IARPA

BROAD AGENCY ANNOUNCEMENT

IARPA-BAA-11-11

IARPA
BE THE FUTURE

OPEN SOURCE INDICATORS (OSI) PROGRAM

Office of Incisive Analysis

IARPA-BAA-11-11

Release Date: August 23, 2011

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BROAD AGENCY ANNOUNCEMENT: IARPA-BAA-11-11

OPEN SOURCE INDICATORS (OSI) PROGRAM

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PART ONE: OVERVIEW INFORMATION

This publication constitutes a Broad Agency Announcement (BAA) and sets forth research areas of interest in anticipating and/or detecting significant societal events. Awards based on responses to this BAA are considered to be the result of full and open competition.

- **Federal Agency Name** – Intelligence Advanced Research Projects Activity (IARPA), Office of Incisive Analysis
- **Funding Opportunity Title –** Open Source Indicators (OSI) Program
- **Announcement Type –** Initial
- **Funding Opportunity Number –** IARPA-BAA-11-11
- **Catalog of Federal Domestic Assistance Numbers (CFDA)** – Not applicable
- **Dates**
  - Proposal Due Date: October 14, 2011
- **Anticipated individual awards** – Multiple awards are anticipated.
- **Types of instruments that may be awarded** – Procurement contract
- **Agency Points of contact**
  - Jason Matheny
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  - ATTN: IARPA-BAA-11-11
  - Office of the Director of National Intelligence
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- **Program website:** http://www.iarpa.gov/solicitations_osi.html
- **BAA Summary:** The OSI Program seeks to develop methods for continuous, automated analysis of publicly available data in order to anticipate and/or detect significant societal events. The Program will aim to develop methods that "beat the news" by fusing early indicators of events from multiple publicly available data sources and types.
- **Questions:** IARPA will accept questions about the BAA until September 30, 2011. A consolidated Question and Answer response will be publicly posted every few days on the IARPA website http://www.iarpa.gov/solicitations_osi.html; no answers will go directly to the submitter. Questions about administrative, technical or contractual issues must be submitted to the BAA e-mail address at dni-iarpa-baa-11-11@ugov.gov. If e-mail is not available, fax questions to 301-851-7673, Attention: IARPA-BAA-11-11. All requests must include the name, e-mail address (if available) and phone number of a point of contact for the requested information. Do not send questions with proprietary content.

PART TWO: FULL TEXT OF ANNOUNCEMENT

Section 1: FUNDING OPPORTUNITY DESCRIPTION

The Intelligence Advanced Research Projects Activity (IARPA) often selects its research efforts through the Broad Agency Announcement (BAA) process. The BAA will appear first on the FedBizOpps website, http://www.fedbizopps.gov/, then the IARPA website at http://www.iarpa.gov. The following information is for those wishing to respond to this Program BAA.

IARPA is seeking innovative solutions for the Open Source Indicators (OSI) Program. The use of a BAA solicitation allows a wide range of innovative ideas and concepts. The OSI Program is envisioned to begin in April 2012 and end in April 2015.

The goal of the OSI Program is to develop methods for continuous, automated analysis of publicly available data in order to anticipate and/or detect significant societal events. The Program will aim to develop methods that "beat the news" by fusing early indicators of events from multiple publicly available data sources and types.

1.A.   Program Overview

Many significant societal events are preceded and/or followed by population-level changes in communication, consumption, and movement. Some of these changes may be indirectly observable from publicly available data, such as web search queries, blogs, micro-blogs, internet traffic, financial markets, traffic webcams, Wikipedia edits, and many others. Published research has found that some of these data sources are individually useful in the early detection of events such as disease outbreaks, political crises, and macroeconomic trends. For example, much has been published on extracting indicators useful in forecasting political unrest from news feeds; public sentiment has been inferred from blogs and microblogs; and disease outbreaks have been detected from web search queries. In addition, Government-funded programs such as the Integrated Crisis Early Warning System (ICEWS), the Political Instability Task Force (PITF), and the Aggregative Contingent Estimation (ACE) Program have focused on methods to forecast pre-defined events. But few methods have been developed for anticipating or detecting unexpected events by fusing publicly available data of multiple types from multiple sources.

OSI aims to fill this gap by developing methods for continuous, automated analysis of publicly available data[1] in order to anticipate and/or detect significant societal events, such as political crises, humanitarian crises, mass violence, riots, mass migrations, disease outbreaks, economic instability, resource shortages, and responses to natural disasters. OSI performers will develop methods that "beat the news" by fusing early indicators of events. Performers will be evaluated on the basis of warnings that they deliver about real-world events.

Performers must address the following technical challenges in order to meet the objectives of OSI:

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[1] By "publicly available data" we mean lawfully obtained data available to any member of the general public, to include by purchase, subscription or registration.

- Development of methods that leverage population behavior change in anticipation of, and in response to, events of interest;
- Processing of publicly available data that reflect those population behavior changes;
- Development of data extraction techniques that focus on volume, rather than depth, by identifying shallow features of data that correlate with events;
- Development of multivariate time series models robust to non-stationary, noisy data to reveal patterns that precede events;
- Innovative use of statistical methods to fuse combinations of time series for generating probabilistic warnings of events.

Offerors must explain in detail how their approach addresses these technical challenges.

Successful approaches will require a combination of innovative research and the capability to develop robust prototypes. The OSI Program expects a staged approach to prototype development; each successive prototype will leverage research progress made since the previous prototype. Research goals should be set, and research plans should be made, to take full advantage of the length of the OSI Program. Offerors must describe how research advances will be incorporated into successive prototypes.

It is expected that the technology developed under OSI will have no "human in the loop." The performers' systems must generate warnings without the help of subject matter experts (SMEs), either to guide the system or to filter warnings before they are sent to IARPA. SMEs may help develop, train, and improve the systems, but the warnings must be machine-generated and all warnings generated must be submitted automatically to IARPA. During site visits, performers will be asked to replicate a sample of warnings that the team submitted during the prior month. The replication will require the system version and data that were used at the time of the submission.

Performers' systems must include an audit trail for each warning, listing relevant evidence that supports the warning. For their annual reports, performers will be asked to perform ablation tests on a sample of warnings, to assess the sensitivity of results to the removal and addition of certain data. Offerors must describe how their approach will meet these requirements.

Because OSI is an R&D program, not an operational global watchboard, the geographic focus of OSI will be limited to Latin America, without the Caribbean. This region covers 21 countries,[2] is large enough to test the generalizability of performers' approaches, includes a representative variety of events, has abundant publicly available data, and has timely reporting of events for determining "ground truth" in training and testing.

Proposals must defend the choice of data that will be used in the offeror's approach. While the output of the OSI system must be warnings about events in Latin America without the Caribbean, performers may use data from other regions, if justified by their approach.

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[2] Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela.

Because of the many challenges presented by OSI, IARPA expects performer teams will include expertise in the social sciences, mathematics and statistics, computer science, content extraction, information theory, and software rapid prototype development. Performer teams might also include detection experts from other fields in which signal processing involves multimodal, noisy, incomplete, and contradictory data. Offerors must demonstrate that their team does not lack capabilities necessary for success, that their team is tighly knit with strong management and a single point of contact, and that each team member contributes significantly to the program goals.

IARPA expects that data acquisition will require significant resources by each performer, and expects that data requirements will likely overlap across performers. To maximize the use of resources towards technology development, IARPA may make a data investment. Offerors are asked to list all data sources required for their approach, to explain how each data source supports their approach, and to include estimates of all data costs in their cost proposals. After source selection, IARPA will identify core data -- those data at the intersection of selected performers' data requirements. IARPA may acquire some of the core data and make them available to all performers as Government Furnished Information.

Out of Scope

Warnings for U.S. events; identification, geolocation, or tracking of individuals; development of new sensors; and collection mechanisms that require directed participation by individuals are out of scope for this Program. In addition, OSI is not focused on advanced natural language processing (NLP), or on the development of other advanced tools for analyzing a single signal. Off-the-shelf NLP tools should be sufficient for extracting features of interest, and OSI methods should focus on aggregating multiple, noisy signals indicative of significant events at the population-level. Offerors must demonstrate that their approach is consistent with these restrictions.

1.B.   Program Milestones and Metrics

The Government will use the following Program Milestones and Metrics to evaluate the effectiveness of proposed solutions in achieving the stated program objectives, and to determine whether satisfactory progress is being made to warrant continued funding of the Program. These metrics are intended to bound the scope of effort, while affording maximum flexibility, creativity, and innovation in proposing solutions to the stated problem.

At Program kickoff, the Government Team will provide an initial Gold Standard Report (GSR) containing a large list of significant events in the region for the prior year, for which an early warning would have been valuable. The GSR will include event descriptions from the earliest mention of an event by a major news source, and the timestamp of that mention. The initial GSR may be used by performers to train their systems. For a period of 30 days after the program kickoff, performers can provide feedback on the initial GSR. At the end of the 30-day period, IARPA will publish an updated GSR which will be considered the "complete" list of events for the prior year.

For the duration of the program, IARPA will update the GSR monthly, by adding significant events in the region that occurred during the prior month. IARPA will deliver a

draft GSR update approximately two weeks after the end of each month. Performers will have an opportunity to provide feedback on the draft before IARPA publishes the final GSR update for that month. For example, IARPA will provide a draft of the May 2012 update of the GSR in mid-June 2012 and a final update during the first week of July 2012. Performers will be responsible for justifying the addition of events to the GSR, by providing references to news reports or other evidence that an event has occurred. The Government Team will then calculate the match between the warnings and the GSR events, using the metrics described below.

