircraft as well as system robustness via flight test activity, exercising the system in command operation for a minimum of 12 hours of flight, including a complete representative logistics or ISR flight profile from takeoff through landing.

DARPA has established the following system performance and capability objectives to define an ultimate vision of an ALIAS system:

1) System extensible to most (approximately 80 percent or more) of DoD multi-crew aircraft types (fixed and rotary wing)
2) Automatic flight operability; takeoff-through-landing via an in-cockpit ALIAS system
3) Essential aircraft functions controlled by single screen and/or voice inputs; suitable human interface paradigm to manage workload and enable replanning
4) Capable of onboard or offboard (on-ground) interface with operator
5) Tolerant of communication latency of 1 second or greater

6) Capable of diagnosing system failures and implementing response procedures as generally provided for in relevant manuals
7) One month to adapt to new aircraft type
8) Rapid installation time of 1 day or even less; field-reversible
9) Low cost implementation on additional aircraft, production recurring objective system cost of <$1M
10) Installation and removal without impact to host aircraft flightworthiness
11) Scalable fault tolerance, appropriate to mission design safety or greater (architecture ultimately scalable to catastrophic failure probability of 10^−9 per hour)
12) Maximal system content located in the host aircraft cockpit in order to minimize aircraft impact and maximize portability
13) Open interfaces from the ALIAS system to permit it to act as a layer of middleware between mission-specific autonomy software and a host aircraft and its mission equipment

It is expected that some elements, such as system production cost, architectural fault tolerance goals, and airworthiness impacts will be shown by analysis. Other elements, such as the vision of broad portability across many aircraft types, will be partially demonstrated across program activity and may not be fully shown by analysis. DARPA desires compelling research and development efforts which can achieve maximal capability, maximal maturity, and best show a path to meeting objective metrics within aggressive program schedule and budgetary constraints.

DARPA envisions an evolutionary approach to achieving a fully capable ALIAS system and is focused on the development of a progressively refined common ALIAS core system that is supplemented by common adaptation modules and minimal aircraft unique elements. These ALIAS system elements are defined as follows.

- The ALIAS system comprises:
    - A continuously evolving core system, architected to support flexibility and adaptability. It is expected that the core system has hardware and software elements, but most of the evolution will be in the form of software enhancements.
    - A “capability library” of hardware/software services and hardware/software modules used to adapt to different individual aircraft types or across different missions and operations.
    - Aircraft-specific information that is used by the core system to deliver appropriate system behaviors. This information may have to be rapidly generated, validated, and formatted appropriately to permit use by the core system across different instances.
- An ALIAS instance is an ALIAS kit adapted to a particular aircraft (Figure 2a). This would include the current or most recent ALIAS core system with a selection of the appropriate modules and services from the ALIAS capability library. If a given aircraft requires a new module, then the library must be expanded. However, it is anticipated that there are realistically a finite number of types of different modules.

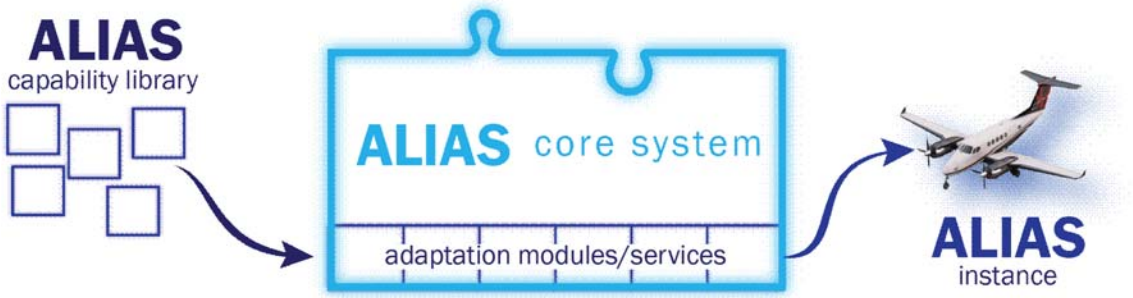

Figure 2a. Notional Adapted ALIAS System

The ALIAS program intends to prove feasibility of the ALIAS vision system concept and demonstrate metrics to the maximum extent feasible within the schedule and budgetary constraints

B. Program Plan

The ALIAS program is a three-phase development effort that concludes with a graduating flight demonstration. The program schedule defines a rapid, 43-month program. The envisioned Program Schedule is provided in Figure 3.

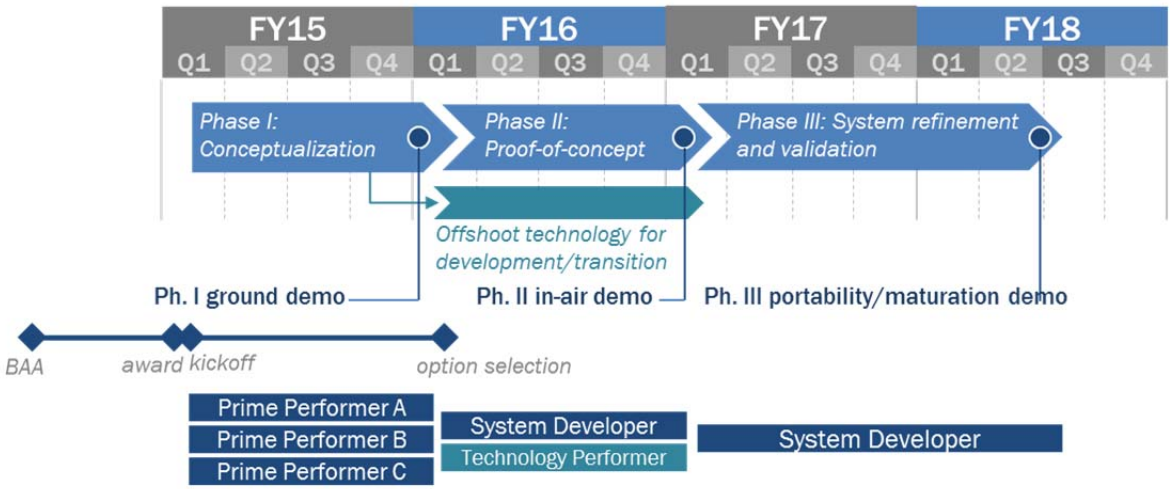

Figure 3. Program Schedule

Phase I will systematically measure progress through monthly reporting and conclude with one or more ground simulator-based feasibility test(s). Phase II will include a flight demonstration of system control over a measurable portion of flight for an initial aircraft type as well as a ground simulator-based test in a second aircraft type. Performers will select and source the requisite simulators and aircraft. It is anticipated that performers will select aircraft and architect their system to permit operation at a commercial test range or airport. The envisioned demonstration progression is illustrated in Figure 4.

Assuming sufficient progress has been made to warrant continuation, the Government intends to specify a second flight test aircraft type for the Phase III demonstration during Phase II. The second aircraft will be chosen based on transition considerations, technical status, and

resource availability. During Phase III, it is anticipated that the performer will install the system in this second aircraft type and conduct extensive flight testing at a Government test range. Phase III is intended to show both system portability and enhanced system maturity and robustness via control across all phases of flight.

