Enterprise Information Web (EIW) RFI Industry Day

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Questions Submitted for Interview
Can the interview be done at/after the November 30th Industry Discussion?
Can one see the EIW work done so far in presentations and Web content?
Can one use the EIW public content to pilot semantic technologies while all of this RFI process is going on?
Is the overall goal to significantly reduce the number and cost of DoD Information Systems as my first story found?
Is the RFI goal to federate selected DoD content for delivery to the warfighter on mobile devices over secure networks? E.g. my TBI knowledgebase

Is the RFI goal to deliver public DoD content so the public can better understand and use it? E.g. my Weapons Systems 2011 knowledgebase

Is the RFI goal to use the most advanced semantic technology that I know of to do Dynamic Case Management (e.g. Be Informed)?

Is the DoD considering forming a Semantic Interoperability Center of Excellence like the EU’s SEMIC.EU?

Should industry form a non-profit consortium with multiple organizations to do this kind of work under say a CRADA like the NCOIC is doing for the FAA NextGen and National Geospatial Intelligence Agency?

Will there be a follow-up event to discuss the results of the RFI with the participants/public?

How many have responded to the RFI/are registered to attend the two Industry Events?

Invite to attend Opening Keynote at SemTech DC - Wed. 11/30 8:30am-9:30am

Invitation

Enterprise Information Web (EIW) RFI Industry Day Participant Follow-up, 12 December 2011

Enterprise Information Web (EIW) - RFI Questions and Answers

Slides by Jonathan Underly

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Revised RFI

1. Contracting Office Address
The Senate agreed recently to give DoD an even more aggressive legal deadline for getting ready to pass an audit. Under current law, DoD has to be audit-ready by the close of business on September 30, 2017. Meanwhile, Defense Secretary Leon Panetta has told the department he wants to be ready for a partial audit by 2014. Source: Federal News Radio.

DoD currently has a mix of legacy accounting systems together with an estimated 2,200 enterprise resource planning (ERP) systems across the various services and DoD agencies. The Department is trying to consolidate those systems, but Mark Keeley, a partner at PricewaterhouseCoopers, said, before a special panel of the House Armed Services Committee recently, that the sheer number of ERPs isn't the problem. For accountants, it's the fact that they often contain duplicative and inconsistent information.

"An auditor doesn't know which one to choose," he said. "If the business folks have data in a legacy system and an ERP system, it's difficult to reconcile that information and then to nail down a population. We spend a great deal of time identifying the absolute population against which we can test. Less may be more, so I applaud the consolidation effort."

The Defense and Veterans Affairs Departments have been pursuing creation of a single, compatible health IT record. It would start when service members enlist and would stay with them after they muster out of DoD and become clients of Veterans Affairs health care. "If you can't talk in the same language between the two organizations, then it makes developing a common record very difficult," said DoD Deputy Chief Management Officer Beth McGrath. Each department, on its own, had been working to update their respective EHR systems. Earlier this year, those disparate
efforts were fused when VA Secretary Eric Shinseki and then-Defense Secretary Robert Gates signed a memo, enshrining into official policy the creation of a common EHR system between the two departments.

Dennis Wisnosky, DoD Deputy Chief Management Office, CTO, told the Semantic Technology and Business Conference this past week that the Semantic Interoperability RFI, that I wrote about and responded to recently, is meant to address the multiple ERP and EHR systems problem, and needs more visibility like it received recently in Federal Computer Week. Unfortunately, his excellent presentation was not part of the actual DoD RFI Industry Data session where it could have helped provide a broader context and we can still not see the DoD Enterprise Information Web that is offered as the proof this has demonstrated value after two years of effort and expense.

So I went to the DoD RFI Industry Day session last week and asked my questions which are provided elsewhere in detail and wrote this story.

Jonathan Utley, DoD Special Expert and Program Manager in the DoD Deputy Chief Management Office, provided an introductory presentation with demos and answered a lengthy series of questions from the audience of about 100. In response to my request, they are setting up a new web site with more background information than they have provided so far. My chief concerns that I and others expressed were as follows:

1. What is the expected outcome given that they have been doing research on this approach for the past two years, the results are limited, and the approach seems to be technology constraining?

2. Why not use the App Contest approach to foster innovation like Federal CTO Aneesh Chopra is advocating?

3. Why not use the CRADA (Cooperative Research and Development Act) approach that the FAA, National Geospatial Intelligence Agency, USGS, etc. are using to get input from a consortium of experts?

4. Why limit this to the ontology-driven engineering approach when ontology change management is still a difficult and unsolved problem and there are other technologies that are more mature and should be tried as well in parallel?

5. Is the DoD data for the 2,000 - 5,000 information systems really good enough to support the "semantic approach"?

It was the last question that has me really concerned given my experience the past six months in looking at DoD data and applying data science to it to build applications like dashboards. If the data is not good enough to support the lofty objectives described by Leon Panetta, Beth McGrath, Dennis Wisnosky, and Mark Keeley, above, then DoD will not get to Semantic Interoperability and the Audit Deadline. Like Federal CTO Aneesh Chopra said recently: "The government needs data science and data scientists" to work on these kinds of critical problems.


December 1, 2011

Global Reach!

DCMO CTO/CA

Missions of the DoD

Warfighter Mission Area

Business Mission Area

Intel Mission Area

Enterprise Information Environment Mission Area

SGOATS

SSBI

CNCI

ASD/STEM

ADD/DO

DCMO

Global Reach!
Slide 3

DoD Management Challenges

Reach of the Business Mission Area

The Secretary of Defense is responsible for a half-trillion dollar enterprise that is roughly an order of magnitude larger than any commercial corporation that has ever existed. DoD estimates that business support activities—the Defense Agencies and the business support operations within the Military Departments—comprise 54% of the DoD enterprise.

Slide 4

A Reasoned Approach

DoD Management Challenges

I want to make sense out of this. How do I do that?

A Reasoned Approach
Slide 5 SOA-Cloud-Semantic

Slide 6 DoD solution architectures vision
Slide 7 A metaphor to consider

A Vision for DoD Solution Architectures

Altitude

Heading

Airspeed

DoD EA

Business Enterprise Architecture: BEA

AppDomain Vocabulary

Real-Time Domain Vocabulary

Log Domain Vocabulary

SM Domain Vocabulary

DMSO

A metaphor to consider!

Slide 8 It’s all about Services

Heading – Altitude - Airspeed

It's all about Services
Slide 11 It’s all about all SOA-Cloud-Data

Slide 12 In another venue

Slide 12 In another venue

http://semanticommunity.info/Build_DoD_in_the_Cloud/Enterprise_Information_Web_for_Semantic_Interoperability_at_DoD/Entr
Updated: Wed, 23 Sep 2015 06:44:09 GMT
Powered by mindtouch™
Slide 15 How Hard is this?

Slide 16 Remember
Slide 17 Otherwise

Slide 18 We have proof

http://www.youtube.com/watch?v=qb4K3t5zOack
Slide 19 You can see it today

Slide 20 Thank you!

Thurs. Dec. 1 - 1:40pm-2:30pm

Department of Defense Enterprise Information Web (EIW) – Bottom Line Up Front

- The DoD Enterprise Information Web (EIW) is pioneering the adoption of Semantic Technology and approaches that can be the way forward for enterprise business intelligence and solution architectures in the DoD.

Thank you!
Questions Submitted for Interview

Can the interview be done at/after the November 30th Industry Discussion?

Done in the Q&A part of the meeting.

Can one see the EIW work done so far in presentations and Web content?

http://semanticommunity.info/Build_DoD_in_the_Cloud/Enterprise_Information/Web_for_Semantic_Interoperability_at_DoD/Ent
They are setting up a new Web site.

Can one use the EIW public content to pilot semantic technologies while all of this RFI process is going on?

Apparently

Is the overall goal to significantly reduce the number and cost of DoD Information Systems as my first story found?

