



Walrus

GLOBAL REACH AIR VEHICLE DESIGN PROGRAM

PHASE I

PROGRAM SOLICITATION PS05-01

**Defense Advanced Research Projects Agency
DARPA/TTO
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1 Introduction

The Defense Advanced Research Projects Agency (DARPA) is soliciting responses for the Walrus global-reach air vehicle program. This solicitation provides a unique opportunity to work in partnership with DARPA to design, build, and demonstrate the technical feasibility of a global-reach air lift capability.

The Walrus program seeks to provide the United States with a transformational force projection capability. Walrus will be able to deliver material to sites which lack transportation routes, support infrastructure, or prepared reception facilities ("Fort-to-Fight" capability). It will operate from unimproved landing sites and in the maritime environment. The Walrus program will bring together earlier airship ideas with new technologies to develop a new conceptual approach to flight. It will not re-package 1930s technology nor upscale the more limited commercial dirigibles of today, but rather will develop a vehicle concept with transformational military utility.

The Walrus program will develop an Objective Vehicle (OV) concept to preliminary design (PD), supported through a risk reduction program including flying a demonstrator vehicle of "significant scale" with technology and operational systems that are complementary to the overall risk reduction effort and scalable to a full size vehicle.

The goal of the program is to demonstrate that the OV based on derivative lighter-than-air (LTA) technology is an effective candidate to fulfill the needs for a global reach air vehicle. The design must have the potential to be transitioned to the military after Phase II and is based on the following premises:

1. An air vehicle with LTA derivative technology can provide the basis of a new military capability, and a Technology Development and Assessment Plan (TDAP) will demonstrate the required technology and scalability.
2. The Walrus OV will operate without the significant limitations of earlier LTA air vehicles, including independence from water-ballast, hangars, masts, tie-down ropes, etc.

During the Phase I system studies, contractors will identify Walrus concepts through system trade studies that will offer the broadest range of military capability. The offeror's concept will reflect a balance between cost, manufacturability and technical risk without compromising the operational goals and military utility of the Walrus system. DARPA's acquisition approach requires contractor teams wishing to participate in the Phase I study be in a position to design the entire OV system and address its scalability risk reduction requirements. Contractors having a capability in only specific technology or subsystem areas should seek partners to complement their efforts. The program described in this solicitation begins with an initial study phase (Phase I) followed by a risk reducing second phase for developing the preliminary design of the OV.

2 Program Description and Objectives

2.1 Program Goal

The Walrus principal challenge is the ability to control lift at all times, both in air and on the ground, including the ability to off-load payloads on the order of 500 tons or more without taking on ballast, other than from surrounding air. An incremental approach to Walrus is necessary to establish clear and credible solutions that provide confidence that earlier shortcomings have been overcome. The Walrus program seeks to identify and utilize design trade-space on the basis of the military utility of a number of broad operational tasks (defined later), rather than establishing constraints and requirements too early in the program development process. It is against these tasks that contractors will be required to develop a set of notional CONOPS that integrate their OV concept and DARPA goals.

The Walrus program will demonstrate the feasibility and viability of a global-reach air vehicle concept through the development of an OV design supported by risk reduction demonstrations, most notably, a scalable ATD air vehicle. The ATD vehicle is unlikely to encompass every technology that may be associated with the objective vehicle design. Other enabling technologies should be demonstrated in separate risk reduction efforts paralleling the ATD vehicle. The successful demonstrations of the ATD vehicle and other risk reducing technologies are anticipated to show levels of utility well in excess of previous generations of LTA and lead to an acquisition program for full-scale development of the OV. To demonstrate assurance that concept design goals can be met, critical technologies will be identified by the offeror early in the program and will be entered in the Technology Development and Assessment Plan (TDAP).

DARPA seeks the discovery and development of revolutionary (not evolutionary) concepts and technology. DARPA is investing in approaches that are innovative and promise a transformational improvement in global reach air lift performance.

2.2 Objective Vehicle Objectives and Mission Description

Walrus will bring new capabilities to the warfighter. The principal operational tasks of Walrus are:

- Origin to Point of Employment Lift (strategic capability)
- Theater Lift
- Support Seabasing Operations
- Perform Persistence Missions

The WALRUS system will be developed to provide the maximum military utility possible to the warfighter. In the first instance this utility will be understood to be as follows:

- Control of lift in all stages of air or ground operations including off-loading of payload without taking onboard ballast.
- Carry useful payload >500 tons over global distances (12,000 nm in less than 7 days) at a competitive cost.
- Primary mission is to deploy composite loads of personnel and equipment (including, for example, the components of a Unit of Action) ready to fight as they disembark the air vehicle within 6 hours after landing.
- Operate without significant support infrastructure and from unimproved landing sites, ostensibly flat but over rough ground to tolerate, at a minimum, 5 feet high obstacles.

- Capable of VTOL/STOVL/CTOL and hover (program goals) (VTOL - vertical < 1,500 feet; STOVL - 4,500 feet; CTOL - <10,000 feet).

Earlier Government analysis has identified a range of attributes that will support the achievement of the listed operational tasks. These attributes and their dependencies are listed at Appendix V. Contractor trade studies may identify other attributes and associated dependencies that also influence their design concept. However, the analyses should remain sensitive to the potential value of the other roles and missions. The priority of attributes linked to discrete operational tasks may challenge the “one concept meets all” solution and achievement of the highest possible utility is an important goal for reasons of cost effectiveness, service interest, and continued DARPA investment.

2.3 Program Plan

The program will be conducted in 2 phases as defined below:

- Phase I – OV Concept Definition Phase
- Phase II – OV Concept Demonstration Phase

Phase I is the OV Concept Definition phase with trade studies to determine the design with maximum utility. A minimum of one offeror will be selected to continue into the Phase II OV Concept Demonstration phase. Phase II will result in a Preliminary Design (PD) of the OV, and a refined and executed TDAP eliminating and reducing risk to acceptable levels. Anticipated levels of importance for the areas identified in Phase II above are 10% Ops Utility, 20% OV PD, and 70% Risk Reduction Activities.

Phase II will culminate with a PDR of the OV including model validation and other data accumulated from the ATD vehicle demonstration and other technology demos. These demos should prove the scalability, utility, and mission enhancement capability of the key enabling technologies. The ATD vehicle may be transitioned to the military for utility experimentation and assessment. The program plan shown in Figure 2-1 gives notional dates for the future phases of the program.

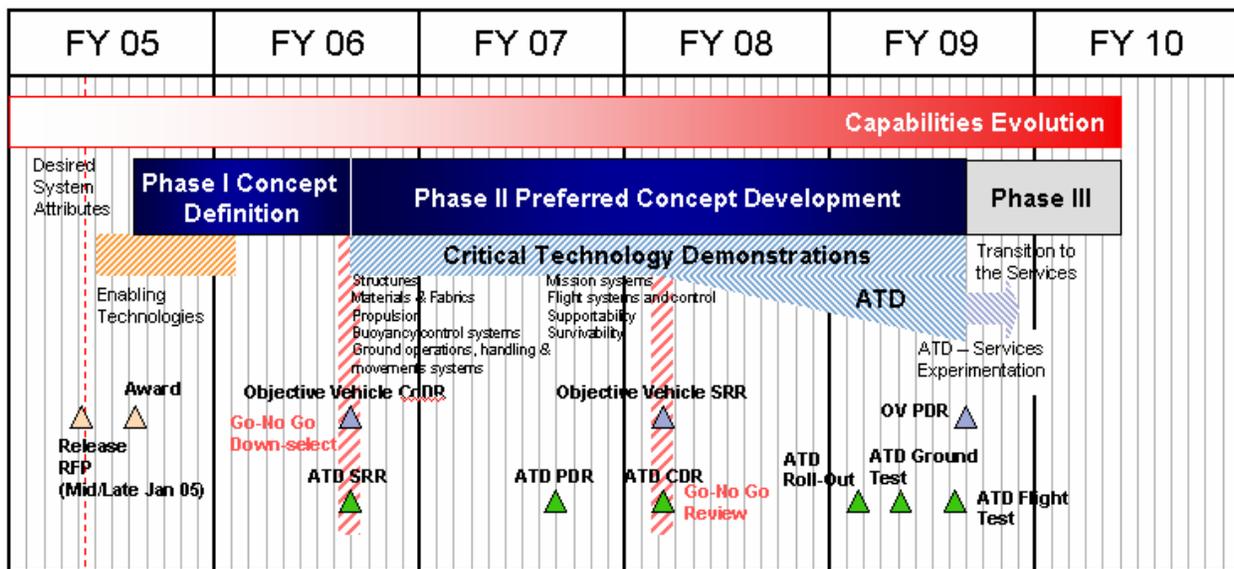


Figure 2-1 - Walrus Acquisition Strategy

The program plan calls for the development and refinement of the TDAP during Phase I and II, with ongoing execution of the TDAP (risk reduction plan) through both phases. This will provide an integrated roadmap for all activities necessary to meet the Walrus program goals. The updated TDAP will detail all the Phase II risk reduction efforts, subsystem and component verification tests, vehicle checkout and flight safety activities, critical technology evaluations, assessments, demonstrations, and flight tests of the ATD vehicle, and all other risk reduction activities

identified by the offeror. The management team will coordinate with industry and the DoD to ensure maximum advantage is taken of any leveraging opportunities, and the scarce research and development dollars are focused on supporting the acquisition strategy. The TDAP will be continually updated during the entire program to reflect emerging results.

2.4 Government Management Approach

DARPA is responsible for overall program management of the Walrus program, and will provide technical, acquisition, and security assistance, and CONOPS/mission development. The DARPA PM is responsible for ensuring a streamlined approach to program management and transition. Major tenets of that approach include: close cooperation between government and contractor teams, small staffs, abbreviated oversight, face-to-face communication, real-time decision making, and short, direct lines of authority.

As required, DARPA will establish a technical support team (TST) drawing upon the full spectrum of technical expertise within United States Air Force, Navy, and Army organizations and other organizations to provide specialist expertise in key system areas.

2.5 Data Rights

Phase I of this program requires sufficient government rights to the technical data developed to enable the Government to: 1) flexibly brief stake holders regarding technical progress and accomplishments and 2) allow validation of technical claims and accomplishment by independent technical (potentially non-government) experts. In order to assure that full credit is given to technical approaches, contractors may wish to minimize restrictions on data transfer wherever possible. Future Phases will require the necessary data and Government Purpose Rights to the data, at a minimum, for items including but not limited to:

- The System Design – sufficient data and rights thereto to enable third party vendors to develop technologies for insertion into the system architecture
- Technology Development – sufficient data and rights thereto to enable independent verification of the performance predictions and technology claims. Examples of the types of data include test results and interface definitions
- Maintenance and Life Cycle Support Data – sufficient data and rights thereto to enable development of life cycle support models and cost predictions based on a credible life cycle support program

It is anticipated that GPR will be necessary for other data not mentioned above as the program continues. Additional data requirements may later be defined and become a part of the down-selection criteria. All delivered data and handouts should be marked appropriately, by page.

2.6 ITAR Compliance

All offerors must comply with export control laws and ITAR regulations, and be able to protect sensitive and controlled data including critical technologies.

3 Phase I Execution

The primary objectives of Phase I are to identify mission needs, establish system operating attributes and to conduct trade studies leading to a concept system design. The results from a successful Phase I program must convince the Government that: (1) The Walrus OV will be an effective option for large scale force mobility and deployment, (2) the risk reduction and the detailed critical design objectives can be accomplished within the funding constraints, and (3) a TDAP can be developed to better understand scope and scalability of the ATD vehicle and transitioning the full scale design to military acquisition.

3.1 Overview

The contractor will implement a complete systems engineering process to achieve the Phase I objectives. The contractor should perform system requirements analyses, trade studies, and refine the TDAP. The major Phase I activities represent a progressive refinement of the contractor’s Walrus NSC and TDAP, including the identification of critical technologies, and the development of the Walrus System Level Design.