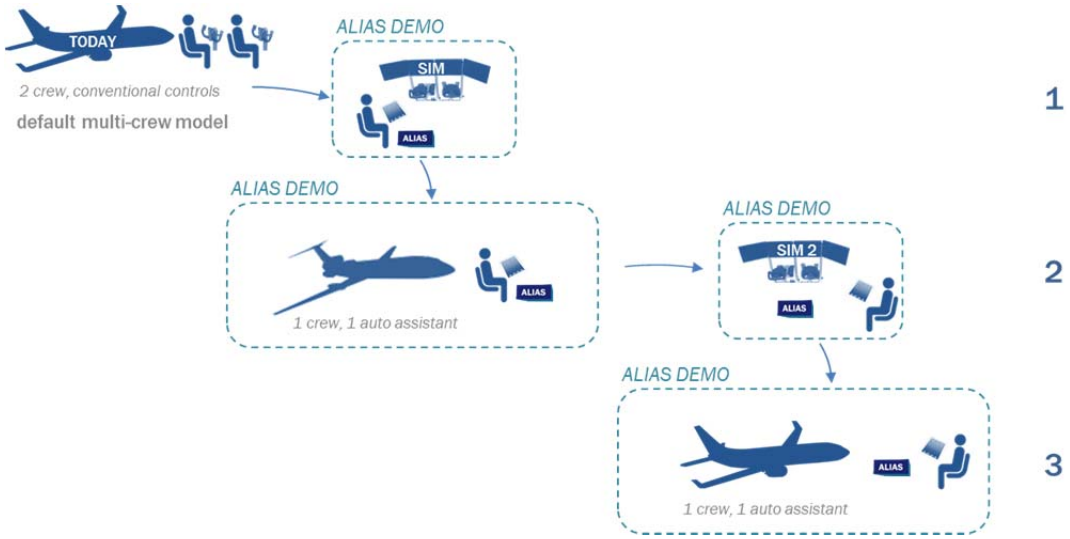

Figure 4. ALIAS Demonstration Progression

Phase I (Conceptualization) - Technical Objectives

The primary objectives of Phase I are to conduct the system architecture analyses, system requirements development, trade studies, and operational capability definition necessary to develop an optimized ALIAS system vision, architecture, and development approach and demonstrate an initial ALIAS instance on the ground.

The results from a successful Phase I program will convince DARPA that: (1) ALIAS is a feasible and effective option for developing and inserting new automation capabilities into aircraft; (2) the system development plan and successive demonstrations will present a feasible and affordable approach to advance the system concept and reduce system risk within the program schedule and budget; and (3) continuation into Phase II is warranted. More detail on each of the Phase I objectives is provided in the following paragraphs.

ALIAS System Conceptual Design

The Government recognizes that a fully common multi-platform ALIAS design may well be impractical, due to differences in operating environments and unique integration challenges for the various aircraft. Moreover, such an approach could well prove unaffordable, as the system would be overdesigned to include features not needed for all applications. By contrast, the program objective is to develop an extensible ALIAS system that notionally incorporates a sufficiently capable core system and provides a convincing argument as to why this core coupled with elements from a capability library can affordably meet ALIAS objectives across multiple platform types. DARPA desires a clever, affordable, extensible approach to a system design and interfaces that provide risk reduction applicable across a range of platforms. The core system, capability library, and aircraft unique elements are expected to evolve over time as the system

migrates to new aircraft types. A mission and autonomy application library may also develop, which would leverage ALIAS instances for specific missions.

In particular, the performer shall define an initial system architecture, describe an initial approach to human interface and approach for evolving said interface, describe an approach to knowledge acquisition on the host aircraft, and describe a set of approaches for interfacing with aircraft.

As part of the ALIAS conceptual design and subsequent development, it is expected that the performer will select and pursue an appropriate set of technologies that have promise for achieving the ALIAS system vision and generally address all three critical technology areas identified above. Some key technical elements for consideration include vision-based cockpit sensing and perception, digital bus monitoring, physical manipulation, machine learning, natural language understanding, procedural verification, algorithmic implementation, flexible flight control techniques, optimized feasible trajectory computation, rule-based routing suggestions, vehicle or health management systems, triaged display of expert system logic and system status, and consumer-technology based human interface modalities. This list is by no means exhaustive and is not intended to be prescriptive. Any included technology should be justified by a performer for a realistic potential contribution to the ALIAS system vision and demonstration objectives.

Leverage of promising emerging tools and development models for software-centric systems development should also be considered. As a notional example, the Robot Operating System (ROS) has proven to offer a powerful set of software libraries and tools to rapidly develop complex and highly capable software-hardware systems. Miniaturized computing and a large consumer device market have spawned a wave of highly accessible and highly capable voice and touch-based interface modalities. Effective software-centric development processes like Agile development are also encouraged. A variety of open and Government-owned standards exist or are emerging to support common interfaces with diverse systems (e.g. relevant Standardization Agreements (STANAGs), Cursor-on-Target (COT), Unmanned Aircraft System/UAS C2 Initiative (UCI), or UAS Control Segment (UCS)), and compliant interfaces may be useful for future ALIAS extensibility. Wherever reasonable and prudent, the Government desires to leverage free, open-source, or open-standard software elements to maximize the value of ALIAS development investment. The development roadmap to achieving highly reliable ALIAS software functions should also be identified.

The performer shall conduct requirements analysis of the ALIAS system objectives to derive a full set of system requirements that maximize ALIAS utility for platform and mission applications according to the vision of reduced crew logistics and ISR operations. In parallel, the performer shall conduct design trade studies to assess the feasibility, technical complexity, development risk and affordability of alternative conceptual ALIAS designs in meeting these requirements. By iteratively conducting requirements analysis and conceptual design trade studies, it is envisioned that the performer can converge on a set of ALIAS system requirements that:

- Results in a core system design that has a basic capacity to meet the majority of program objectives;

- Results in an initial set of "capability library" modules to populate an initial ALIAS instance;
- Substantiates the most effective and affordable development approach;
- Provides the baseline to support further development of the capability library and any additional platform specific requirements; and
- Provides an interface to mission and autonomy applications.

Given that the Government does not intend to specify the second flight test aircraft type until late in Phase II, it is critical that the performer continually articulate and validate portability of the proposed design.

ALIAS System Development and Demonstration Plan (SDDP)

The performer shall refine and add details to the ALIAS SDDP provided in the proposal. The SDDP will define the team's overall approach to mitigating risk and maturing their ALIAS system vision. The SDDP should define the risk reduction, technology and process development and maturation, and demonstration activities that must be conducted to validate the ability to achieve ALIAS program objectives. The SDDP will provide an integrated basis for all development and demonstration activities and detail the full progression of demonstrations envisioned to achieve the final Phase III objective of flight demonstration in a Government furnished aircraft at a Government test range. The ground-based simulation and flight test activities described in the Program Plan are a minimum set of demonstration objectives for each phase. It is expected that performers will conduct additional demonstration events no less frequently than at six month intervals throughout the program to demonstrate the maturation of their ALIAS system. The plan should describe the objectives and system-level maturity expected at each demonstration event, the host aircraft platform, and the type/fidelity of the demonstration (e.g., software simulation, hardware in the loop simulation, ground based aircraft test, flight test). The plan shall also include a complete demonstration schedule as well as Phase III ROM cost.

ALIAS Phase I Demonstrations

The performer shall conduct all development and interim demonstration activities to achieve Phase I program objectives for their selected Phase I aircraft type. The Phase I final demonstration objective is a ground-based demonstration of the performer's ALIAS system installed in a ground-based simulator. The simulation platform could be a cockpit simulator, an aircraft, or another relevant ground-based platform. It is expected that this initial system be at least capable of in-flight navigation between waypoints and diagnosis of some aircraft faults, with more capability desired. The demonstration should show a clear path to the flight demonstration objective in Phase II as well as the simulator portability demonstration.

Phase I Deliverables

DARPA desires that the program include quarterly program reviews at Government facilities (at the DARPA facility or a Government partner site), or, if the review includes hardware demonstrations, at the contractor's facility. The objective of these reviews will be to assess progress, provide feedback and stay abreast of any emerging technical, cost, or schedule issues. DARPA will staff a team of subject matter experts from Government and support contractors to attend program reviews to provide feedback to the Program Manager and to be a

technical resource for the contractors. In addition to formal program reviews, regular telecoms are encouraged to enhance communications with the Government team. To successfully achieve the Phase I objectives and to ensure consistency among performers, DARPA has developed a minimum list of deliverables that must be included in the proposer's Phase I program. The desired content at each review is described below. Proposers should populate their program schedule with these minimum deliverables and supplement this list with additional deliverables/material to be presented at each quarterly review in accordance with their unique program schedule and development approach. It is envisioned that routine system architecture and design updates, technical status reviews and results of any simulations/demonstrations will be provided at each quarterly review.

Kick-off Meeting

A kick-off meeting will be held at the DARPA facility. The objective of this meeting will be to discuss the performer's approach to the program and provide feedback to guide the performer in executing their Phase I program. The Government and the performer will also establish the program review schedule as well a schedule of interim informal interactions, including routine management and technical telecoms.

