

## STATEMENT OF WORK

### Task 1. Operational and System Architecture

H&AI will define and document the architectures of the Total Information Awareness (TIA) System and develop a concept of operations for the development of the functional prototyping platforms to be used in exploring technology.

**Task 1.1 IAC Operational Architecture:** H&AI will develop a Concept of Operations (ConOps) and identify user requirements for the IAC's of the TIA environment. H&AI will develop the strategy for testing candidate TIA tools and technologies in the TIA functional prototyping platforms. H&AI will also participate in collaborative beta testing of the tools and environment.

**Subcontractor SubTask:** [REDACTED]  
support for Task 1.1

**Project Description: Support for System Architecture Development:** Provide support to Hicks and Associates, Inc., for the definition of the TIA System Architecture.

#### **Sub Tasks :**

**Sub Task 1.1.1: Support System Architecture Development:** [REDACTED] will support HA&I in defining the architecture for the TIA for use in test-beds at the [REDACTED]. [REDACTED] will also advise HA&I on the current infrastructure within [REDACTED] and other [REDACTED] and review architectural concepts for implementation feasibility.

**Key Performer:** [REDACTED]

#### **Deliverables for Subcontractor:**

**Deliverable 1.1.1** [REDACTED] shall support the development of the SDD and EDD documents as required.

**Task 1.2 IAC System Architecture:** H&AI will support defining the architecture for the TIA System at IAO's Information Awareness Center (IAC) and in a TC&SA prototyping facilities. H&AI will develop a static layout of the hardware and software functionalities, component interface descriptions, environment context schemas, and Use Case models for each architecture considered. UML System Diagrams will be used to represent alternative architecture constructs. The IAC designs will be conducted in collaboration.

**Subcontractor SubTask:** [REDACTED]  
support for Task 1.1

**Project Description:** Support for System Architecture Development: Provide support to Hicks and Associates, Inc., for the definition of the TIA System Architecture.

**Sub Tasks :**

Sub Task 1.1.2: Support [REDACTED] Integration and Experimental Efforts: [REDACTED]

[REDACTED]

[REDACTED]

**Key Performer:** [REDACTED]

**Deliverables for Subcontractor:**

Deliverable 1.2.1 [REDACTED] shall support the development of the SDD and EDD documents as required.

**Deliverables:**

Deliverable 1.1. A system description document (SDD) including the reference model for the business processes. This document shall be updated as the model evolves to include "as-is" releases after each experiment. It shall be delivered in formats that will support on-line review with the capability of printing all or parts of the SDD. Schedule: Update release of SDD quarterly as required. – MS-Word and PDF format document (and other as required)

Deliverable 1.2. An engineering description document (EDD) including the reference model for the TIA System development and experimentation processes. This document shall be updated as the model evolves. It shall be delivered in formats that will support on-line review with the capability of printing all or parts of the EDD. Schedule: Update release of EDD quarterly as required. – MS-Word and PDF format document (and other as required)

**Task 2.0 Technical Investigation and Metrics-based Evaluation**

Hicks and Associates, Inc. (H&AI) will identify and evaluate technologies for potential insertion into the TIA System and define and collect metrics to evaluate their performance.

**Task 2.1 Technology Investigation:** H&AI will identify new technologies and concepts that provide the core elements needed to develop a prototype TIA System. As directed by the DARPA program office, H&AI will assess government and commercial technologies from diverse sources, including: (1) basic, exploratory, and applied research efforts; (2) emerging commercial product offerings; and (3) off-the-shelf software (COTS/GOTS) technology products for potential insertion into TIA prototype system releases. Technology identification will be motivated by user requirements, experimental goals, and opportunities offered within the technical community.

**Task 2.2 Metrics Determination and Evaluation:** H&AI will define and refine decision-centered, cognitively based metrics to be used in the evaluation of the functional performance of the TIA System and component technologies. Working with appropriate intelligence analyst subject matter experts, H&AI will baseline the performance of intelligence analysts, and formulate qualitative and quantitative performance measures, observations, and measurements such that the operational impact of the TIA System and component technologies on intelligence analysts can be gauged.

**Deliverables:**

**Deliverable 2.1.** Technology exploration reports. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed every two months for the life of the contract.

**Deliverable 2.2.** TIA Experiment Metrics. H&AI will develop a report that defines (and when appropriate, refines) the metrics to be used and identifies the measurements to be collected for each TIA experiment. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed 30 days prior to the commencement of each experiment.

**Subcontract SOW - Klein Associates Inc.**

**Subcontractor:** [REDACTED]

**Description:** Provide support to H&AI, for: (1) defining metrics to be used in the evaluation of the functional performance of TIA Systems and its component technologies; (2) specifying plans to identify the measurements that should be collected, during experiments and in routine system operation, for the purpose of providing analysis data to establish system/component performance; and (3) analyzing the measurements collected and producing a performance assessment of the system/components after each experiment window.

**Tasks:**

**Task 1. Cognitive Task Analysis (CTA):** [REDACTED] will perform CTA with appropriate intelligence analyst Subject Matter Experts, who will be identified in cooperation with H&AI, to understand the cognitive nature of the domain, establish baseline performance measures and observations, and begin to uncover valid and useful measurements of effectiveness. Define metrics to be used in the evaluation of the functional performance of TIA Systems and its component technologies.

**Task 2: Formulation of Key Measurements:** [REDACTED] will apply findings from the CTA to formulate qualitative and quantitative measures of effectiveness for use in evaluating the performance of intelligence analysts and TIA Systems and its component technologies.