No

Is the RFI goal to federate selected DoD content for delivery to the warfighter on mobile devices over secure networks? E.g. my TBI knowledgebase

No

Is the RFI goal to deliver public DoD content so the public can better understand and use it? E.g. my Weapons Systems 2011 knowledgebase

No

Is the RFI goal to use the most advanced semantic technology that I know of to do Dynamic Case Management (e.g. Be Informed)?

No

Is the DoD considering forming a Semantic Interoperability Center of Excellence like the EU's SEMIC.EU?

Did not ask.

Should industry form a non-profit consortium with multiple organizations to do this kind of work under say a CRADA like the NCOIC is doing for the FAA NextGen and National Geospatial Intelligence Agency?

They liked my suggestion.

Will there be a follow-up event to discuss the results of the RFI with the participants/public?

Undecided.
How many have responded to the RFI/are registered to attend the two Industry Events?

The West Coast Event was cancelled due to lack of response.

Invite to attend Opening Keynote at SemTech DC - Wed. 11/30 8:30am-9:30am

Hello, You are receiving this email as you have registered for the DoD EIW RFI Industry Day, scheduled for Wed. Nov. 30, 2011 starting at 9:30am. This event is co-located with the Semantic Tech & Business Conference; MediaBistro (the organizer), has invited folks attending the EIW RFI Industry Day to attend their opening keynote presentation, Jim Hendler, Rensselaer Polytechnic Institute, from 8:30am-9:30am, keynote description: http://semtechbizdc2011.semanticweb.com/sessionPop.cfm?confid=64&proposalid=4381. You are also invited to the evening exhibit reception on Wednesday evening, Nov. 30 from 5:15pm-6:15pm – Just identify yourself as a DoD EIW RFI Industry Day Attendee.

Best regards, Jessica

Jessica Zucal
Supporting the Department of Defense
BMA Chief Architect & CTO, within the Office of the Deputy Chief Management Officer
Jacobs Technology Inc., Strategic Solutions Group
Office: (703) 607-3426, Cell: (703) 862-2828

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Watch Mr. Dennis Wisnosky discuss Semantic Technology and the Future of the DoD Enterprise: http://www.youtube.com/watch?v=OzW3Gc_yA9A

Invitation

Date: 30 November 2011  Time: 9:30 am till Noon (eastern)
Location: Kellogg Conference Hotel, Gallaudet University
800 Florida Avenue, N.E., Washington, DC 20002

Thank you for your registration to the EIW RFI Industry Day scheduled for 30 November 2011. We appreciate your interest in the Department of Defense (DoD), Office of the Deputy Chief Management Officer (DCMO), EIW Request for Information (RFI) posted in FedBizOpps.gov on 9 November 2011.
The purpose of industry day is to ensure companies, interested in the EIW project and RFI, have an opportunity to learn about the EIW project and submit questions through an open forum. The general session, open to all registrants, will include a presentation by the EIW Manager regarding the project vision, status, and schedule followed by a Q&A session. An overview of the industry day agenda and process is below.

Additionally, the EIW Manager and project management team will be conducting prescheduled, one-on-one meetings—with companies intending to respond to the EIW RFI—on a first-come, first-serve basis. The industry appointments create a venue for company-specific questions regarding the RFI and EIW project to further assess whether the products and/or services your company provides would benefit EIW.

**EIW RFI General Forum:** 9:30 am to Noon
EIW Project & RFI Presentation
Open Question & Answer Session

**Appointment Only Meetings:** Company-specific EIW RFI Questions
Times: 1:00 to 4:45 pm
Process: Pre-scheduled appointments at 15 minute intervals (first-come, first-serve). EIW anticipates three sessions will be held per hour, beginning at 1:00 pm and closing at 5:00 pm. One-on-one meetings are limited to two members from your company.
Schedule of Appointments:

1:00 – 2:00 pm (e.g., 1:00 – 1:15 pm, 1:20 – 1:35 pm, 1:40 – 1:55)
2:00 – 3:00 pm
3:00 – 4:00 pm
4:00 – 5:00 pm
Waiting List

Request Appointment: If your organization would like to be considered for a one-on-one meeting, please coordinate with your registered attendee(s) and submit a single request with the company’s preferred timeslot (e.g., first and second preference) to the EIW Organizational Change Management lead at eiwcommunications@bta.mil no later than 23 November 2011.

**RFI Information:** The DCMO is accepting written questions through 29 November 2011. EIW will publish the questions and answers on FedBizOpps.gov (registration is required for notifications) at the following link: https://www.fbo.gov/index?s=opportunity=core&cview=0.

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**Enterprise Information Web (EIW) RFI Industry Day Participant Follow-up, 12 December 2011**

Thank you for your participation in the EIW RFI Industry Day held on 30 November 2011 in Washington, DC. We appreciate your interest in the Department of Defense (DoD), Office of the Deputy Chief Management Officer (DCMO), EIW Request for Information (RFI) originally posted in FedBizOpps.gov on 9 November 2011.

The purpose of the RFI Industry Day was to ensure companies, interested in the EIW project and RFI, had an opportunity to learn about the EIW project and submit questions through an open forum. Additionally, the EIW Manager and project management team conducted prescheduled, one-on-one meetings with companies intending to respond to the EIW RFI.

The DCMO accepted written questions and RFI Industry Day participant questions through 30 November 2011. The EIW Project Office, in conjunction with the contracting office, has published an updated RFI, the questions and answers,
and the Industry Day presentation on FedBizOpps.gov (registration is required for notifications) at the following link: https://www.fbo.gov/index?s=opportun...=core&_cview=1.

We encourage companies to review the questions and answers and the updated RFI before submitting their response. Participants will note that the EIW RFI submission date and time have been changed to Wednesday, 21 December 2011, no later than 9:00 am (eastern).

We appreciate your interest in the EIW project and attendance at the EIW RFI Industry Day.

Regards,
EIW Communications

The RFI referenced in this notice is issued solely for information and planning purposes and does not constitute a solicitation. All information received in response to the referenced RFI marked Proprietary will be handled accordingly. Responses to the RFI will not be returned. Whatever information is provided in response to the RFI will be used to assess tradeoffs and alternatives available for determining how to proceed in the acquisition process for the EIW. In accordance with FAR 15.201(e), responses to this RFI are not offers and cannot be accepted by the Government to form a binding contract.

Enterprise Information Web (EIW) - RFI Questions and Answers

1. Can DCMO share the example referenced in the RFI? "A DARPA technology, called “Semantic Web”...demonstration has proven to solve...federating enterprise data, providing near-real-time access to authoritative data sources in legacy systems and aggregating data across the Department."

The software that has been developed has been published at forge.mil and can be found by searching using key word “EIW”.

2. Define "authoritative data sources"? Can this be a data warehouse? "EIW is envisioned...reduce delays...entry of new information...in a traditional data warehouse" "Translating existing and to-be Service-specific data elements...a common view of information", "gather, translate and display information"

Yes, an authoritative data source can be a data warehouse. Authoritative data sources include any databases, data stores/marts/warehouses, ERPs, file stores, etc. where authoritative data is maintained.

3. Solution scope? Is the RFI response expected to address the workflow from the query/report writer all the way to the source databases? Alternatively, can one assume each remote data source does/can make its data available in a common RDF, relational, or XML format, as a web service?

Responses are expected to address the workflow from the query/report writer to the source database. Responses should assume that EIW will need to process data that is available in a number of different forms depending on the capabilities of the source DoD database (e.g., data stored in relational databases, XML format, RDF format, fixed or delimited files, or web services).

4. How is data labeled/tagged for role based access today? "Provide access to cross-domain information by authorized users except where limited by law, policy, or security classifications"

DoD is currently developing an enterprise-wide IDAM capability which will define how data will be labeled/tagged for role-based access. EIW will need to comply with the DoD IDAM requirements. The government is seeking input from respondents on their approach to user access controls.