System requirements analyses, trade studies, and the Walrus engineering design should be conducted in accordance with DARPA’s Walrus Objectives and Mission Description (Section 2.2) and the Phase I objectives described in this section. All studies and analyses performed during this phase should be documented and accomplished in accordance with the proposed TDAP. The contractor will be responsible for considering all subsystems associated with a Walrus system to a level of detail necessary to justify their envisioned Walrus operational plans, program plan, and TDAP. All Phase I analyses, trade studies, and risk reduction activities shall be documented.

Phase I results will serve as the foundation and provide a roadmap for achieving the Walrus vision and objectives during Phase II. The Walrus designs, refined TDAP, and other results of the Phase I efforts will serve, in part, as evaluation factors for award of Phase II efforts.



Figure 3-1 - Phase I Milestones

3.2 Milestones

The government envisions five Phase I milestones.

- Milestone 1 – NSC Design Review - within 1 Month after Award (MAA)
 - ◆ Minimum Exit Criteria:
 - Briefing Charts (with annotated notes)
 - Initial System Requirements
 - Design Description
 - Supporting Analysis
 - TDAP
 - Phase I Schedule Review
 - Milestone Management Review
- Milestone 2 – Program Review – 3 MAA
 - ◆ Minimum Exit Criteria:
 - Briefing Charts (with annotated notes)
 - Progress Update (Financial and Technical)
 - Schedule Review
 - Milestone Management Review
- Milestone 3 – Heading Check – 6-7 MAA
 - ◆ Minimum Exit Criteria:
 - Briefing Charts (with annotated notes)
 - Progress Update (Financial and Technical)
 - Schedule Review
 - Milestone Management Review
- Milestone 4 – Walrus OV Conceptual Design Review - 11 MAA
 - ◆ Minimum Exit Criteria:
 - Briefing Charts (with annotated notes)
 - System Requirements Definition
 - Trade Study Results
 - Preferred OV Concept Design
 - Updated and Refined TDAP
 - Preliminary Phase II Development Plan
 - Milestone Management Review
- Milestone 5 – Final Report submittal – No Later Than 12 MAA
 - ◆ Minimum Exit Criteria:
 - Final report
 - Updated preferred concept
 - Updated CoDR documentation and briefing charts
 - Final Phase II Development Plan
 - Milestone Management Review

3.3 Figures of Merit

To evaluate the previously defined trade studies and analyses, mission effectiveness, and affordability of the Walrus system, a standard set of defined criteria should be generated. To that end, figures of merit will be determined and provided during the early part of Phase I.

4 Evaluation Criteria

4.1 Introduction

The Government will evaluate the offeror's ability to best perform Phase I via an evaluation of the FAR based technical proposal, and the FAR based cost proposal. After award selection successful offeror(s) OT proposals will be opened and negotiations will be conducted. The Government intends to award OT agreements for Phase I; however, the Government reserves the right to award other than an OT Agreement. DARPA reserves the right to award without discussion.

Guidance on preparation of the proposal is provided as Appendix I and details all information pertaining to the proposal organization. It also defines to a greater detail the evaluation criteria discussed in this section.

DARPA desires award of multiple Agreements for Phase I of the Walrus program. The Phase I selections will be accomplished based on an evaluation of proposals as described in this section of the solicitation. There are three (3) factors that will be rated during the evaluation: 1) Technical Approach, 2) Management, Key Personnel and Corporate Capabilities, and 3) Cost. Technical Approach is significantly more important than Management, Key Personnel and Corporate Capabilities; and Cost. Cost is of lesser importance than Management, Key Personnel and Corporate Capabilities. Evaluation factors and their subfactors are listed below.

- 1) Technical Approach
 - o NSC
 - o Technical Approach and Substantiation
 - o TDAP
- 2) Management
 - o Key Personnel and Program Team
 - o Corporate Capabilities
 - o Facilities
 - o Past Performance
- 3) Cost

Subfactors are weighted equally. An unsatisfactory rating in any one of the subfactors may be considered a significant deficiency and reduce the overall factor rating accordingly. The evaluation will consider the entire solicitation document. The following sections describe the areas that will be considered within each evaluation factor/subfactor. The areas of consideration identified under each of the factors/subfactors will be used for evaluation assistance and are not all inclusive nor considered evaluation subfactors.

After consideration of all evaluation factors, award preference will be the set of proposals which are individually determined to represent best value to the Government, where each proposal offers divergent technical approaches. In the event that a set of proposals do not clearly fit the preference criteria, award selection will be based on the best overall programmatic value, all factors considered.

Each offeror's proposal will receive an integrated evaluation by a single multi-functional team. The government reserves the right to award without discussions.

4.1.1 Technical Approach

The offeror's Notional System Concept (NSC), Trade Study and Analysis Plan, and Technology Demonstration and Assessment Plan will be evaluated to determine how well they will satisfy the all phases of Walrus Program Objectives, as well as the detailed Phase I Statement of Objectives.

4.1.1.1 Notional System Concept (NSC)

1. Extent to which the offeror's design is credible and feasible
2. Extent to which offeror's design is innovative
3. Extent to which CONOPS demonstrates understanding and implementation of Government's operational vision and adequately addresses all aspects of system including basing, infrastructure requirements, command, control and communications, support, integration with other battlefield assets, etc.
4. Extent to which the offeror's design is responsive to program goals and mission
5. Extent to which the offeror identifies an acceptable point of departure for accomplishing trade studies
6. Extent to which the offeror's design can accommodate the range of technologies to be considered

4.1.1.2 Technical Approach and Substantiation

1. Extent to which the technical approach is innovative and substantiated by first order analysis or calculation
2. Extent to which the technical approach follows a logical decision process to an appropriate point of departure
3. Extent to which the approach is supported by engineering best practices

4.1.1.3 Technology Development and Assessment Plan

1. Extent to which the TDAP process is robust in identifying critical technologies, processes and system attributes
2. Extent to which the TDAP is detailed in evaluating and down selecting among competing component technologies
3. Extent to which the TSAP is comprehensive and fully explores trade space
4. Extent to which the TSAP includes a robust assessment of the range of available technologies across government and industry
5. Extent to which modeling tools are utilized, and expected quality of output
6. Extent to which the TDD is inclusive of major tasks and demonstrates foresight into likely activities
7. Extent to which the IMS is detailed and reasonable given the TDD.

4.1.2 Management

The offeror's management and system engineering process will be evaluated to ensure that overall sound methodologies that represent good management practices are used to complete all proposed activities described in the offeror's TDD, TDAP and IMS. Streamlined and innovative business, teaming and technical management practices are desired.

4.1.2.1 Program Team

1. Senior management commitment
2. Appropriate milestone products and accomplishment criteria defined and demonstrates program commitment
3. Extent to which the schedule is detailed, reasonable, and complete.
4. The offeror's team composition will be evaluated based on:
 - a. Key personnel, including the PM, Chief Engineer, Lead Systems Engineer, and Analysis Lead.
 - b. The team's ability to execute the program from conceptual design through fabrication and flight test, including the demonstrated ability to produce systems of this complexity.

- c. The breadth and depth of the proposed team in advanced LTA, hybrid, and other air vehicle development programs
- d. The proposed management constructs.

4.1.2.2 Corporate Capabilities

1. Extent to which the offeror has the planning, management, system engineering and software development processes, lifecycle cost approach, security and qualified program team to successfully accomplish the tasks defined in their TDAP.
2. Extent to which innovative business practices are used to reduce the cost and schedule required to achieve the required level of performance as compared to a typical acquisition program.
3. Extent to which offeror has proposed use of appropriate management tools
4. Adequate process for subcontractor and vendor management discussed and is credible

4.1.2.3 Facilities

1. Staff and facility resource requirements identified and sufficiently dedicated to the program

4.1.2.4 Past Performance

1. Contractor team has relevant past performance and facilities to support design, development and flight test of air vehicle and associated technologies

4.1.3 Cost

- Extent to which the offered program is affordable
- Extent to which the WBS budget allocations substantiate the scope of work identified and, test facilities, and GFE are identified and considered in total Phase I program costs
- Extent to which proposed cost is realistic, credible, and substantiated

4.2 Basis for Phase II Award

The government plans to develop a new solicitation for Phase II. The government expects that only those companies involved in the performance of phase I will be at a level mature enough to respond to the phase II solicitation; responses may be limited to only those companies. In the event a company not involved in the first phase demonstrates a level of maturity and has sufficient qualifications, they may be considered to enter the limited selection. The evaluation criteria will be further defined in the Phase II solicitation. Some guidance on criteria and intent is below.

Oral Proposals – The Government intends to use oral presentations for the technical and management volumes of the Phase II proposals.

Evaluation Criteria – The Government intends to use contractor performance in key areas throughout the Phase I period of performance as part of the Phase II proposal evaluation.

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APPENDIX I - Proposal Guidance

This section provides the offeror guidance for developing and presenting the Walrus Phase I proposals. The offeror should carefully read and ensure that their proposal responds to the entire solicitation.

Offerors shall submit three (3) separate volumes in response to this solicitation. Volume 1 will be a FAR-based technical proposal, Volume 2 will be the FAR-based cost proposal, and Volume 3 will be an OT-based “Delta Proposal”. The “Delta Proposal” should clearly identify changes to the proposed FAR-based technical and cost proposals (Volumes 1 and 2 respectively) that results from use of an OTA. Two cost proposals, one OTA compliant proposal and one FAR CAS compliant proposal are required. The Government may award the contract on either the FAR-based proposal or OTA delta proposal volumes. Only the FAR-based proposal will be evaluated for purposes of award selection, all factors considered.

The offeror’s written submission should be packaged as follows:

- Volume 1 - FAR Based Technical Proposal
 - Technical Section
 - Management Section
 - Integrated Master Schedule (IMS)
- Volume 2 - FAR Based Cost Proposal
 - Total Cost Summary
 - FAR Based WBS Budget Allocation
- Volume 3 - OT Based Delta Proposal
 - Completed OT Agreement
 - Delta TDD
 - Delta IMS
 - Delta Total Cost Summary and Delta FAR Based WBS Allocation
 - Section 803 Provisions
 - Data Rights

Further organization guidance is provided in the following sections.

The Government will evaluate the offeror’s ability to best perform Phase I via an evaluation of the FAR based technical proposal, and the FAR based cost proposal. After award selection successful offeror(s) OT proposals will be opened and negotiations will be conducted. The Government intends to award OT agreements for Phase I; however, the Government reserves the right to award other than an OT Agreement.

A TDD and IMS will be incorporated into any resulting award and form the basis for executing Phase I.

AI.1 - Work Breakdown Structure (WBS)

This section describes the work outline as viewed by the Government. The government work outline is provided for guidance. The offeror should propose a WBS system that corresponds to the appropriate outline level. However, to allow for an equitable comparison of competing concepts the offeror should ensure their Work Outline addresses all the program elements shown below:

Walrus Phase I Solicitation
2/1/2005

The work outline will provide a common numbering system that ties all program elements together. This numbering system will integrate the NSC, TDD, and IMS and must be used throughout all program documentation. The NSC, TDD and IMS should be consistent down through level 3 of the work outline. The Phase I WBS should be consistent between Phase I and future phases when additional detail may be required.

Outline Level

Code	1	2	3	4
000	Walrus System			
100		Walrus Objective System		
110			Airframe	
120			Propulsion	
			Buoyancy Management System	
			...	
			...	
			...	
200		Risk Reduction Activities		
210			Buoyancy Management System Demo	
			...	
			...	

AI.2 - Written Proposal Instructions

The Offeror shall submit three separately packaged proposal volumes organized and identified as follows:

- Volume 1 – FAR Based Technical Proposal
- Volume 2 – FAR Based Cost Proposal
- Volume 3 – OTA Based Delta Proposal

The required format and content of each proposal volume is discussed in the following paragraphs. The offeror should clearly and fully address each of the specified topic areas within the identified sections of each volume. The structure for these volumes is described in the following sections. The Government may choose to accept the FAR based proposal or an OTA based proposal.