ALIAS System Architecture Review

The objective of this meeting will be to discuss the performer's optimized ALIAS system architecture. It is expected that this review will detail the design trades and analyses conducted to define the performer's ALIAS system. This review should fully detail the proposed core system capabilities, functions and interfaces and show how this core system can meet the system performance and capability objectives. Description/illustration of how the system could be ported to multiple aircraft types should be a key element of this review. Key interfaces should be defined and described. The review shall also describe the approach to developing and maturing the associated capability library, including a general overview of the envisioned library components. The review must also address envisioned configurations of specific elements. Finally, this review shall provide the roadmap for maturing the capability and fully describe the Phase I demonstration plans. This includes describing the initial ALIAS instance on the contractor-selected aircraft platform as well as the approach for porting it to a flight test vehicle and additional aircraft types. It also includes a discussion of options for hosting mission and autonomy applications.

ALIAS Phase I Capability Demonstrations

In addition to the final Phase I ground-based simulation demonstration, the performer will conduct at least one additional interim ALIAS system demonstration for the Government team. Demonstration results should be presented at a quarterly review and include an assessment of performance with relation to the ALIAS system level objectives.

SDDP Quarterly Updates

The performer will update their SDDP to reflect emerging Phase I results, and add additional details to the plan when the Phase II aircraft and test site have been identified. The

plan should include Phase III demonstration events, ROM cost and schedule information. These updates should be briefed at quarterly design reviews.

Phase II Objectives

The decision to continue the program into Phase II will be based in part upon the Government's determination that one or more performers have successfully completed Phase I with a feasible ALIAS system design and development approach. If the Government elects to continue the program into Phase II, it will exercise the option on the contract of the selected performer(s).

The results from a successful Phase II program will convince DARPA that: (1) ALIAS will result in safe, flyable new automation capabilities; (2) new ALIAS human interface models are feasible and effective for at least logistics and ISR mission sets; and (3) continuation into Phase III is warranted.

The primary objectives of Phase II are to enhance and mature the Phase I system to support flight test, enhance the usability and robustness of the human interface, and demonstrate system portability on the ground, including demonstration of the knowledge acquisition approach.

In Phase II, the performer will further mature the ALIAS instance demonstrated in Phase I, culminating in installation and flight demonstration on a contractor-sourced aircraft. The performer is responsible for conducting a low cost flight test demonstration at an appropriate facility. The performer should propose content of this demonstration consistent with their SDDP, program schedule and proposed funding.

The performer should describe their planned approach to airworthiness and flight clearance for Phase II demonstrations (e.g., experimental or other), including prior experience using the proposed approach, planned testing site, and how their system will be architected for safe operation during the Phase II flight demonstration.

In parallel, the performer will develop a second aircraft instance and conduct ground-based demonstration. Not later than seven (7) months after Phase II option award, the Government intends to select a platform and test range to be furnished for the Phase III flight test demonstration. The Government may elect to choose the second aircraft selected by the contractor in Phase II if it offers a promising transition opportunity and offers best value to the Government.

At its sole discretion, the Government reserves the right to make a partial award of one or more proposed Phase II options in lieu of a full system demonstration. This partial award could potentially permit further development of key technologies demonstrated in Phase I towards transition or risk reduction towards further development.

Phase II Deliverables

DARPA will continue quarterly program reviews at the contractor's facility. DARPA has developed the following minimum list of Phase II deliverables that must be included in the proposer's Phase II program. The desired content at each review is described below. As with Phase I, performers should populate their program schedule with these minimum deliverables and supplement this list with additional deliverables/material to be presented at each quarterly review in accordance with their unique program schedule and development approach.

ALIAS Phase II Capability Demonstrations

In addition to the Phase II flight test and second platform ground-based simulation demonstrations, the performer will conduct at least one additional interim ALIAS system demonstration for the Government team, selected to show continuing progress on the performer's ALIAS integrated system. Demonstration results should be presented at quarterly reviews and include an assessment of performance with relation to the ALIAS system level objectives.

The Phase II flight test is desired to deliver maximal content and maturity within schedule and budget limitations. At a minimum, the performer's ALIAS system is expected to complete one hour of active time in flight test and successfully redirect the vehicle course between two or more waypoints in flight. The system should be able to successfully diagnose an induced aircraft fault condition or malfunction and identify and implement an appropriate procedure in response. It is expected that this flight test will be a tool to refine the ALIAS human interface.

The Phase II ground-based portability demonstration is designed to refine the ALIAS approach to knowledge acquisition on the host aircraft and demonstrate rapid installation time.

SDDP Updates

The performer will update their SDDP as appropriate to incorporate emerging Phase II results and add additional details to the Phase III portion of the plan.

Phase III Objectives

The decision to continue the program into Phase III will be based in part upon the Government's determination that one or more performers have successfully completed Phase II with a feasible ALIAS system design and development approach and an affordable, executable Phase III plan. The Government intends to request proposals for Phase III prior to the completion of Phase II. Participation is optional and will be limited to Phase II prime contractors. Evaluation of the Phase III proposal will be based on criteria to be specified in the proposal request. These criteria will be consistent with the evaluation criteria in this BAA, but tailored to the Phase III proposal content. In Phase III, the performer will continue the evolution of their ALIAS system by installing and integrating an ALIAS instance into the specified Phase III flight test aircraft and validating the mission and autonomy interface. Final demonstration will include a flight test activity that exercises the system in command operation for a minimum of 12 hours of flight,

including a complete logistics or ISR flight profile from takeoff through landing at a Government flight test range.

Phase III Deliverables

Due to the evolutionary nature of the desired ALIAS development, the Government believes that delivery of ALIAS system assets is of limited value prior to completion of Phase III. However, proposers should be mindful that the Government will desire transitionable assets at the completion of Phase III and develop their program and data rights approach accordingly. Specific additional Phase III deliverables will be further described in the Phase III proposal request.

II. Award Information

Multiple awards are anticipated. DARPA plans to invest up to $16.5M for Phase I awards. The current Phase II budget available for award is approximately $20M. DARPA envisions selecting one or more Phase I performers to conduct $10-15M Phase II ALIAS system demonstrations through the award of the contract option. To maximize competition, DARPA may elect to fund only portions of a performers' Phase II Option based on transition opportunities, proposals received, and funding available. Phase III funding guidance will be finalized dependent upon the platform and location selected for the Phase III flight test demonstration, the scope of the proposed flight demonstrations, and feedback from the Phase I and II efforts. If the Government elects to continue to the program into Phase III, the Government may request Phase II prime performers to update their proposals for Phase III based on the results of the Phase II activities. Such requests and proposal guidance may be provided toward the end of Phase II.

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. The Government also reserves the right to award the option for Phase II work on all, some, one or none of the contracts awarded under this solicitation. 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.

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. 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.

In all cases, the Government contracting officer shall have sole discretion to select award instrument type and to negotiate all instrument terms and conditions with selectees. Proposers are advised that if they propose grants or cooperative agreements, DARPA may select other award instruments, as it deems appropriate. 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.

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 established the national policy for controlling the flow of scientific, technical, and engineering information produced in federally funded fundamental research at colleges, universities, and laboratories. The Directive defines fundamental research as follows:

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

As of the date of publication of this BAA, the Government expects that program goals as described herein either cannot be met by proposers intending to perform fundamental research or the proposed research is anticipated to present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Therefore, the Government anticipates restrictions on the resultant research that will require the contractor to seek DARPA permission before publishing any information or results relative to the program.

Proposers should indicate in their proposal whether they believe the scope of the research included in their proposal is fundamental or not. While proposers should clearly explain the intended results of their research, the Government shall have sole discretion to select award instrument type and to negotiate all instrument terms and conditions with selectees. Appropriate clauses will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate.