5. Define "On-demand, dynamic queries"? Is the scope of queries known in advance, are they on a subset or all data in the "authoritative data sources"?

http://semanticommunity.info/Build_DoD_in_the_Cloud/Enterprise_Information_Web_for_Semantic_Interoperability_at_DoD/Entr

Updated: Wed, 23 Sep 2015 06:44:09 GMT
Powered by mindtouch
The initial queries to be implemented will be defined and known in advance. Long-term the plan is to build ad-hoc query capabilities based on mapped concepts against authoritative sources. Pre-defined or ad hoc queries will be limited in scope to the defined and mapped concepts available in the “authoritative data source”. This could include a subset or all data contained in a given data source.

6. Nature of queries? Will queries subquery/join centralized reference data to provision a query to a remote data source?

Yes.

7. Inferencing? Is there a requirement to inference to discover new relationships, if so is inferencing required across the distributed heterogeneous data sources?

The work performed to date has not identified a requirement for inferencing. Going forward, developing functional requirements and use cases will dictate whether this becomes a requirement.

8. Solution Selection. Is the DCMO looking for a single software vendor solution or considering EIW solution components from more than one software vendor? An example could be to leverage certain Open Source based middleware components, but leveraging an Open Standards (not Open Source) commercial COTS solution for security requirements, etc.

At this point DCMO is open minded in regards to the software as long as it is complies with the W3C-based open standards.

9. RFI Question #25-26 - What is the purpose and workload for this system? What part of the solution is expected to run in it?

The purpose of the system is to aggregate, run analytics against, and present data from authoritative sources across the DoD. The workload is to be determined. For RFI purposes we generated a baseline set of workload assumptions to inform our research. We are seeking input from respondents on the solution architecture.

10. RFI Question #28 - Some data sources have a schema (such as a database or an XML document or an RDF/OWL source), others don't (such as a text or binary file). Has the DoD made an effort to classify, categorize, or quantify the data sources that do not have an associated schema? Can a more comprehensive description be given regarding the semantic data sources?

DoD has not classified, categorized, or quantified the data sources that do not have an associated schema. A more comprehensive description of the data sources cannot be provided at this time.

11. RFI Question #28 - Where are the disparate ontologies going to live? Will they be rolled up to a central location or exist only at distributed local locations independently?

We are seeking input from respondents on the solution architecture.

12. RFI Question #28 - Is there a need to support analysis (querying, mining) based on semantic content of textual documents (obtained through natural language understanding and entity extraction)?

While DoD does anticipate the authoritative data sources to be both structured and unstructured, the work performed to date has not identified a requirement for mining unstructured textual documents.

13. RFI Question #36 - Are data sources read-only, or can they be enhanced with view definitions or triggers that don’t affect the actual data or data definitions?

Responses should assume that EIW will not have access to modify or enhance authoritative data sources.
14. RFI Question #36 - Are there any other restrictions which might inhibit broad Federation of authoritative data sources, including Cross-Domain and other restrictions?

No other restrictions are anticipated within the Business Mission Area.

15. RFI Question #37 - What are the data management products used for these data sources? Can additional programs be installed on these remote systems to process queries?

There are a variety of data management products in use for the data sources for which we do not currently have a comprehensive list. Additional programs could potentially be installed on the remote systems to process queries (subject to approval by the system owner).

16. RFI Question #40 - Must user have access to sources in #37 or can access to data be managed through queries controlled on the system defined in #25-26?

Final solutions are not determined, however it is envisioned that access to data will be managed by the queries controlled in EIW. Users should not need direct access to authoritative data systems.

17. RFI Question #43 - Are all data sources protected by an independent layer of security technology or is there a central authentication and authorization mechanism? Or both? If all data sources are protected by an independent layer of security technology, what additional value is expected from enforcing another layer of security in the information federation engine?

DoD is currently developing an enterprise-wide IDAM capability which will define how data will be labeled/tagged for access. EIW will need to comply with the DoD IDAM requirements.

18. RFI Question #43 - Where does the DCMO see the user credential information living? Is this in central, distributed, or both types of repositories?

DoD is currently developing an enterprise-wide IDAM capability which will define how data will be labeled/tagged for access. EIW will need to comply with the DoD IDAM requirements.

19. Is the government also interested in solution alternatives that are not based on Semantic Web Technology (RDF/OWL)? If there can be a solution that satisfies all the use cases, meets all functional and non-functional requirement, but uses traditional EAI technology stack with some quasi-semantic twist like business rules, fuzzy logic or pattern matching – would the client be interested in hearing about it?

The government is interested in a solution that complies with the W3C Standards. If a “traditional EAI technology stack” can be implemented, utilizing the W3C Standards, in a way that meets the needs outlined in the RFI then we would be interested in hearing about it.

20. How open is the government to use of purely experimental technologies (like pure-play RDF stores) that have never been used in the enterprise or applied at scale comparable to EIW? Will they be willing to invest in experimentation without guarantee that the outcome will be suitable or would even work?

For the purposes of this RFI, we are not currently interested in purely experimental technologies and do not intend to invest in experimentation without guarantee that the outcome will be suitable or will even work.

21. Does the government have a preference whether the data remains in situ (in position) within ADSs versus pulled into a centralized system? If it is required/acceptable to pull the data into a central location, is this to be a temporary event with data remaining with the entity that owns the corresponding ADS or is the pulled data to be consolidated at the DoD level for a specified period of time?
The government is open to learning about the pros and cons of both approaches and understanding how either may be implemented.

22. Do they have a preference whether the searches are run in situ within ADSs?

The government currently does not express a preference for where searches are run. We are open to industry best practices in this area.

23. How strong are preferences in 21 & 22 – non-negotiable vs. nice to have?

No preference has been expressed.

24. Reference the prototype of desired implementation; can the government describe their existing or integration layer or technology footprint?

The software developed for current proof of technology efforts has been made available on forge.mil.

25. Appears the DARPA Semantic Web solution was the basis of the government pilot. Is that pilot to be extended as part of the overall solution? Is the government looking for an integrator for implement the pilot foundation? Can the government speak to any short comings of the pilot?

No decision has been made regarding whether the current proof of delivery activity will be extended as part of the overall EIW solution. The proof of delivery activity has shown that the technology exists to use an approach compliant with W3C Standards to access authoritative data from multiple sources, run analytics on that data and present it to users.

26. What is the estimated/expected size of the resulting IDIQ contract in terms of funding per year and total contract cap?

While the RFI may help DoD decide to conduct an acquisition, that decision has not yet been made. Therefore it is premature to answer this question.

27. What is the desired ratio between COTS product purchases and R&D (developmental) funding in the resulting IDIQ contract?

While the RFI may help DoD decide to conduct an acquisition, that decision has not yet been made. No specific ratio between COTS product purchases and developmental funding has been established at this time. In addition, the RFI responses will help the government to compare the out-of-the box COTS functionality vs. custom development/configuration based on the functional requirements.

28. Given the ongoing work on EIW and previous work on HR-EIW, what are the prioritized technology gaps/needs to complete the EIW vision?

The EIW solution need is as described in the RFI.

29. Can you list all commercial vendors that the DCMO/EIW is already working with?

Current EIW technology demonstration activities are performed by SAIC, Spry, Inc. and Reveleytix.

30. Given that the IDIQ contract might result in multiple awards, will the DCMO perform the role of an overall integrator or is it envisioned that this role will be competed amongst contractors?

While the RFI may help DoD decide to conduct an acquisition, that decision has not yet been made. Therefore it is premature to answer this question.
31. What intellectual property rights does the DCMO seek in work that has been previously developed by the contractors? How would such work be made available (if at all) to the community of performers?

Intellectual property rights expectations are described in RFI section 2.5.

32. What data sources are prioritized to be integrated in EIW next? Are those available through data.gov or a similar repository with schema and data contents examples?

EIW does not currently exist. We are in the planning stages of determining how to implement a capability to solve the requirements identified in the RFI. Hence, there is not a current prioritization of data sources to be integrated into EIW next.