Starting in month 5, performers will deliver warnings to IARPA for newsworthy events in the 21 countries. Teams can decide how many warnings they deliver, and how frequently they deliver them. As teams will still be ramping up their research efforts, the warnings delivered to IARPA during months 5 through 8 will not be used to evaluate accuracy, but to provide an early assessment by the Government Team of the format of warnings and audit trails.

Starting in Month 9 and continuing approximately each month for the remainder of the Program, IARPA will score performers' warnings against Program milestones. Performers will be rewarded for anticipating and/or detecting as many events as possible. Each warning sent to IARPA will be scored on three metrics:

- **Lead time** = the number of days between the time the performer delivered the warning to IARPA and the GSR timestamp for the event (not necessarily the time of the event). This number will be calculated by rounding the difference between the timestamps to the nearest day, so that a warning needs to be sent at least 12 hours before the GSR timestamp to have a lead time of 1 day. A warning sent less than 12 hours before the GSR timestamp will have a lead time equal to zero.
- **Probability score** (quadratic score) = $1 - (o-p)^2$ where p is the probability assigned by the performer to the event, o is "ground truth": 1 if the event occurred, 0 if the event didn't occur within 30 days of the expected date.
- **Warning quality** = the "match" between the event descriptions in the performer's warning and the GSR, defined below.

Warning quality

Each event description will include four entries: the population involved in the event, the type of event, the date of the event, and the location of the event. For each of these entries IARPA will calculate the match between the performer's warning and the GSR.

The match between the submitted date of event and the GSR date of event is:

$α_{date}$ = 1- min(|date of the event listed in the warning – actual date of the event|,30)/30

Note that a warning that misses the date of the event by more than 30 days will have $α_{date}$ = 0.

For the other three entries, IARPA will use a hierarchical typology of actors, events, and locations, and define the match as a measure of how close the submitted warning is to the GSR.

Event location provides an illustration. IARPA will use a three-level typology. At the top level is the *country*, the second level is the *province* or *state*, and the third level is the

city. Performers will submit their warning using this typology, and will be as specific as possible. That is, performers will submit a triple, (*country*, *province* or *state*, *city*), with possibly empty entries, either because the event location is larger than a city or a province or state, or because the performer cannot determine the specific location. IARPA will compare the warning location with the GSR location, to get (x_1, x_2, x_3), where x_1 is the *country* comparison, x_2 is the *province* or *state* comparison (if the GSR has that level of specificity), and x_3 is the *city* comparison (if the GSR has that level of specificity). $x_i = 0$ if they do not match, $x_i = 1$ if they do. The match between the submitted warning location and the GSR location is:

$$\alpha_{location} = 1/3\ x_1 + 1/3\ x_1 x_2 + 1/3\ x_1 x_2 x_3\ \text{or}$$
$$\alpha_{location} = 1/2\ x_1 + 1/2\ x_1 x_2\ \ \text{or}$$
$$\alpha_{location} = x_1$$

depending on whether the GSR specifies location at the city level, or the province or state level only, or the country level only. Some events may not have a state or city location (e.g. macroeconomic events), and this formula allows such events to be scored against the GSR for all levels that apply. Note that if $x_1 = 0$ (i.e. the warning misses the country level location), then $\alpha_{location} = 0$. If all the entries match, then $\alpha_{location} = 1$.

The hierarchical typology for events will be based on the Integrated Data for Events Analysis (IDEA) typology[3]. The IDEA typology is included in Appendix E. IDEA includes 249 event types, representing a wide range of political, economic, and social events. At kickoff, the Government Team may deliver a modified typology based on IDEA. Performers will have one month to provide feedback on this typology.

Performers will submit warnings in which the event type is represented as one of the typology codes. The Government team will similarly code every event in the GSR and compare the warning with the GSR to calculate (x_1, x_2, x_3), just as it was calculated for location, above.

The hierarchical typology for the population entry will be based on the top two levels of the sector typology used in the Text Analysis By Augmented Replacement Instructions (TABARI) event coding system[4]. This typology is included in Appendix F. At kickoff, the Government Team may deliver a modified typology based on TABARI. Performers will have one month to provide feedback on this typology.

Since TABARI is also a 3-level typology (2 sector levels plus the specific group name), the match for population will be calculated just as it is for event type.

With the match calculated for each entry of a warning's event description, the quality score for each warning is defined as:

$$q = \alpha_{population} + \alpha_{type} + \alpha_{date} + \alpha_{location}$$

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[3] Bond D., Bond J., Oh C., Jenkins J. C., Taylor C. L., *Integrated Data for Events Analysis (IDEA): An Event Typology for Automated Events Data Development*, Journal of Peace Research, vol. 40, no. 6, 2003, pp. 733-745. See also http://vranet.com/idea/EventForms.asp?by=IDEA

[4] Schrodt, P. A., *Automated Production of High-Volume, Real-Time Political Event Data*, American Political Science Association 2010 Annual Meeting Paper, 2010. Available at http://www.princeton.edu/~pcglobal/conferences/methods/papers/schrodt.pdf. See also the Penn State Event Data Project, http://eventdata.psu.edu/.

Note that if the warning perfectly matches the GSR, then $q = 4$. If it does not perfectly match, the quality score provides "partial credit" for partially correct warnings.

As an example, consider the following event description in the GSR:

(General population, Flu outbreak, 11/01/11, Curitiba).

general population is its own sector, *flu outbreak* is IDEA code 411*, infectious human illness*. And Curitiba is the capital of the Brazilian state of Paraná. So a perfect event description from a performer would be:

(*general population*, *infectious human illness*, 11/01/11, (Brazil, Paraná , Curitiba)).

Suppose the GSR timestamp for the earliest media report of that event is 11/11/11. Consider the following three successive warnings sent by a performer:

Warning 1:
  – Timestamp: 11/03/11
  – Probability: 0.15
  – Event description: (*general population*, *human illness*, 11/03/11, (Brazil,-,-))
Warning 2:
  – Timestamp: 11/05/11
  – Probability: 0.30
  – Event description: (*general population*, *infectious human illness*, 11/02/11, (Brazil, Paraná, Paranaguá))
Warning 3:
  – Timestamp: 11/09/11
  – Probability: 0.45
  – Event description: (*general population*, *infectious human illness*, 11/01/11, (Brazil, Paraná, Curitiba))

The table below gives the quality score for each warning:

	Warning 1	Warning 2	Warning 3
$\alpha_{population}$	1	1	1
α_{type}	0.50	1	1
α_{date}	0.93	0.97	1
$\alpha_{location}$	0.33	0.67	1
Quality Score	**2.76**	**3.64**	**4**

The overall scores for each warning are given in the table below:

Metric	Warning 1	Warning 2	Warning 3
Lead Time	8 days	6 days	2 days
Prob. Score	0.28	0.51	0.70
Quality Score	2.76	3.64	4

In addition to the above three metrics intended to assess each warning sent to IARPA, additional metrics will be calculated to help the Government team track performers' progress: mean lead time, mean probability score, mean quality score, precision, and recall. These metrics will be updated every month.

Precision will be calculated as the number of events in the GSR for which the performer sent a warning to IARPA with a non-zero lead time and quality score, divided by the total number of warnings sent to IARPA by the performer.

Recall will be calculated as the number of events in the GSR for which the performer sent a warning to IARPA with a non-zero lead time and quality score, divided by the total number of events in the GSR.

Performers may send multiple warnings for the same event. Each warning will be scored separately and will count towards mean lead time, mean probability score, and mean quality score. Only one warning for each event will be counted towards the precision and recall calculations.

Performers are encouraged to submit additional information about warnings and events that may demonstrate the performance of their methods. For example, while successive warnings for the same event will be scored separately, performers are encouraged to identify such warnings. Other dependency information among warnings is also encouraged (e.g. conditional warnings, or mutually exclusive warnings). Similarly, performers are encouraged to provide additional details about events. All such information must be automatically generated, with no human in the loop. If additional information will be generated by a system, the offeror must describe how they will develop this capability.

OSI's year-end milestones are given in the following table:

Metric	Month 12 4 months of warnings	Month 24 12 months of warnings	Month 36 12 months of warnings
Mean Lead Time	1 day	3 days	7 days
Mean Probability Score	0.60	0.70	0.85
Mean Quality Score	3.0	3.25	3.5
Recall	0.50	0.65	0.80
Precision	0.50	0.65	0.80

Other assessments, qualitative and quantitative, will be performed by the Government team to evaluate each performer's approach (e.g. the scientific merit of the approach and the research findings). Most importantly, the program will be evaluated by the utility of the warnings, including the evidence produced, as judged by potential users.

Waypoints

To increase the likelihood that the above milestones will be met, Program Waypoints are outlined below. The intent of these waypoints is to provide a measure of progress toward

meeting the Program milestones so that the Program Manager and advisors can provide more effective guidance and assistance to performers. The Program Manager and advisors will use these waypoints to assess whether course corrections are needed to ensure Program success.

At month 5, the program waypoint is an initial check that systems can generate warnings and audit trails in the correct formats. At months 17 and 29, the program waypoints are a check that performers have improved their metrics by half of the difference between the last set of milestones and the next set.

In their proposals, offerors must describe additional waypoints for months 4, 9, 15, 21, 27, and 33. Each waypoint should be distinct, and should demonstrate progress in longer-term research activities. These performer-defined waypoints may include the execution of key experiments and the development of key capabilities. Progress against these waypoints will be reviewed during site visits. Proposals must include a rationale, definition, metrics, and an evaluation plan for each waypoint, and must also describe how the research advances will be incorporated into successive prototypes. As an example provided for illustrative purposes only, an offeror might propose a 9-month waypoint that will demonstrate a time-series model that successfully incorporates at least 8 different data types, as well as provide a description of when and how that model will be incorporated into the offeror's system prototype.