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

The following statement or similar provision will be incorporated into any resultant non-fundamental research procurement contract or other transaction:

> There shall be no dissemination or publication, except within and between the contractor and any subcontractors, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval of DARPA's Public Release Center (DARPA/PRC). All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the contractor. With regard to subcontractor proposals for Contracted Fundamental Research, papers resulting from unclassified contracted fundamental research are exempt from prepublication controls and this review requirement, pursuant to DoD Instruction 5230.27 dated October 6, 1987.
>
> When submitting material for written approval for open publication, the contractor/awardee must submit a request for public release to the PRC and include the following information: (1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx. 30 words), number of pages (or minutes of video) and document type (e.g., briefing, report, abstract, article, or paper); (2) Event Information: event type (conference, principal investigator meeting, article or paper), event date, desired date for DARPA's approval; (3) DARPA Sponsor: DARPA Program Manager, DARPA office, and contract number; and (4) Contractor/Awardee's Information: POC name, e-mail and phone. Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests may be sent either by-mail to prc@darpa.mil or via 675 North Randolph Street, Arlington VA 22203-2114, telephone (571) 218-4235. Refer to the following for link for information about DARPA's public release process: http://www.darpa.mil/NewsEvents/Public_Release_Center/Public_Release_Center.aspx

III. Eligibility Information

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

A. Eligible Applicants

1. Federally Funded Research and Development Centers (FFRDCs) and Government entities (e.g., Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they

meet the following conditions: (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector. (2) FFRDCs must provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement and terms and conditions. This information is required for FFRDCs proposing to be prime contractors or subcontractors. 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. 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 eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the proposer.

All proposers are expected to address transition (see Section 2.5 of Proposal Format under Section IV.B.3); transition is part of the evaluation criteria in Section V.A. However, given their special status, FFRDCs should describe how and when a proposed technology/system will transition to which Non-FFRDC organization(s).

2. 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. Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest

Current federal employees are prohibited from participating in particular matters involving conflicting financial, employment, and representational interests (18 U.S.C. §§ 203, 205, and 208). Once the proposals have been received, and prior to the start of proposal evaluations, the Government will assess potential conflicts of interest and will promptly notify the proposer if any appear to exist. The Government assessment does NOT affect, offset, or mitigate the proposer's responsibility to give full notice and planned mitigation for all potential organizational conflicts, as discussed below.

Without prior approval or a waiver from the DARPA Director, in accordance with FAR 9.503, a contractor cannot simultaneously provide scientific, engineering, technical assistance

(SETA) or similar support and also be a technical performer. As part of the proposal submission, all members of the proposed team (prime proposers, proposed subcontractors, and consultants) must affirm whether they (their organizations and individual team members) are providing SETA or similar support to any DARPA technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer, subcontractor, consultant, or individual supports and identify the prime contract number(s). All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure must include a description of the action the proposer has taken or proposes to take to avoid, neutralize, or mitigate such conflict. If in the sole opinion of the Government after full consideration of the circumstances, a proposal fails to fully disclose potential conflicts of interest and/or any identified conflict situation cannot be effectively mitigated, the proposal will be rejected without technical evaluation and withdrawn from further consideration for award.

If a prospective proposer believes a conflict of interest exists or may exist (whether organizational or otherwise) or has questions on what constitutes a conflict of interest, the proposer should send his/her contact information and a summary of the potential conflict DARPA-BAA-14-37@darpa.mil before time and effort are expended in preparing a proposal and mitigation plan.

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 (e.g., for any Other Transactions under the authority of 10 U.S.C. §2371). Cost sharing is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

D. Other Eligibility Criteria

1. Collaborative Efforts

Collaborative efforts/teaming are strongly encouraged, especially considering the multi-disciplinary nature of expected research.

IV. Application and Submission Information

A. Address to Request Application Package

This solicitation contains all information required to submit a proposal. No additional forms, kits, or other materials are needed. This notice constitutes the total solicitation. No additional information is available, except as provided at FBO.gov, nor will a formal Request for Proposal (RFP) or additional solicitation regarding this announcement be issued. Requests for the same will be disregarded.

B. Content and Form of Application Submission

1. Security and Proprietary Issues

NOTE: If proposals are classified, the proposals must indicate the classification level of not only the proposal itself, but also the anticipated award document classification level.

The Government anticipates proposals submitted under this BAA will be unclassified. However, if a proposal is submitted as "Classified National Security Information" as defined by Executive Order 13526, then the information must be marked and protected as though classified at the appropriate classification level and then submitted to DARPA for a final classification determination.

Security classification guidance via a DD Form 254, "DoD Contract Security Classification Specification," will not be provided at this time, since DARPA is soliciting ideas only. After reviewing the incoming proposals, if a determination is made that the award instrument may result in access to classified information, a DD Form 254 will be issued and attached as part of the award.

Proposers choosing to submit a classified proposal derived from other classified sources must first receive permission from the respective Original Classification Authority in order to use their information in replying to this BAA. Applicable classification guide(s) should also be submitted to ensure the proposal is protected at the appropriate classification level.

Classified submissions shall 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)

Classified submissions shall be in accordance with the following guidance:

Confidential and Secret Collateral Information: Use classification and marking guidance provided by previously issued security classification guides, the DoD Information Security Manual (DoDM 5200.01, Volumes 1 - 4), and the National Industrial Security Program Operating Manual (DoD 5220.22-M) when marking and transmitting information previously classified by another Original Classification Authority. Classified information at the Confidential and Secret level may be submitted via ONE of the two following methods:

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

OR

2. Mailed via appropriate U.S. Postal Service methods (e.g., (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: DARPA/TTO
Reference: DARPA-BAA-14-37
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

All Top Secret materials: Top Secret information should 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.

Special Access Program (SAP) Information: SAP information must be transmitted via approved methods. Prior to transmitting SAP information, contact the DARPA SAPCO at 703-526-4052 for instructions.

Sensitive Compartmented Information (SCI): SCI must be transmitted via approved methods. Prior to transmitting SCI, contact the DARPA Special Security Office (SSO) at 703-526-4052 for instructions.

Proprietary Data: All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the proposer's responsibility to clearly define to the Government what is considered proprietary data.

Proposers must have existing and in-place prior to execution of an award, approved capabilities (personnel and facilities) to perform research and development at the classification level they propose. It is the policy of DARPA to treat all proposals as competitive information, and to disclose their contents only for the purpose of evaluation. Proposals will not be returned. An electronic copy of each proposal 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 at this office within 5 days after notification that a proposal was not selected.

2. Proposal Submission Information

Proposers are required to submit proposals by the time and date specified in the BAA in order to be considered during the initial round of selections. DARPA may evaluate proposals received after this date for a period up to twelve months from date of posting on FedBizOpps. The ability to review and select proposals submitted after the initial round deadline will be contingent on availability of funds.

Restrictive notices notwithstanding, proposals may be handled, for administrative purposes only, by a support contractor. This support contractor is prohibited from competition in DARPA technical research and is bound by appropriate nondisclosure requirements.

Proposals may not be submitted by fax or e-mail; any so sent will be disregarded. See IV.B.4. for details of delivery instructions.

DARPA intends to use electronic mail correspondence regarding BAA-14-37. All administrative correspondence and questions on this solicitation, including requests for information on how to submit a proposal to this BAA, should be sent via e-mail to DARPA-BAA-14-37@darpa.mil. Proposals 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.

3. Proposal Format

The proposal shall be delivered in two volumes, Volume I, Technical, and Volume II, Cost. Proposals not meeting the format described in this BAA may not be reviewed.

The proposal shall include the following sections, each starting on a new page (where a "page" is 8-1/2 by 11 inches with type not smaller than 12 point, charts may use 10 point font, margins not smaller than 1 inch, and line spacing not smaller than single-spaced). Fold-outs up to 11 by 17 inches may be used but will be counted as two pages. All submissions must be in English. The total page count for Proposal Volume I, Part 2: Technical Details is 35 pages, excluding the Statement of Work and Integrated Master Schedule. Recommended page counts for individual elements of the proposal are shown in braces { } below. The proposer may reallocate page counts within Part 2, not exceeding the total.

Ensure that each section provides a detailed discussion of proposed work to enable an in-depth review of specific technical and managerial issues relevant to that section. Specific attention must be given to addressing both risk and payoff of the proposed work that make it desirable to DARPA.

Volume I, Technical and Management Proposal

Section 1. Administrative

1.1 Cover Sheet {no page limit} to include:

- BAA number (DARPA-BAA-14-37);
- Technical area(s);
- Lead organization submitting proposal;
- Type of organization, selected among the following categories:
    - LARGE BUSINESS,
    - SMALL DISADVANTAGED BUSINESS,
    - OTHER SMALL BUSINESS,
    - HBCU,
    - MI,
    - OTHER EDUCATIONAL, OR
    - OTHER NONPROFIT;
- Proposer's reference number (if any)
- All other team members (if applicable and including second- and lower-tier subcontractors) and type of organization for each;
- Proposal title;
- Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax, and electronic mail;
- Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax, and electronic mail;
- Award instrument requested: cost-plus-fixed-free (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), or other transaction;
- Place(s) and period(s) of performance;
- Summary of the costs of the proposed research, including total base cost, estimates of base cost in each year of the effort, estimates of itemized options in each year of the effort, and cost sharing if relevant;
- Name, address, and telephone number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office (if known);
- Name, address, and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office (if known);
- Date proposal was prepared;
- DUNS number;
- TIN number;
- Cage Code;
- Proposal validity period (minimum 180 days).