**Task 3: Provide Input to Experimental Design and Participate in Experiments:** [REDACTED] will advise H&AI on the incorporation of CTA findings into the design of experiments and observations that

will produce outputs and measurements. [REDACTED] will participate in the data collection efforts during these experimental and observational windows.

**Task 4: Produce Performance Assessment:** [REDACTED] will work with H&AI and other members of the metrics team to analyze measurements collected during the experimental and observational windows. KA will produce a decision-centered performance assessment of the system/components following each window.

**Deliverables for Subcontractor:**

**Deliverable 1.** A report that defines the metrics to be used and identifies the measurements to be collected for the November 2002 experiment. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 18 September 2002.

**Deliverable 2.** A decision-centered performance assessment report of the November 2002 experiment system and components. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 27 November 2002.

**Deliverable 3.** A report that defines the metrics to be used and identifies the measurements to be collected for the February 2003 experiment. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 18 December 2002.

**Deliverable 4.** A decision-centered performance assessment report of the February 2003 experiment system and components. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 26 February 2003.

**Deliverable 5.** A report that defines the metrics to be used and identifies the measurements to be collected for the May 2003 experiment. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 18 March 2003.

**Deliverable 6.** A decision-centered performance assessment report of the May 2003 experiment system and components. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 28 May 2003.

**Deliverable 7.** A report that defines the metrics to be used and identifies the measurements to be collected for the August 2003 experiment. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 18 June 2003.

**Deliverable 8.** A decision-centered performance assessment report of the August 2003 experiment system and components. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 27 August 2003.

**Deliverable 9.** A report that defines the metrics to be used and identifies the measurements to be collected for the November 2003 experiment. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable will be completed by 18 September 2003.

**Total Duration:** 12 months

### **Task 3.0 Prototype Platform Integration and Experimentation**

H&AI will develop a system Prototype Platform (PP) that can be used for the preparation and exploration of selected technologies that are considered candidates for integrated experimentation. The PP, located and operated at H&AI, will serve as a test bed for technologies prior to installation within the Data Protected Platform (DPP) and the Operational Transition Platform (OTP).

**Task 3.1 Prototype Platform Integration:** H&AI will develop and test system Prototype Platform (PP) which will host technologies that are potential candidates for experimentation and work with the operational user community to evaluate and re-define TIA concepts and functionality. H&AI will develop HW and SW requirements for the Prototype Platform (PP) and provide support for training in the use of candidate applications that are selected for evaluation and possible integration into the Prototype Platform (PP). H&AI will acquire HW/SW required to develop and operate PP.

**Task 3.2 Prototype Platform Experimentation:** As directed by the DARPA program office, H&AI will develop the prototypes of new technologies and concepts that support the exploration of TIA technologies. H&AI will work with operational users for accessing the PP to evaluate the potential merit of the candidate technologies as part of mini-experiment demonstrations.

#### **Deliverables:**

**Deliverable 3.1.** HW/SW inventory control list. Schedule: Published quarterly. Excel spread sheet.

**Deliverable 3.2.** A system deployment presentation that describes a snapshot of the technologies deployed on the Prototype Platform. MS PowerPoint document (approximately 10 pages). Schedule: To be conducted quarterly, after the technology refit stage of each experiment cycle (approximately every 3 months).

## **Task 4.0 Data Protected Platform Integration and Experimentation**

H&AI will establish a prototyping Data Protected Platform (DPP) that will be used for the integration, experiment design and testing of government and commercial technologies. The DPP will include hardware and software and serve as the intermediate staging area for technology integration prior to experimentation and transition. The DPP will exploit selected technologies and defined metrics to define a system baseline and will be hosted at designated facilities for fielding into an operationally compliant yet non-hardened environment.

**Task 4.1 Data Protected Platform Integration:** As directed by the DARPA program office, H&AI shall install, configure, and integrate selected technologies from internal DARPA and external programs, government laboratories, and other commercial sources into a Data Protected Platform (DPP). The DPP will serve as a staging platform for test prior to insertion into the Operational Transition Platform (OTP). H&AI will develop HW and SW requirement for the Data Protected Platform (DDP) and provide support for training in the use of candidate applications that are selected for evaluation and possible integration into the DPP. H&AI will acquire HW/SW required to develop and operate the DPP.

### **Subcontractor SubTask: [REDACTED] Statement Of Work support for Task 4.1**

**Project Description:** Provide support to H&AI for: (1) the installation and configuration of software technologies from DARPA, external programs, government laboratories and commercial sources onto Data Protected Platform computer servers and workstations; (2) the integration of respective software (see 1.), onto the DPP while adhering to the TIA system architectural specifications; and (3) the establishment of required DPP computing infrastructure including configuration management, systems administration, network management, and general configuration management activities.

#### **SubTasks:**

**Sub Task 4.1.1 DPP Testbed Infrastructure:** [REDACTED] will develop a DPP computing test-bed for the purposes of software installation, software integration, software testing, and software training.

**Sub Task 4.1.2. DPP Software Integration:** [REDACTED] will support H&AI with technical integration recommendations, integration software design and development, and component and application testing.

#### **Deliverables for Subcontractor:**

**Deliverable 4.1.1** [REDACTED] shall prepare monthly technical reports deTIAling technical progress, problems and proposed solutions, and plans for the next task work. OSC shall also conduct technical reviews as required for the purpose of assessing the current state of

integration task(s). The reviews will be scheduled to coincide with IAC experiment demonstrations. Reports and reviews shall be in contractor format and will be either an MS PowerPoint or MS Word document.