1. C.   Program Timeline

The Government will use the following timeline with programmatic gates to help the Program maintain its three-year schedule:

Date	Event	Description/Purpose
Month 1	Kickoff Meeting	• Meeting in Washington DC to communicate OSI goals and expectations • IARPA delivers initial Gold Standard Report (GSR) and typologies
Month 2	Performer feedback due	• Performers deliver feedback on initial GSR and typologies • IARPA begins delivering monthly GSR updates to performers
Month 4	Site Visit 1	• Review research and progress against performer-defined waypoints
Month 5	Program waypoint, begin warnings	• Performers begin to deliver warnings to IARPA • Assess program waypoint results
Month 9	Site Visit 2	• Review research and progress against performer-defined waypoints • Perform replication tests

Date	Event	Description/Purpose
Month 9	Begin scoring	• IARPA begins scoring performers' warnings and assesses results against 12-month milestones
Month 11	Deliver year-end deliverables	• Assessment against Program Milestones • Performers deliver year-end deliverables to IARPA, to include research reports, software, and documentation
Month 12	Principal Investigators Meeting 1	• Meeting in Washington, DC to review Base Year research results
Month 12	Notification of Option Year 1 Award	• Performers are notified of Option Year 1 selection
Option Year 1		
Month 13	Begin Option Year 1 warnings	• Performers begin to deliver warnings to IARPA • IARPA begins delivering monthly GSR updates to performers
Month 15	Site Visit 3	• Review research and progress against performer-defined waypoints • Perform replication tests
Month 17	Program waypoint	• Assess program waypoint results
Month 21	Site Visit 4	• Review research and progress against performer-defined waypoints • Perform replication tests
Month 23	Deliver year-end deliverables	• Assessment against Program Milestones • Performers deliver year-end deliverables to IARPA, to include research reports, software, and documentation
Month 24	Principal Investigators Meeting 2	• Meeting in Washington, DC to review Option Year 1 research results
Month 24	Notification of Option Year 2 Award	• Performers are notified of Option Year 2 selection
Option Year 2		
Month 25	Begin Option Year 2 warnings	• Performers begin to deliver warnings to IARPA • IARPA begins delivering monthly GSR updates to performers

Date	Event	Description/Purpose
Month 27	Site Visit 5	• Review research and progress against performer-defined waypoints • Perform replication tests
Month 29	Program waypoint	• Assess program waypoint results
Month 33	Site Visit 6	• Review research and progress against performer-defined waypoints • Perform replication tests
Month 35	Deliver year-end deliverables	• Assessment against Program Milestones • Performers deliver year-end deliverables to IARPA, to include research reports, software and documentation
Month 36	Principal Investigators Meeting 3	• Meeting in Washington, DC to review Year 3 research results
Month 36	Complete Program	• Technical and programmatic closeout

SECTION 2: AWARD INFORMATION

The OSI Program is envisioned as a three-year effort that is intended to begin in April 2012. The Base Period is 12 months with two possible Option Years of 12 months each. Costs associated with the commercialization of technology are not covered under this solicitation. It is expected that external investment or company funds will be leveraged to accomplish final commercialization of technology.

This BAA will result in awards for the entire program. Funding for Optional Period(s) will depend upon performance during the Base Period, (and succeeding Optional Periods), as well as program priorities, the availability of funding, and IARPA priorities. Funding of Option Periods is at the sole discretion of the Government. Participants considered for funding in the Option Period(s) will be those performers that have made significant progress in the Base Period (and succeeding Optional periods) and have correctly understood and contributed to the overarching goals of the Program. Performers that offer only minor enhancements to the current state of the art will not be invited to continue with the Program.

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

The Government reserves the right to select for negotiation all, some, one or none of the proposals received in response to this solicitation and to make awards without discussions with offerors. The Government also reserves the right to conduct discussions if the Source Selection Authority determines them to be necessary. If the proposed effort is inherently divisible and nothing is gained from the aggregation, offerors should consider submitting it as multiple independent efforts. Additionally, IARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for negotiations for award. In

the event that IARPA desires to award only portions of a proposal, negotiations may be opened with that offeror.

Awards under this BAA will be made to offerors on the basis of the evaluation criteria listed in 5.A, program balance, and availability of funds. Proposals identified for negotiation may result in a procurement contract. However, the Government reserves the right to negotiate the type of award instrument it determines appropriate under the circumstances.

Offerors whose proposals are accepted for funding will be contacted before award to obtain additional information required for award. The Government may establish a deadline for the close of fact-finding and negotiations that allows a reasonable time for the award of a contract. Offerors that are not responsive to government deadlines established and communicated with the request, may be removed from award consideration. Offerors may also be removed from award consideration should the parties fail to reach agreement on contract terms, conditions, and cost/price within a reasonable time.

SECTION 3: ELIGIBILITY INFORMATION

3.A.   Eligible Applicants

All responsible sources capable of satisfying the Government's needs may submit a proposal. Historically Black Colleges and Universities (HBCUs), Small Businesses, Small Disadvantaged Businesses and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas for exclusive competition among these entities. Other Government Agencies, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and any other similar type of organization that has a special relationship with the Government, that gives them access to privileged and/or proprietary information or access to Government equipment or real property, are not eligible to submit proposals under this BAA or participate as team members under proposals submitted by eligible entities.

Foreign participants and/or individuals may participate to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, Export Control Laws and other governing statutes applicable under the circumstances.

To be eligible to submit proposals to the OSI BAA, offerors must have at least one team member that is a U.S. organization or institution.[5] Additionally, at least twenty percent (20%) of the key personnel in the team (as measured by FTEs) must be from this (these) U.S. organization(s) or institution(s). Foreign entities and/or individuals may participate

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[5]"U.S. organization or institution" means any corporation, business association, partnership, trust, academic institution, society or any other entity or group that is incorporated or organized to do business in the United States. It specifically excludes any foreign corporation, business association, partnership, trust, academic institution, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments.

to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, Export Control Laws and other governing statutes applicable under the circumstances. Offerors are expected to ensure that the efforts of foreign participants do not either directly or indirectly compromise the laws of the United States, nor its security interests. As such, offerors should carefully consider the roles and responsibilities of foreign participants as they pursue teaming arrangements to propose to the OSI BAA.

3.A.1.   Procurement Integrity, Standards of Conduct, Ethical Considerations and Organizational Conflicts of Interest (OCI)

"Organizational conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

If a prospective offeror, or any of its proposed subcontractor teammates, believes that a potential conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with IARPA and submit a waiver request by e-mail to the mailbox address for this BAA at dni-iarpa-baa-11-11@ugov.gov. All waiver requests must be submitted through the offeror, regardless of whether the waiver request addresses a potential OCI for the offeror or one of its subcontractor teammates. A potential conflict of interest includes but is not limited to any instance where an offeror, or any of its proposed subcontractor teammates, is providing either scientific, engineering and technical assistance (SETA) or technical consultation to IARPA. In all cases, the offeror shall identify the contract under which the SETA or consultant support is being provided. Without a waiver from the IARPA Director, neither an offeror, nor its proposed subcontractor teammates, can simultaneously provide SETA support or technical consultation to IARPA and compete or perform as a Performer under this solicitation.

All facts relevant to the existence of the potential conflict of interest, real or perceived, should be disclosed in the waiver request. The request should also include a proposed plan to avoid, neutralize or mitigate such conflict.   The offeror, or subcontractor teammate as appropriate, shall certify that all information provided is accurate and complete, and that all potential conflicts, real or perceived, have been disclosed. It is recommended that an offeror submit this request as soon as possible after release of the BAA before significant time and effort are expended in preparing a proposal. If, in the sole opinion of the Government, after full consideration of the circumstances, the conflict situation cannot be resolved, the request for waiver will be denied, and any proposal submitted by the offeror that includes the conflicted entity will be withdrawn from consideration for award.

As part of their proposal, offerors who have identified any potential conflicts of interest shall include either an approved waiver signed by the IARPA Director or a copy of their waiver request. Otherwise, offerors shall include in their proposal a written certification that neither they nor their subcontractor teammates have any potential conflicts of interest, real or perceived. A sample certification is provided in Appendix D.

If, at any time during the solicitation or award process, IARPA discovers that an offeror has a potential conflict of interest, and no waiver request has been submitted by the offeror, IARPA reserves the right to immediately withdraw the proposal from further consideration for award.

Offerors are strongly encouraged to read "Intelligence Advanced Research Projects Activity's (IARPA) Approach to Managing Organizational Conflicts of Interest (OCI)", found on IARPA's website at http://www.iarpa.gov/IARPA_OCI_081809.pdf.

3.B. US Academic Organizations

According to Executive Order 12333, as amended, paragraph 2.7, "Elements of the Intelligence Community are authorized to enter into contracts or arrangements for the provision of goods or services with private companies or institutions in the United States and need not reveal the sponsorship of such contracts or arrangements for authorized intelligence purposes. Contracts or arrangements with academic institutions may be undertaken only with the consent of appropriate officials of the institution."

It is highly recommended that offerors submit with their proposal a completed and signed Academic Institution Acknowledgement Letter for each U.S. academic organization that is a part of their team, whether the academic organization is serving in the role of prime, or a subcontractor or consultant at any tier of their team. A template of the Academic Institution Acknowledgement Letter is enclosed in this BAA at Appendix A. It should be noted that an appropriate senior official from the institution, typically the President, Chancellor, Provost, or other appropriately designated official must sign the completed form. Note that this paperwork **must** be received before IARPA can enter into any negotiations with any offeror when a U.S. academic organization is a part of its team.