1.2 Table of Contents {no page limit}

1.3 Organizational Conflict of Interest Affirmations and Disclosure {no page limit}

Per the instructions in Section III.B above, all members of the proposed team (prime proposers, proposed subcontractors, and consultants) must affirm whether they (their organizations and individual team members) are providing SETA or similar support to any DARPA technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer, subcontractor, consultant, or individual supports and identify the prime contract number(s). All facts relevant to the existence or potential existence of

organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure must include a description of the action the proposer has taken or proposes to take to avoid, neutralize, or mitigate such conflict.

If the proposer or any proposed subcontractor IS NOT currently providing SETA support as described, then the proposer should simply state "NONE."

Proposals that fail to fully disclose potential conflicts of interests or do not have acceptable plans to mitigate identified conflicts will be rejected without technical evaluation and withdrawn from further consideration for award.

1.4 Human Subjects Research {no page limit}

For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to DARPA as part of their proposal, prior to being selected for funding. For further information on this subject, see Section VI.B.2 below. If human subjects research is not a factor in a proposal, then the proposer should state "NONE."

1.5 Animal Use {no page limit}

For projects anticipating animal use, proposals must briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval. For further information on this subject, see Section VI.B.3 below. If animal use is not a factor in a proposal, then the proposer should state "NONE."

1.6 Federally Funded Research and Development Center Team Member Eligibility {no page limit}

Per Section III.A., Eligible Applicants, proposals that include Federally Funded Research and Development Centers as prime, subcontractor or team member must (1) clearly demonstrate that the proposed work is not otherwise available from the private sector and (2) provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement and terms and conditions. For more information, see Section III.A. If none of the team members belongs to an FFRDC, then the proposer should state "Not Applicable."

1.7 Government Entity Team Member Eligibility {no page limit}

Per Section III.A., proposals from Eligible Applicants that include Government entities (e.g., Government/National laboratories, military educational institutions, etc.) as prime, subcontractor or team member must (1) clearly demonstrate that the work is not otherwise available from the private sector and (2) provide written documentation citing the specific statutory authority and contractual authority, if relevant, establishing their ability to propose to Government solicitations. For more information, see Section III.A. If no such entities are involved, then the proposer should state "NONE."

Section 2. Technical Details

2.1 Executive Summary {4}:

This section should provide an executive level description of key elements and unique features of the proposer's proposed ALIAS program. The Executive Summary should also include a top-level schedule that outlines the proposer's overall vision and approach to executing the full ALIAS program through the Phase III demonstration. Fully describe similar efforts completed/ongoing by the proposer in this area, including identification of other Government sponsors.

2.2 ALIAS System Concept and Architecture {8}:

The proposer shall describe their top-level vision for ALIAS. This description is intended to be the proposer's initial thoughts on their ALIAS system that will evolve based on the Phase I activities. This discussion should focus on the overall approach and how this reflects an understanding of how to effectively and efficiently achieve ALIAS program objectives rather than a specific design. This discussion should address the trade study and analysis process to define the ALIAS system architecture. This discussion should include the proposers' initial approaches to the three critical technology areas identified: minimally invasive aircraft interfaces, knowledge acquisition, and human interfaces. The proposal should also describe the systems engineering process to develop a core system, extensible across many aircraft, and how the proposer will define and evolve the core modules and services in the capability library. The proposer should also address how they will develop interfaces, track configuration, and their overall development process. Finally, this section should include a discussion of the development tools the proposer plans to use and their experience using those tools to address relevant problems.

2.3 Phase I and II Execution Plans {10}:

The proposer shall provide a detailed description of the proposed approach to accomplishing the Phase I (Base) and Phase II (Option) program objectives. Provide cost, schedule and measurable milestones for the proposed research, including estimates of cost for each task in each year of the effort delineated by the prime and major subcontractors, total cost and company cost share, if applicable. (Note: Measurable milestones should capture key development points in tasks and should be clearly articulated and defined in time relative to start of effort.)

This section shall describe the structure and integration of the proposed team to cover the various ALIAS program domains. This section shall also provide the qualifications of the proposed team and proposed personnel for accomplishing Phase I. Carefully identify key personnel by name and include a description of their role. Short resumes shall be provided for the Program Manager, Chief Engineer, Chief Systems Engineer, Software Development Lead and Aircraft Integration Lead, as well as any other personnel deemed critical to the successful performance of Phase I and II. The proposer shall also identify the number of hours committed for each of these key personnel each Phase. DARPA requires key personnel identified in the proposal to be assigned as proposed, and the resulting contract/agreement will indicate no substitution shall be made without prior approval of the Government.

Proposers should identify their planned approach to software re-use and software development. Proposers are strongly encouraged to adopt Agile methodologies for ALIAS

software development. Proposers should identify their planned management approach and identify qualified resources. DARPA is also receptive to iterative or Agile-like development approaches for all or portions of ALIAS hardware development efforts.

2.4 Initial System Development and Demonstration Plan (SDDP) {8}

The proposer shall provide an initial demonstration plan providing point-of-departure ideas for achieving a compelling progression of ALIAS demonstrations within the available budget and schedule objectives. The proposer should describe their overall technical approach, including their trade study and analysis plan for developing the ALIAS system architecture, initial ALIAS instances, and finalizing their SDDP. This discussion shall describe major demonstration events and proposed functionality at each event to illustrate how the proposed progression will accomplish the minimum specified demonstration events and achieve the ALIAS program vision. The proposer shall include a master demonstration schedule that shows the full scope of program demonstrations in Phases I through III. The details of the proposer's proposed Phase I and II activities will be included in their SOW and IMS sections; however, in this section the proposer shall also provide an initial program plan, schedule, and ROM cost for Phase III, including major envisioned demonstration events leading to flight demonstration. The Government is not expecting a detailed plan for Phase III, but rather seeks confidence that the proposer understands the major technical hurdles and has a top-level approach to achieving ALIAS demonstration on a Government-provided aircraft and a Government test range.

2.5 Relevance to DARPA Mission {5}

The proposer shall describe the relevance of their proposed ALIAS program to the DARPA mission. This discussion should describe the proposer's vision for how their proposed program will lead to a robust capability with high likelihood for transition to the Services. In particular, the proposer shall provide rationale for the aircraft selected for the Phase I and II ground and flight demonstrations and describe the overall suitability of the selected aircraft to achieve successful demonstration and offer transition potential to the Services. The proposer may also articulate their vision for future growth or spin-off applications.

2.6 Intellectual Property {no page limit}

The proposal shall include a discussion of the proposed data rights approach for the entire program, including with regard to delivered assets at the conclusion of Phase III. Due to the Government's desire to rapidly deploy ALIAS on multiple aircraft types, the Government desires a maximally open architecture with no proprietary interfaces. If the proposer intends to assert proprietary claims, they must provide rationale for this claim (e.g., potential commercial follow-on applications or use of Section 845), describe why it is in the best interest of the Government, and describe why it will not hamper the transition objectives for ALIAS. Per Section VIII.A below, proposers responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if proposers fail to identify any intellectual property restrictions in their proposals. Include in this section all proprietary claims to results, demonstration systems, deliverables or systems supporting and/or necessary for the use of the research, results, demonstration systems and/or deliverables. If no restrictions are intended, then the proposer should state "NONE".

2.7 Statement of Work (SOW) {no page limit}:

In plain English, clearly define the technical tasks/subtasks to be performed in Phase I, their durations, and dependencies among them. Clearly identify and include separate tasks for the Phase I Base and Phase II Option periods. The SOW shall be detailed to work breakdown structure (WBS) level 4. For each task/subtask, provide:

- A general description of the objective (for each defined task/activity);
- A detailed description of the approach to be taken to accomplish each defined task/activity);
- Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.);
- The completion criteria for each task/activity—a product, event or milestone that defines its completion;
- Define all deliverables (reports, data, software, hardware, demonstration system elements, etc.) to be provided to the Government in support of the proposed research tasks/activities. Include expected delivery date for each deliverable.