AI.2.1 - Volume 1 – FAR Based Technical Proposal

Volume 1 will be a technical proposal that should address the following areas:

- Executive Summary
- Technical Proposal
 - Notional System Concept (NSC)
 - Technical Approach and Substantiation
 - Technology Development and Assessment Plan (TDAP)
 - Trade Study and Analysis Plan (TSAP)
 - Task Description Document (TDD)
 - Demonstration Master Schedule
 - Management Plan
 - Corporate Capabilities

Key Personnel, Program Team
Facilities
Past Performance

AI.2.1.1 - Executive Summary

This section is meant to be an executive level description of key elements and unique features of each offeror's proposed Walrus Phase I program. The Executive Summary should at least address the offeror's:

- 1) Program Objectives and Approach
- 2) Acquisition Approach, including schedule, technical performance risk areas, risk mitigation or reduction activities, and leveraging from Independent Research and Development (IR&D) or other government research activities
- 3) Top Level Program Schedule
- 4) Proposed Cost

AI.2.1.2 - Notional System Concept (NSC)

The offeror should describe their top-level vision of a Walrus system architecture and notional system concept. This is meant to be an initial look that demonstrates the offeror's understanding of the program objectives, performance goals and operational issues. The offeror will not only describe their top-level vision, but will parameterize their concept and major technologies.

The offeror's NSC will serve as a point of departure for Phase I trade studies. The government does not expect the NSC to be defined to high fidelity but rather will use this information to gauge the offeror's initial thoughts on how to best meet program objectives. To provide a common framework, the offeror's NSC description should conform to the single, common program numbering system outlined in their TDD and other program documentation.

AI.2.1.3 - Technical Approach and Substantiation

This section of the proposal provides the offeror with the opportunity to explain and substantiate the significant features of their NSC and TDAP. Offeror should provide first order analysis or calculation to substantiate NSC technical capabilities.

AI.2.1.4 - Proposed Technology Demonstration and Assessment Plan (TDAP)

The TDAP should identify the top level metrics, processes, and system level performance and affordability trades the offeror intends to use to identify the critical and enabling Technologies, Processes and System Attributes (TPSA) that must be validated and/or demonstrated to achieve acceptable risk entry into an acquisition program. A major objective of Phase I is to examine and assess the range of competing technologies and CONOPS that could enable the Walrus OV. The plan should describe the offeror's process that will be implemented for identifying and evaluating competing technologies available from other government and industry R&D programs. The TDAP should include details on planned risk mitigation efforts including notional Phase II risk reduction efforts. It should include (but is not limited to) subsystem and component verification, vehicle check-out and flight safety assessments, critical technology evaluation and assessments, and flight demonstration of the ATD vehicle. The TDAP includes the Trade Study and Analysis Plan (TSAP), Task Description Document (TDD), and the Integrated Master Schedule (IMS). It is the risk mitigation plan for the entire program (at least through the end of Phase II), and will act as a living document, refined based on Phase I activities and findings.

Trade Study and Analysis Plan (TSAP)

The trade study and analysis plan should describe the offeror's approach to progressively refining their NSC into a final demonstration design. Those refinements will be based on a series of concurrent system requirements, design and affordability trades.

Task Description Document (TDD)

The TDD describes the work effort necessary to meet the milestones and Statement of Objectives for Phase I of the Walrus program. The TDD will include the offeror's plans for trade studies and analyses, Walrus OV concept development, cost analysis tool development and technology assessment. The TDD should define structure tasks consistent with the Work Outline provided in Section AI.1. The offeror may choose to define work at lower levels to better explain their approach. This TDD should include only those activities associated with the baseline FAR based cost response and will be incorporated into any resultant agreement.

A Notional Phase II TDD toward meeting overall program goals and OV objectives should be provided, and will be updated during the refinement of the TDAP to reflect Phase II demonstration and risk reduction objectives and activities.

Integrated Master Schedule

The IMS should outline the detailed tasks and the amount of time expressed in calendar schedules necessary to achieve the milestones and significant functional accomplishments in program. It is a tiered scheduling system corresponding to the work outline. The first iteration of the IMS should be to level 3 of the offeror's TDD or lower as determined by the offeror. Definitions and characteristics of the key elements of the IMS are given below.

Detailed Tasks: Detailed work effort to be completed in support of a specific significant milestone or functional accomplishment.

Calendar Schedule: Detailed schedule (dates) of the period of performance for each work effort.

An initial IMS should be delivered with the Phase I proposal and should be delivered with the Phase I proposal in Microsoft Project format. It will be updated throughout Phase I as part of the TDAP refinement, and ultimately used for the Phase II execution of the TDAP.

AI.2.1.5 - Management Plan

The offeror should describe their program management process, based on the concepts of Integrated Product and Process Development. A series of tracking tools should be used and updated monthly. They should include:

- **Integrated Master Schedule (IMS)**: The offeror will establish and maintain a master scheduling system that provides continuous status of program accomplishments against time. This tiered system will provide visibility to Level 3 and Level 4 items as appropriate.
- **Management Tools**: The offeror will provide a management system that allows the Government visibility into the program budget and spend plan and is tied to their work outline. The offeror will provide regular cost reports to the Government, at least monthly, in an offeror-preferred format. Required tracking numbers include, but are not limited to, Estimate at Completion (EAC), Schedule Performance Index (SPI), Cost Performance Index (CPI), and explanations of significant variance from budget to actual cost.

These tools should be the same tools used internally to manage the program. No additional unique information for the Government is desired or required.

Corporate Capabilities

The offeror should describe the innovative business approached that will be used to reduce overhead costs to the program and implement effective communication and feedback processes with the Government. There may be some overlap with tracking tools and program management processes described in the management plan.

Key Personnel and Program Team

Short one page resumes should be provided for the top four members of the development team. The entire team will be represented by these key personnel. The Government does not desire or require resumes of the key personnel from each partner company, subcontractor or organization within the team. These key personnel should be the leaders of the team and represent the capability and strength of the team. They can be from a single company or distributed across various team members. The Government wishes to understand the strength of the team through its acknowledged leaders and their qualifications.

The offeror will describe the proposed program team and demonstrate the team's capability and experience to perform **ALL PHASES** of the Walrus program.

Facilities

The offeror will identify facilities needed and available to support all phases of this program.

Past Performance

The offeror should describe relevant experience in each of the related areas to the Walrus program, including but not limited to large scale systems integration, flight testing, and simulation based acquisition experience, and experience in development of aircraft, LTA aircraft, flight line operations, life cycle cost analysis, software, fabric development, FEA, envelope manufacturing, and large scale vehicle or airship manufacturing. The offeror should identify what the offeror did, assess its performance, and identify how it relates to the Walrus program on the contract identified. Program name, agency, and POC information must be provided for experience claimed.

AI.2.2 - Volume 2 – FAR Based Cost Proposal

The FAR based cost proposal must contain a completed Total Cost Summary, the Task Description Document (TDD) and Integrated Master Schedule (IMS). This Total Cost Summary should be modified as necessary to support the level of detail requested.

Table 1 - Total Cost Summary

Labor (\$)	
Overhead/fringe (\$)	
Direct materials (\$)	
Subcontracts (\$)	
Consultants (\$)	
Travel (\$)	
Equipment (\$)	
Other costs (\$)	
G&A (\$)	
COM (\$)	
Fee (\$)	
Fee (%)	

Total Labor Hours	
Prime Labor Hours	
Subcontractor/Consultant labor hours (add rows to break down by organization)	
Total Ave Cost/Labor hour	
% of effort subcontracted	
Range costs	
Government Test Facility costs	
Use of Government Assets and Value	
Identification of GFE and Value	

In addition the offeror is required to provide costs and labor hours to level three of its work outline or WBS. The following table is an outline of the spreadsheet which identifies the level of pricing detail the Government requires. It should be modified as necessary to reflect the same total program costs as the above table.

Failure to provide and support detailed costs to the level identified above may result in the Offeror not receiving a contract award.

In order for the Government to determine the reasonableness, realism and completeness of your cost proposal, the following data must be provided for each team member and in a cumulative summary. The below requested supporting information must address the Total Cost Summary and therefore may need to be modified appropriately.

Labor: Total labor includes direct labor and all indirect expenses associated with labor, to be used for the Phase I period of performance. Provide a breakdown of labor hours and rates for each category of personnel to be used on this project.

Direct Materials: A by item/unit cost breakdown of the total direct material that will be acquired and/or consumed in the Phase I period of performance. Limit this information to only major items of material (>\$1,000) and how the estimated expense was derived.

Subcontracts: Describe major efforts to be subcontracted, the source, estimated cost and the basis for this estimate. A summary cost breakdown should be provided for each subcontract proposed.

Consultants: Any proposed use of an individual not directly employed by the Offeror resulting in a cumulative Phase I cost of \$10,000 or more should be detailed. The individual should be identified by name and affiliation, as well as his/her hourly rate, total number on labor hours, and any other direct costs such as materials or travel that are not accounted for elsewhere in the cost proposal.

Travel: Total proposed travel expenditures relating to the Phase I period of performance. Limit this information to the number of trips, and purpose of each cost.

Equipment: Any equipment to be acquired for the effort. Breakdown the equipment into those items required for Phase I.

Other Costs: Any direct costs not included above. List the item, the estimated cost, and basis for the estimate.

Remember the cost proposal should tell the story of how and why you are planning to complete your proposed Phase I TDD. Activities such as demonstrations required to reduce the various technical risks should be identified in the TDD and reflected in the cost proposal.

AI.2.2.1 - FAR Based WBS Budget Allocation

The offeror should complete and present the WBS Budget Allocation provided as Table 2. The structure of this table may be modified by the offeror however the total amount should reflect total Phase I program cost to the Government.

Table 2 - WBS Budget Allocation

WBS Level 1000	Labor Hours	Labor Dollars	Direct Material Dollars	Subcontract /Consultant Dollars	Travel Dollars	Other Dollars	Total Dollars
100							
110							
120							
130							

AI.2.2.2 - Phase I Detailed Schedule

The Phase I detailed schedule should outline the detailed tasks and the amount of resources and time expressed in a calendar schedule necessary to achieve the milestones and significant functional accomplishments of Phase I. It is a tiered scheduling system corresponding to the work outline. The first iteration of this schedule should be to level 3 of the offeror's TDD or lower as determined by the offeror. Definitions and characteristics of the key elements of the IMS are given below.

Detailed Tasks: Detailed work effort to be completed in support of a specific significant milestone or functional accomplishment.

Calendar Schedule: Detailed schedule (dates) of the period of performance for each work effort.

The schedule should be delivered with the Phase I proposal in Microsoft Project format.

AI.2.3 - Volume 3 – OTA Based Delta Proposal

The following outline should be used for Volume 3.

- Completed OT Agreement
- Delta TDD
- Delta IMS
- Delta Total Cost Summary & WBS Budget Allocation
- Section 803 Provisions
- Data Rights

AI.2.3.1 - Completed OT Agreement

The offeror should provide its proposed Phase I Agreement, along with rationale for any changes to the Government model agreement provided within the solicitation. In addition to a hard clean copy of the entire agreement, the offeror should provide a MS Word electronic copy with the "track changes" feature employed so that changes can be readily identified. The offeror should complete all attachments of the model agreement as appropriate.

The offeror can propose any changes, additions, or deletions to the Model Agreement that should be considered during Agreement negotiations. Fully explain the rationale for the changes made in an addendum to the Agreement. Rationale located in other areas of the solicitation response may be cross-referenced.

AI.2.3.2 - Delta TDD and Delta IMS

The offeror should provide a top level summary as well as a “red-lined” TDD that highlights additional tasks being performed as compared to the FAR based program. The IMS should highlight these additional tasks as well and be delivered in Microsoft Project format.