Deliverable 4.1.2. For purposes of continued DPP integration, [REDACTED] shall make available software source code, software executables, software scripts and provide software documentation detailing each components instruction and use. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

Task 4.2 Data Protected Platform Staging: H&AI will stage and integrate the DPP at a designated integration site near selected IAC's in preparation for experimental insertion. This staging will include the connection of candidate technology to synthetic transaction data for the purposes of component evaluation and subsequent migration into an operational environment.

Subcontractor Sub Task: [REDACTED] Statement Of Work for Task 4.2

Project Description: In conjunction to DPP Integration tasks, [REDACTED] shall provide support to Hicks & Associates, Inc. for the preparation and connection of synthetic data into the DPP.

#### Sub Tasks:

Sub Task 4.2.1 DPP Synthetic Data Development: [REDACTED] will create a synthetic data environment as part of the DPP computing testbed (see Task 4.1.1). The synthetic data environment will include relational, object oriented and schema-less repository technology (as required) to support DPP evaluation and testing. [REDACTED] will also be responsible for any synthetic data formatting, ingestion software routines, and subsequent repository population.

Sub Task 4.2.2 DPP Synthetic Data Identification: [REDACTED] will assist H&AI staff in the identification and access to open source, unclassified, semi and unstructured data for the purposes of supporting DPP testing and evaluation.

#### Deliverables for Subcontractor:

Deliverable 4.2.1 [REDACTED] shall include in each technical report (Deliverable 4.1.1), information describing all technical aspects of the synthetic data environment. Technical reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

Task 4.3 Data Protected Platform Experimentation: H&AI shall setup and test experimental configurations of the DPP. This task will include providing the DPP with methods for collecting measurement data as specified by metrics definition (Task 2). When operational testing is not

possible due to unavailability of the OTP and/or operational facilities, the DPP will serve as the experiment platform using synthetic transaction data.

**Subcontractor:** [REDACTED] **Statement Of Work for Task 4.3**

**Project Description:** [REDACTED] shall provide support to H&AI for the collection of measurement data as specified by metrics definition (Task 2).

**Sub Tasks:**

**Sub Task 4.3.1 DPP Synthetic Data Collection:** [REDACTED] will create the required software and routines to capture and format as required, any identified measurement data needed to support TIA metrics development and analysis.

**Deliverables for Subcontractor:**

**Deliverable 4.3.1** [REDACTED] shall include in each technical report (Deliverable 4.1.1), information describing all technical aspects of the synthetic data measurement collection. Technical reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Deliverable 4.3.2** [REDACTED] shall make available software source code, software executables, software scripts and provide software documentation detailing the collection of measurement data. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

**Deliverables:**

**Deliverable 4.1. Data Protected Platform Technical reports.** The reports shall describe the Data Protected Platform, and its configuration, the hardware & software, integration details, and the synthetic data being used. This document shall be updated as the DPP evolves. It shall be delivered in formats that will support on-line review with the capability of printing all or parts. The reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Schedule:** This deliverable will be completed after the technology refit stage of each experiment cycle.

**Deliverable 4.2. Data Protected Platform Experimentation reports.** The reports shall describe all aspects of the experiment(s), experimental configurations, instrumentation, and experiment scripting. This document shall be updated as the DPP experimentation evolves. It shall be delivered in formats that will support on-line review with the capability of printing all or parts. The reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Schedule:** This deliverable will be completed after the technology refit stage of each experiment cycle.

## Task 5.0 Operational Transition Platform Integration and Experimentation

H&AI will establish an Operational Transition Platform (OTP) to be used within operational environments for the integration, experiment design and testing of government and commercial technologies, prior to the hand-off of the system components to the "system hardening" contractor. This task will include installing the software infrastructure, installing and configuring new technology for experimentation on an ongoing basis, providing access to operational data sources as required, and planning and executing the experiments. This task will occur across multiple operational sites known as Information Awareness Centers (IACs). H&AI will acquire HW/SW as required to develop and operate OTP. H&AI has included hardware costs assuming three IACs.

**Task 5.1 Operational Transition Platform Integration:** H&AI shall provide for the integration of technology into the OTP at each site. This includes the configuration of the system infrastructure as well as the application code and assumes that the technology has been prepared for integration previously on the DPP. All hardware, software, and technology installed at operational sites and IACs will be installed for use in continuous experiments during "viewing windows" periods. Experimentation and user evaluation may continue beyond the close of a viewing window. H&AI will acquire HW/SW as required to develop and operate OTP. H&AI has included hardware costs assuming three IACs. All travel related to the experimentation has been allocated to this task.

### Subcontractor Sub Tasks: [REDACTED] - Statement Of Work for Task 5.1

**Project Description: OTP Integration:** Provide support to H&AI, for the integration of technology into the OTP. [REDACTED] shall support the configuration of the system infrastructure, the application code, computing infrastructure including configuration management, systems administration, network management, and security accreditation activities.

#### Sub Tasks:

**Sub Task 5.1.1 OTP Test bed Infrastructure:** [REDACTED] will develop an OTP computing test bed for the purposes of software installation, software integration, software testing, and software training within an operational environment. In accordance with operational policy guidelines, [REDACTED] will provide the required technical networking support to permit OTP workstation connectivity to classified operational networks.

**Sub Task 5.1.2. OTP Software Integration:** [REDACTED] will support H&AI with technical integration recommendations, integration software design and development, and component and application testing within operational environments.