Do not include any proprietary information in the SOW or include any markings placing limitations on distribution on the pages containing the SOW.

2.8 Integrated Master Schedule {no page limit}:

This section should include an Integrated Master Schedule that details all of the proposed Phase I and II activities down to WBS level 4 and using the same numbering scheme as the SOW. The Government strongly encourages that tables included in the cost proposal submission be provided in an editable (e.g., MS Project) format.

Volume 2, Cost Proposal

All proposers, including FFRDCs, must submit the following:

Cover Sheet {no page limit} to include:

- BAA number (DARPA-BAA-14-37);
- Technical area(s);
- Lead organization submitting proposal;
- Type of organization, selected among the following categories:
    - LARGE BUSINESS,
    - SMALL DISADVANTAGED BUSINESS,
    - OTHER SMALL BUSINESS,
    - HBCU,
    - MI,
    - OTHER EDUCATIONAL, OR
    - OTHER NONPROFIT;
- All other team members (if applicable and including second- and lower-tier subcontractors) and type of organization for each;
- Proposal title;

- Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax, and electronic mail;
- Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax, and electronic mail;
- Award instrument requested: cost-plus-fixed-free (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), or other transaction;
- Place(s) and period(s) of performance;
- Summary of the costs of the proposed research, including total base cost, estimates of base cost in each year of the effort, estimates of itemized options in each year of the effort, and cost sharing if relevant;
- Name, address, and telephone number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office (if known);
- Name, address, and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office (if known);
- Date proposal was prepared;
- DUNS number;
- TIN number;
- Cage Code;
- Proposal validity period (minimum 180 days).

For proposers without a DCAA-approved cost accounting system who are proposing negotiation of a cost-type contract, DCAA must complete an SF 1408. To facilitate this process, complete the SF 1408 found at http://www.gsa.gov/portal/forms/download/115778 and submit the completed form with your proposal. Proposals requesting a cost-type contract without this form may be deemed non-conforming to this solicitation. The Government recognizes that this form is intended for an auditor to use when evaluating a contractor's cost accounting system. However, your preliminary responses to the questions will expedite the DCAA accounting system review. 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.

Detailed Cost Breakdown {no page limit}

The Government strongly encourages that tables included in the cost proposal be provided in an editable (e.g., MS Excel) format with calculation formulas intact to allow traceability of the cost proposal numbers across the prime and subcontractors. This includes the calculations and adjustments that are utilized to generate the Summary Costs from the source labor hours, labor costs, material costs, and other input data. The Government prefers receiving cost data as Excel files; however, this is not a requirement. If the PDF submission differs from the Excel submission, the PDF will take precedence. Each copy must be clearly labeled with the DARPA BAA number, proposer organization, and proposal title (short title recommended).

Proposals shall include the following information detailed to WBS Level 4 and using the same numbering scheme as the SOW and IMS: (1) total program cost broken down by major cost items (direct labor, including labor categories; subcontracts; materials; other direct costs,

overhead charges, etc.) and further broken down by task and phase; (2) major program tasks by fiscal year; (3) an itemization of major subcontracts and equipment purchases; (4) an itemization of any information technology (IT) purchase, as defined in FAR 2.101; (5) a summary of projected funding requirements by month; (6) the source, nature, and amount of any industry cost-sharing; and (7) identification of pricing assumptions of which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter Expert/s, 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. Note: "cost or pricing data", as defined in FAR 2.101, shall be required if the proposer is seeking a procurement contract award of $700,000 or greater unless the proposer requests an exception from the requirement to submit cost or pricing data. "Cost or pricing data" are not required if the proposer proposes an award instrument other than a procurement contract (e.g., a grant, cooperative agreement, or other transaction.)

The prime contractor is responsible for compiling and providing all subcontractor proposals for the Procuring Contracting Officer (PCO). Subcontractor proposals should include Interdivisional Work Transfer Agreements (IWTA) or similar arrangements. 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 for each. NOTE: for IT and equipment purchases, include a letter stating why the proposer cannot provide the requested resources from its own funding.

All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime shall be provided to the Government either by the prime contractor or by the subcontractor organization when the proposal is submitted. Subcontractor proposals submitted to the Government by the prime contractor should be submitted in a sealed envelope that the prime contractor will not be allowed to view. The subcontractor must provide the same number of hard copies and/or electronic proposals as is required of the prime contractor.

NOTE: PROPOSERS ARE CAUTIONED THAT PROPOSALS MAY BE REJECTED IF SUBMITTAL INSTRUCTIONS ARE NOT FOLLOWED.

The Government may award either a Federal Acquisition Regulation (FAR) based contract or an Other Transaction for Prototypes (OT) agreement for prototype system development proposals. Proposers interested in receiving an OT and where cost share is required are asked to submit proposal responses that accommodate both options. The Government must be able to determine that the amount of the agreement is fair and reasonable and determine the final type of award to negotiate. Without complete cost volumes, it may not be possible to thoroughly understand what is being offered. For information on 845 Other Transaction for Prototypes (OT) agreements, refer to http://www.darpa.mil/Opportunities/Contract_Management/Other_Transactions_and_Technology_Investment_Agreements.aspx.

All proposers requesting an 845 Other Transaction for Prototypes (OT) agreement must include a detailed list of milestones. Each milestone must include the following: milestone description, completion criteria, due date, and payment/funding schedule (to include, if cost share is proposed, contractor and Government share amounts). It is noted that, at a minimum, milestones should relate directly to accomplishment of program technical metrics as defined in the BAA and/or the proposer's proposal. Agreement type, fixed price or expenditure based, will be subject to negotiation by the Agreements Officer; however, it is noted that the Government prefers use of fixed price milestones with a payment/funding schedule to the maximum extent possible. Do not include proprietary data. If the proposer requests award of an 845 OT agreement as a nontraditional defense contractor, as so defined in the OSD guide entitled "Other Transactions (OT) Guide For Prototype Projects" dated January 2001 (as amended) (http://www.acq.osd.mil/dpap/Docs/otguide.doc), information must be included in the cost proposal to support the claim. Additionally, if the proposer requests award of an 845 OT agreement, without the required one-third (1/3) cost share, information must be included in the cost proposal supporting that there is at least one non-traditional defense contractor participating to a significant extent in the proposed prototype project.

4. Proposal Submission Deadline and Instructions

Proposers should submit six (6) hard copies of their proposal and two (2) CD-ROMs containing the entire proposal as a single Adobe PDF file to the following address:

DARPA/TTO
ATTN: DARPA-BAA-14-37
675 North Randolph Street
Arlington, VA 22203-2114

No e-mailed or faxed proposals will be accepted. The initial deadline for proposal submissions is 4:00 p.m. Eastern Time on July 14, 2014. The closing date for this BAA is 4:00 p.m. Eastern Time on May 12, 2015. The dates and times indicated are deadlines by which proposals must be received by DARPA.

Proposers are required to submit proposals by the time and date specified in the BAA in order to be considered during the initial round of selections. DARPA may evaluate proposals received after this date for a period up to up to twelve months from date of posting on FedBizOpps. Ability to review late submissions remains contingent on availability of funds. Proposers are warned that the likelihood of funding is greatly reduced for proposals submitted after the initial closing date deadline.

DARPA will acknowledge receipt of complete submissions via e-mail and assign control numbers that should be used in all further correspondence regarding proposals.

DARPA will post a consolidated Question and Answer response after June 16, 2014, before proposals are due. In order to receive a response to your question, submit your question by 4:00 p.m. Eastern Time on June 13, 2014 to DARPA-BAA-14-37@darpa.mil.

NOTE: PROPOSERS ARE CAUTIONED THAT FAILURE TO COMPLY WITH THE SUBMISSION PROCEDURES MAY RESULT IN REJECTION OF THE PROPOSAL.

5. Funding Restrictions

Not applicable.

6. 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:
(a) Overall Scientific and Technical Merit; (b) Proposer's Capabilities and/or Related Experience; (c) Initial System Development and Demonstration Plan; (d) Potential Contribution and Relevance to the DARPA Mission; and (e) Cost Realism.