AI.2.3.3 - Delta Total Cost Summary and Delta WBS Budget Allocation

The offeror should clearly identify and summarize the cost changes that result from using an OTA agreement versus a FAR based contract. The offeror is required to identify changes to the Total Cost Summary table and WBS Budget Allocation table that were proposed as part of the FAR Based cost proposal submittal. A summary description of the change and the rationale supporting the change should also be provided.

Certified cost or pricing data is not required. However, explain any differences in the below cost details that result from use of an OTA.

Labor: Total labor includes direct labor and all indirect expenses associated with labor, to be used for the Phase II period of performance. Provide a breakdown of labor hours and rates for each category of personnel to be used on this project.

Direct Materials: A by item/unit cost breakdown of the total direct material that will be acquired and/or consumed in the Phase II period of performance. Limit this information to only major items of material (>\$1,000) and how the estimated expense was derived.

Subcontracts: Describe major efforts to be subcontracted, the source, estimated cost and the basis for this estimate. A summary cost breakdown should be provided for each subcontract proposed.

Consultants: Any proposed use of an individual not directly employed by the Offeror resulting in a cumulative Phase II cost of \$10,000 or more should be detailed. The individual should be identified by name and affiliation, as well as his/her hourly rate, total number on labor hours, and any other direct costs such as materials or travel that are not accounted for elsewhere in the cost proposal.

Travel: Total proposed travel expenditures relating to the Phase II period of performance. Limit this information to the number of trips, and purpose of each cost.

Equipment: Any equipment to be acquired for the effort. Breakdown the equipment into those items required for Phase II.

Other Costs: Any direct costs not included above. List the item, the estimated cost, and basis for the estimate.

As applicable, the Offeror should provide a total estimated price for the major IR&D and cost sharing activities associated with the program. The Offeror should state whether each IR&D program is dedicated or if it is being pursued to benefit other programs as well. The cost sharing estimate should include the type of cost share, i.e. cash or in-kind. If in-kind is proposed, the Offeror should provide a discussion of how the cost share was valued.

If a teaming arrangement is proposed the above cost information should be provided for all team members.

AI.2.3.4 - Section 803 Provisions

The offeror should describe how they intend to meet the Section 803 provisions of the National Defense Authorization Act for FY2001 (Public Law 106-398) in Phase I. To meet these provisions, there must be either at least one non-traditional defense contractor participating to a significant extent in the prototype project; or, if there is no nontraditional defense contractor participating to a significant extent, at least one of the following circumstances exists: at least one third of the total cost of the prototype project is to be paid with funds provided by parties to the transaction other than the Federal Government; or, the senior procurement executive determines that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract. The Government has discretion in determining the level of “significant extent.” Some factors may include:

- a) criticality of the technology being contributed
- b) role of the non-traditional defense contractor(s) in the design process
- c) value of the effort being proposed

If the Offeror does not have a non-traditional partner and cannot meet the cost share condition, the Offeror should provide justification to enable the senior procurement executive to waive the requirements of Section 803.

The entire amendment to the Authorization Act is available for your convenience at <<http://www.darpa.mil/cmo>> under "Items of Note" and includes the definition of a nontraditional defense contractor.

As detailed above, Volume 3 must clearly separate the technical and cost-share portion of the proposal from the non-cost share portion of the proposal. Cost contributions for items such as IRAD reimbursement, G&A, cost of money and fee identified separately will meet the solicitation requirement.

AI.2.3.5 - Data Rights

The offeror should discuss its proposed approach to Data Rights for all phases, and how it aligns to the Government's desires.

AI.3 - Administrative Instructions

AI.3.1 - Volume I

The Offeror's Volume I FAR Based Technical Proposal material shall be submitted in a separate standard three-ring, loose leaf binder with individual pages unbound and printed single sided. Pages should be marked **SOURCE SELECTION SENSITIVE**. Volume 1, excluding title pages, table of contents, section dividers, TDD and IMS shall not exceed 50 pages. The offeror shall submit eight (8) hard copies of Volume 1.

Suggested page limits for each section are as follows:

- | | |
|--|----------|
| 1. Executive Summary | 2 pages |
| 2. Technical Section | 28 pages |
| a. Notional System Concept (NSC) | |
| b. Technical Approach and Substantiation | |
| c. Technology Development and Assessment Plan (TDAP) | |
| 3. Management Section | 15 pages |
| a. Management Plan | |
| i. Corporate Capabilities | |
| ii. Key Personnel, Program Team | |
| iii. Facilities | |
| iv. Past Performance | |

Authorized representatives of the offeror must sign proposal volumes.

AI.3.2 - Volumes 2 and 3

The offeror's Volumes 2 and 3 shall be submitted in a separate standard three-ring, loose leaf binder with individual pages unbound and printed single sided. They shall be packaged and marked for clear identification separately. There is no page limit for either Volume 2 or 3. Pages should be marked **SOURCE SELECTION SENSITIVE**. The offeror shall submit two hard copies of Volume 2 and 3. It will not be evaluated for technical content. Each page shall be printed on an 8-1/2" x 11" sheet using Times New Roman 12-point font. Foldouts should be no larger than 11" x 17". Margins should be 1" on all sides. The size of text used in tables and figures should not be smaller than 10-point.

AI.3.3 - Electronic Submission

Teams are required to submit two copies of all proposal material in IBM PC Microsoft Office 2000 compatible electronic format with embedded graphics on CD-ROM. If the proposal contains imported graphics (drawings, charts, photos, etc.) the offeror should also include an electronic copy of the originally imported graphics files. Each Volume should be on separate disk(s) and should be packaged with the respective hard copies.

AI.3.4 - Proposal Delivery

All responses must be received on or before April 1, 2005 at 4:00 PM Eastern Daylight Savings Time. Late responses may not be accepted. The offeror's proposal should be mailed or hand carried to:

Defense Advanced Research Projects Agency (DARPA)
Walrus Program
3701 North Fairfax Drive
Arlington, VA 22203-1714
Attn: Contracts Management Office/Charles Nurse
Program Solicitation Number: PS05-01

Responses and response modifications (which will only be accepted prior to the deadline for receipt of response) should be submitted in sealed envelopes or packages to the address shown above and marked with the following information on the outer wrapping:

Offeror's name and return address
The response receipt address above
Program Solicitation Number: PS05-01
Hour and date:

AI.4 - Regulations Governing Objections to Solicitation and Award

Any objections to the terms of this solicitation or to the conduct of receipt, evaluation or award of agreements must be presented in writing within ten calendar days of (1) the release of this solicitation or (2) the date the objector knows or should have known the basis for its objection. Objections must be provided in letter format, clearly stating that it is an objection to this solicitation or to the conduct of evaluation or award of an agreement, and providing a clearly detailed factual statement of the basis for objection. Failure to comply with these directions is a basis for summary dismissal of the objection. Mail objections to the address listed in the proposal delivery information.

AI.5 - Rules of Communication

All actions by the DARPA Walrus Government Team and industry teams' employees involved in the Phase I source selection process shall be such that no person's actions provide an unfair competitive advantage either actual or reasonably perceived by any other party or parties. Upon release of the Phase I solicitation and until Phase I award, all discussions with the Walrus Government Team can only be in the form of questions through the Agreements Officer. This includes discussions regarding Phase I, Phase II, this solicitation, proposals, and any other issue relating to source selection. Program Office Team members will report any violations of these rules to the Program Manager and Agreements Officer.

Industry teams are advised that employees of support contractors may be called upon as subject matter experts in the source selection process. These individuals will be required to sign non-disclosure statements and will be

authorized access to only those portions of the proposal data and discussions that are necessary to enable them to perform their respective duties. Such firms are expressly prohibited from competing on the subject acquisition and from proposal scoring, ranking or recommending the selection of a source. By submission of a proposal, the team agrees that proposal information may be disclosed to these selected individuals for the limited purpose stated above. Any information not intended for limited release to these individuals must be clearly marked and submitted segregated from other proposal material with accompanying rationale and identification of specific companies and/or individuals to be excluded. The Government reserves the right to exclude from consideration any information that is not available to the entire source selection team.

AI.6 - Destruction of Unsuccessful Proposals

One copy of each unsuccessful proposal will be retained on file. All other copies will be destroyed one month after award. No destruction certification will be furnished.

APPENDIX II - Model OT Agreement

AII.1 - Model Agreement

AGREEMENT

BETWEEN

(INSERT NAME AND ADDRESS)

AND

THE DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
3701 NORTH FAIRFAX DRIVE
ARLINGTON, VA 22203-1714

CONCERNING

WALRUS – PHASE I

Agreement No.:

DARPA Order No.:

Total Estimated Government Funding of the Phase I Agreement: \$

Funds Obligated: \$

Authority: 10 U.S.C. 2371 and Section 845 of the 1994 National Defense Authorization Act as amended

Line of Appropriation: AA

This Agreement is entered into between the United States of America, hereinafter called the Government, represented by The Defense Advanced Research Projects Agency (DARPA), and the (INSERT NAME) pursuant to and under U.S. Federal law.

FOR (INSERT CONTRACTOR NAME)

FOR THE UNITED STATES OF
AMERICA THE DEFENSE ADVANCED
RESEARCH PROJECTS AGENCY

(Signature)

(Signature)

(Name, Title) (Date)

(Name, Title) (Date)

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ARTICLE I: SCOPE OF THE AGREEMENT

This article should describe your vision for the Concept Definition Phase (Phase I of the Walrus Program), the overarching Walrus Objective Vehicle of the future, and how the proposed program will provide an evolutionary step to enabling this future system. The Offeror should address Phase II objectives of the Walrus program, how its proposed Phase I program will smoothly transition into Phase II, and how the envisioned products of Phase II would further enhance development of the Walrus Objective Vehicle. You should include a detailed description of how your proposed program satisfies the proposed statement of objectives. If there are dual or commercial uses of the developed technologies, be sure to include them but discuss the military uses first. This article should clearly address your corporate commitment to ensuring that proper sharing of data is accomplished and commitment through the entire program is maintained.

In addition, this article should discuss the way you will interact with the DARPA program team. Suggested wording (i.e., paragraphs used in other DARPA Agreements) for your consideration follows:

“DARPA will have continuous involvement with the Contractor. DARPA will obtain access to program results and certain rights to patents and data pursuant to Articles VIII and IX. DARPA and the Contractor are bound to each other by a duty of good faith and best effort in achieving the program objectives.”

“This Agreement is an ‘other transaction’ pursuant to 10 U.S.C. 2371 and section 845 of the 1994 National Defense Authorization Act, as amended. The Parties agree that the purpose of this Agreement is to acquire the Team's best efforts in development of detailed designs and risk mitigation activities supporting that design. The delivery of this design is a prototype within the meaning of the above-mentioned statute. The Federal Acquisition Regulation (FAR) and Department of Defense FAR Supplement (DFARS) apply only as specifically referenced herein. This Agreement is not intended to be, nor shall it be construed as, by implication or otherwise, a partnership, a corporation, or other business organization.”

Terms such as “Team,” “Team Members” and “program,” etc. should also be defined in this article.

ARTICLE II: TERM

A. The Term of this Agreement

This Agreement commences upon the date of the last signature hereon and continues for the duration of the Concept Definition, Phase I. For planning purposes, the estimated period of performance for Phase I is date of award through 12 months.

B. Termination Provisions

Subject to a reasonable determination that this agreement will not produce beneficial results commensurate with the expenditure of resources, the Government may terminate this Agreement by written notice to the Team, provided that such written notice is preceded by consultation between the Parties. In the event of a termination of the Agreement, it is agreed that disposition of data developed under this Agreement, shall be in accordance with the provisions set forth in Articles IX, Data Rights. The Government and Team will negotiate in good faith a reasonable and timely adjustment of all outstanding issues between the Parties as a result of termination. Failure of the Parties to agree to a reasonable adjustment will be resolved pursuant to Article VII, Disputes.

C. Extending the Term

The Parties may extend by mutual written agreement the term of this Agreement if funding availability and research opportunities reasonably warrant. Phase II, Concept Demonstration, is anticipated to follow Phase I pending program status and funding availability. Any program extension shall be formalized through modification of the Agreement by the Agreements Officer and the Team Administrator.