3.C.   Cost Sharing/Matching

Cost sharing is not required and is not an evaluation criterion; however, cost sharing will be carefully considered and may be required where there is an applicable statutory or regulatory condition relating to the selected award instrument (e.g., for any other transactions under the authority of 10 U.S.C. § 2371). Cost sharing is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

3.D.   Other Eligibility Criteria

3.D.1.   Collaboration Efforts

Collaborative efforts and teaming arrangements among potential performers are strongly encouraged. Specific content, communications, networking and team formations are the sole responsibility of the participants.

SECTION 4: APPLICATION AND SUBMISSION INFORMATION

This notice constitutes the total BAA and contains all information required to submit a proposal. No additional forms, kits, or other materials are required.

4.A.   Content and Form of Application Submission

4.A.1.   Proposal Information

Interested offerors are required to submit full proposals in order to receive consideration for funding. All proposals submitted under the terms and conditions cited in this BAA will be reviewed.

Proposals must be received by the time and date specified in section 4.C.1. in order to be considered during the initial round of selections.   IARPA may evaluate proposals received after this date for a period of up to one year from the date of initial posting on FedBizOpps. Selection remains contingent on availability of funds.

The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be included in a single proposal.

Offerors should submit proposals for a Base Period of 12 months plus two possible 12-month Option Years.

The Government intends to use employees of Booz Allen Hamilton, as well as employees of the MITRE Corporation, to provide expert advice regarding portions of the proposals submitted to the Government. Booz Allen Hamilton will also provide logistical support in carrying out the evaluation process. These personnel will have signed and be subject to the terms and conditions of non-disclosure agreements. By submission of its proposal, an offeror agrees that its proposal information may be disclosed to employees of these organizations for the limited purpose stated above. If offerors do not send notice of objection to this arrangement, the Government will assume consent to the use of contractor support personnel in assisting the review of submittal(s) under this BAA.

Only Government personnel will make evaluation and award determinations under this BAA.

All administrative correspondence and questions regarding this solicitation should be directed by e-mail to dni-iarpa-baa-11-11@ugov.gov. Proposals must be submitted to the address provided in Section 4.C.2. Proposals may **not** be submitted by hand, e-mail or fax; any such proposals received in this manner will be disregarded. See below for proposal submission instructions.

Offerors must submit two hard copies and one soft copy of their proposals: one original hard copy with original signatures; one hard copy with original or copied signatures; and 1 electronic copy with Volume 1, Volume 2 and any permitted, additional information (.pdf format preferred) on a CD-ROM. Both hard copies and the CD must be clearly labeled with the following information: IARPA-BAA-11-11, the offeror's organization, the proposal title (short title recommended), and copy # of #.

Please note that reviewers receive the electronic copy submitted by CD. Hard copies are primarily for archival purposes. In case of inconsistencies between the hard copy and the electronic copy, the electronic copy takes precedence.

4.A.2.   Proposal Format

All proposals must be in the format given below. Nonconforming proposals may be rejected without review. Proposals shall consist of two volumes: "Volume 1 - Technical and Management Proposal" and "Volume 2 - Cost Proposal." All pages shall be printed on 8-1/2 by 11 inch paper with type not smaller than 12 point. Smaller font may be used for figures, tables and charts. The page limitation for full proposals includes all figures, tables, and charts. All pages must be numbered. Unnecessarily elaborate brochures or presentations beyond what is sufficient to present a complete and effective proposal are not acceptable and will be discarded without review.

4.A.3.   Proposal Classification

The Government requires that proposals submitted under this BAA will be unclassified. No classified information will be accepted in response to this BAA.

4.B.   Proposal Content Specifics
Each proposal submitted in response to this BAA shall consist of the following:

Volume 1 – Technical & Management Proposal
    Section 1 - Cover Sheet & Transmittal Letter
    Section 2 – Summary of Proposal
    Section 3 – Detailed Proposal
    Section 4 – Additional Information

Volume 2 – Cost Proposal
    Section 1– Cover Sheet
    Section 2 – Detailed Estimated Cost Breakdown

4.B.1.   Volume 1, Technical and Management Proposal {Limit of 30 pages}

Volume 1, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach on which the proposal is based. Copies of not more than three relevant papers can be included with the submission. The submission of other supporting materials along with the proposal is strongly discouraged and will not be considered for review. Except for the cover sheet, transmittal letter, table of contents (optional), signed Academic Institution Acknowledgement Letter(s) if required, OCI waiver/certification, bibliography, and relevant papers, Volume 1 shall not exceed 30 pages. Any pages exceeding this limit will be removed and not considered during the evaluation process. Full proposals must be accompanied by an official transmittal letter. All full proposals must be written in English.

    <u>Section 1: Cover Sheet & Transmittal Letter</u>

A. Cover sheet:
    (1) BAA number
    (2) Lead organization submitting proposal
    (3) Type of business, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT"
    (4) Contractor's reference number (if any)
    (5) Other team members (if applicable) and type of business for each

(6) Proposal title

(7) Technical point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available)

(8) Administrative point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available)

(9) IP rights have been addressed in accordance with Section 6.B.3? Yes/No

(10) OCI waiver or waiver request [see Section 3.A.1.] included? Yes/No

(10a) If no OCI, a written certification must be included (see Appendix D letter template).

(11) Are one or more U.S. Academic Organizations part of your team? Yes/No

(11a) If Yes, are you including an Academic Institution Acknowledgement Statement with your proposal for each Academic Organization that is part of your team? Yes/No

(12) Total funds requested from IARPA and the amount of cost share (if any)

(13) Date proposal was submitted.

[NOTE: See Appendix B for Cover Sheet Template]

B. Official Transmittal Letter.

Section 2: Summary of Proposal

Section 2 shall provide an overview of the proposed work as well as introduce associated technical and management issues. This section shall contain a technical description of and technical approach to the research as well as a succinct portrayal of the uniqueness and benefits of the proposed work. It shall make the technical objectives clear and quantifiable and shall provide a project schedule with definite decision points and endpoints. Offerors must address:

   A. Innovative claims for the proposed research. This section is the centerpiece of the proposal and should succinctly describe the uniqueness and benefits of the proposed approach relative to the state-of-the-art and alternate technologies and approaches.
   B. Summary of the products, transferable technology and deliverables associated with the proposed research results. Measurable deliverables should be defined that show progress toward achieving the stated Program Milestones. Include in this section all proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and/or prototype. If there are no proprietary claims, this should be stated. Should no proprietary claims be made, Government rights will be unlimited.
   C. Schedule and milestones for the proposed research, including overall estimates of cost for each task. Summarize, in table form, the cost, schedule and milestones for the proposed research, including estimates of cost for each deliverable, total cost and company cost share, if applicable. Do not include proprietary information with the milestones.
   D. Overview of the technical approach and plan. Technical rationale, technical approach and constructive plan for accomplishing the technical goals that realize the innovative claims and deliverables. (This section will be supplemented with a more detailed plan in Volume 1, Section 3 of the proposal.)
   E. Related research. General discussion of other research in this area.

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F. <u>Project contributors.</u> Offerors must include a clearly defined organizational chart of all anticipated project participants and their roles in the project. Accompanying this chart, offerors will provide brief biographical sketches of key personnel and significant contributors and a detailed description of the roles that contributors (including Principal Investigator(s)) will play based on their qualifications and on their level of effort in each year of the Program. Discussion of the teaming strategy among team members shall be included. If the team intends to use consultants, they must be included in the organizational chart as well. Indicate if the person will be an "individual" or "organizational" consultant (that is, will the consultant represent himself/herself or his/her organization). In both cases, the organizational affiliation should be identified. The consultant should make a written commitment to be available to the team; the commitment should be attached to the Cost Volume. (Interested parties are encouraged to leverage personnel that are dedicated to BAA requirements no less than 10% of their time. If any participant is scheduled for less than 10% of his/her time, the offeror will provide a clear and compelling justification as to how benefit can be gained from that person's participation at the specified level of effort.)

A chart, such as the following, is suggested.

Participants	Org	Role	Unique, Relevant Capabilities	Specific Task(s) / Contributions	Time Commitment
John Doe	ABC University	PI/Key Personnel	Statistician	Time series analysis	25%
John Doe, Jr.	ABC University	Key Personnel	Computer Programmer	Content extraction	25%
Jane Doe	ABC University	Significant Contributor	And so forth…	And so forth…	50%
Jane Roe	ABC University	Contributor			25%
John Doe, III	XYZ Co.	Co-PI/Key Personnel			25%
Wayne Roe	XYZ Co.	Significant Contributor			40%
John Doe, IV	XYZ University	Consultant (Individual)			200 hours

<u>Section 3: Detailed Proposal Information</u>

This section of the proposal shall provide the detailed, in-depth discussion of the proposed research. Specific attention must be given to addressing both the risks and payoffs of the proposed research and why it is desirable for IARPA to pursue. This part shall provide:

A. <u>Statement of Work (SOW)</u> - In plain English, clearly define the technical tasks and sub-tasks to be performed, their durations and the dependencies among them. For each task and sub-task, provide:
   - A general description of the objective;
   - A detailed description of the approach to be taken, developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the goals of the task;
   - Identification of the primary organization responsible for task execution (prime, sub-contractor, team member, etc.) by name;

- The exit criteria for each task/activity, i.e., a product, event or milestone that defines its completion;
- Definition of all deliverables (e.g., data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities.

Note: Do not include any proprietary information in the SOW.

At the end of this section, provide a Gantt chart, showing all the tasks and sub-tasks on the left with the performance period (in years/quarters) on the right. All milestones should be clearly labeled on the chart.