(a) Overall Scientific and Technical Merit

The proposed technical approach is innovative, feasible, achievable, complete, and supported by a proposed technical team that has the expertise and experience to accomplish the proposed tasks. The Government will make this evaluation based on an examination of several areas. The proposer's Initial ALIAS System Concept and Architecture will be reviewed to assess the overall system concept and the feasibility of the proposed system to 1) achieve the DARPA objective demonstrations, including demonstration performance objectives and 2) evolve towards the ALIAS vision capability, including objective system metrics. The Government will evaluate the proposed technical approach, toolset, and initial system architectural concepts to assess its potential extensibility to multiple platforms. The Government will examine the approach to interfacing with legacy aircraft, as well as the approach for acquiring and codifying knowledge of existing aircraft. The Government will also assess the proposed human machine interface. The Government will also review the Phase I and II Execution Plans to evaluate the extent to which the Phase I and Phase II technical approach, Statement of Work and Integrated Master schedule are credible, executable, and address the Phase I and Phase II objectives, deliverables and success metrics.

(b) Proposer's Capabilities and/or Related Experience

The proposer's prior experience in similar efforts clearly demonstrates an ability to deliver products that meet the proposed technical performance within the proposed budget and schedule. The proposed team has the expertise to manage the cost and schedule. Similar efforts completed/ongoing by the proposer team are fully described including identification of other Government sponsors. The Government will assess the performance capabilities and relevant experience of key personnel, including the Program Manager, Chief Engineer, Chief Systems

Engineer, Software Development Lead and Integration/Test Lead. Finally, the Government will assess the proposed team's expertise across the range of disciplines required to successfully perform the ALIAS program, including previous experience on programs with similar levels of complexity and design approaches.

(c) Initial System Development and Demonstration Plan (SDDP)

The proposer's Initial SDDP will be evaluated to assess the proposer's approach to developing an affordable ALIAS system architecture and achieving a compelling set of progressive capability demonstrations throughout the program. The proposed plan will be reviewed to assess the extent to which the proposer can rapidly demonstrate all or part of the ALIAS system vision system capability, and the expected maturity and content of the Phase I and Phase II demonstrations. The Government will also review the proposed content and schedule of demonstrations to assess program execution risk. The proposal plan will also be reviewed to assess the initial Phase III planning, schedule and teaming approach to assess whether the proposer has a vision for credibly achieving Phase III flight demonstration within a reasonable cost and the desired 43 month schedule.

(d) 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 maintain the technological superiority of the U.S. military and prevent technological surprise from harming national security by sponsoring revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their application. The Government will assess the transition potential of the proposed approach, aircraft demonstration platforms selected, and capability demonstrations. The Government will also assess the ability of the proposed program to achieve the vision of rapid adaptation across aircraft types, ease of installation, removal and degree of impact to host aircraft, and potential for the proposed architecture to be built into future aircraft. In addition, the evaluation will take into consideration the extent to which the proposed intellectual property (IP) rights will potentially impact the Government's ability to transition the technology to the research, industrial, and operational military communities.

(e) Cost Realism

The proposed costs are realistic for the technical and management approach offered and demonstrates the proposer's practical understanding of the effort. The costs proposed are based on realistic assumptions, reflect a sufficient understanding of the technical goals and objectives of the BAA, and are consistent with the proposer's technical approach (to include the proposed Statement of Work). At a minimum, the prime proposer and proposed subawardees substantiate the proposed costs with the type and number of labor hours proposed per task as well as the types and kinds of materials, equipment and fabrication costs proposed. 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

DARPA will conduct a scientific/technical review of each conforming proposal. 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 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.

For evaluation purposes, a proposal is the document described in "Proposal Information," Section IV.B. Other supporting or background materials submitted with the proposal will be considered for the reviewer's convenience only and not considered as part of the proposal.

Restrictive notices notwithstanding, proposals may be handled for administrative purposes by support contractors. These support contractors are prohibited from competition in DARPA technical research and are bound by appropriate non-disclosure requirements.

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.

VI. Award Administration Information

A. Selection Notices

After the evaluation of a proposal is complete, the proposer will be notified that (1) the proposal has been selected for funding pending contract negotiations, or (2) the proposal has not been selected. These official notifications will be sent via e-mail to the Technical POC and/or Administrative POC identified on the proposal coversheet.

B. Administrative and National Policy Requirements

1. Meeting and Travel Requirements

There will be a program kickoff meeting in the Washington DC area. Subsequent technical meetings will be held on a quarterly basis at the proposer's facility if they feature a demonstration, or otherwise in the Washington DC area.

2. Human Subjects Research

All research selected for funding involving human subjects, to include use of human biological specimens and human data, must comply with the federal regulations for human subjects protection. Further, research involving human subjects that is conducted or supported by the DoD must comply with 32 CFR 219, *Protection of Human Subjects* (and DoD Instruction 3216.02, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research* (http://www.dtic.mil/whs/directives/corres/pdf/321602p.pdf).

Institutions awarded funding for research involving human subjects must provide documentation of a current Assurance of Compliance with Federal regulations for human subjects protection, such as a Department of Health and Human Services, Office of Human Research Protection Federal Wide Assurance (http://www.hhs.gov/ohrp). All institutions engaged in human subjects research, to include subcontractors, must also hold a valid Assurance. In addition, all personnel involved in human subjects research must provide documentation of completion of human subjects research training.

For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to DARPA as part of their proposal, prior to being selected for funding. The IRB conducting the review must be the IRB identified on the institution's Assurance of Compliance with human subjects protection regulations. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. It is recommended that you consult the designated IRB for guidance on writing the protocol. The informed consent document must comply with federal regulations (32 CFR 219.116). A valid Assurance of Compliance with human subjects protection regulations along with evidence of completion of appropriate human subjects research training by all investigators and personnel involved with human subjects research should accompany the protocol for review by the IRB.

In addition to a local IRB approval, a headquarters-level human subjects administrative review and approval is required for all research conducted or supported by the DoD. The Army, Navy, or Air Force office responsible for managing the award can provide guidance and information about their component's headquarters-level review process. Note that confirmation of a current Assurance of Compliance with human subjects protection regulations and appropriate human subjects research training is required before headquarters-level approval can be issued.

The time required to complete the IRB review/approval process varies depending on the complexity of the research and the level of risk involved with the study. The IRB approval process can last between one and three months, followed by a DoD review that could last between three and six months. Ample time should be allotted to complete the approval process.

DoD/DARPA funding cannot be used towards human subjects research until ALL approvals are granted.

3. Animal Use

Award recipients performing research, experimentation, or testing involving the use of animals shall comply with the rules on animal acquisition, transport, care, handling, and use as outlined in: (i) 9 CFR parts 1-4, Department of Agriculture rules that implement the Animal Welfare Act of 1966, as amended, (7 U.S.C. § 2131-2159); (ii) National Institutes of Health Publication No. 86-23, "Guide for the Care and Use of Laboratory Animals" (8th Edition); (iii) DoD Instruction 3216.01, "Use of Animals in DoD Programs."

For projects anticipating animal use, proposals should briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval. Animal studies in the program will be expected to comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, available at http://grants.nih.gov/grants/olaw/olaw.htm.

All award recipients must receive approval by a DoD-certified veterinarian, in addition to an IACUC approval. No animal studies may be conducted using DoD/DARPA funding until the United States Army Medical Research and Materiel Command (USAMRMC) Animal Care and Use Review Office (ACURO) or other appropriate DoD veterinary office(s) grant approval. As a part of this secondary review process, the award recipient will be required to complete and submit an ACURO Animal Use Appendix, which may be found at https://mrmc-www.army.mil/index.cfm?pageid=Research_Protections.acuro&rn=1.

4. Export Control

Per DFARS 225.7901-4, all procurement contracts, other transactions and other awards, as deemed appropriate, resultant from this solicitation will include the DFARS Export Control clause (252.225-7048).

5. Subcontracting

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. § 637(d)), it is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as subcontractors to contractors performing work or rendering services as prime contractors or subcontractors under Government contracts, and to assure that prime contractors and subcontractors carry out this policy. Each proposer who submits a contract proposal and includes subcontractors is required to submit a subcontracting plan in accordance with FAR 19.702(a)(1) should do so with their proposal. The plan format is outlined in FAR 19.704.