ARTICLE III: STATEMENT OF OBJECTIVES

This article should also summarize the scope of the work and the business arrangement to which you are committing (as described in detail in this article, Statement of Objectives) by entering into this Agreement.

The Team will reference here their proposed Task Description Document (TDD) and Integrated Master Schedule (IMS) in accordance with the guidance provided in the solicitation. The TDD describes the tasks that the Team must accomplish to be successful in this Concept Definition (Phase I). The IMS provides a timeline for each significant task, indicating a planned start date and completion date, and includes specific events, milestones and accomplishments. The IMS should portray in a clear fashion the time relationship of Phase I tasks and identify the critical path of events. Consider the Government Phase I Statement of Objectives, the overall Walrus program goals and other guidance provided in the solicitation.

ARTICLE IV: PAYABLE EVENT SCHEDULE AND DELIVERABLES

A. Payment Schedule

The Team shall perform the work as generally identified throughout this document to include its attachments. The Team shall be paid for each Payable Milestone accomplished and delivered in accordance with the Schedule of Payments and Payable Milestones and accomplishment criteria for the milestone events. Both the Schedule of Payments and the Funding Schedule may be revised or modified in accordance with subparagraph C of this article.

B. Schedule of Payments and Payable Milestones

The Team shall propose milestone accomplishment criteria and deliverables to be incorporated into this agreement. Reference Government provided accomplishments and criteria guidelines provided in solicitation as a starting point for your proposal (Section 3.2).

C. Modifications

1. At any time during the term of the Agreement, progress or results may indicate that a change in the Statement of Objective/SOO and/or the Payable Milestones would be beneficial to the Walrus program objectives. Recommendations for modifications, including justifications to support any changes to the Statement of Objectives/SOO and/or the Payable Milestones, will be documented in a letter and submitted by the Team to the DARPA Program Manager with a copy to the DARPA Agreement Officer. This letter will detail the technical, chronological, and financial impact of the proposed modification to the research program. Any resultant modification is subject to mutual agreement of the parties. The Government is not obligated to pay for additional or revised Payable Milestones until the Payable Milestones Schedule is formally revised by the DARPA Agreements Officer and made part of this Agreement.

2. The DARPA Program Manager shall be responsible for the review and verification of milestone accomplishment criteria and any recommendations to revise or otherwise modify the Agreement Statement of Objectives/SOO, Schedule of Payments and Payable Milestones, or other proposed changes to the terms and conditions of this Agreement.

3. For minor or administrative Agreement modifications (e.g., changes in the paying office or appropriation data, changes to Government or Team personnel identified in the Agreement, etc.), DARPA shall make these types of changes unilaterally.

4. The Government will be responsible for effecting all modifications to this agreement.

ARTICLE V: AGREEMENT ADMINISTRATION

Administrative and contractual matters under this Agreement shall be referred to the following representatives of the parties:

Walrus Phase I Solicitation
2/1/2005

DARPA: Mr. Charles Nurse, Agreements Officer, Tel: (571) 218-4815

Team: (INSERT NAME) (INSERT TITLE) (INSERT TELEPHONE NUMBER)

Technical matters under this Agreement shall be referred to the following representatives:

DARPA: Dr. Gary Graham, Program Manager, Tel: (571) 218-4350

Team: (INSERT NAME) (INSERT TITLE) (INSERT TELEPHONE NUMBER)

Either party may change its representatives named in this Article by written notification to the other party. The Government will effect the change as stated in subparagraph C.4 of Article IV above.

ARTICLE VI: OBLIGATION AND PAYMENT

A. Obligation

The Government's liability to make payments to the Team is limited to only those funds obligated under this Agreement or by amendment to the Agreement. DARPA may obligate funds to the Agreement incrementally.

B. Payments

1. The following information shall be included on each invoice:

- Agreement Number
- Invoice Number
- A description of services performed
- Quantity of service received or performed
- The time of period covered by the invoice
- Terms of Payment
- Payment Office
- Amount claimed

2. The Team shall document each Payable Milestone by submitting deliverables in accordance with the Payable Milestone Schedule and Accomplishment Criteria. The Team shall submit an original and one (1) copy of all invoices to the Agreements Officer for payment approval. After written verification of the accomplishment of the Payable Milestone by the DARPA Program Manager, and approval by the Agreements Officer, the invoices will be forwarded to the payment office within fifteen (15) calendar days of receipt of the invoices at DARPA. Payment approval for the final Payable Milestone will be made after reconciliation. Payments will be made by Defense Accounting Office, DFAS, Attention: Vendor Pay, 8899 East 56th Street, Indianapolis, IN 46249-1325 within fifteen (15) calendar days of DARPA's transmittal. Subject to change only through written Agreement modification, payment shall be made via electronic funds transfer to the Contractor's address set forth below:

3. Bank Account of Payee:

- Bank:
- Address:
- Routing Transit Number:
- Depositor Account Title:
- Depositor Number:

4. Financial Records and Reports: The Team's relevant financial records associated with this Agreement are not subject to examination or audit by the Government, except as noted below, since the confirmed accomplishment of the appropriate milestone completes the obligation of both parties.

5. Comptroller General Access to Records: To the extent that the total government payments under this Agreement exceed \$5,000,000, the Comptroller General, at its discretion, shall have access to and the right to examine records of any party to the agreement or any entity that participates in the performance of this agreement that directly pertain to and involve transactions relating to, the agreement for a period of three (3) years after final payment is made. This requirement shall not apply with respect to any party to this agreement or any entity that participates in the performance of the agreement, or any subordinate element of such party or entity, that has not entered into any other agreement (contract, grant, cooperative agreement, or "other transaction") that provides for audit access by a government entity in the year prior to the date of this agreement. This paragraph only applies to any record that is created or maintained in the ordinary course of business or pursuant to a provision of law. The terms of this paragraph shall be included in all sub-agreements to the Agreement.

ARTICLE VII: DISPUTES

A. General

The Parties shall communicate with one another in good faith and in a timely and cooperative manner when raising issues under this Article.

B. Dispute Resolution Procedures

1. Any disagreement, claim or dispute between the Government and the Team concerning questions of fact or law arising from or in connection with this Agreement, and, whether or not involving an alleged breach of this Agreement, may only be raised under this Article.

2. Whenever disputes, disagreements, or misunderstandings arise, the Parties shall attempt to resolve the issue(s) involved by discussion and mutual agreement as soon as practicable. In no event shall a dispute, disagreement or misunderstanding which arose more than three (3) months prior to the notification made under subparagraph B.3 of this Article constitute the basis for relief under this article unless the Director of DARPA in the interests of justice waives this requirement.

3. Failing resolution by mutual Agreement, the aggrieved Party shall document the dispute, disagreement, or misunderstanding by notifying the other Party (through the DARPA Agreements Officer) in writing of the relevant facts, identify unresolved issues, and specify the clarification or remedy sought. Within five (5) working days after providing notice to the other Party, the aggrieved Party may, in writing, request a joint decision by the DARPA Director, Contract Management Office, and Representative of the Team ("Team Representative"). The other Party shall submit a written position on the matter(s) in dispute within thirty (30) calendar days after being notified that a decision has been requested. The Director, Contract Management Office and the Team Representative shall conduct a review of the matter(s) in dispute and render a decision in writing within thirty (30) calendar days of receipt of such written position. Any such joint decision is final and binding.

4. In the absence of a joint decision, upon written request to the Director of DARPA, made within thirty (30) calendar days or upon unavailability of a joint decision under subparagraph B.3 above, the dispute shall be further reviewed. The Director of DARPA may elect to conduct this review personally or through a designee or jointly with a representative of the other Party who is a senior official of the Party. Following the review, the Director of DARPA or designee will resolve the issue(s) and notify the Parties in writing. Such resolution is not subject to further administrative review and, to the extent permitted by law, shall be final and binding.

ARTICLE VIII: PATENT RIGHTS

A. Definitions

1. "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code.

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2. "Made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.
3. "Practical application" means to manufacture, in the case of a composition of product; to practice, in the case of a process or method, or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is capable of being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.
4. "Subject invention" means any invention of a Team Member conceived or first actually reduced to practice in the performance of work under this Agreement.

B. Allocation of Principal Rights

The Team shall retain the entire right, title, and interest throughout the world to each subject invention consistent with this Article and 35 U.S.C. § 202. With respect to any subject invention in which the Team retains title, DARPA shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced on behalf of the United States the subject invention throughout the world. Notwithstanding the above, the Team may elect to provide full or partial rights that it has retained to Team Members or other parties.

C. Action to Protect the Government's Interest

1. The Team agrees to execute or to have executed and promptly deliver to DARPA all instruments necessary to establish or confirm the rights the Government has throughout the world in those subject inventions to which the Consortium elects to retain title and to enable the Government to obtain patent protection throughout the world in that subject invention.
2. The Team shall include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement: "This invention was made with Government support under Agreement No. XXXXXXXXX awarded by DARPA. The Government has certain rights in the invention."

D. Lower Tier Agreements

The Team shall include this Article, suitably modified, to identify the Parties, in all subcontracts or lower tier agreements, regardless of tier, for experimental, development, or research work.

E. Reporting on Utilization of Subject Inventions

The Team agrees to submit a final report on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Team or its licensees or assignees. The report shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Team subcontractor(s), and such other data and information as the agency may reasonably specify. The Team also agrees to provide additional reports as may be requested by DARPA in connection with any march-in proceedings undertaken by DARPA in accordance with paragraph G of this Article. Consistent with 35 U.S.C. § 202(c)(5), DARPA agrees it shall not disclose such information to persons outside the Government without permission of the Team.

F. Preference for American Industry

Notwithstanding any other provision of this Article, the Team agrees that it shall not grant to any person the exclusive right to use or sell any subject invention in the United States or Canada unless such person agrees that any product embodying the subject invention or produced through the use of the subject invention shall be manufactured substantially in the United States or Canada. However, in individual cases, the requirements for such an agreement may be waived by DARPA upon a showing by the Team that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that, under the circumstances, domestic manufacture is not commercially feasible.

G. March-in Rights

The Team agrees that, with respect to any subject invention in which it has retained title, DARPA has the right to require the Team, an assignee, or exclusive licensee of a subject invention to grant a non-exclusive license to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Team, assignee, or exclusive licensee refuses such a request, DARPA has the right to grant such a license itself if DARPA determines that:

1. Such action is necessary because the Team or assignee has not taken effective steps, consistent with the intent of this Agreement, to achieve practical application of the subject invention;
2. Such action is necessary to alleviate health or safety needs that are not reasonably satisfied by the Team, assignee, or their licensees;
3. Such action is necessary to meet requirements for public use and such requirements are not reasonably satisfied by the Team, assignee, or licensees; or
4. Such action is necessary because the agreement required by paragraph (I) of this Article has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such Agreement.

ARTICLE IX: DATA RIGHTS

Government Purpose Rights in all data delivered under this Concept Definition Phase (Phase I) agreement is desired. The following standard Government Data Rights Article is offered as a point of departure in this case.

A. Definitions

1. "Government Purpose Rights", as used in this article, means rights to use, duplicate, or disclose Data, in whole or in part and in any manner, for Government purposes only, and to have or permit others to do so for Government purposes only.
2. "Unlimited Rights", as used in this article, means rights to use, duplicate, release, or disclose, Data in whole or in part, in any manner and for any purposes whatsoever, and to have or permit others to do so.
3. "Data", as used in this article, means recorded information, regardless of form or method of recording, which includes but is not limited to, technical data, software, trade secrets, and mask works. The term does not include financial, administrative, cost, pricing or management information and does not include subject inventions included under Article VIII.
4. "Limited rights" as used in this article means the rights to use, modify, reproduce, release, perform, display, or disclose technical data, in whole or in part, within the Government. The Government may not, without the written permission of the party asserting limited rights, release or disclose the data outside the Government, use the technical data for manufacture, or authorize the technical data to be used by another party.