B. A detailed description of the objectives, scientific relevance, technical approach and expected significance of the work. The key elements of the proposed work should be clearly identified and related to each other. Proposals should clearly detail the technical method(s) and/or approach(es) that will be used to meet or exceed each program milestone and should provide ample justification as to why the proposed method(s)/approach(es) is/are feasible. Any anticipated risks should be described and possible mitigations proposed. General discussion of the problem without specific detail about the technical implementation will result in an unacceptable rating.

C. State-of-the-art. Comparison with other on-going research, highlighting the uniqueness of the proposed effort/approach and differences between the proposed effort and the current state-of-the-art clearly stated. Identify the advantages and disadvantages of the proposed work with respect to potential alternative approaches.

D. Data sources: Identification and description of data sources to be utilized in pursuit of the project research goals. Explain clearly how the data selected will be an appropriate and adequate set for exploring the research topic being proposed. Offerors proposing to use existing data sets must provide written verification that all data were obtained in accordance with U.S. laws and, where applicable, are in compliance with End User License Agreements, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Offerors proposing to obtain new data sets must ensure that their plan for obtaining the data complies with U.S. Laws and where applicable, with End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. It is not expected that the research will involve human subjects. Proposals that include such research must include a compelling justification and include the documentation required in 6.B.5. (Human Use). Documentation must be well written and logical; claims for exemptions from Federal regulations for human subject protection must be accompanied by a strong defense of the claims. The Human Use documentation and the written verification are not included in the total page count. The Government reserves the right to reject a proposal if it does not appropriately address all data issues.

E. Description of the deliverables associated with the proposed research results, enhancing that of Volume 1, Section 2: Summary of Proposal.
Deliverables should be defined that show progress toward achieving the stated Program Milestones. Year-end deliverables are to include all data, prototypes, evaluation analyses and documents (software documentation, methodology documentation, year-end research reports, and publications). Other deliverables are to include research status reports including waypoint results, and significant completed prototypes, publications, and data. For all deliverables describe the proposed approach to intellectual property rights, together with supporting

rationale of why this approach offers the best value to the Government. This section should include a list of technical data, computer software or computer software documentation associated with this research effort in which the Government will acquire less than unlimited rights. For all software deliverables, the offeror shall include all as delivered version source code produced in the course of software development. These deliverables must include source code and the appropriate scripting, subordinate libraries, release notes, and other necessary components, data, and documentation. These and all other deliverables developed as part of the IARPA OSI Program shall be delivered prior to the end of each Program year. The Government desires at least Government Purpose Rights for all deliverables first produced in the performance of the contract; anything less will be considered a significant weakness in the proposal. For technical data and computer software not first produced in the performance of the contract (including all integrated commercial, proprietary, and/or third party data and software), the Government desires, for a minimum of one year after the conclusion of the OSI Program, the right to use, modify, perform, display or disclose each copy of the data deliverable for Government purposes. Offerors must describe their proposed approach to intellectual property consistent with Section 6.B.3 (Intellectual Property).

F. <u>Cost, schedule, milestones.</u> Cost, schedule, and milestones for the proposed research, including estimates of cost for each deliverable delineated by the primes and major sub-contractors, total cost, and company cost share, if any. Where the effort consists of multiple portions that could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. The milestones must not include proprietary information.

G. <u>Offeror's previous accomplishments.</u> Discuss previous accomplishments and work in this or closely related research areas and how these will contribute to and influence the current work.

H. <u>Facilities.</u> Describe the facilities that will be used for the proposed effort, including computational and experimental resources.

I. <u>Detailed Management Plan.</u> The Management Plan should identify both the organizations and the individuals within those organizations that make up the team and delineate the expected duties, relevant capabilities and task responsibilities of team members and expected relationships among team members. Expected levels of effort (percentage time or fraction of an FTE) for all key personnel and significant contributors should be clearly noted. A description of the technical, administrative and business structure of the team and the internal communications plan should be included. Project/function/sub-contractor relationships (including formal teaming agreements), Government research interfaces, and planning, scheduling, and control practices should be described. The team leadership structure should be clearly defined. Provide a brief biography of the key personnel (including alternates, if desired) who will be involved in the research along with the amount of effort to be expended by each person during the year. Participation by key personnel and significant contributors is expected to exceed 10% of their time. A compelling explanation of any variation from this figure is required.

J. <u>Resource Share.</u> Include the type of support, if any, the offeror might request from the Government, such as facilities, equipment or materials, or any such resources the offeror is willing to provide at no additional cost to the Government to support the research effort. Cost sharing is not required from offerors and is not an evaluation criterion, but is encouraged where there is a reasonable

probability of a potential commercial application related to the proposed research and development effort.

K. The names of other federal, state or local agencies or other parties receiving the proposal and/or funding the proposed effort. If none, so state.

Section 4: Additional Information

A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas on which the proposal is based. Copies of not more than three (3) relevant papers may be included in the submission. This information does not contribute to the page count of Volume 1.

4.B.2.   Volume 2: Cost Proposal {No Page Limit}

Section 1: Cover Sheet

(1) BAA number;
(2) Lead organization submitting proposal
(3) Type of business, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT"
(4) Contractor's reference number (if any)
(5) Other team members (if applicable) and type of business for each
(6) Proposal title
(7) Technical point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available)
(8) Administrative point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available)
(9) Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify)
(10) Place(s) and period(s) of performance
(11) Total proposed cost separated by basic award and option(s) (if any)
(12) Name, address, telephone number of the offeror's Defense Contract Management Agency (DCMA) administration office or equivalent cognizant contract administration entity, if known
(13) Name, address, telephone number of the offeror's Defense Contract Audit Agency (DCAA) audit office or equivalent cognizant contract audit entity, if known
(14) Date proposal was prepared
(15) DUNS number
(16) TIN number
(17) Cage Code
(18) Proposal validity period [minimum of 180 days]

[NOTE: See Appendix C for Cover Sheet Template]

Section 2: Detailed Estimated Cost Breakdown

(1) Total cost broken down by major cost items (direct labor, including labor categories; sub-contracts; materials; other direct costs, overhead charges, etc.) and further broken down by major task and phase

(2) Major program tasks by fiscal year
(3) An itemization of major subcontracts and equipment purchases
(4) An itemization of any information technology (IT[6]) purchase
(5) A summary of projected funding requirements by month
(6) The source, nature and amount of any industry cost-sharing
(7) Identification of pricing assumptions of which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter Expert/s, etc.).

The prime contractor is responsible for compiling and providing all subcontractor proposals. All subcontractor proposals shall also include the above listed cost breakdown. If any subcontractor does not wish to provide their direct and/or indirect rates to the prime contractor, their proposal may contain burdened rates; however, a copy of the proposal showing their unburdened rates shall be contained in the offeror's proposal as a sealed package to the Government. Subcontractor proposals should include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements. Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. NOTE: For IT and equipment purchases, include a letter stating why the offeror cannot provide the requested resources from its own funding.

Supporting cost and pricing information must be provided in sufficient detail to substantiate the summary cost estimates in Volume 1 above. Include a description of the method used to estimate costs and supporting documentation. *Key personnel must be listed by name for the prime and all subcontractors*. Note: "cost or pricing data" shall be required if the offeror is seeking a procurement contract award of $650,000 or greater unless the offeror requests an exception from the requirement to submit cost or pricing data. All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime, shall be made immediately available to the Government, upon request, under separate cover (i.e., mail, electronic/email, etc.), either by the offeror or by the subcontractor organization.

Consultant letter(s) of commitment should be attached to the Cost Volume and estimated costs should be included in the cost estimates.

4.C.   Submission Details

4.C.1.   Due Dates

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[6]IT is defined as "any equipment, or interconnected system(s) or subsystem(s) of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency. (a) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency which – (1) Requires the use of such equipment; or (2) Requires the use, to a significant extent, or such equipment in the performance of a service or the furnishing of a product. (b) The term "information technology" includes computers, ancillary, software, firmware and similar procedures, services (including support services), and related resources. (c) The term "information technology" does not include – (1) Any equipment that is acquired by a contractor incidental to a contract; or (2) Any equipment that contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment, such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, is not information technology."

Proposals must be received by or before 5:00 p.m. Eastern time on October 14, 2011, in order to be considered during the initial round of selections.

4.C.2.　　Proposal Delivery

The full proposal (one original hard copy with original signatures; one hard copy with original or copied signatures; and 1 electronic copy with Volume 1, Volume 2 and any permitted, additional information (.pdf format preferred) on a CD-ROM), and any white paper must be delivered to:

ODNI/IARPA
Attention: Jason Matheny
Telephone Number: 301-851-7500
Gate 5
1000 Colonial Farm Road
McLean, VA 22101

IMPORTANT: Deliveries must be made using one of the following commercial delivery services: UPS, FedEx or DHL; NOT United States Postal Service (USPS). Failure to use one of these methods may jeopardize or delay delivery of proposals. Note that under certain "same day delivery" options, UPS, FedEx and DHL may subcontract out their services to local delivery companies. These smaller local delivery companies will not be allowed access to this address to make deliveries.   Offerors are cautioned that they assume the risk of untimely delivery of their proposal if they use one of these "same day delivery" options. Deliveries by hand, e-mail or fax will not be accepted.

Offerors must ensure the timely delivery of their proposals. The mail facility closes at 5 p.m. Eastern time; delivery cannot take place after this time until the following day. IARPA will generally acknowledge receipt of complete submissions via e-mail within 24-48 hours and assign control numbers that should be used in all further correspondence regarding proposals. To be certain of delivery, however, it is suggested that a tracking number be obtained from the carrier.

Proposals must be received by the time and date specified in the BAA in order to be considered during the initial round of selections. IARPA may evaluate proposals received after this date for a period up to one year from the date of initial posting on FedBizOpps. Selection remains contingent on availability of funds. Failure to comply with the submission procedures may result in the submission not being evaluated.