6. Electronic and Information Technology

All electronic and information technology acquired through this solicitation must satisfy the accessibility requirements of Section 508 of the Rehabilitation Act (29 U.S.C. § 794d) and FAR 39.2. Each proposer who submits a proposal involving the creation or inclusion of

electronic and information technology must ensure that federal employees with disabilities will have access to and use of information that is comparable to the access and use by Federal employees who are not individuals with disabilities and members of the public with disabilities seeking information or services from DARPA will have access to and use of information and data that is comparable to the access and use of information and data by members of the public who are not individuals with disabilities.

7. Employment Eligibility Verification (For FAR-Based Awards Only)

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as federal contractors in E-verify and use the system to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification." This clause will not be included in grants, cooperative agreements, or Other Transactions.

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

Unless the proposer is exempt from this requirement, as per FAR 4.1102 or 2 CFR 25.110 as applicable, all proposers must be registered in the System for Award Management (SAM) and have a valid Data Universal Numbering System (DUNS) number prior to submitting a proposal. All proposers must maintain an active registration in SAM with current information at all times during which they have an active Federal award or proposal under consideration by DARPA. All proposers must provide the DUNS number in each proposal they submit.

Information on SAM registration is available at www.sam.gov.

9. Reporting Executive Compensation and First-Tier Subcontract Awards

FAR clause 52.204-10, "Reporting Executive Compensation and First-Tier Subcontract Awards," will be used in all procurement contracts valued at $25,000 or more. A similar award term will be used in all grants and cooperative agreements.

10. Updates of Information Regarding Responsibility Matters

Per FAR 9.104-7(c), FAR clause 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters, will be included in all contracts valued at $500,000 or more where the contractor has current active Federal contracts and grants with total value greater than $10,000,000.

11. Representations by Corporations Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under Any Federal Law – Fiscal Year 2014 Appropriations (Deviation 2014-O0004)

(a) In accordance with section 101(a) of Division A of the Continuing Appropriations Act, 2014 (Pub. L. 113-46), none of the funds made available by that Act for DoD

(including Military Construction funds) may be used to enter into a contract with any corporation that --

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government; or

(2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(b) The Proposer represents that –

(1) It is [ ] is not [ ] a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability,

(2) It is [ ] is not [ ] a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

12. Representation by Corporations Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction under any Federal Law – Fiscal Year 2014 Appropriations (Deviation 2014-OO00009)

(a) In accordance with sections 8113 and 8114 of the Department of Defense Appropriations Act, 2014, and sections 414 and 415 of the Military Construction and Veterans Affairs and Related Agencies Appropriations Act, 2014 (Public Law 113-76, Divisions C and J), none of the funds made available by those divisions (including Military Construction funds) may be used to enter into a contract with any corporation that --

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government; or

(2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(b) The Proposer represents that –

(1) It is [ ] is not [ ] a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability,

(2) It is [ ] is not [ ] a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

13. Cost Accounting Standards (CAS) Notices and Certification

As per FAR 52.230-2, any procurement contract in excess of $700,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR 99), except those contracts which are exempt as specified in 48 CFR 9903.201-1. Any proposer submitting a proposal which, if accepted, will result in a CAS compliant contract, must submit representations and a Disclosure Statement as required by 48 CFR 9903.202 detailed in FAR 52.230-2. The disclosure forms may be found at http://www.whitehouse.gov/omb/procurement_casb.

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

Controlled Unclassified Information (CUI) refers to unclassified information that does not meet the standards for National Security Classification but is pertinent to the national interests of the United States or to the important interests of entities outside the Federal Government and under law or policy requires protection from unauthorized disclosure, special handling safeguards, or prescribed limits on exchange or dissemination. All non-DoD entities doing business with DARPA are expected to adhere to the following procedural safeguards, in addition to any other relevant Federal or DoD specific procedures, for submission of any proposals to DARPA and any potential business with DARPA:

Do not process DARPA CUI on publicly available computers or post DARPA CUI to publicly available webpages or websites that have access limited only by domain or Internet protocol restriction.

Ensure that all DARPA CUI is protected by a physical or electronic barrier when not under direct individual control of an authorized user and limit the transfer or DARPA CUI to subcontractors or teaming partners with a need to know and commitment to this level of protection.

Ensure that DARPA CUI on mobile computing devices is identified and encrypted and all communications on mobile devices or through wireless connections are protected and encrypted.

Overwrite media that has been used to process DARPA CUI before external release or disposal.

15. Safeguarding of Unclassified Controlled Technical Information

Per DFARS 204.7303, DFARS 252.204-7012, Safeguarding of Unclassified Controlled Technical Information, applies to this solicitation and all FAR-based awards resulting from this solicitation.

C. Reporting

The number and types of reports will be specified in the award document, but will include as a minimum monthly financial and technical status reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed on before award. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. A Final Report that summarizes the project and tasks will be required at the conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle. A list of other reports and deliverables required under Phases I, II and III are listed on pages 12 through 15 of this BAA under Part II, Section I, paragraph B. At least one copy of each report will be delivered to DARPA and not merely placed on a SharePoint site.

D. Electronic Systems

i. Representations and Certifications

In accordance with FAR 4.1201, prospective proposers shall complete electronic annual representations and certifications atwww.sam.gov.

ii. Wide Area Work Flow (WAWF)

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

iii. i-Edison

The award document for each proposal selected for funding will contain a mandatory requirement for patent reports and notifications to be submitted electronically through i-Edison (http://s-edison.info.nih.gov/iEdison) .

VII. Agency Contacts

Administrative, technical, or contractual questions should be sent via e-mail to DARPA-BAA-14-37@darpa.mil. All requests must include the name, email address, and phone number of a point of contact.

VIII. Other Information

A. Intellectual Property Procurement Contract Proposers

1. **Noncommercial Items (Technical Data and Computer Software)**

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS shall identify all noncommercial technical data and noncommercial computer software that it plans to generate, develop, and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Proposers shall follow the format under DFARS 252.227-7017 for this stated purpose. In the event that proposers do not submit the list, the Government will assume that it automatically has "unlimited rights" to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, then proposers should identify the data and software in question, as subject to Government Purpose Rights (GPR). In accordance with DFARS 252.227-7013 Rights in Technical Data - Noncommercial Items, and DFARS 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, the Government will automatically assume that any such GPR restriction is limited to a period of five (5) years in accordance with the applicable DFARS clauses, at which time the Government will acquire "unlimited rights" unless the parties agree otherwise. Proposers are advised that the Government will use the list during the evaluation process to evaluate the impact of any identified restrictions and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE." It is noted an assertion of "NONE" indicates that the Government has "unlimited rights" to all noncommercial technical data and noncommercial computer software delivered under the award instrument, in accordance with the DFARS provisions cited above. Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

A sample list for complying with this request is as follows:

NONCOMMERCIAL

Technical Data Computer Software To	Summary of Intended Use in the	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions

be Furnished With Restrictions	Conduct of the Research			
(LIST)	(NARRATIVE)	(LIST)	(LIST)	(LIST)

5. Commercial Items (Technical Data and Computer Software)

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS shall identify all commercial technical data and commercial computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial technical data and/or commercial computer software. In the event that proposers do not submit the list, the Government will assume that there are no restrictions on the Government's use of such commercial items. The Government may use the list during the evaluation process to evaluate the impact of any identified restrictions and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE." Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

A sample list for complying with this request is as follows:

COMMERCIAL

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. Non-Procurement Contract Proposers – Noncommercial and Commercial Items (Technical Data and Computer Software)

Proposers responding to this BAA requesting a Grant, Cooperative Agreement, Technology Investment Agreement, or Other Transaction for Prototype 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 those award instruments in question. This includes both Noncommercial Items and Commercial Items. Although not required, proposers may use a format similar to that described in Paragraphs 1.a and 1.b above. The Government may use the list during the evaluation process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE." Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

C. All Proposers – 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.

D. All Proposers – Intellectual Property Representations

Provide a good faith representation that you either own or possess appropriate licensing rights to all other intellectual property that will be utilized under your proposal for the DARPA program. Additionally, proposers shall provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research.