**Sub Task 5.1.3. Operational Data Identification:** [REDACTED] will assist H&AI staff in the identification and access to operational data sets for the purposes of supporting OTP testing and evaluation.

**Sub Task 5.1.4. Operational Data Development:** In accordance with operational policy guidelines, [REDACTED] will provide technical access to operational data as part of the OTP computing test bed. Operational data may include relational, object oriented and schema-less data needed to support OTP evaluation and testing. [REDACTED] will also be responsible for any operational data formatting and ingestion software routines required for subsequent data access by the OTP.

**Deliverables for Subcontractor:**

**Deliverable 5.1.1** [REDACTED] shall prepare monthly OTP technical reports detailing technical progress, network configuration(s), problems and proposed solutions, and plans for the next task work. [REDACTED] shall also conduct technical reviews as required for the purpose of assessing the current state of integration task(s). The reviews will be scheduled to coincide with TIA OTP Experiment demonstrations. Reports and reviews shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Deliverable 5.1.2.** For purposes of continued OTP integration, [REDACTED] shall make available software source code, software executables, software scripts and provide software documentation detailing each components instruction and use. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

**Task 5.2 Operational Transition Platform Experiment #1:** H&AI will provide the necessary support to conduct a TIA OTP Experiment #1 in the November CY'02 timeframe. This task will include effort for experiment planning, configuration, instrumentation, and execution. It will include the instrumentation of technology to collect measurements of metrics, the scripting of experiments, and experimental test runs. Special attention will be given to provide analyst oversight for the model development activities of an SRI SEAS model instance that is consistent with the prior Mistral and Sirocco Experiments. The task scope will include support for both technical staff and domain specialists for assisting in the experiment configuration and working with operational analysts selected training on prototype and new application insertions.

**Subcontractor Sub Tasks:** [REDACTED] **Statement Of Work**  
**- Task 5.2**

**Project Description: Technical Support for OTP Experiment #1:** Provide support to H&AI for the integration of technology into the OTP. [REDACTED] shall support the configuration of the system infrastructure, the application code, computing infrastructure including configuration management, systems administration, network management, and security accreditation activities.

**Sub Tasks:**

**Sub Task 5.2.1 Operational Transition Platform Experiment Configuration:** [REDACTED] will be responsible for any experiment specific configuration and instrumentation required to the OTP. OTP Experiment configuration may include the addition of hardware /software, software modifications, specific network based enhancements, and specialized data access.

**Sub Task 5.2.2. OTP Software Integration:** [REDACTED] will support H&AI with technical integration recommendations, integration software design and development, and component and application testing.

**Sub Task 5.2.3 Analytical Task Support:** [REDACTED] will assist H&AI staff with operational domain specific analysis. [REDACTED] will provide instruction and guidance on domain specific data, analytical tool usage, and analytical assessment support.

**Sub Task 5.2.4. Operational Data Identification:** Because each experiment may vary in the type and volume of data acquired, [REDACTED] will assist H&AI staff in the identification and access to any new operational data sets required for the purposes of supporting OTP testing and evaluation.

**Sub Task 5.2.5. Operational Data Development:** The data needed to support each experiment may be in new repositories and formats. In accordance with operational policy guidelines, [REDACTED] will provide technical access to operational data as part of the OTP computing test bed (see Task 5.1.1). Operational data may include relational, object oriented and schema-less data needed to support OTP evaluation and testing. [REDACTED] will also be responsible for any operational data formatting and ingestion software routines required for subsequent data access by the OTP for experimental purposes.

**Sub Task 5.2.6 Operational Data Collection:** [REDACTED] will create the required software and routines to capture and format as required, any identified measurement data needed to support metrics development and analysis.

#### **Deliverables for Subcontractor:**

**Deliverable 5.2.1** [REDACTED] shall prepare an OTP Experimental report detailing the technical aspects of the experiment such as: OTP configuration, network topology, and data accessed. The reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Deliverable 5.2.2.** For purposes of experiment regeneration, [REDACTED] shall make available software source code, software executables, software scripts and provide software documentation detailing each components instruction and use. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

**Task 5.3 Operational Transition Platform Experiment #2:** H&AI will provide the necessary support to conduct a TIA OTP Experiment #2 in the February CY'03 timeframe. This task will include effort for experiment planning, configuration, instrumentation, and execution. It will include the instrumentation of technology to collect measurements of metrics, the scripting of experiments, and experimental test runs. The experiment will include support for both technical staff and domain specialists for assisting in the experiment configuration and working with operational analysts selected training on prototype and new application insertions.

**Subcontractor Sub Tasks: [REDACTED] Statement Of Work  
- Task 5.3**

**Project Description: Technical Support for OTP Experiment #2:** Provide support to H&AI for the integration of technology into the OTP. [REDACTED] shall support the configuration of the system infrastructure, the application code, computing infrastructure including configuration management, systems administration, network management, and security accreditation activities.

**Sub Tasks:**

Sub-Task 5.3.1 Operational Transition Platform Experiment Configuration: [REDACTED] will be responsible for any experiment specific configuration and instrumentation required to the OTP. OTP Experiment configuration may include the addition of hardware /software, software modifications, specific network based enhancements, and specialized data access.

Sub Task 5.3.2. OTP Software Integration: [REDACTED] will support H&AI with technical integration recommendations, integration software design and development, and component and application testing.

Sub Task 5.3.3 Analytical Task Support: [REDACTED] will assist H&AI staff with operational domain specific analysis. OSC will provide instruction and guidance on domain specific data, analytical tool usage, and analytical assessment support.