B. Allocation of Principal Rights

1. The Parties agree that in consideration for Government funding, the Team intends to reduce to practical application items, components and processes developed under this Agreement. It is the intent of this Agreement to pursue research and technology where risk and payoff are both very high and where success may provide dramatic advances for traditional military roles and missions. In regards to Data Rights, the objective is to agree to the mutually beneficial Walrus Program Intellectual Property Rights which both optimizes industries commitment of resources to the program and fulfils the Government requirement for a competitive environment which maintains

competitive pricing, and maintainability options. In as much, the contractor is requested to consider the following when proposing the IP terms.

(a) The selected performer(s) will be responsible for developing and coordinating interface processes and management plans in Phase I to ensure that adequate interface controls are openly established and maintained.

(b) For Phases I and beyond the Government requires, at a minimum, having Government Purposes Rights (GPR) to Technical Data for items such as:

- System Design – adequate to enable third party vendors to develop technologies for insertion into the system architecture
- Technology Development – adequate to enable independent verification of the performance predictions. Examples of the types of data include test results and interface definitions
- Maintenance and Life Cycle Support Data – Sufficient data and rights thereto to enable development of life cycle support models and cost predictions based on a credible life cycle support program.

It is anticipated that GPR may be necessary for other data not mentioned above as the program continues. Additional data requirements may later be defined and become a part of the down-selection criteria.

All delivered data and handouts shall be marked appropriately, by page.

2. The Team agrees to retain and maintain in good condition until (INSERT NUMBER OF YEARS) (___) years after completion or termination of this Agreement, all Data necessary to achieve practical application. In the event of exercise of the Government's March-in Rights as set forth under Article VIII or subparagraph B.3 of this article, the Team, acting through its Team Lead, agrees, upon written request from the Government, to deliver at no additional cost to the Government, all Data necessary to achieve practical application within sixty (60) calendar days from the date of the written request. The Government shall retain Unlimited Rights, as defined in paragraph A above, to this delivered Data.

3. The Team agrees that, with respect to data necessary to achieve practical application, DARPA has the right to require the Team to deliver all such data to DARPA in accordance with its reasonable directions if DARPA determines that:

(a) Such action is necessary because the Team or assignee has not taken effective steps, consistent with the intent of this Agreement, to achieve practical application of the technology developed during the performance of this Agreement;

(b) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Team, assignee, or their licensees; or

(c) Such action is necessary to meet requirements for public use and such requirements are not reasonably satisfied by the Team, assignee, or licensees.

4. With respect to data delivered pursuant to Attachment 3, Reports (and listed below), the Government shall receive Government Purpose Rights, as defined in paragraph A above. With respect to all Data delivered, in the event of the Government's exercise of its right under subparagraph B.2 of this article, the Government shall receive Unlimited Rights.

C. Marking of Data

Pursuant to paragraph B above, any data delivered under this Agreement shall be marked specifically with the appropriate disclosure legend.

D. Lower Tier Agreements

The Team shall include this Article, suitably modified to identify the Parties, in all subcontracts or lower tier agreements, regardless of tier, for experimental, developmental, or research work.

ARTICLE X: FOREIGN ACCESS TO TECHNOLOGY

(NOTE: It is DARPA's intention to restrict this technology from flowing overseas without approval to ensure the economic and security issues have been resolved prior to any release. If the offerors desire proposed changes to this article they should explain the rationale completely.)

This Article shall remain in effect during the term of the Agreement and for five years thereafter.

A. Definitions

“Foreign Firm or Institution” means a firm or institution organized or existing under the laws of a country other than the United States, its territories, or possessions. The term includes, for purposes of this Agreement, any agency or instrumentality of a foreign government; and firms, institutions or business organizations that are owned or substantially controlled by foreign governments, firms, institutions, or individuals.

“Know-How” means all information including, but not limited to discoveries, formulas, materials, inventions, processes, ideas, approaches, concepts, techniques, methods, software, programs, documentation, procedures, firmware, hardware, technical data, specifications, devices, apparatus and machines.

“Technology” means discoveries, innovations, Know-How and inventions, whether patentable or not, including computer software, recognized under U.S. law as intellectual creations to which rights of ownership accrue including, but not limited to, patents, trade secrets, maskworks, and copyrights developed under this Agreement.

B. General

The Parties agree that research findings and technology developments in (INSERT TYPE OF TECHNOLOGY) technology may constitute a significant enhancement to the national defense, and to the economic vitality of the United States. Accordingly, access to important technology developments under this Agreement by Foreign Firms or Institutions must be carefully controlled. The controls contemplated in this Article are in addition to, and are not intended to change or supersede, the provisions of the International Traffic in Arms Regulation (22 CFR pt. 121 et seq.), the DoD Industrial Security Regulation (DoD 5220.22-R) and the Department of Commerce Export Regulation (15 CFR pt. 770 et seq.)

C. Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions

1. In order to promote the national security interests of the United States and to effectuate the policies that underlie the regulations cited above, the procedures stated in subparagraphs C.2, C.3, and C.4 below shall apply to any transfer of Technology. For purposes of this paragraph, a transfer includes a sale of the company, and sales or licensing of Technology. Transfers do not include:

- (a) sales of products or components, or
- (b) licenses of software or documentation related to sales of products or components, or
- (c) transfer to foreign subsidiaries of the Contractor for purposes related to this Agreement, or
- (d) transfer which provides access to Technology to a Foreign Firm or Institution which is an approved source of supply or source for the conduct of research under this Agreement provided that such transfer shall be limited to that necessary to allow the firm or Institution to perform its approved role under this Agreement.

2. The Team shall provide timely notice to the Government of any proposed transfers from the Team of technology developed with Government funding under this Agreement to Foreign Firms or Institutions. If the Government determines that the transfer may have adverse consequences to the national security interests of the United States, the Team, its vendors, and the Government shall jointly endeavor to find alternatives to the proposed transfer which

obviate or mitigate potential adverse consequences of the transfer but which provide equivalent benefits to the Team.

3. In any event, the Team shall provide written notice to the DARPA Program Manager and Agreements Officer of any proposed transfer to a foreign firm or institution at least sixty (60) calendar days prior to the proposed date of transfer. Such notice shall cite this Article and shall state specifically what is to be transferred and the general terms of the transfer. Within thirty (30) calendar days of receipt of the Team's written notification, the DARPA Agreements Administrator shall advise the Team whether it consents to the proposed transfer. In cases where the Government does not concur or sixty (60) calendar days after receipt and the Government provides no decision, the Team may utilize the procedures under Article VII, Disputes. No transfer shall take place until a decision is rendered.

4. Except as provided in subparagraph C.1 above and in the event the transfer of Technology to Foreign Firms or Institutions is approved by the Government, the Team shall (a) refund to the Government funds paid for the development of the Technology and (b) negotiate a license with the Government to the Technology under terms that are reasonable under the circumstances.

D. Lower Tier Agreements

The Team shall include this Article, suitably modified, in all subcontracts or lower tier Agreements, for experimental, developmental, or research work.

ARTICLE XI: CIVIL RIGHTS ACT

This Agreement is subject to the requirements of Title VI of the Civil Rights Act of 1964 as amended (42 U.S.C. 2000-d) relating to nondiscrimination in employment.

ARTICLE XII: GOVERNMENT FURNISHED EQUIPMENT PROPERTY, INFORMATION FACILITIES AND SERVICES

The government does not anticipate the need for any Government Furnished Equipment/Property/Information in the performance of this agreement.

The following Government Equipment property, information facilities, and services shall be provided upon the written approval of the cognizant contracting officers:

(Offeror will list all desired GFE, GFP, GFI, GFF, and GFS.)

ARTICLE XIII: TITLE AND DISPOSITION OF PROPERTY

A. Definitions

In this article "property" means any tangible personal property other than property actually consumed during the execution of work under this agreement.

B. Title to Property

Contractor may acquire property under this Agreement, with Government funds, which is necessary to further the research and development goals of the program. Title to property shall vest in the Contractor upon acquisition with no further obligation of the Parties unless otherwise determined by the DARPA Agreements Administration in paragraph C below. Any item of property with a cumulative acquisition value greater than \$15,000 shall require prior written approval by the DARPA Agreement Administrator with the exception of the items identified below.

Items of Property With a Cumulative Acquisition Value Greater Than \$15K

Item Description	Qty	Total Value
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C. Disposition of Property

At the completion of the term of this Agreement, the Contractor shall provide the Government a list of any item of property with an acquisition value greater than \$5,000. Upon written direction from the Government, the items of property set forth therein shall be disposed of in the following manner:

1. Purchased by the contractor at an agreed-upon price, the price to represent fair market value, with the proceeds of the sale being returned to DARPA; or
2. Transferred to a Government research facility with title and ownership being transferred to the Government; or
3. Donated to a mutually agreed University or technical learning center for research purposes; or
4. Any other DARPA-approved disposition procedure.

D. Lease vs. Buy Considerations

The Government fully expects prime/subcontractors/teammates to make maximum use of their capital equipment as it applies to accomplishing Walrus activities. The Contractor shall consider leasing versus buying any acquisition item having a cumulative total above \$2500.

E. Delivered Hardware

Although the Government does not intend to take title to any Walrus components, or other prototypes, below is a list identifying all prototypes being developed under this agreement.

(CONTRACTOR SHALL COMPLETE)

ARTICLE XIV: SECURITY

The highest level of classification involved in the performance of the agreement is Secret. It is the government's position that the highest security classification of any item deliverable as a result of this agreement is unclassified. This document is unclassified.

ARTICLE XV: REPRESENTATIONS AND FEDERAL ACQUISITION REGULATIONS

The Contractor, as an experienced government contractor, has internal systems in place which are designed to comply with the legal and regulatory requirements applicable to government contracts including such certification as are required by ethics and procurement integrity, small business, women owned and small disadvantaged business, affirmative action, and environmental law. None of the participants in this contractual effort are currently debarred or suspended from doing business with the Government.

ARTICLE XVI: SUBCONTRACTORS

The Contractor shall make every effort to satisfy the intent of competitive bidding of subcontracts to the extent practical.

ARTICLE XVII: EXECUTION

This Agreement constitutes the entire agreement of the Parties and supersedes all prior and contemporaneous agreements, understandings, negotiations and discussions among the Parties, whether oral or written, with respect to the subject matter hereof. This Agreement may be revised only by written consent of the Contractor and the DARPA Agreements Officer. This Agreement, or modifications thereto, may be executed in counterparts each of which shall be deemed as original, but all of which taken together shall constitute one and the same instrument.

ARTICLE XVIII: WORK BREAKDOWN STRUCTURE AND TECHNOLOGY DEVELOPMENT AND ASSESSMENT PLAN UPDATES

The Work Breakdown Structure (WBS) and Technology Development and Assessment Plan (TDAP) as proposed by the contractor are included as ATTACHMENT 3 and ATTACHEMENT 4 to this Agreement. Throughout performance it is envisioned that the WBS and TDAP will evolve as progress is made by the contractor in performance hereunder. As the program evolves the WBS and TDAP shall be updated no less frequently than every six (6) months or sooner if circumstances warrant such a change. It is intended that the WBS and TDAP will serve as living documents reflecting the most current status of the relevant technologies and planned activities under the program.

ARTICLE XIX: PAYABLE MILESTONE SCHEDULE

Payment Schedule

The Contractor shall perform the work as described by this agreement. The Contractor shall be paid for its efforts based on accomplishing the Payable Milestones. The Schedule of Payments and Payable Milestones set forth below.

The Contractor shall propose the content and timing for all payable milestones. The milestones and meeting will be scheduled to optimize cost and schedule. Both the Schedule of Payments and the Funding Schedule set forth below may be revised in accordance with Article III. Below, the Contractor shall cross-reference the payable milestone activities (task) identified in the TDD and IMS to the maximum extent possible, leading up to the milestone accomplishment criteria, identify the milestone accomplishment criteria, the payment amount and schedule. Guidance on milestone deliverables is provided in the solicitation.