33. Specifically, the RFI includes the following statement: "A Defense Advanced Research Projects Agency (DARPA) technology, called "Semantic Web", was chosen and implemented as a model-driven concept demonstration for the EIW. This demonstration has proven to solve several key challenges of federating enterprise data, providing near-real-time access to authoritative data sources in legacy systems and aggregating data across the Department."

a. What is the demonstration referred to on page 2?

EIW has conducted research and technology demonstration activities to assess the potential application of a semantic approach based on W3C Standards within the DoD Business Mission Area.

b. Are there any reports or findings that are or will be made available to the public or alternatively to those bidding on a potential EIW RFP?

The demonstration software that has been developed has been published at forge.mil and can be found by searching using key word "EIW". There are no other reports or findings that will be published.

c. Was any software code or other intellectual property created at government expense during this demonstration?

Yes, reference the answer to 33.b.

d. If the answer to question 1C is 'yes,' will this (software code or other intellectual property) be made available through open source or otherwise for those bidding on a potential EIW RFP?

Yes, reference the answer to 33.b.

34. On page 6, specifically section 4.1.2, the respondent is required to make the following representation: "A statement that the respondee will allow the Government to release its proprietary data to the Government support contractors."

a. Who are the 'Government support contractors,' the RFI is alluding to?

DoD has engaged a with program management office (PMO) support contractors who are supporting this activity. The current PMO support contractors are Peridot Solutions, LLC, Semantic Strategy Inc and The Pirko Group.

b. Are these Government support contractors under any obligation to maintain confidentiality?

Yes, they are committed to maintaining confidentiality in accordance with their contracts as well as through individual non-disclosure agreements (NDA).

c. Can these Government support contractors use a respondee's proprietary data in any manner it should so choose, to include competing against a respondee in the marketplace or on any subsequent EIW RFP?
No. Proprietary data is protected by support contractors’ contracts with DoD. Support contractors will not be allowed to compete on any subsequent EIW request for proposal for technology development or implementation.

35. Under ‘Other,’ is the following question: DoD intends to execute a streamlined acquisition process to procure the EIW and support rapid capability deployment. Please provide recommended approaches DoD could implement to rapidly execute the EIW acquisition phase within the regulatory and statutory constraints of the BCL.

a. What does BCL mean?


36. On page 4, the RFI has a screenshot with the following caption: “the information federation/virtualization function will display the resulting outcomes in a single view according to user roles, preferences and logic via either pre-defined or ad-hoc reports and queries”. In the Training/Anticipated Learning Curve section is the following question “What is the anticipated learning curve for end users (non-technical domain experts, analysts, and decision makers)?”

a. What end user roles are envisioned/required?

A complete set of end user roles has not yet been defined. However, the end users will be the people who request and view the data, develop and present reports, and make decisions based on the data presented.

b. To what extent has the user interface design has been decided on during the demonstration phase?

No decision has been made regarding user interface design during the technology demonstrations. The user interface shown is based on a specific use case that was selected to support the demonstration.

c. Were any usability tests conducted during the demonstration and if the answer is ‘yes’, will their findings be made available?

No usability tests were conducted during the technology demonstration.

36. On page 5 RFI provides the following acquisition key date “Estimated development start in second quarter of 2012.”

a. What other key events and dates have been established?

b. For example, will the RFP/RFQ be issued and if the answer is ‘yes’, when?

An RFI revision will be published on FBO.gov that will remove this statement. The RFI responses will help inform decision-making and whether DoD proceeds with an acquisition.

37. Can you make the HR data for what we’ve already done available to all?

Models and descriptions will be made available in the DoD Business Enterprise Architecture (BEA), but no HR data will be released.

38. Can you explain “Data Lineage Traceability”?

Intent is to be able to identify with confidence where data comes from.

39. What do you mean by Unified Logic (is it not OWL)?
Unifying Logic is the framework that includes the others as subsets: RDF, RDF-S, Rule RIF, OWL, and SPARQL.

40. What do we mean by PII (requirements)?

PII is Personally Identifiable Information (PII). Additional information may be found in OMB Memorandum M-07-16, “Safeguarding Against and Responding to the Breach of Personally Identifiable Information”.

41. For the purposes of transmitting info from one source to another, if OWL is the grammar what is the progress for common vocabulary?

EIW as envisioned is dependent on concepts defined in a common vocabulary. The Business Enterprise Architecture (BEA) is the foundation for these concepts and supports commonality through models and ontologies. As new or changed items are incrementally created, they will be integrated into the BEA.

42. What are the authoritative data sources? Are legacy system owners on board?

Authoritative data sources include databases, data stores/marts/warehouses, ERPs, file stores, etc. where authoritative data is maintained. We recognize there is a change management aspect to gaining access to data in the authoritative data sources but that is not within the scope of the RFI.

43. What do you consider the top technical problems re: use cases.

Well-defined use cases are necessary to ensure that EIW will satisfy real-world user needs for information and analytics. Other technical challenges include scalability, diversity of the DoD network and authoritative data sources, and security accreditation of tools and environments.

44. The RFI discusses what you want to accomplish, but also constrains us as to how it should be done.

This doesn’t seem to open up opportunity to use industry best practices. Why is government constraining the technical approach on semantic technology?

We do not consider this RFI to be constraining in terms of using industry best practices. The only constraint is using standard based models that represent our business.

45. Authoritative data sources. Is there an OWL RDF requirement being imposed on services?

There is no policy requiring OWL RDF at this time.

46. How do you characterize data sources?

Most existing DoD data sources are relational, with some XML, flat files and documents, or web services.

47. Is the project moving away from aggregated model?

Yes, we are moving to a use case-driven approach based on analytic needs.

48. How do we get from the study phase to acquisition phase (project RFP)?

While the RFI may help DoD decide to conduct an acquisition, that decision has not yet been made. Information submitted by vendors in response to the RFI will be used to help determine the path forward to providing DoD with a capability that meets that described in the RFI.

49. Please elaborate on the layer cake diagram (in the EIW Industry Day presentation).
The layer cake is used to illustrate the W3C architecture for Semantic Web. Please refer to the W3C for details on the applicable standards.

50. Per the (EIW Industry Day) presentation, some problems appear to be solved; however there appears to be issues with crypto. Security seems to be a big issue. What is the focus area of the project?

The technology demonstration activity to date has shown that the open standards approach outlined in the RFI can be used to access data from authoritative data sources, run analytics on that data, and present it to end users. Security was specifically mentioned during the presentation as the design of a comprehensive security architecture in accordance with DoD security standards was beyond the scope of the technology demonstration.

51. Secretary of Defense Leon Panetta has agreed to a 2014 audit of the DoD. Why wouldn’t we focus this effort on DoD financial systems?

At this point the EIW team has not received guidance to focus this effort specifically on DoD financial systems. However, we may apply EIW to this problem (financials) in the future.

52. Please clarify what you mean by “this is not a planned acquisition at this time”. Will you release the names of current contractors working on project?

The PMO support contractors are contractually and individually obligated to protect proprietary data and they will not be allowed to compete for an EIW technology contract. Also, the current technology demonstration support contractors will not participate in the RFI review process nor will they be given access to information received in response to the RFI.

52. Regarding the CIOSP-2 vehicle. Why did you pick that vehicle for the RFI?

We released the RFI at both FedBizOpps and CIOSP-2 to get to the vendors. DISA DITCO provided the EIW team the most expeditious way to get contracting officer support to publish the RFI. No determination has been made that future acquisition activities will use this contract vehicle.

53. Have you standardized mapping standards?

We have been using R2RML during our technology demonstrations, but we have not published a standard. We have looked at multiple standards and are open to others.

54. Where will the ontologies “live”?

Ontologies should be published and available for discovery by authorized DoD users. No specific decision has been made at this time where the ontologies will “live”. The government is looking for industry’s input on potential solution architectures.

55. Please talk a bit about integration with service enterprise models, ex. GFEBS? How will EIW be expected to integrate?