Sub Task 5.3.4. Operational Data Identification: Because each experiment may vary in the type and volume of data acquired, [REDACTED] will assist H&AI staff in the identification and access to any new operational data sets required for the purposes of supporting OTP testing and evaluation.

Sub Task 5.3.5. Operational Data Development: The data needed to support each experiment may be in new repositories and formats. In accordance with operational policy guidelines, OSC will provide technical access to operational data as part of the OTP computing test bed (see Task 5.1.1). Operational data may include relational, object oriented and schema-less data needed to support OTP evaluation and testing. [REDACTED] will also be responsible for any operational data formatting and ingestion software routines required for subsequent data access by the OTP for experimental purposes.

Sub Task 5.3.6 Operational Data Collection: [REDACTED] will create the required software and routines to capture and format as required, any identified measurement data needed to support metrics development and analysis.

**Deliverables for Subcontractor:**

Deliverable 5.3.1 [REDACTED] shall prepare an OTP Experimental report detailing the technical aspects of the experiment such as: OTP configuration, network topology, and data accessed. The reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

Deliverable 5.3.2. For purposes of experiment regeneration, [REDACTED] shall make available software source code, software executables, software scripts and provide software documentation detailing each components instruction and use. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

**Task 5.4 Operational Transition Platform Experiment #3:** H&AI will provide the necessary support to conduct a TIA OTP Experiment #3 in the May CY'03 timeframe. This task will include effort for experiment planning, configuration, instrumentation, and execution. It will include the instrumentation of technology to collect measurements of metrics, the scripting of experiments, and experimental test runs. The experiment will include support for both technical staff and domain specialists for assisting in the experiment configuration and working with operational analysts selected training on prototype and new application insertions.

**Subcontractor Sub Tasks:** [REDACTED] **Statement Of Work**

**Task 5.4**

Project Description: Technical Support for OTP Experiment #3: Provide support to H&AI for the integration of technology into the OTP. [REDACTED] shall support the configuration of the system infrastructure, the application code, computing infrastructure including configuration management, systems administration, network management, and security accreditation activities.

**Sub Tasks:**

Sub Task 5.4.1 Operational Transition Platform Experiment Configuration: [REDACTED] will be responsible for any experiment specific configuration and instrumentation required to the OTP. OTP Experiment configuration may include the addition of hardware/software, software modifications, specific network based enhancements, and specialized data access.

Sub Task 5.4.2. OTP Software Integration: [REDACTED] will support H&AI with technical integration recommendations, integration software design and development, and component and application testing.

**Sub Task 5.4.3 Analytical Task Support:** [REDACTED] will assist H&AI staff with operational domain specific analysis. [REDACTED] will provide instruction and guidance on domain specific data, analytical tool usage, and analytical assessment support.

**Sub Task 5.4.4. Operational Data Identification:** Because each experiment may vary in the type and volume of data acquired, [REDACTED] will assist H&AI staff in the identification and access to any new operational data sets required for the purposes of supporting OTP testing and evaluation.

**Sub Task 5.4.5. Operational Data Development:** The data needed to support each experiment may be in new repositories and formats. In accordance with operational policy guidelines, [REDACTED] will provide technical access to operational data as part of the OTP computing test bed (see Task 5.1.1). Operational data may include relational, object oriented and schema-less data needed to support OTP evaluation and testing. [REDACTED] will also be responsible for any operational data formatting and ingestion software routines required for subsequent data access by the OTP for experimental purposes.

**Sub Task 5.4.6 Operational Data Collection:** [REDACTED] will create the required software and routines to capture and format as required, any identified measurement data needed to support metrics development and analysis.

#### **Deliverables for Subcontractor:**

**Deliverable 5.4.1** [REDACTED] shall prepare an OTP Experimental report detailing the technical aspects of the experiment such as: OTP configuration, network topology, and data accessed. The reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Deliverable 5.4.2.** For purposes of experiment regeneration, [REDACTED] shall make available software-source code, software executables, software scripts and provide software documentation detailing each components instruction and use. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

**Task 5.5 Operational Transition Platform Experiment #4:** H&AI will provide the necessary support to conduct a TIA OTP Experiment #4 in the August CY'03 timeframe. This task will include effort for experiment planning, configuration, instrumentation, and execution. It will include the instrumentation of technology to collect measurements of metrics, the scripting of experiments, and experimental test runs. The experiment will include support for both technical staff and domain specialists for assisting in the experiment configuration and working with operational analysts selected training on prototype and new application insertions.

**Subcontractor Sub Tasks:** [REDACTED] **Statement Of Work**  
- Task 5.5

**Project Description: Technical Support for OTP Experiment #4:** Provide support to H&AI for the integration of technology into the OTP. [REDACTED] shall support the configuration of the system infrastructure, the application code, computing infrastructure including configuration management, systems administration, network management, and security accreditation activities.

### **Sub Tasks:**

**Sub Task 5.5.1 Operational Transition Platform Experiment Configuration:** [REDACTED] will be responsible for any experiment specific configuration and instrumentation required to the OTP. OTP Experiment configuration may include the addition of hardware /software, software modifications, specific network based enhancements, and specialized data access.

**Sub Task 5.5.2. OTP Software Integration:** [REDACTED] will support H&AI with technical integration recommendations, integration software design and development, and component and application testing.

**Sub Task 5.5.3 Analytical Task Support:** [REDACTED] will assist H&AI staff with operational domain specific analysis. [REDACTED] will provide instruction and guidance on domain specific data, analytical tool usage, and analytical assessment support.