Schedule of Payments and Payable Milestones

1. Walrus Concept Definition Phase I

Task	Payable Milestone	Payment Amount	Payment Schedule
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(Contractor Shall Complete)

The DARPA Program Manager shall be responsible for the review and verification of milestone accomplishment criteria and any recommendation to revise or otherwise modify the Agreement.

ARTICLE XX: COMPLETION CRITERIA

The following completion criteria define the successful completion of the Concept Definition Phase I effort.

(Contractor Complete)

ATTACHMENT 1

TECHNOLOGY DEVELOPMENT AND ASSESSMENT PLAN

(To be provided by the Contractor)

ATTACHMENT 2

REPORT REQUIREMENTS

A. MONTHLY REPORT

On or before ninety (90) calendar days after the effective date of the Agreement and monthly thereafter throughout the term of the Agreement, ABC shall submit or otherwise provide a monthly report. Two (2) copies shall be submitted or otherwise provided to the DARPA Program Manager, one (1) copy shall be submitted or otherwise provided to the DARPA Agreements Officer, and one (1) copy shall be submitted or otherwise provided to DARPA/TTO, Attn: Assistant Director for Program Management. The report will have two (2) major sections.

1. Technical Status Report. The technical status report will detail technical progress to date and report on all problems, technical issues, major developments, and the status of external collaborations during the reporting period.

2. Business Status Report. The business status report shall provide summarized details of the resource status of this Agreement, including the status of ABC contributions. This report will include a monthly accounting of current expenditures as outlined in the Annual Program Plan. Any major deviations, over plus or minus 10%, shall be explained along with discussions of the adjustment actions proposed. The report will also include an accounting of any interest earned on Government funds. ABC is reminded that interest in amounts greater than \$250 per year is not expected to accrue under this Agreement. In the event that this interest does accrue on Government funds, ABC is required to provide an explanation for the accrual in the business report. Depending on the circumstances, the Payable Milestones may require adjustment.

C. SPECIAL TECHNICAL REPORTS

As agreed to by ABC and the DARPA Agreements Officer's Representative, ABC shall submit or otherwise provide to the DARPA Agreements Officer's Representative and DARPA Agreements Officer one (1) copy each of special reports on significant events such as significant target accomplishments by ABC, significant tests, experiments, or symposia.

D. PAYABLE MILESTONES REPORTS

ABC shall submit or otherwise provide to the DARPA Agreements Officer's Representative and DARPA Agreements Officer documentation describing the extent of accomplishment of Payable Milestones. This information shall be as required by Article V, paragraph B and shall be sufficient for the DARPA Agreements Officer's Representative to reasonably verify the accomplishment of the milestone of the event in accordance with the Statement of Work. These documents shall be provided in hard copy of by CD-ROM in Microsoft Office 2000 compatible format. Two (2) copies shall be submitted or otherwise provided to the DARPA Program Manager, one (1) copy shall be submitted or otherwise provided to the DARPA Agreements Officer, and one (1) copy shall be submitted or otherwise provided to DARPA/TTO, Attn: Assistant Director for Program Management.

E. FINAL REPORT (NOTE: The Final Report is included in the last Payable Milestone for the completed Agreement)

1. ABC shall submit or otherwise provide a Final Report making full disclosure of all major developments by ABC upon completion of the Agreement or within sixty (60) calendar days of termination of this Agreement. With the approval of the DARPA Agreements Officer's Representative, reprints of published articles may be attached to the Final Report. Two (2) copies shall be submitted or otherwise provided to the DARPA Agreements Officer's Representative, one (1) copy shall be submitted or otherwise provided to the DARPA Agreements Officer, and one (1) copy shall be submitted or otherwise provided to DARPA/TTO, Attn: Assistant Director for Program Management.

2. The Final Report shall be marked with a distribution statement to denote the extent of its availability for distribution, release, and disclosure without additional approvals or authorizations. The Final Report shall be marked on the front page in a conspicuous place with the following marking:

"DISTRIBUTION STATEMENT B. Distribution authorized to U.S. Government agencies only to protect information not owned by the U.S. Government and protected by a contractor's "limited rights" statement, or received with the understanding that it not be routinely transmitted outside the U.S. Government. Other requests for this document shall be referred to DARPA/Technical Information Officer."

F. REPORT ON LONG LEAD ITEMS FOR PHASE II

ABC shall submit a list of long lead items for Phase II activities and demonstrations that may require procurement during Phase I. The report shall include an estimated procurement date and estimated cost of each item. One (1) copy shall be updated and submitted to the DARPA Program Manager every six months throughout the term of the Agreement.

ATTACHMENT 3

WORK BREAKDOWN STRUCTURE BUDGET ALLOCATION

To be completed by the contractor (reference Appendix I in solicitation)

APPENDIX III - DARPA Other Transactions and Agreements Authority

AIII.1 - Other Transactions Authority

The Walrus program will utilize DARPA's Other Agreements Authority (Other Transactions for Prototypes Section 845/804), which allows the offeror to be creative in designing the system and in the selection of the management framework which best suits the proposed technical and management approach. The government will share information and data throughout the program. However, the data will always be advisory, not directive in nature, and offered as a way to foster better communications on the program. Our intent is to provide the best possible insight into what the government thinks while minimizing oversight. To this end, the government will focus on accurately defining what they want and letting the offeror determine how best to provide it. Government oversight will be provided through the same management framework proposed by the offeror.

The government will allow the offeror to use either commercial or DoD streamlined processes, reporting and management practices. The use of Other Agreement Authority requires compliance with applicable laws but allows the latitude to depart from acquisition specific laws, FARs, and DoD practices where it makes sense. The offeror should take full advantage of this latitude to propose innovative/revolutionary approaches to team building. The resulting offeror proposal must clearly demonstrate a robust method to assure and control costs, quality, reliability, system engineering, program schedule, system design, and test planning and execution.

Commercial, industrial, and corporate specifications and standards should be used in lieu of military specifications and standards where appropriate. Military specifications and standards, if needed, should be used as guides, with any modifications, tailoring or partial application described. A rigorous formal process should be employed to design, verify and implement software.

All proposals will be evaluated by a formal Government source selection evaluation board (SSEB) established to review all responses to the solicitations. The government reserves the right to conduct a rolling down select from the end of Phase I to Phase II, Phase IIa to Phase IIb based on contractors' performance. Rules and criteria for the rolling down select process will be included in the Phase IIa and IIb Solicitation updates provided prior to the end of each phase.

In order to broaden the technology and industrial base available for meeting Department of Defense needs, conditions have been put forth on the use of Section 845 Other Transaction for Prototype authority by the recent enactment of the National Defense Authorization Act for fiscal year 2001. Section 803 of the National Defense Authorization Act for FY2001 (Public Law 106-398) became law on 30 October 2000 and modifies DARPA's authority to use Other Transactions for Prototypes. For proposals submitted under this solicitation there must be either at least one nontraditional defense contractor participating to a significant extent in the prototype project; or, if there is no nontraditional defense contractor participating to a significant extent, at least one of the following circumstances must exist: at least one third of the total cost of the prototype project is to be paid with funds provided by parties to the transaction other than the Federal Government; or, the senior procurement executive determines that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract. There is no definition for "significant extent" as in a "Nontraditional defense contractor participating to a significant extent in the prototype project." The Government has discretion in determining the level of "significant extent." Some factors may include:

- a) criticality of the technology being contributed

- b) role of the non-traditional defense contractor(s) in the design process
- c) value of the effort being proposed in comparison to the potential cost share value requirement

Because the evaluation is subjective, it carries with it some risk to the proposing team that the Government will not recognize the value; therefore, offerors are requested to identify in their agreement addendum the applicable Section 803 condition with explanation, which qualifies them to receive an 845 award. The entire amendment to the Authorization Act is available for your convenience at <http://www.darpa.mil/cmo> under "Breaking News" and includes the definition of a nontraditional defense contractor.

Teams composed of members with complementary areas of expertise are strongly encouraged. To this end, DARPA invites all interested offerors to provide capability statements to assist with teaming arrangements. In light of the new Section 803 language for other transactions for prototypes conditions, offerors are requested to specify on their capability statements whether or not they qualify as a nontraditional defense contractor. Capability statements will be posted on the web with the solicitation. Specific information content, communications, networking, and team formation are the sole responsibilities of the participants. DARPA does not endorse the information and organizations posted.

AIII.2 - Agreements Authority and Section 845 Authorization Act

DARPA "Agreements authority" was enacted as section 251, Public Law 101-189, the FY 1990 National Defense Authorization Act (codified at 10 U.S.C. § 2371) and is currently found in part of 10 U.S.C. § 2371. Section 845 of the 1994 National Defense Authorizations Act allows DARPA, on a pilot basis to use non-procurement Agreements for purely military Research and Development and, prototype projects and technology demonstrations of hardware directly relevant to weapon systems.

The primary benefit of this authority is that DARPA can tailor the contracting process to each project rather than conforming to predetermined contracting rules. This authority should increase the efficiency of DARPA's limited resources. DARPA also hopes use of this authority will shorten development time for these projects and enhance affordability.

This Section 845 Authority allows DARPA to:

- 1) Use Agreements even if a procurement contract would be appropriate or feasible.
- 2) Execute projects with or without cost sharing.
- 3) Implement streamlined acquisition procedures (e.g., using Generally Accepted Accounting Practices in lieu of Government Cost Accounting Standards).
- 4) Focus on goals and objectives rather than acquisition regulations.

Commercial Agreement Participants benefit from:

- 1) Increased government flexibility in structuring these Agreements (e.g., flexibility on patent and intellectual property issues).
- 2) Being able to use commercial rather than government procedures for doing business.
- 3) Government funding with minimum government bureaucracy.

Both Groups Benefit in that:

- 1) Armed Services Procurement Act, CICA, FAR, DFARS, and all procurement system regulations are inapplicable.
- 2) Existing regulations, MILSPECS, directives may but need not be applied.

Section 803 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001.

In order to broaden the technology and industrial base available for meeting Department of Defense needs, conditions have been put forth on the use of Section 845 Other Transaction for Prototype authority by the recent enactment of the National Defense Authorization Act for Fiscal year 2001. Section 803 of the National Defense Authorization Act for FY2001 (Public Law 106-398) became law on 30 October 2000. Section 803 modifies our authority to use the Other Transactions for Prototypes. In summary, for proposals submitted under this solicitation there must be either at least one nontraditional defense contractor participating to a significant extent in the prototype project; or, if there is no nontraditional defense contractor participating to a significant extent, at least one of the following circumstances exists; at least one third of the total cost of the prototype project is to be paid with funds provided by parties to the transaction other than the Federal Government; or, the senior procurement executive determines that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract. The definition for a nontraditional defense contractor is contained in the attached language. There is no definition for “significant extent” as in a “nontraditional defense contractor participating to a significant extent in the prototype project.” The Government has discretion in determining the level of “significant extent.” Some factors may include:

- a) criticality of the technology being contributed
- b) role of the non-traditional defense contractor(s) in the design process
- c) value of the effort being proposed in comparison to the potential cost share value requirement

Because the evaluation is subjective, it carries with it some risk to the proposing team that the Government will not recognize the value; therefore, offerors are requested to identify in their agreement addendum the applicable Section 803 condition with explanation, which qualified them to receive an 845 award.

The entire amendment to the Authorization Act is available for your convenience at <http://www.darpa.mil/cmo> under “Breaking News” and includes the definition of a nontraditional defense contractor.

APPENDIX IV – Milestone Meeting Details

All milestone reviews will be conducted at the contractor's location. The purpose of the milestone reviews is to demonstrate accomplishment through completion of the milestone exit criteria. The review objective is to convey information and discuss accomplishments and issues, not to generate documentation. Instead of written milestone reports, a complete copy of the annotated milestone review briefings should be provided to the meeting attendees. The contractor will forward an electronic copy of the draft briefing 3 days prior to the meeting and meeting minutes and an electronic briefing to the DARPA PM within a week after the review. The government anticipates sending 10-20 people to each milestone review.