SECTION 5: APPLICATION REVIEW INFORMATION

5.A.　　Evaluation Criteria

The criteria to be used to evaluate and select proposals for this Program BAA are described in the following paragraphs. Because there is no common statement of work, each proposal will be evaluated on its own merits and its relevance to the Program goals rather than against other proposals responding to this BAA. Specifics about the evaluation criteria are provided below, in descending order of importance.

5.A.1.　　Overall Scientific and Technical Merit

Overall scientific and technical merit of the proposal is substantiated, including unique and innovative methods, approaches, and/or concepts. The offeror clearly articulates an understanding of the problem to be solved. The technical approach is credible, and includes a clear assessment of primary risks and a means to address them. The selection process includes an assessment of the proposal against the state-of-the-art.

5.A.2.   Effectiveness of Proposed Work Plan

The feasibility and likelihood that the proposed approach will satisfy the Program's milestones and metrics are explicitly described and clearly substantiated along with risk mitigation strategies for achieving stated milestones and metrics. The proposal reflects a mature and quantitative understanding of the Program milestones and metrics, and the statistical confidence with which they may be measured. Offeror-proposed waypoints and metrics are clear and well-defined, with a logical connection to enabling offeror decisions and/or Government decisions. The schedule to achieve the milestones is realistic and reasonable.

The role and relationships of prime and sub-contractors is clearly delineated with all participants fully documented. Work plans demonstrate the ability to provide full Government visibility into and interaction with key technical activities and personnel; and a single point of responsibility for contract performance. Work plans must also demonstrate that key personnel have sufficient time committed to the Program to accomplish their described Program roles.

The requirement for and the anticipated use or integration of Government Furnished Property (GFP) including all equipment, facilities, information, etc., is fully described including dates when such GFP, GFE (Government Furnished Equipment), GFI (Government Furnished Information) or other similar Government-provided resources will be required.

The offeror's proposed intellectual property and data rights are consistent with the Government's need to be able to communicate Program information across Government organizations and to support transition of the Program results to Intelligence Community users at a reasonable cost.

5.A.3.   Contribution and Relevance to the IARPA Mission and Program Goals

The proposed solution meets the letter and intent of the stated program goals and all elements within the proposal exhibit a comprehensive understanding of the problem. The offeror clearly addresses how the proposed effort will meet and progressively demonstrate OSI Program goals. The offeror describes how the proposed solution contributes to IARPA's mission to invest in high-risk/high-payoff research that can provide the U.S. with an overwhelming intelligence advantage over its future adversaries. The proposed approach to intellectual property rights offers the best value to the Government.

5.A.4.   Relevant Experience and Expertise

The offeror's capabilities, related experience, facilities, techniques, or unique combination of these which are integral factors for achieving the proposal's objectives

will be evaluated, as well as qualifications, capabilities, and experience of the proposed principal investigator, team leader, and key personnel critical in achieving the proposal objectives. Time commitments of key personnel must be sufficient for their proposed responsibilities in the effort.

5.A.5.   Cost Realism

The proposed costs are reasonable and realistic for the work proposed. Estimates are "realistic" when they are neither excessive nor insufficient for the effort to be accomplished.   The proposal documents all anticipated costs including those of associate, participating organizations. The proposal demonstrates that the respondent has fully analyzed budget requirements and addressed resulting cost risks. Other sponsors who have funded or are funding this offeror for the same or similar efforts are identified. The Government shall evaluate how well all cost data are traceable and reconcilable.

IARPA recognizes that undue emphasis on cost may motivate Offerors to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. IARPA discourages such cost strategies. Cost reduction approaches that will be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

After selection and before award, the Contracting Officer will negotiate cost/price reasonableness.

5.B.   Review and Selection Process

It is the policy of IARPA to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the Government's technical, policy and programmatic goals. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

Proposals will only be evaluated against the criteria described under Section 5.A above, and will not be evaluated against other proposals since they are not submitted in accordance with a common work statement. For evaluation purposes, a proposal is the document described in Section 4.A.   Other supporting or background materials submitted with the proposal will be considered for the reviewer's convenience only and not considered as part of the proposal.

5.C.   Proposal Retention

It is the policy of IARPA to treat all proposals and white papers as competitive information and to disclose their contents only for the purpose of evaluation. Proposals will not be returned. Upon completion of the source selection process, the original of each proposal received will be retained at IARPA and all other non-required copies will be destroyed. A certification of destruction may be requested, provided that the formal request is sent to IARPA via e-mail within 5 days after notification of proposal results.

SECTION 6: AWARD ADMINISTRATION INFORMATION

6.A.   Award Notices

As soon as the evaluation of a proposal is complete, the offeror will be notified that: 1) the proposal has been selected for funding pending contract negotiations, or, 2) the proposal has not been selected.

6.B.   Administrative and National Policy Requirements

6.B.1.   Security

The Government requires that proposals submitted under this BAA be unclassified. No classified information will be accepted in response to this BAA.

6.B.2   Proprietary Data

It is the policy of IARPA to treat all proposals as competitive information, and to disclose their contents only for the purpose of evaluation.

All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the offeror's responsibility to <u>clearly define</u> to the Government what is considered proprietary data.

Performers can use their own data for development purposes as long as they follow the guidelines in 6.B.12 Lawful Use and Privacy Protection Measures.

6.B.3.   Intellectual Property

6.B.3.a.   Procurement Contract Offerors

6.B.3.a.1. Noncommercial Items (Technical Data and Computer Software)

Offerors responding to this BAA requesting a procurement contract to be issued under the FAR shall identify all noncommercial technical data and noncommercial computer software that it plans to generate, develop and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights and to assert specific restrictions on those deliverables. In the event that offerors do not submit such information, the Government will assume that it automatically has "unlimited rights" to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and noncommercial computer software generated, developed and/or delivered under any award instrument, then offerors should identify the data and software in question as subject to Government Purpose Rights (GPR).[7] The

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[7] "Government purpose rights" means the rights to use, modify, reproduce, release, perform, display, or disclose technical data and computer software within the Government without restriction; and to release or disclose technical data and computer software outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data or software for any United States Government purpose. United States Government purposes include any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government

Government will automatically assume that any such GPR restriction is limited to a period of five (5) years, at which time the Government will acquire "unlimited rights" unless the parties agree otherwise. Offerors are advised that the Government will use this information during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the offeror, as may be necessary, to evaluate the offeror's assertions. If no restrictions are intended, then the offeror should state "NONE."

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

NONCOMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

6.B.3.a.2. Commercial Items (Technical Data and Computer Software)

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

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

COMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

6.B.3.b.   All Offerors – Patents

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

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to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software for commercial purposes or authorize others to do so.

title, together with either: 1) a representation that the offeror owns the invention, or 2) proof of possession of appropriate licensing rights in the invention.

6.B.3.c. All Offerors – Intellectual Property Representations

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

6.B.4. Meeting and Travel Requirements

Performers are expected to assume responsibility for administration of their projects and to comply with contractual and Program requirements for reporting, attendance at Program workshops and availability for site visits.

6.B.4.a. Workshops

The OSI Program intends to hold a Program-level Kick-Off meeting during the first month of the Program and then hold Program-level Workshops every 12 months. These two-day Workshops will focus on technical aspects of the Program and on facilitating open technical exchanges, interaction and sharing among the various Program participants. Program participants will be expected to present the technical status and progress of their projects as well as to demonstrate their technical capabilities to other participants and invited guests at these events. For costing purposes, the offeror should expect one Workshop in the Washington, D.C., area and the other outside the Washington, D.C., area for each year of the contract.

6.B.4.b. Site Visits

Site visits by the Contracting Officer Representative and the OSI Program Manager will generally take place twice yearly during the life of the Program and will occur during the period between Program-level Workshops. These visits will occur at the Contractor's facility. Reports on technical progress, details of successes and issues, contributions to the Program goals and technology demonstrations will be expected at such visits.

6.B.5. Human Use

All research involving human subjects, to include use of human biological specimens and human data, selected for funding must comply with the federal regulations for human subject protection, namely 45 CFR Part 46, *Protection of Human Subjects* (http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm).

Institutions awarded funding for research involving human subjects must provide documentation of a current Assurance of Compliance with Federal regulations for human subject protection, for example a Department of Health and Human Services, Office of Human Research Protection Federal Wide Assurance (http://www.hhs.gov/ohrp). All institutions engaged in human subject research, to include sub-contractors, must also have a valid Assurance.

For all proposed research that will involve <u>human subjects</u>, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) on final proposal submission to IARPA. The IRB conducting the review must be the IRB identified on the institution's Assurance. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. Consult the designated IRB for guidance on writing the protocol. The informed consent document must comply with federal regulations (45 CFR Part 46).

The amount of time required to complete the IRB review/approval process may vary depending on the complexity of the research and/or the level of risk to study participants. Ample time should be allotted to complete the approval process. The IRB approval process can last between one to three months. No IARPA funding can be used towards human-subject research until ALL approvals are granted.

In limited instances, human subject research may be exempt from Federal regulations for human subject protection, for example, under Department of Health and Human Services, 45 CFR 46.101(b). Offerors claiming that their research falls within an exemption from Federal regulations for human subject protection must provide written documentation with their proposal that cites the specific applicable exemption and explains clearly how their proposed research fits within that exemption.

6.B.6. Publication Approval

It is anticipated that research funded under this Program will be unclassified research that will not require a pre-publication review. However, performers should note that pre-publication approval of certain information may be required if it is determined that its release may result in the disclosure of sensitive intelligence information. A courtesy soft copy of any work submitted for publication must be provided to the IARPA Program Manager and the Contracting Officer Representative (COR).