The technology demonstrations to date have focused on integration of relational data sources through semantic information models. However, EIW will need to integrate with a variety of data sources including relational databases, XML files, web services, etc. The government is seeking input from respondents on potential solution architectures.

56. We agree that a semantic solution is viable. In addition to that, are you open to other types of solutions?

DoD has made a commitment to create standards-based semantic business models for EIW. If other types of solutions can be implemented, utilizing the W3C standard models, in a way that meets the needs outlined in the RFI then we would be interested in hearing about it.
57. What is the relationship with DODAF regarding integrating architectures?

DODAF could be represented through a semantic OWL model so that it can be used as an information model to expose DODAF views.

58. Why are there DM2 based DODAF constraints in the RFI?

We don’t believe those constraints are in RFI.

59. Change Management is still unsolved. Shouldn’t we try other ideas?

This RFI is for technology related market research purposes only and change management issues are out of scope.

60. Where do queries come from?

Queries are identified, defined, analyzed and developed with input from data owners and subject matter experts from business mission areas in the Department.

61. Is there “lessons learned” info about previous prototyping?

We do not anticipate releasing additional information regarding the technology demonstration activities.

62. How will you distribute future info?

FedBizOpps

63. Where can we find additional info on the project to date?

We are currently developing a space on the DCMO website for this.

64. Regarding the USMC and Army databases, is the requirement SQL?

The USMC and Army test data used for technology demonstration was stored in a relational database. SQL was then used to query the relational test data based on defined semantic to relational mappings.

Many of the authoritative data source systems within the Business Mission Area utilize relational database technology.

65. Please clarify IT Compliance (access controls, etc.).

Reference DoD Instruction 8500.2 Information Assurance (IA) Implementation for additional information about DoD IA requirements. Reference DoD Instruction 8510.01 DoD Information Assurance Certification and Accreditation Process (DIACAP) for information about the compliance process.

66. How do we see the solution fitting in with the existing architecture?

Based on the results of technology demonstrations to date, we are confident that a W3C standards-based, model-driven approach can meet the needs outlined in the RFI (e.g., business concepts were described in an information model, the concepts were mapped to data sources, queries were executed against the model, and results were retrieved and consolidated based on the mappings). Any potential solution will need to securely access information in a variety of distributed data source systems to meet the needs described in the RFI. The government is seeking input from respondents on potential solution architectures.

67. What network are you anticipating this to run on?
Currently the NIPRNET, maybe the SIPRNET in the future.

68. What is the user interface compatibility?

EIW should provide a web-based capability to end-users (e.g., accessible via web browser). The user interface will have to comply with current policies for usability and accessibility (e.g., Section 508). See also DoD Instruction 8552.01 Use of Mobile Code Technologies in DoD Information Systems. No specific decisions regarding user interface design or implementation have been made during technology demonstrations.

69. What are the browser requirements?

EIW will need to support the most commonly used web browsers including Internet Explorer, Firefox, and Chrome. Internet Explorer is typically used within DoD as the default browser for Windows workstations.

70. Data Source: Are you expecting to integrate data that is not under our control?

Yes. EIW does not own or operate the authoritative data sources.

71. EPA exposed data and had people develop apps. Would DoD consider making a public challenge with a prize?

We are open to it, but cannot expose potentially sensitive DoD information that has not been approved for public release.

72. Semantics doesn’t solve problem of authoritative data sources. Where in the architecture do we propose solving the problem of gaining access to authoritative data sources?

Access to authoritative data sources will be established based on agreement with the responsible Service/Agency and system/information owner. EIW must provide a solution architecture that is robust, secure, and interoperable with a variety of data source types. The government is seeking input from respondents on potential solution architectures.

73. What are the tolerances for leniency in queries?

This depends on the use cases. It will vary depending on what particular information is being requested.

74. Is it possible to evaluate current software?

Yes, software developed to support the EIW technology demonstration has been posted on Forge.mil.

75. What is the desired outcome of EIW?

In the scope of your response, refer to the RFI. We want to be able to provide enterprise information visibility that is compliant with standards in the BEA.

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**Slides by Jonathan Underly**
Department of Defense
Enterprise Information Web (EIW)

30 Nov 2011

Jonathan Underly
Project Manager

Slide 2 Agenda

- Who We Are
- Big Picture
- EIW Defined
- EIW Desired Benefits
- EIW RFI
- Demo
Slide 3 Who We Are

Slide 4 Big Picture
Slide 5 DoD Management Challenges

DoD Management Challenges

Early Attempts at DoD Enterprise Architecture

Slide 6 Dod Architecture Progression

DoD Architecture Progression

Blueprinting ➔ BEA - Stovepiped ➔ BEA - Semantic

Branch office-based; readable but not analyzable; stovepiped

Core Business Mission (CBM) based; readable within CBM; not analyzable; not integrated with solution architectures

End-to-End based; analyzable; executable; integrated with & consumable by solution architectures
Slide 7 EIW History

**EIW History**

Problem: Personnel Visibility (PV), accurate and timely pay
Alternative: Build an enterprise ERP for HR functionality across DoD

<table>
<thead>
<tr>
<th>Measure</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agility</td>
<td>10-year program, system did not pass Integration Testing and Acceptance Testing</td>
</tr>
<tr>
<td>Interoperability</td>
<td>100+ planned point-to-point interfaces to legacy systems, 1/3 successfully built and tested</td>
</tr>
<tr>
<td>Savings</td>
<td>$555,555 spent, system not fielded</td>
</tr>
</tbody>
</table>

**Post-DIMHRS Personnel Visibility Problem Persists**

<table>
<thead>
<tr>
<th>Personnel Visibility</th>
<th>Interoperability/Federation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoD currently lacks the enterprise-level capability to quickly and accurately account for personnel, manage troop strength, and plan</td>
<td>• Standards &amp; transactional systems in constant state of change • Relationally-based architectures expensive to change/maintain</td>
</tr>
</tbody>
</table>

Slide 8 The Root of Enterprise Analytics Problem: Federation

**The Root of Enterprise Analytics Problem: Federation**

PV consists of many domains within domains

DoD will not solve Enterprise Analytics problem until it solves the INFORMATION FEDERATION problem

Each Military Service is a domain. Each Service fields its own applications and creates its own information to execute its mission

It is prohibitively complex to federate and integrate applications within & across domains

Slide 9 Ontology-Based Information Integration & Analytics 1

http://semanticommunity.info/Build_DoD_in_the_Cloud/Enterprise_Information_Web_for_Semantic_Interoperability_at_DoD/Ent...
Slide 10 Ontology-Based Information Integration & Analytics 2

Ontology – Based Information Integration & Analytics

What Pay Grade is Col. Blatt?

Graph 1

Ontology – Based Information Integration & Analytics

How much Dwell Time does Col. Blatt have?

Graph 2
Slide 11 Ontology-Based Information Integration & Analytics

- Ontology-Based Information Integration & Analytics
- Graph3
- Who has a Pay Grade of “O6” and has at least 24 months of Dwell Time?