Informal TIMs may be conducted if appropriate. The objective of a TIM is to allow communication of Government objectives and contractor activities. These meetings can occur on teleconference/videoconference or other means as required or available. The Government reserves the right to call one face-to-face TIM (to be held at the contractor location) if desired or necessary. TIMs are small working level meetings without formal documentation. Attendance at each TIM will be tailored based on the agenda, but the maximum government attendance should be ten people. The TIMs provide an opportunity for the government to view the trades in progress and provide additional insight or information as required. The value of the meetings will be in the breadth of material and level of detail and interaction with the team.

The design and program reviews will serve to inform the Government of contractor progress and performance. A notional agenda for most meetings follows, but may be tailored to the offeror's needs and design and the state of the program.

Agenda:

1. Executive Summary
2. OV Current Design
 - a. Progress and Changes
 - b. System Requirements
 - c. Go Forward Plan
3. Trade Study Findings
 - a. Impact on OV and ATD Design
4. Risk Reduction and TDAP
 - a. Progress and Changes
 - b. Performed tests and modeling, results
 - c. ATD Vehicle Progress
 - i. System Requirements
 - ii. Design Progress
 - d. Technology Demos
 - e. Go Forward Plan

APPENDIX V – Attribute Descriptions

Table 3 - WALRUS System Attributes Priority

Attribute Importance		
Primary	Secondary	Tertiary
Organic Direct Lift Control ¹	Payload Weight	Life Cycle Cost
Low Speed Controlled Maneuver	Cruise Speed	Selective Offload Capability
Ability to Maintain Position during Loading and Unloading (Ground/Sea Handling)	Range	Survivability
Landing Site Flexibility	Operating Altitude	Hover Capability
Take Off/Landing Distance (VTOL, STOVL, TOL)	Load/Unload Time	Endurance
Intermodal Transfer Capability	Mission Tailorable Payload Area	Sea-Base Interface
Payload Volume	Ability to Negotiate Adverse Weather	

The priorities in this table reflect the anticipated importance during Phase I where the primary concern of the program is to demonstrate as early as possible the ability to overcome technological hurdles that have formerly been impediments to the realization of an LTA vehicle with military utility in the modern age. Lower priority attributes should not be summarily dismissed but should be handled in such a way as to recognize their potential for future importance. For example, affordability and total life costs, cost per ton mile of payload delivered, payload distribution/handling and supportability vice sortie generation rate et cetera, will become more dominant as the fundamental credibility of the LTA concept is substantiated. Contractors should bear this in mind as they develop their design concepts for the OV.

The attributes have varying degrees of dependency on each other (some are independent) and are anticipated to form the basis of trade studies that will lead to optimized performance of the operational tasks. Under five design areas, namely; performance, controllability, logistic utility, basing and operational utility, Contractor trade studies may identify other attributes and associated dependencies that also influence their design concept. However, the analyses should remain sensitive to the potential value of the other missions and roles. The priority of attributes linked to discrete operational tasks may challenge the “one concept meets all” solution and achievement of the highest possible utility is an important goal for reasons of cost effectiveness, service interest, and continued DARPA investment.

Contractor trade studies may identify other attributes and associated dependencies that also influence their design concept. However, the analyses should remain sensitive to the potential value of the other missions and roles. The priority of attributes linked to discrete operational tasks may challenge the “one concept meets all” solution and achievement of the highest possible utility is an important goal for reasons of cost effectiveness, service interest, and continued DARPA investment.

¹ Organic Direct Lift Control refers to the ability to control lift without the utilization of external ballast (with the possible exception of surrounding air).

Table 4 identifies Walrus attributes and potential trade space.

Contractor trade studies may identify other attributes and associated dependencies that also influence their design concept. However, the analyses should remain sensitive to the potential value of the other missions and roles. The priority of attributes linked to discrete operational tasks may challenge the “one concept meets all” solution and achievement of the highest possible utility is an important goal for reasons of cost effectiveness, service interest, and continued DARPA investment.

Table 4 - Walrus Operational Tasks and Associated Attributes

Operational Tasks	Design Area	Attribute	Attribute Dependency - Tradespace
1. Origin to Point of Employment Lift (global/strategic capability) 2. In-Theater Lift 3. Seabasing Ops 4. Persistence Missions	Performance	Cruise Speed	Range; Operating Altitude; Ability to Negotiate Adverse Weather; Endurance; Payload Volume; Payload Weight
		Operating Altitude	Range; Cruise Speed; Payload Volume; Payload Weight; Low Speed Controlled Maneuver; Organic Direct Lift Control; Ability to Negotiate Adverse Weather; Survivability; Endurance
		Range	Operating Altitude, Endurance; Cruise Speed; Payload Volume; Payload Weight
		Hover Capability	Sea-Base Interface; Ability to Negotiate Adverse Weather; Payload Volume; Payload Weight; Landing Site Flexibility; Take Off/Landing Distance; Low Speed Controlled Maneuver; Organic Direct Lift Control; Ability to Maintain Position During Loading and Unloading.
		Take Off/Landing Distance (VTOL, STOVL, TOL)	Low Speed Control Maneuver; Organic Direct Lift Control; Landing Site Flexibility; Payload Volume; Payload Weight; Ability to Negotiate Adverse Weather; Hover Capability; Sea-Base Interface
	Controllability	Low Speed Controlled Maneuver	Ability to Maintain Position During Loading and Unloading; Landing Site Flexibility; Take Off/Landing Distance; Payload Volume; Operating Altitude; Ability to Negotiate Adverse Weather; Hover Capability; Sea-Base Interface
		Ability to Maintain Position During Loading and Unloading (Ground and Sea Handling)	Low Speed Controlled Maneuver; Organic Direct Lift Control; Landing Site Flexibility; Intermodal Transfer Capability; Payload Volume; Load and Unload Time; Ability to Negotiate Adverse Weather; Hover Capability; Sea-Base Interface
		Organic Direct Lift Control (Buoyancy)	Ability to Maintain Position During Loading and Unloading; Landing Site Flexibility; Take Off/Landing Distance; Payload Volume; Payload Weight; Operating Altitude; Load and Unload Time; Ability to Negotiate Adverse Weather; Hover Capability; Endurance
	Logistic Utility	Payload Volume	Take Off/Landing Distance; Landing Site Flexibility; Ability to Maintain Position During Loading and Unloading; Organic Direct Lift Control; Low Speed Controlled Maneuver; Payload Weight; Cruise Speed; Range; Operating Altitude; Load and Unload Time; Mission Tailorable Payload Area; Ability to Negotiate Adverse Weather; Hover Capability; Endurance
		Payload Weight	Payload Volume; Take Off/Landing Distance; Organic Direct Lift Control; Cruise Speed; Range; Operating Altitude; Load and Unload Time; Mission Tailorable Payload Area; Selective Offload Capability; Hover Capability
		Load and Unload Time	Organic Direct Lift Control; Ability to Maintain Position During Loading and Unloading; Landing Site Flexibility; Intermodal Transfer Capability; Payload Volume; Payload Weight; Mission Tailorable Payload Area; Ability to Negotiate Adverse Weather; Survivability; Sea-Base Interface
		Selective Offload Capability	Payload Weight; Sea-Base Interface
		Intermodal Transfer Capability	Landing Site Flexibility; Load and Unload time
		Life Cycle Cost	
		Mission Tailorable Payload Area	Payload Volume; Payload Weight; Load and Unload Time; Sea-Base Interface
	Basing	Sea-Base Interface	Low Speed Controlled Maneuver; Ability to Maintain Position During Loading and Unloading; Take Off/Landing Distance; Load and Unload Time; Mission Tailorable Payload Area; Selective Offload; Endurance
		Landing Site Flexibility (Size and Condition)	Low Speed Controlled Maneuver; Organic Direct Lift Control; Ability to Maintain Position During Loading and Unloading; Take Off/Landing Distance; Intermodal Transfer Capability; Payload Volume; Load and Unload Time; Ability to Negotiate Adverse Weather; Survivability; Hover Capability

Operational Utility	Ability to Negotiate Adverse Weather	Low Speed Controlled Maneuver; Organic Direct Lift Control; Ability to Maintain Position During Loading and Unloading; Landing Site Flexibility; Take Off/Landing Distance; Cruise Speed; Operating Altitude; Load and Unload Time; Hover Capability
	Endurance	Sea-Base Interface; Payload Volume; Cruise Speed; Range; Operating Altitude
	Survivability	Organic Direct Lift Control; Landing Site Flexibility; Operating Altitude; Load and Unload Time

The following is a list of the Attributes and their descriptions:

1. **Organic Direct Lift Control:** Buoyancy and lift control on-board; no need to pick up external weight.
2. **Ability to Maintain Position during Loading and Unloading:** Ability to position for all surface operations, e.g., taxi, take off...
3. **Low-speed Controlled Maneuver:** Sufficient control margin throughout flight regime.
4. **Landing-site Flexibility:** Ability to land on small unimproved landing sites.
5. **Ability to Operate in Adverse Weather:** Not precisely defined, but includes operation in or ability to avoid adverse weather, e.g., lightning storm, snow, etc.
6. **Payload Volume:** Ability to load mission ready unit (and equipment).
7. **Speed (operating):** The knots at which the air vehicle can fly when operating as opposed to speed for taking off or landing or loading or unloading.
8. **Operating Altitude:** Considers need to pressurize cabin and/or cargo impact if higher altitudes are desired. .
9. **Load and Unload Time:** The time to load and unload.
10. **Mission Tailorable Payload Area:** Considers how easy it is to switch between cargo types given configurations of payload area.
11. **Range:** The range to the destination in nautical miles, as opposed to endurance defined below.
12. **Take Off/Landing Distance:** (VTOL - STOVL -TOL)
13. **Hover Capability:** degree to which the air vehicle can station-keep
14. **Survivability:** Considers the ability of the vehicle to operate in a threat spectrum.
15. **Endurance:** Ability to stay aloft.
16. **Payload Capacity:** Total weight of payload
17. **Sea-Base Interface:** Ability to load, offload and refuel from ships
18. **In-Flight Mission Adaptability:** Ability to reconfigure payload internally in flight (selective offload)
19. **Intermodal Transfer Capability:** The ability of the vehicle to seamlessly transfer cargo to ground delivery systems.
20. **Life Cycle Cost Considerations**

APPENDIX VI - ACRONYMS

ATD	Advanced Technology Demonstrator
ATP	Authorization to Proceed
CAS	Cost Accounting Standards
CDR	Critical Design Review
CoDR	Conceptual Design Review
CONOPS	Concept of Operations
CONUS	Continental United States
DARPA	Defense Advanced Research Projects Agency
DoD	Department of Defense
DPM	Deputy Program Manager
FAR	Federal Acquisition Regulations
FF	Fort-to-Fight
GPR	Government Purpose Rights
GFE	Government Furnished Equipment
ICD	Interface Control Document
IPT	Integrated Product Team
IMS	Integrated Management Schedule
IRAD	Independent Research and Development
LTA	Lighter than Air
MAA	Months After Award
NSC	Notional System Concept
OV	Objective Vehicle
OCONUS	Outside the Continental United States
Ops	Operations
OT	Other Transaction
OTA	Other Transaction Authority
PD	Preliminary Design
PDR	Preliminary Design Review
PM	Program Manager
RTB	Return to Base
SDR	System Design Review
QFD	Quality Function Deployment
ROM	Rough Order of Magnitude
SOO	Statement of Objectives
SOW	Statement of Work
SRR	System Requirements Review
SSA	Source Selection Authority
SSEB	Source Selection Evaluation Board
TDAP	Technology Development and Assessment Plan
TDD	Task Description Document
TPSA	Technologies, Processes and System Attributes
TRL	Technology Readiness Level
TSAP	Trade Study and Analysis Plan
TST	Technical Support Team
UA	Unit of Action
WBS	Work Breakdown Structure
WPTP	Walrus Production and Transition Plan