6.B.7.   Export Control

(1) The offeror shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the offeror shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.

(2) The offeror shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.

(3) The offeror shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(4) The offeror shall appropriately mark all contract deliverables controlled by ITAR and/or EAR.

(5) The offeror shall be responsible for ensuring that the provisions of this clause apply to its sub-contractors**.**

(6) The offeror will certify knowledge of and intended adherence to these requirements in the representations and certifications of the contract.

6.B.8.   Subcontracting

It is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as sub-contractors to contractors performing work or rendering services as prime contractors or sub-contractors under Government contracts and to assure that prime contractors and sub-contractors carry out this policy. Each offeror that submits a proposal that includes sub-contractors; is selected for funding (pending negotiations); and has proposed a funding level above the maximum cited in the FAR, may be asked to submit a sub-contracting plan before award, in accordance with FAR 19.702(a) (1) and (2). The plan format is outlined in FAR 19.704. Offerors must declare teaming relationships in their proposals and must specify the type of teaming arrangement in place, including any exclusive teaming arrangements. IARPA neither promotes, nor discourages the establishment of exclusive teaming agreements within offeror teams. Individuals or organizations associated with multiple teams must take care not to over-commit those resources being applied.

6.B.9.   Reporting

Fiscal and management responsibility are important to the OSI Program. Although the number and types of reports will be specified in the award document, all performers will, at a minimum, provide the Contracting Office, Contracting Officer Representative and the OSI Program Manager with monthly technical reports and monthly financial reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed upon before award. Technical reports will describe technical highlights and accomplishments, priorities and plans, issues and concerns; will provide evaluation and waypoint results; and will detail future plans. Financial reports will present an on-going financial profile of the project, including total project funding, funds invoiced, funds received, funds expended during the preceding month and planned expenditures over the remaining period.   Additional reports and briefing material may also be required, as appropriate, to document progress in accomplishing program metrics.

Performers will prepare a final report of their work at the conclusion of the performance period of the award (even if the research may continue under a follow-on vehicle). The final report will be delivered to the Contracting Agent, Contracting Officer Representative and the OSI Program Manager. The report will include:

- Problem definition
- Findings and approach
- System design and solution
- Possible generalization(s)
- Anticipated path ahead

6.B.10.   Central Contractor Registration (CCR)

Selected offerors not already registered in the Central Contractor Registry (CCR) may be required to register in CCR prior to any award under this BAA. Information on CCR registration is available at http://www.ccr.gov.

6.B.11.   Representations and Certifications

Prospective offerors may be required to complete electronic representations and certifications at http://orca.bpn.gov. Successful offerors will be required to complete additional representations and certifications prior to award.

6.B.11.b. Certification for Contract Awards

Certifications and representations shall be completed by successful offerors prior to award. Federal Acquisition Regulation (FAR) Online Representations and Certifications Application (ORCA) is at website http://orca.bpn.gov.

6.B.12.   Lawful Use and Privacy Protection Measures

All data gathered by performers must be obtained in accordance with U.S. laws and in compliance with the End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Before using such data, the performer must provide proof that the data was acquired in accordance with U.S. laws and regulations.

SECTION 7: AGENCY CONTACTS

Administrative, technical or contractual questions concerning this BAA should be sent via e-mail to dni-iarpa-baa-11-11@ugov.gov. If e-mail is not available, fax questions to 301-851-7673, Attention: IARPA-BAA-11-11. All requests must include the name, email address (if available), and phone number of a point of contact for the requested information. Do not send questions with proprietary content. IARPA will accept questions about the BAA until its closing. A consolidated Question and Answer response will be periodically posted on the IARPA website (www.IARPA.gov); no answers will go directly to the submitter.

    <u>Points of Contact:</u>
      The technical POC for this effort is

      Jason Matheny, IARPA, Office of Incisive Analysis
      ATTN: IARPA-BAA-11-11
      Office of the Director of National Intelligence
      Intelligence Advanced Research Projects Activity (IARPA)
      Washington, DC 20511
      Fax: (301) 851-7673
      E-mail: dni-iarpa-baa-11-11@ugov.gov

All emails must have the BAA number (IARPA-BAA-11-11) in the Subject Line.

APPENDIX A

Academic Institution Acknowledgement Letter Template

IARPA Broad Agency Announcement

IARPA-BAA-11-11

<insert date>

To: Mr. Thomas Kelso
     Chief Acquisition Officer
     ODNI/IARPA
     Office of the Director of National Intelligence
     Washington, D.C. 20511

Subject: Academic Institution Acknowledgement Letter

Reference: Executive Order 12333, As Amended, Para 2.7

This letter is to acknowledge that the undersigned is the responsible official of <insert name of the academic institution>, authorized to approve the contractual relationship in support of the Office of the Director of National Intelligence's Intelligence Advanced Research Projects Activity and this academic institution.

The undersigned further acknowledges that he/she is aware of the Intelligence Advanced Research Projects Activity's proposed contractual relationship with <insert name of institution> through IARPA-BAA-11-11 and is hereby approved by the undersigned official, serving as the president, vice-president, chancellor, vice-chancellor, or provost of the institution.

_____
    <Name>   Date
    <Position>

APPENDIX B

SAMPLE COVER SHEET

for

VOLUME 1: Technical/Management Details

BROAD AGENCY ANNOUNCEMENT (BAA)

OSI Program

IARPA-BAA-11-11

(1) BAA Number	IARPA-BAA-11-11
(2) Lead Organization Submitting Proposal	
(3) Type of Business, Selected Among the Following Categories: "Large Business", "Small Disadvantaged Business", "Other Small Business", "HBCU", "MI", "Other Educational", or "Other Nonprofit"	
(4) Contractor's Reference Number (if any)	
(5) Other Team Members (if applicable) and Type of Business for Each	
(6) Proposal Title	
(7) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(8) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Intellectual property rights addressed in accordance with 6.B.3?	Yes/No
(10) OCI Waiver or Waiver Request [see Section 3.A.1] Included?	Yes/No
(10a) If No, is written certification included?	
(11) Are one or more U.S. Academic Organizations part of your team?	Yes/No
(11a) If Yes, are you including an Academic Institution Acknowledgement Statement with your proposal for each Academic Organization that is part of your team?	Yes/No
(12) Total Funds Requested from IARPA and the Amount of Cost Share (if any)	$
(13) Date Proposal as Submitted.	

APPENDIX C

SAMPLE COVER SHEET

for

VOLUME 2: Cost Proposal

BROAD AGENCY ANNOUNCEMENT (BAA)

OSI Program

IARPA-BAA-11-11

(1) BAA Number	IARPA-BAA-11-11
(2) Lead organization submitting proposal	
(3) Type of Business, Selected Among the Following Categories: "Large Business", "Small Disadvantaged Business", "Other Small Business", "HBCU", "MI", "Other Educational", or "Other Nonprofit"	
(4) Contractor's Reference Number (if any)	
(5) Other Team Members (if applicable) and Type of Business for Each	
(6) Proposal Title	
(7) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(8) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Award Instrument Requested: Cost-Plus-Fixed-Fee (CPFF), Cost-Contract—No Fee, Cost Sharing Contract – No Fee, or Other Type of Procurement Contract (specify)	
(10) Place(s) and Period(s) of Performance	
(11) Total Proposed Cost Separated by Basic Award and Option(s) (if any)	
(12) Name, Address, Telephone Number of the Offeror's Defense Contract Management Agency (DCMA) Administration Office or Equivalent Cognizant Contract Administration Entity, if Known	
(13) Name, Address, Telephone Number of the Offeror's Defense Contract Audit Agency (DCAA) Audit Office or Equivalent Cognizant Contract Audit Entity, if Known	
(14) Date Proposal was Prepared	
(15) DUNS Number	
(16) TIN Number	
(17) Cage Code	
(18) Proposal Validity Period [minimum of 180 days]	

APPENDIX D

Letter Template

For

Organizational Conflicts of Interest Certification Letter Template

IARPA Broad Agency Announcement (BAA)

OSI Program

IARPA-BAA-11-11

(Month DD, YYYY)

Office of the Director of National Intelligence
Intelligence Advanced Research Projects Activity (IARPA)
Office of Incisive Analysis
ATTN: Jason Matheny
Washington, DC 20511

Subject: OCI Certification

Reference: OSI, IARPA-BAA-11-11, (Insert assigned proposal ID#, if received)

Dear Mr. Matheny,

In accordance with IARPA Broad Agency Announcement IARPA-BAA-11-11, Section 3.A.1, *Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest (OCI)*, and on behalf of _____ (offeror name) I certify that neither _____ (offeror name), nor any of our subcontractor teammates has as a potential conflict of interest, real or perceived, as it pertains to the <Insert Program Name>..

If you have any questions, or need any additional information, please contact (Insert name of contact) at (Insert phone number) or (Insert e-mail address).