Slide 12 A Vision for DoD Solution Architecture

- A Vision for DoD Solution Architectures
- User engages with DoD Business Process (DBP)
- Query BEA directly
  - Enterprise
  - Analytics
  - Compliance
  - HI/Portfolio Management

http://semanticommunity.info/Build_DoD_in_the_Cloud/Enterprise_Information_Web_for_Semantic_Interoperability_at_DoD/Entx
Updated: Wed, 23 Sep 2015 06:44:09 GMT
Powered by mindtouch™
EIW Defined

A New Approach to Enterprise Analytics

The Enterprise Information Web (EIW) is envisioned to be a mechanism for reaching into authoritative data sources (ADS) to satisfy enterprise information needs. It should accomplish three things:

1. Report near real-time, authoritative information on-demand
2. Support enterprise information standards (Open and DoD standards)
3. Support IT flexibility/agility
Slide 19 We Are Pursuing a Path to Use Commercial Resources to Implement EIW

- Currently conducting market research
- A component of our market research is a Request for Information (RFI)
  - This is a formal government request for a written response and an optional presentation
- We will use the information we receive to:
  - Update our market research
  - Confirm or alter our implementation assumptions
  - Plan our contracting strategy

Slide 20 RFI Written Response and Oral Presentation

- Written responses due 19 December 2011
- Companies who submit written responses will be offered the opportunity to provide an oral presentation and participate in an interface session with DoD
- These will be 2 hour sessions
  - Either in person in Alexandria, Va., or via web conference
- My team will proactively schedule these sessions with respondents
Revised RFI

Request for Information (RFI) for Enterprise Information Web (EIW)

1. Contracting Office Address

Defense Information Systems Agency, DITCO-Scott PL8313, P.O. 2300 East Drive, Bldg 3600, Scott AFB, IL, 62225-5406

2. Background and Description

The Department of Defense (DoD) is an immense and complex organization. The nation’s largest employer, DoD has more than 1.4 million men and women on active duty serving in the Army, Navy, Air Force and Marines (Services), 750,000 civilian personnel and 1.1 million serving in the Army and Air National Guard and Army, Navy, Air Force and Marine Reserves (Components). Additionally, more than 5.5 million family members and military retirees receive benefits from the DoD. Supporting the diverse information technology (IT) needs of this population is a tremendous challenge that involves approximately 15,000 unclassified networks, more than seven million computers and IT devices, and a 170,000-person information management/IT workforce.

Our forces work more closely together today than ever supporting and executing missions. This “joint” approach to operations increases the enterprise-level information needs of decision makers as we respond to conflicts, natural disasters, and other missions with multi-service/component forces. In this context, the Office of the Secretary of Defense (OSD) and the Joint Chiefs of Staff require current, accurate, and timely information from authoritative data sources to make effective, informed decisions affecting the DoD.

The information necessary for decision-making is often contained in multiple source systems managed by the Military Services, Components and/or Defense Agencies. In order to provide an enterprise view or answer questions that involve
multiple Services or Components, each organization receives data requests then must interpret the question and collect, combine, and present the requested information.

**Challenges with Enterprise Information Visibility**

Over the years Services and Components have developed and deployed several information systems using available resources (server infrastructure, operating systems, application platforms and skilled labor) to support their business needs at different levels of their organizations. This resulted in multiple systems using different technologies and data standards that support the same business processes.

Current technical solutions to meet enterprise data reporting needs include developing reports from data extracts and implementing point-to-point interfaces across systems to bridge multiple data formats to retrieve, compile, and assemble data into standard reports. Manual data collection is required when information is not available in an existing data extractor interface. This time-consuming process limits the Department's ability to rapidly respond to unplanned information requirements.

Because the Services do not collect consistent data, Combatant Commanders (COCOMS) and other users in DoD and other Federal agencies must apply different business rules, processes, data and systems to obtain data and perform analyses to support enterprise reporting and planning needs. Workaround solutions include receiving extracts of personnel data from multiple Services’ legacy systems and using the data to determine eligibility for certain benefits, support trend and policy analysis, and respond to inquiries from members of Congress, OSD, and the Joint Staff. The result is that gathering data and assembling reports is currently sub-optimized as it requires interfacing with multiple Service systems in multiple file formats and assembling data into standard reports.

Generally speaking, the analytic gaps at the DoD enterprise level are not caused by lack of data. Rather it is the collection, analysis, and reporting of data that is time-consuming, expensive, and sometimes inaccurate.

The examples below provide context for enterprise information visibility:

1. The Investment Review Board (IRB) is a senior-level DoD governance board that checks for redundancy in information technology investments, aligns the investments to business needs and enforces standards compliance before certifying funds. Currently there are limited automated mechanisms or reports that provide the information required to make these assessments. Rather, investment decisions are made based upon analyzing data call results and historical information.

2. There are DoD Enterprise Standards for Service Member Race and Ethnic Group codes although conceptually these are the same for each Service, they have been coded differently in many of the Services’ systems. Data coding disconnects like this prevent timely and accurate reporting as they cause time-consuming manual data manipulation and interpretation when the underlying data is being used to generate joint reports.

Currently, military leave data is collected and managed in multiple systems at different frequencies throughout the Department. It is often difficult for individual service members to know how much leave they actually have vs. how much leave has been processed. It also difficult for DoD to accurately account for the leave carried by its service members. At the enterprise level this is a significant financial accountability issue.
The Deputy Chief Management Officer (DCMO), in support of the Enterprise Information requirements, is seeking information on solutions utilizing Semantic Web Technology to provide the type of enterprise level information visibility and access to financial, personnel and asset data across the DoD enterprise and across domains to support war planning, policy development analysis, and decision-making.

The Enterprise Information "Web" (EIW) is envisioned to provide greater access to authoritative information in near-real-time; reduce or eliminate delays between the entry of new information and its availability to decision makers in a traditional data warehouse, report, or extract; and move away from creating additional redundant data-marts and databases. A Defense Advanced Research Projects Agency (DARPA) technology, called “Semantic Web”, was chosen and implemented as a model-driven concept demonstration for the EIW. This demonstration has proven to solve several key challenges of federating enterprise data, providing near-real-time access to authoritative data sources in legacy systems and aggregating data across the Department.

In simple terms, EIW, using Semantic Web technology, should allow the DoD to have visibility of personnel, pay, logistics and other pertinent data at the enterprise (DoD) level using authoritative data from each of the Services. It will enable data aggregation using established standards, regardless of code values or format, to support analysis and decisions in a near real-time environment. Below are the priorities for EIW to meet its mission.

**Priority 1:** Enterprise Information: On-demand, dynamic queries that return standard enterprise-wide results directly from authoritative data sources.

**Priority 2:** Standards-based information: Translating existing and to-be Service-specific data elements into standard reporting language for OSD-level information requirements. Rather than force the Services to comply with uniformity and make coding changes to existing authoritative data sources, a solution is needed that will translate their unique instances into a common view of information. In addition the solution needs to comply with W3C standards and Department of Defense Business Enterprise Architecture (http://www.bta.mil/products/bea.html).

The high level EIW requirements are to:

- Support timely access to authoritatively sourced enterprise information
- Provide business intelligence capabilities that support cross domain information visibility
- Enable standard and ad-hoc reporting
- Provide access to cross-domain information by authorized users except where limited by law, policy, or security classifications
- Provide standards-based information

In addition to enterprise information visibility, the DoD anticipates the EIW solution will assist with portfolio management of systems and business processes, enhance policy compliance, increase data accuracy and avoid data duplication across the enterprise.

**EIW Solution Approach:**

http://semanticommunity.info/Build_DoD_in_the_Cloud/Enterprise_Information/Web_for_Semantic_Interoperability_at_DoD/Enter...
The EIW solution is expected to directly access Authoritative Data Sources (ADS) to satisfy enterprise information needs and accomplish the following three objectives:

1. On-demand reporting of timely and authoritative information
2. Support enterprise information standards (Open standards, Ontology-based, DoD Business Enterprise Architecture (BEA) alignment)
3. Support IT flexibility/agility

The EIW plans to apply Semantic Web industry standards including Resource Description Framework (RDF) and Web Ontology Language (OWL) to the greatest extent possible in the solution. RDF is a standard framework for describing varying information resources, such as databases, that allow those resources to be unambiguously described in a format readable by both humans and machines. OWL is a knowledge representation language that makes it possible to enrich data with additional meaning, which allows more people (and more machines) to do more with the data.

The anticipated EIW solution includes modeling and aligning disparate information resources using RDF/OWL to develop ontologies at the enterprise level and enabling the deployment of an executable enterprise information management platform that acts upon these RDF/OWL ontologies. Together RDF and OWL will allow the Military Services to maintain their distinctive information systems while maintaining alignment to a common vocabulary at the enterprise level to support analysis and policy making.