**Sub Task 5.5.4. Operational Data Identification:** Because each experiment may vary in the type and volume of data acquired, [REDACTED] will assist H&AI staff in the identification and access to any new operational data sets required for the purposes of supporting OTP testing and evaluation.

**Sub Task 5.5.5. Operational Data Development:** The data needed to support each experiment may be in new repositories and formats. In accordance with operational policy guidelines, [REDACTED] will provide technical access to operational data as part of the OTP computing test bed (see Task 5.1.1). Operational data may include relational, object oriented and schema-less data needed to support OTP evaluation and testing. [REDACTED] will also be responsible for any operational data formatting and ingestion software routines required for subsequent data access by the OTP for experimental purposes.

**Sub Task 5.5.6 Operational Data Collection:** [REDACTED] will create the required software and routines to capture and format as required, any identified measurement data needed to support metrics development and analysis.

### **Deliverables for Subcontractor:**

**Deliverable 5.5.1** [REDACTED] shall prepare an OTP Experimental report detailing the technical aspects of the experiment such as: OTP configuration, network topology, and data accessed. The reports shall be in contractor format and will be either an MS PowerPoint or MS Word document.

**Deliverable 5.5.2.** For purposes of experiment regeneration, [REDACTED] shall make available software source code, software executables, software scripts and provide software documentation detailing each components instruction and use. The documentation shall be in contractor format and will be either an MS PowerPoint, MS Word Document or approved software documentation format.

### **Deliverables:**

**Deliverable 5.1.** H&AI shall provide for the integration of technology into the OTP at each site. This includes the configuration of the system infrastructure as well as the application code and assumes that the technology has been prepared for integration previously on the DPP. All hardware, software, and technology installed at operational sites and IAC's will be installed for use in continuous experiments beginning with "viewing window" periods. Experimentation and user evaluation may continue beyond the close of a viewing window.

H&AI will acquire HW/SW as required to develop and operate OTP. H&AI has included hardware costs assuming four IACs. All travel related to the experimentation has been allocated to this task.

**Deliverable 5.2.** Operational Transition Experimentation report. The report shall describe all aspects of the experiment(s), experimental configurations, instrumentation, and experiment scripting. The report shall be in contractor format and will be either an MS PowerPoint or MS Word document. Schedule: This deliverable shall be updated as the OTP evolves but shall be prepared quarterly beginning 1 month after Experiment #1.

### **Task 6.0 Program Management**

A dedicated Program Manager (PM) will be provided and will be responsible for execution of the program to ensure that all tasks are completed as specified, on time and within budget. Cost control and monitoring systems will be created to ensure proper tracking of budgets and schedules. Upon award the PM will establish the program to include development of a detailed WBS by task, allocation of funds, performance tracking system and security support capability. Further, the PM will: (1) manage the procurement of materials to support the Prototype Platform (PP), the Data Protected Platform (DPP) and the Operational Transition Platforms (OTP); (2) work with subcontractors to establish Scope and SOW for TIAIgate tasks as directed by the IAO TIA PM; (3) provide day-to-day management of the core team to include contractors and subcontractors; (4) establish a financial control tracking system to ensure successful execution of the program within budget constraints; and (5) work with the DARPA IAO TIA PM to coordinate development of technical objectives and high-level experimentation and integration goals. The PM will submit cost reports on a bi-weekly basis and status of activities management reports monthly.

The PM will be supported by a Deputy PM and a Project Controller who will provide support for "TIAIgate" subcontracting actions, management of security clearance processing requests, development of subcontractor SOW's to conform with DARPA IAO directives, and monitoring of all cost and subcontract deliverables. In addition, this task provides support for Configuration

and Logistics Management at all designated IAC and DPP deployment sites for all hardware and software items purchased and/or leased in conjunction with the execution of all system development and integration tasks.

### Deliverables:

Deliverable 6.1: DeTIAled WBS. 1 Month ARO. Format: Excel Document, 5 pages.

Deliverable 6.2: Task Budget and Milestone Schedule. 1 Month ARO. Format: Excel and Power Point Documents, 5 pages.

Deliverable 6.3: Cost reports. Annotated Excel document. Bi-weekly beginning 1 Month ARO, 10 pages.

Deliverable 6.4: Management Status Reports. Monthly beginning 1 Month ARO. MS Word document, 10 pages.

Deliverable 6.5: Configuration and Logistics Management Report. Quarterly beginning 3 Months ARO. MS Word document with embedded Excel configuration data for all hardware/software deployment sites, 10 pages.

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## **Task 7.0 Transition**

H&AI will provide technical support for working with the "system hardening" contractor (Booz Allen & Hamilton) for transitioning OTP technology, validated by the experiments in Task 5. As such, this task will include support for testing the hardened system within the operation environment as required to validate performance metrics. This effort assumes that technologies will transition in component form and that there will be an increased activity required as the system becomes more complex and the prototype phase concludes.

### Deliverable:

Deliverable 7.1: Transition Status Report. 1 Year ARO. MS Word document 5 pages in length.

## **Task 8. TIAlgaters**

H&AI will provide for subcontractor support for: integration of selected technologies into the TIA Prototype system, algorithm modification, concept development, metrics definition and analysis, user requirements analysis, user performance evaluation, experiment design and execution, technology transition, policy and security analysis, privacy impact, and other areas as specified by DARPA. These subcontractors are referred to as "TIAlgaters". Once specified by DARPA IAO, H&AI will recommend scope and SOW descriptions to the DARPA Agreements Officer's Representative and work with TIAlgater subcontractors for the development of proposals to support DARPA directed efforts. A list of "TIAlgate" subcontractors and associated tasks has been established to provide general coverage for all support items identified at this

time. Additional subcontractors will be added as the program needs are specified and as requested by DARPA.