Sincerely,

(Insert organization name) (Must be signed by an official that has the authority to bind the organization)

(Insert signature)

(Insert name of signatory)
(Insert title of signatory)

APPENDIX E

Integrated Data for Events Analysis (IDEA) Typology

IARPA Broad Agency Announcement (BAA)

OSI Program

IARPA-BAA-11-11

01 – Yield	011 – Yield to order	
	012 – Yield position	
02 – Comment	021 – Decline comment	
	022 – Pessimistic comment	
	024 – Optimistic comment	
	026 – Acknowledge responsibility	
03 – Consult	031 – Discussion	0311 – Mediate talk
		0312 – Engage in negotiation
	032 – Travel to meet	
	033 – Host a meeting	
04 – Endorse	041 – Praise	
	043 – Emphasize	
	044 – Apologize	
	045 – Forgive	
	046 – Ratify a decision	
05 – Promise	051 – Promise policy support	
	052 – Promise material support	0521 – Promise economic support
		0522 – Promise military support
		0523 – Promise humanitarian support
	054 – Assure	
	055 – Promise to mediate	
06 – Grant	062 – Extend invitation	
	063 – Provide shelter	0631 – Grant asylum
		0632 – Evacuate victims
	064 – Improve relations	
	065 – Ease sanctions	0651 – Observe truce
		0652 – Relax censorship
		0653 – Relax administrative sanctions
		0654 – Demobilize armed forces
		0655 – Relax curfew
		0656 – Demining
		0657 – Ease economic sanctions
		0658 – Ease military blockade
	066 – Release or return	0661 – Return, release person(s)
		0662 – Return, release property
07 – Reward	071 – Extend economic aid	
	072 – Extend military aid	
	073 – Extend humanitarian aid	
	074 – Rally support	
08 - Agree	082 – Agree or accept	0821 – Agree to peacekeeping
		0822 – Agree to mediation
		0823 – Agree to negotiate
		0824 – Agree to settlement
	083 - Collaborate	

	091 – Investigate	
	092 – Solicit support	
09 – Request	093 – Ask for material aid	0931 – Ask for economic aid
		0932 – Ask for armed assistance
		0933 – Ask for humanitarian aid
		0934 – Request an investigation
		0935 – Request mediation
		0936 – Request withdrawal or ceasefire
	094 – Call for action	
	095 – Request protection	
10 - Propose	101 – Offer peace proposal	
	103 – Offer to negotiate	
	104 – Offer to mediate	
11 - Reject	111 – Reject proposal	1111 – Reject cease fire
		1112 – Reject peacekeeping
		1113 – Reject settlement
		1114 – Reject request for material aid
		1115 – Reject proposal to meet
		1116 – Reject mediation
	112 – Refuse to allow	1121 – Impose restrictions
		1122 – Impose censorship
		1123 – Veto
	113 – Defy norms	1131 – Political flight
		1132 – Disclose information
		1133 – Break law
12 – Accuse	121 – Criticize or denounce	
13 – Complain	131 – Informally complain	
	132 – Formally complain	
14 – Deny		
15 – Demand	151 – Demand information	1511 – Investigate human rights abuses
		1512 – Investigate war crimes
	152 – Demand policy support	
	153 – Demand aid	
	154 – Demand protection, peacekeeping	
	155 – Demand mediation	
	156 – Demand withdrawal	
	157 – Demand ceasefire	
	158 – Demand meeting	
	159 – Demand rights	
16 – Warn	161 – Alerts	1611 – Armed force alert
		1612 – Nuclear alert of test
		1613 – Security alert
	162 – Armed force display	1621 – Armed force air display
		1622 – Armed force naval display
		1623 – Armed force troops display
17 – Threaten	171 – Non-specific threat	

	172 – Sanctions threat	1721 – Threaten to halt negotiations
		1722 – Threaten to halt mediation
		1723 – Threaten to reduce or stop aid
		1724 – Threaten to boycott or embargo
		1725 – Threaten to reduce or break relations
	173 – Armed force threats	1731 – Threaten forceful attack
		1732 – Threaten forceful blockade
		1733 – Threaten forceful occupation
		1734 – Threaten war
		1735 – Threaten nuclear attack
		1736 – Threaten biological or chemical attack
	174 – Give ultimatum	
	175 – Other physical force threats	
18 – Demonstrate	181 – Protest demonstration	1811 – Protest obstruction
		1812 – Protest procession
		1813 – Protest defacement
		1814 – Protest altruism
	182 – Armed force mobilization	1821 – Armed force activation
		1822 – Border fortification
19 – Sanction	191 – Armed force blockade	
	192 – Reduce routine activity	
	193 – Reduce or stop aid	1931 – Reduce or stop economic assistance
		1932 – Reduce or stop humanitarian assistance
		1933 – Reduce or stop military assistance
		1934 – Reduce or stop peacekeeping
	194 – Halt discussions	1941 – Halt negotiation
		1942 – Halt mediation
	195 – Break relations	
	196 – Strikes and boycotts	
	198 – Declare war	
20 – Expel		
21 – Seize	211 – Seize possession	2111 – Armed force occupation
		2112 – Armed force border violation
	212 – Arrest and detention	2121 – Political arrests
		2122 – Criminal arrests
	213 – Abduction	2131 – Hijacking
		2132 – Hostage taking and kidnapping

	214 – Covert monitoring	
22 – Force use	222 – Physical assault	2221 – Beatings
		2223 – Bodily punishment
		2224 – Sexual assaults
		2225 – Torture
	223 – Armed actions	2231 – Armed battle
		2232 – Assassination
		2233 – Coups or mutinies
		2234 – Small arms attack
		2235 – Artillery attack
		2236 – Suicide bombing
		2237 – Mine explosion
		2238 – Vehicle bombing
		2239 – Missile attack
	224 – Riot	
	225 – Unconventional weapons attack	2251 – Chem-bio attack
		2252 – Nuclear attack
	226 – Crowd control	
23 – Economic activity	231 – Transactions	2311 – Government transactions
		2312 – Private transactions
	232 – Default on payment	2321 – Government default on payment
		2322 – Private default on payment
29 – Other human action	291 – Elect representative	
	292 – Executive adjustment	
	294 – Judicial actions	
41 – Human illness	411 – Infectious human illness	
	412 – Non-infectious human illness	
42 – Human death		
43 – Economic status	431 – Balance of payments	
	432 – Currency reserves	
	433 – Exchange rates	
	434 – Equity prices	4341 – Equity prices up
		4342 – Equity prices down
	435 – Corporate earnings	4351 – Earnings above expectations
		4352 – Earnings below expectations
	436 – Real estate prices	
	437 – Commodity prices	
	438 – Interest rates	4381 – Upward trend in interest rates
		4382 – Downward trend in interest rates
44 – Cognitive state	441 – Affective state	
	442 – Beliefs and values	
49 – Other human		

condition		
51 – Natural disaster	511 – Drought	
	512 – Earthquake	
	513 – Flood	
	514 – Hurricane	
	515 – Tornado	
	516 – Volcano	
	517 – Tsunami	
	518 – Wildfire	
	519 – Extreme climactic condition	
52 – Accident	521 – Hazardous material spill	
	522 – Radioactive leak	
59 – Other incident		
71 – Animal attack		
72 – Animal death		
73 – Animal illness		
79 – Other animal incident		
98 – A&E performance		
99 – Sports contests		

APPENDIX F

Sector typology used in the Text Analysis By Augmented Replacement Instructions (TABARI)

IARPA Broad Agency Announcement (BAA)

OSI Program

IARPA-BAA-11-11

Level 1	Level 2	Level 1	Level 2
Government	Judicial	Nongovernmental Organizations/Activists	Information or Communication or Transparency
Government	Executive	Nongovernmental Organizations/Activists	Medical or Health
Government	Legislative or Parliamentary	Nongovernmental Organizations/Activists	Business
Government	Military	Nongovernmental Organizations/Activists	Refugees or Displaced
Government	Police	Nongovernmental Organizations/Activists	Education
Government	State Owned Enterprises	Nongovernmental Organizations/Activists	Energy
Government	Local	Nongovernmental Organizations/Activists	Agricultural
Government	Religious	Nongovernmental Organizations/Activists	Charity
International Organization	Law or Justice or Judicial	Nongovernmental Organizations/Activists	Development
International Organization	Environment	Nongovernmental Organizations/Activists	Labor
International Organization	Diplomatic	Nongovernmental Organizations/Activists	Environment
International Organization	Defense or Security	Nongovernmental Organizations/Activists	Legal
International Organization	Information or Communication or Transparency	Nongovernmental Organizations/Activists	Ethnic
International Organization	Energy	Nongovernmental Organizations/Activists	Media
International Dissident	Criminals or Gangs	Nongovernmental Organizations/Activists	Human Rights
International Dissident	Protestors or Popular Opposition or Mobs	Multinational Corporation	Agricultural
International Dissident	Banned Parties	Multinational Corporation	Transportation
International Dissident	Exiles	Multinational Corporation	Defense or Security
International Dissident	Radicals or Extremists or Fundamentalists	Multinational Corporation	Utilities
International Dissident	Rebel	Multinational Corporation	Heavy Industrial or Chemical
International Dissident	Insurgents	Multinational Corporation	Durable Goods
International Dissident	Terrorists	Multinational Corporation	Consumer Goods
International Dissident	Separatists	Multinational Corporation	Consumer Services
Social	General Population or Civilian	Multinational Corporation	Consulting or Financial Services
Social	Labor	Multinational Corporation	Science or Technology or Knowledge or Innovation
Social	Refugees or Displaced	Multinational Corporation	Medical or Health or Pharmeceutical

	Agricultural	Ideological	Center Right
	Business		Center Left
	Ethnic		Communist
	Legal		Tribalist
	Education		Fundamentalist
	Religious		Secular
	Medical or Health		Nationalist
	Media		Far Left
Dissident	Insurgents		Far Right
	Organized Violent		Centrist
	Exiles		Libertarian
	Banned Parties		Anarchist
	Rebel	Nongovernmental Organization (International)	Refugees
	Radicals Extremists or Fundamentalists		Business
	Separatists		Education
	Protestors or Popular Opposition or Mobs		Medical or Health
	Criminals or Gangs		Information or Communication or Transparency
Parties	(National) Major Party		Charity
	(National) Minor Party		Environment
	Provincial Party		Energy
	Municipal Party		Development
Elite			Human Rights
Ethnic			Agricultural
Religious		Unidentified Forces	