The picture below depicts the anticipated EIW solution pattern:

![EIW Solution Pattern Diagram](image)

Key EIW solution expectations:

* The EIW solution is expected to gather, translate and display information from authoritative sources to the end user in accordance with enterprise-level domain ontologies
* The solution is expected to support federation/virtualization to aggregate information from authoritative data sources, primarily located in the Military Services, in accordance with enterprise-level domain ontologies
* The information will be translated and aggregated in accordance with enterprise-level domain ontologies maintained by functional experts.
* The information federation/virtualization function will display the resulting outcomes in a single view according to user roles, preferences and logic via either pre-defined or ad-hoc reports and queries

2.1. **PURPOSE**: This RFI is intended to help DoD learn from industry about products, solutions, and approaches that address EIW’s requirements in whole or in part. This market research will help the government to support upcoming
investment decisions and identify prospective vendors (developers, system integrators, product vendors) and viable approaches to address government needs.

Companies that provide written responses will be provided an opportunity to also orally present their responses if desired. We will communicate the plan for in-person/web conference presentations after the government has received and reviewed the written responses.

2.2. THE GOVERNMENT DOES NOT INTEND TO AWARD A CONTRACT ON THE BASIS OF THIS RFI OR REIMBURSE ANY COSTS ASSOCIATED WITH THE PREPARATION OF RESPONSES TO THIS RFI.

2.3. This RFI is issued solely for information and planning purposes and does not constitute a solicitation. All information received in response to this RFI marked Proprietary will be handled accordingly. Responses to the RFI will not be returned. Whatever information is provided in response to this RFI will be used to assess tradeoffs and alternatives available for determining how to proceed in the acquisition process for the EIW. In accordance with FAR 15.201(e), responses to this RFI are not offers and cannot be accepted by the Government to form a binding contract.

2.4. This RFI is a request for all interested parties including small businesses to describe their technical capabilities and demonstrated experience with support for EIW’s needs. All interested contractors are requested to provide written response to the requirements detailed below. A response to this RFI is necessary in order to assist ODCMO in determining the potential levels of interest, adequate competition, and technical capability to provide the required services.

2.5. The potential project is subject to the following parameters:

Delivery Period: IT programs must deliver capability at least every 12 to 18 months as guided by “Directive-Type Memorandum (DTM) 11-009, Acquisition Policy for Defense Business Systems (DBS)”.

Below is a notional schedule of EIW with illustrative increments, domains and release of deliverables.

In accordance with policy, delivery of capabilities would be based on an incremental development approach that requires releases at least every 90 days. This approach provides faster delivery and complies with DoD acquisition guidance for rapid capability deployment.

Security Requirements: The EIW needs to comply with the following security policies and directives:

- DoDD 8500.1, Information Assurance (IA)
- DoDI 8500.2, Information Assurance (IA) Implementation
- DoDI 8510.01, DoD Information Assurance Certification and Accreditation Process (DIACAP)
DoDI 8520.2, Public Key Infrastructure (PKI) and Public Key (PK) Enabling
DoDI 8520.03, Identity Authenticators for Information Systems
DoDI 8551.1, Ports, Protocols, and Services Management (PPSM)
DoDI 8552.01, Use of Mobile Code Technologies in DoD Information Systems
DoD 5200.1-R, Information Security Program
DoDD 5200.2, DoD Personnel Security Program
DoD 5200.2-R, Personnel Security Program Regulation
DoD 8570.01-M, Information Assurance Workforce Improvement Program

Intellectual Rights:

a. The government will require unlimited data rights for all software source code developed at taxpayer expense.

b. The government may want to release such software as described in 3.5.a as open source software (OSS) to implement a software maintenance philosophy of OSS community development (per DFARS 227.7203-2(b)(1)).

c. The government may direct an EIW contractor to establish, maintain and release software it has developed at taxpayer expense as open source software (OSS).

Off-the-Shelf (OTS) Technologies: Per government law and policy, COTS (including open source software) is acceptable for use in this program.

3. Sources Sought

3.1. This Sources Sought Synopsis is requesting responses to the following criteria from interested parties that can provide the required services under the North American Industry Classification System (NAICS) Code 541512, Computer Systems Design Services. This Synopsis is encouraging responses from any qualified and capable source, including Small Businesses, Service Disabled-Veteran Owned Small Businesses, Veteran-Owned Small Businesses, Women-owned Small Businesses, HUBZone Small Businesses, Small Disadvantaged Small Businesses, Historically Black Colleges and Universities/Minority Institutions, Small Business Joint Ventures, Consortiums and Teaming Partners.

4. Requested Information

Responses shall be in Microsoft Word for Office compatible format. Responses shall contain two sections. Section 1 shall include company information and is page unlimited. Section 2 shall include technical information and is limited to 25 pages.

4.1. Section 1 of the response shall provide administrative information, and shall include the following as a minimum:
4.1.1. Name, mailing address, overnight delivery address (if different from mailing address), phone number, fax number, and e-mail of designated point of contact.

4.1.2. A statement that the respondee will allow the Government to release its proprietary data to the Government support contractors.

4.1.3. Business type (large business, small business, small disadvantaged business, 8(a)-certified small disadvantaged business, HUB Zone small business, woman-owned small business, very small business, veteran-owned small business, service-disabled veteran-owned small business) based upon North American Industry Classification System (NAICS) code 541512, Computer Systems Design Services. "Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR part 121. A small business concern for the purposes of this procurement is generally defined as a business, including its affiliates, averaging no more than [$$] million dollars in annual receipts. Annual receipts of a concern that has been in business for 3 or more complete fiscal years means the annual average gross revenue of the concern taken for the last 3 fiscal years. Annual receipts of a concern that has been in business for less than 3 complete fiscal years means its total receipts for the period it has been in business, divided by the number of weeks including fractions of a week that it has been in business, and multiplied by 52. Respondees are cautioned, however, that this is a general description only. Additional standards and conditions apply. Please refer to Federal Acquisition Regulation FAR 19 for additional detailed information on Small Business Size Standards. The FAR is available at http://www.arnet.gov.

4.1.4 Vendor Administrative Information:

Name of person responsible for the information contained in this RFI

Telephone number

Fax number

Email address

Web page

4.1.5 Indicate your companies' desire to provide an informal oral presentation to DoD regarding your response to this RFI.

4.2 Section 2: Vendor Products/solutions Information

Please complete and submit the following table to comprise Section 2 of the response. Additional information that does not fit into the table can be attached as an appendix apart from the table and within Section 2, and must remain within the 25 page limit for Section 2.
Vendor Product/Solution Information

Discuss how your semantic products and solutions address EIW objectives and provide your solution recommendations with supporting rationale.

How many Semantic Technology implementations has your organization completed?

Discuss key lessons learned during these implementations as they may apply to EIW.

Have you implemented Semantic Technology solutions in large, geographically distributed organizations similar to the DoD? If so, please provide client reference name and contact information.

Provide information on your implementation methodology and how it would support an incremental release development approach (reference illustration).

Describe any third party alliances, relationships, or dependencies with your semantic products and solutions.

Were your software solutions written by your organization or acquired from a third party?

System Administration

Describe the recommended skill sets and approximate level of effort required for installing and configuring your solution.

Describe the recommended system administrator roles, responsibilities, and skill sets required for operation and routine maintenance of your solution.

Is it feasible to train functional users to perform system administration functions in your solution?

Training / Anticipated Learning Curve
Do you offer online training or tutorials?

What types of courses do you provide for end users, implementers, and administrators and what are the course durations?

What is the anticipated learning curve for end users (non-technical domain experts, analysts, and decision makers)?

Do you offer formal classroom based training?

What prerequisite skills are required for implementers and administrators?

What is your anticipated learning curve for implementers and administrators?

What types of courses do you provide for end users, implementers, and administrators and what are their durations?

**Server and Infrastructure Requirements**

What operating systems and platforms are supported by your products/solutions?

List all web browsers supported by your products/solutions.

Does your solution require browser plug-ins or add-ons?