H&AI is authorized to proceed with the list of TIAIgatgers identified in the OTA, Article XIX, TIAIgatger Notification and Approval. The SOW provided below is anticipated for current TIAIgatgers envisioned for the base program year. However this list is subject to change based upon DARPA Agreements Officer's Representative's direction and approval.

**Task 8.1** [REDACTED]

[REDACTED]  
[REDACTED]  
Provide technology support necessary to integrate [REDACTED] into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2** [REDACTED] Bundle

**Task 8.2.1** [REDACTED] Sys Eng Support

System Engineering and Integration Support: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. ~~5-10 page Experiment Design Presentation~~
2. 10-15 Page Experiment Results Presentation

**Task 8.2.2** [REDACTED] POLESTAR

[REDACTED]  
Provide technology support necessary to [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.3** [REDACTED]

[REDACTED] Provide technology support necessary to [REDACTED] technologies into the TIA (TIA) prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.4** [REDACTED]

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration. Data Provided by

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.5** [REDACTED]

[REDACTED] Provide technology support necessary to integrate [REDACTED] Centric Agent Environment technologies into the TIA (TIA) prototype system and shall include [REDACTED]

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.6** [REDACTED]

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.7** [REDACTED]

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.8** [REDACTED]

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.2.9** [REDACTED]

[REDACTED]: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3** [REDACTED] Bundle**Task 8.3.1** [REDACTED]

[REDACTED]: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.2** [REDACTED]

[REDACTED]: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.3** [REDACTED]

[REDACTED]: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.4** [REDACTED]

[REDACTED] Trainable Language-Independent OCR: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.5** [REDACTED]

[REDACTED] Automatic Construction of a Name Database and Index: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.6** [REDACTED]

[REDACTED] Name Markup: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.7** [REDACTED]

[REDACTED] Rich Transcription of Multi-lingual Audio and Video Sources: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.8** [REDACTED]

[REDACTED] Provide technology support necessary to integrate Linking Data with Inference Agents technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.9 [REDACTED] Communicator**

Interactive Dialogue using the [REDACTED] DARPA Communicator System: Provide technology support necessary to integrate Interactive Dialogue technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.10 [REDACTED]**

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.11 [REDACTED]**

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.12 [REDACTED] WMCW**

WMCW Experiments in the Information Awareness Center: Provide technology support necessary to integrate WMCW Experiment technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.13 [REDACTED]**

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.14 [REDACTED] Pattern Recognition**

Pattern Recognition Experiments in the Information Awareness Center: Provide technology support necessary to integrate Pattern Recognition technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.15 [REDACTED] DAML**

Applying DAML to Tools and Experiments in the Information Awareness Center: Provide technology support necessary to integrate DAML technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.16 [REDACTED]**

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.17 [REDACTED]**

[REDACTED] Project: Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.18 [REDACTED] Privacy Protection**

Technology Integration Support for "Privacy Protections for Integrated Intelligence Operations": Provide technology support necessary to integrate Privacy Protections for Integrated Intelligence Operations technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.19 [REDACTED] P2P Discovery**

Integration of Peer-to-Peer Knowledge Discovery Network into the Information Awareness Center System: Provide technology support necessary to integrate Peer-to-Peer Knowledge Discovery Network technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.3.20 [REDACTED] Tech Concepts, Experimentation**

Support for the Development of Technical Concepts, Prototype System, Experimentation and Analysis of the Information Awareness System: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.4 [REDACTED]**

[REDACTED] Joint Counterintelligence Assessment (JCAG) and Intelligence Community Test Network (ICTestNet): Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.5 [REDACTED] Bundle****Task 8.5.1 [REDACTED] Integration Support**

Integration Support: Provide technology support necessary to integrate technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.5.2 [REDACTED] Altern. Int. Strategies**

Alternative Integration Strategies: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.5.3 Group Aware Agents**  
[REDACTED]

Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.6 [REDACTED] Bundle**  
[REDACTED]**Task 8.6.1 [REDACTED] Domain Analysis**

Domain Analysis Support: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.6.2 [REDACTED] Experiment Support**

Experimentation Support: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.6.3 [REDACTED] Integ. Support**

Integration Support: Provide technology support necessary to integrate technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AL

**Task 8.7 [REDACTED] Bundle**  
[REDACTED]**Task 8.7.1 [REDACTED] Sys Eng**

Systems Engineering Support: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.7.2 ISX Decision Games**

Decision Game: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.7.3**

[REDACTED]: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.7.4**

[REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.7.5 Context Collab**

Context Based Collaboration/Information Agent: Provide technology support necessary to integrate Context Based Collaboration/Information Agent technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.8**

[REDACTED]  
[REDACTED]  
Integration of [REDACTED] Provide technology support necessary to integrate [REDACTED] technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.9 Bundle**

**Task 8.9.1 [REDACTED] Integ. Exper.**

Support the Development of Technical Concepts, Prototype System, Experimentation and Analysis of the IAC: Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.9.2 [REDACTED] HARP**

Support the Development of Technical Concepts, Prototype System, Experimentation and Analysis of the IAC: [REDACTED] Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.9.3 [REDACTED]**

Support for Integration Technologies: Provide technology support necessary to integrate technologies into the TIA prototype system and shall include software code transfer, modification, and integration.