Are there any end user capabilities in your solution that are not supported from a web browser? If so please describe.

Does your solution require installation of client software on the user’s desktop? If so please describe.
Will your product work from a mobile device? Please identify any limitations and functionality differences from workstation clients.

Does your system provide application programming interfaces (API) for customization?

Based on your experience implementing Semantic Technology solutions, what hardware/software configuration(s) would you recommend for a medium sized organization with approximately 500 users operating from geographically distributed offices in the continental US?

Based on your experience implementing Semantic Technology solutions, what minimum hardware/software configuration(s) would you recommend for a large scale organization with 5000+ users operating 24X7 from multiple offices distributed worldwide?

How does your solution address scalability as additional users and data sources are added?

Describe your technical approach to enabling web-based federated data access to multiple data sources. Assume that data sources are geographically distributed and do not share the same schema.

List any data source drivers, adapters or connectors provided with your solution (e.g. Oracle database driver)

Data Access

Describe your technical approach to enabling web-based federated data access to multiple data sources. Assume that data sources are geographically distributed and do not share the same schema.

Describe the types of structured or unstructured data that your solution can access (e.g. relational databases, spreadsheets, XML files, etc.).

Describe your approach for developing predefined queries and reports with specific content and formats.
Describe all supported query languages, scripting languages, or other tools for development and execution of queries.

List data source drivers, adapters or connectors provided with your solution (e.g. Oracle database driver).

Does your solution support development of custom data source drivers, adapters or connectors?

Describe the process of adding a new data source and making the data available for end user access.

Describe the process of translating or transforming data from different schemas for presentation to the end user in a standard format.

Describe developer tools available to automate design, development, and testing of queries and reports.

Describe your approach to ad hoc queries based on user options and parameters selected at run time.

Describe your approach for managing user access to information including access to a data source, access to specific tables or columns, and access to subsets (records) of data based on the characteristics of those records.

**End User Support**

Describe the technical architecture and development process for creating and deploying end user applications in your solution.

Describe capabilities such as queries, reports, analysis and data visualization tools available to the end user in your solution. Indicate which capabilities are supported in a web browser and which capabilities require additional client software.

**Security Features**
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the major security features and capabilities of your solution.</td>
<td></td>
</tr>
<tr>
<td>Describe your approach for enabling PKI as described in DoDI 8520.2.</td>
<td></td>
</tr>
<tr>
<td>Describe your approach for data protection and encryption for all local/temporary data storage as well as for information during transfer from the data source to the end user.</td>
<td></td>
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<tr>
<td>Describe your approach for user authentication and authorization.</td>
<td></td>
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<tr>
<td>Describe your approach for managing user access to information including access to a data source, access to specific tables or columns, and access to subsets (records) of data based on the characteristics of those records.</td>
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</tbody>
</table>

**Standards Support**

What standard data formats, protocols and interfaces would you propose for EIW?

Describe your current or planned support for Semantic Web standards including but not limited to W3C Resource Description Framework (RDF) and Web Ontology Language (OWL).

Describe any other standards supported in your solution.

Where open standards are not available, describe how new open standards would be created, and what groups would govern them (e.g. IETF, W3C, OASIS, etc.).

**Consulting Services**

Discuss your services delivery model to implement your solution for DoD and/or similar large private or public organizations.

Have you provided consulting services to DoD in the past? If so, summarize your work with size, scope and complexity of your services.
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>Describe your observations and lessons learned in providing services to large organizations (similar to DoD) as they may apply to EIW.</td>
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<tr>
<td><strong>Cost Model</strong></td>
<td></td>
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<tr>
<td>What is your consulting support cost model (e.g., Hourly/daily, methods of contract (FFP/T&amp;M/Cost Plus))?</td>
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<tr>
<td>What is your technical support cost model (e.g., hours, methods of contract)?</td>
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<tr>
<td>What is your standard software annual maintenance cost?</td>
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<tr>
<td>In your product roadmap, how many major upgrades do you project over the next 5 years?</td>
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<tr>
<td>What is your software licensing model (e.g., per named user/per concurrent user/ per processor/ per server)?</td>
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<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Please provide recommendations for contract vehicle(s) and contract type(s) that provide the best combination of technical, management, and cost within the construct of the planned incremental release approach.</td>
<td></td>
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<tr>
<td>Please provide an assessment of the most important factors to consider when evaluating technologies, solutions, and their associated providers for this type of activity.</td>
<td></td>
</tr>
<tr>
<td>Please suggest performance measures and associated incentives and/or disincentives DoD might implement for an EIW contract and discuss why those measures will appropriately motivate and incentivize contractors to deliver within defined quality, timeliness, and cost parameters.</td>
<td></td>
</tr>
<tr>
<td>DoD intends to execute a streamlined acquisition process to procure the EIW and support rapid capability deployment. Please provide recommended approaches DoD could implement to rapidly execute the EIW acquisition phase within the regulatory and statutory constraints of the BCL</td>
<td></td>
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<tr>
<td>Question</td>
<td>Response</td>
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<tr>
<td>Please provide your thoughts and recommendations for how the government could use an OSS approach to engage with a wider developer and user audience to develop and maintain this capability. (Please refer to section 2.5)</td>
<td></td>
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<tr>
<td>Please provide your thoughts and recommendations on OSS licensing in this scenario. (Please refer section 2.5)</td>
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<tr>
<td>If portions or all the OSS capability is export controlled and/or classified, explain how a contractor/integrator could create and govern source code and effectively engage with an open source developer community.</td>
<td></td>
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</tbody>
</table>

**Responses:**

Interested vendors should forward their capabilities and other information to be considered to david.hill@bta.mil. Responses to this RFI are to be submitted by and RECEIVED by **9:00 AM EST, 21 December 2011**. Responses must be compatible with MS Office Word 2003.

**Questions:**

Questions regarding this announcement shall be submitted in writing by e-mail to David.Hill@BTA.mil. Verbal questions will NOT be accepted. Questions will be answered by posting answers to the FedBizOpps website and/or modifying the RFI accordingly, questions shall NOT contain proprietary or classified information. The Government does not guarantee that questions received after 29 November 2011 will be addressed.

**Industry Discussions:**

DCMO will hold the following industry day event in support of this activity:

**Date:** 30 November 2011  
**Time:** 9:30 AM till Noon  
**Location:** Kellogg Conference Hotel, Gallaudet University  
800 Florida Avenue, N.E., Washington, DC 20002

Participation is limited to two members from each company. Please R.S.V.P. with the full name, phone number(s) and email address of the attendees to the EIW Organizational Change Management lead at eiwcommunications@bta.mil by **5:00 PM, close of business, 15 November 2011.**
Additionally, DCMO representatives intend to meet with potential offerors who provide written responses to this RFI and who identify their interest in meeting with DoD to discuss this RFI. Such discussions would be intended to gather further clarification of potential industry capabilities and solutions to meet EIW requirements.

Proprietary information and trade secrets, if any, must be clearly marked on all materials. All information received that is marked Proprietary will be handled accordingly. Please be advised that all submissions become Government property and will not be returned. All government and contractor personal reviewing RFI responses will have signed non-disclosure agreements and understand their responsibility for proper use and protection from unauthorized disclosure of proprietary information as described 41 USC 423. The Government shall not be held liable for any damages incurred if proprietary information is not properly identified.

EIW RFI Point of Contact:

EIW Acquisition Project Manager: David Hill

E-Mail: david.hill@bta.mil

[1] The Department’s defense business systems investment review process (referred to henceforth as the Investment Review Board (IRB) Process) provides a governance and oversight framework for effective investment decision-making, enabling the Department’s senior leadership to guide investments to maximize the impact to the Warfighter. Led by the Deputy Secretary of Defense (DEPSECDEF), who chairs the Defense Business System Management Committee (DBSMC) with direct participation of the top leadership of each DoD Component, the Department is working to develop and implement integrated, cross-DoD business functions and capabilities.