**Deliverables:**

1. 5-10 Page Technical Report assessing integration requirements for technology.
2. Software deliverable of integration code.
3. One page description of each component according to the template provided by H&AI.

**Task 8.10 [REDACTED] Exper. Execution**

[REDACTED] Provide support for the development of a TIA Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

**Task 8.11 [REDACTED] Consulting**

[REDACTED] Support the Development of TIA system architecture and Concept of Operations: Provide support for the development of a TIA architecture and Concept of Operations, design and conduct of experiments, and the analysis of experiment results.

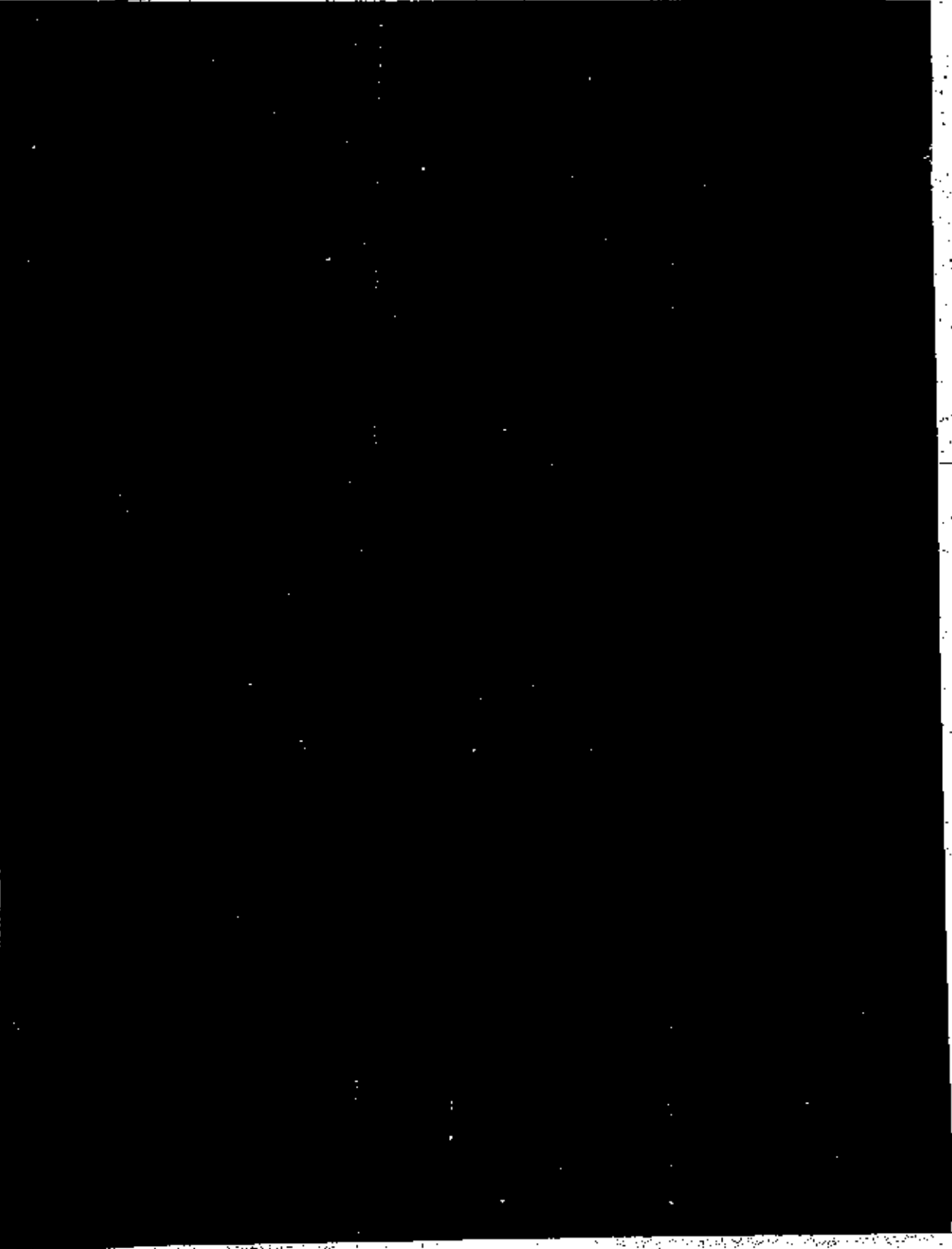
**Deliverables:**

1. 5-10 page Experiment Design Presentation
2. 10-15 Page Experiment Results Presentation

DAARPA TIA Schedule of Payments and Payable Information - AUGUST 15, 2002 - DEC. 31, 2003

Month	Instance	Date of Approval Authority	Est. Date of Attendance Accrual	Description	Category	Total Target Cost	Target Investment Rate (%) & 10%	Total Target Cost x 10%
[REDACTED]								

Year	Actual	Target	Actual	Target	Actual	Target	Actual	Target
2000								
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2002								
2003								
2004								
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Company Name	Technical Area	Data Rights
[REDACTED]	Integration Support	Government Purpose
[REDACTED]	Integration Support	Government Purpose
[REDACTED]	[REDACTED]	Restricted/Gov't Purpose
[REDACTED]	Context Based Collaboration/Information Agent	Restricted/Gov't Purpose
[REDACTED]	Integration of the Universal Database	Negotiated
[REDACTED]	Integration of [REDACTED]	[REDACTED]
[REDACTED]	Learning Structural Patterns for the Detection of Asymmetric Threats	[REDACTED]
[REDACTED]	Support for Integration Technologies	[REDACTED]