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Sources Sought Notice

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SUBJECT*	TAC 00000B - integrated Electronic Health Record (iEHR) initiative.

GENERAL INFORMATION

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Request for Information (RFI)

DEPARTMENT OF VETERAN AFFAIRS

Office of Information Technology (OIT)
Enterprise Systems Engineering (ESE)

DoD-VA Integrated Electronic Health Record Graphical User Interface (GUI) and Related Web Services

Date: September 19, 2011

RFI Version Number: 01

1.0 Purpose of this RFI

This Request for Information (RFI) is to solicit preliminary information from vendors who can advise the Department of Veterans Affairs (VA) and the Department of Defense (DoD) on solutions for a critical need related to their integrated Electronic Health Record (iEHR) initiative.

The legacy systems described below are based largely on proprietary, closed, and tightly-integrated applications that rely on a combination of legacy data aggregators. The Departments plan to transition these systems to a modern, robust, conventional multi-tier architecture comprised of applications and databases, middleware based on a common services broker (CSB) that includes an enterprise service bus (ESB), and modern web-based interface that enables simple attachment to the legacy as well as the iEHR components and capabilities as they become available.

This solicitation focuses on products, tools, and solutions that address the needs within the initial iEHR graphical user interface (GUI) solution, which include: (1) semantically correct assembly of data from heterogeneous legacy data systems, (2) serving those data through web services with standard application program interfaces (APIs), and (3) presenting those data for browser-based clients. Other acquisitions within the iEHR initiative will address database modernization and consolidation, enhanced functional capabilities, and infrastructure services. Section 4.0 describes the current iEHR GUI solution and the projected 2012 needs. The solution must also be flexible and scalable to integrate with the projected iEHR architecture (see Section 3.0) and handle more types of data and user functionality as we build out the iEHR systems. Section 5.0 describes these future considerations.

Vendors are invited to respond to the entire RFI or provide a focused response related to the vendor's products and capabilities.

2.0 Background

DoD and VA operate two of the nation's largest health care enterprises. For the past several decades, both Departments have developed and relied upon segregated EHR systems to create, maintain, and manage the health information of service members, Veterans, and their beneficiaries. DoD's health care operation supports service members at over 700 hospitals, clinics, and other facilities around the world. DoD uses multiple legacy health systems as part of its health IT enterprise. Two of the DoD's primary systems are the Armed Forces Health Longitudinal Technology Application (AHLTA) and its predecessor, the Composite Health Care System (CHCS), which still provides the backbone for many of the AHLTA capabilities. Figure 1 shows sample screen images from the CHCS and AHLTA systems. DoD has a separate inpatient health system, Essentris®, that also interfaces with CHCS and AHLTA. In addition to AHLTA/CHCS and Essentris®, the DoD has numerous other legacy and commercial health IT applications and systems that serve specialized needs throughout the Military Health System (MHS).

VA's Veterans Health Administration (VHA) has over 1400 health care facilities throughout the United States. The VA health IT system is the Veterans Health Information Systems and Technology Architecture (VistA), and its associated graphical user interface (GUI) is known as the Computerized Patient Record System (CPRS). VA also developed and maintains the VistA Imaging system, which supports the integration of clinical images and other non-textual data into the patient's electronic records. Figure 2 shows sample screen images from VistA/CPRS and the VistA Imaging System.

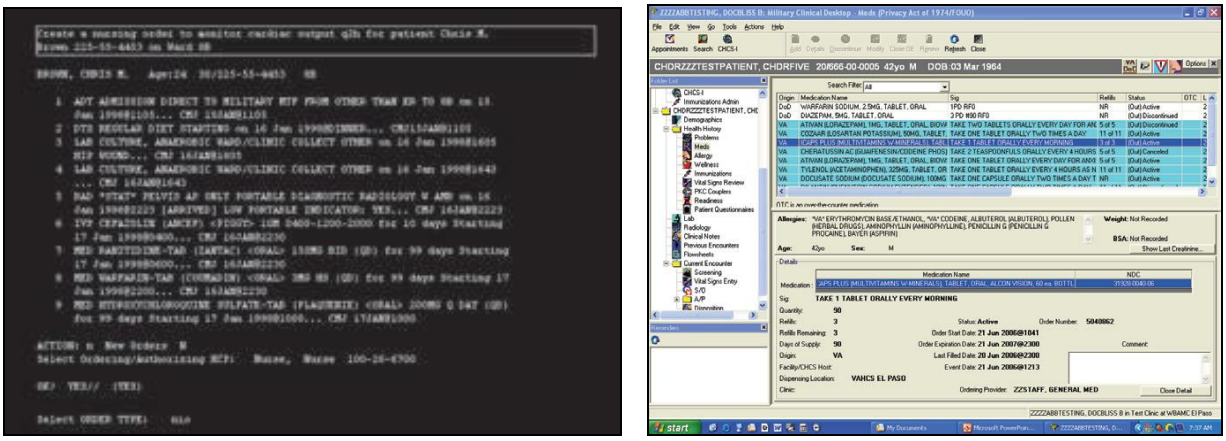

Figure 1. Sample Screen Images of CHCS and AHLTA User Interfaces

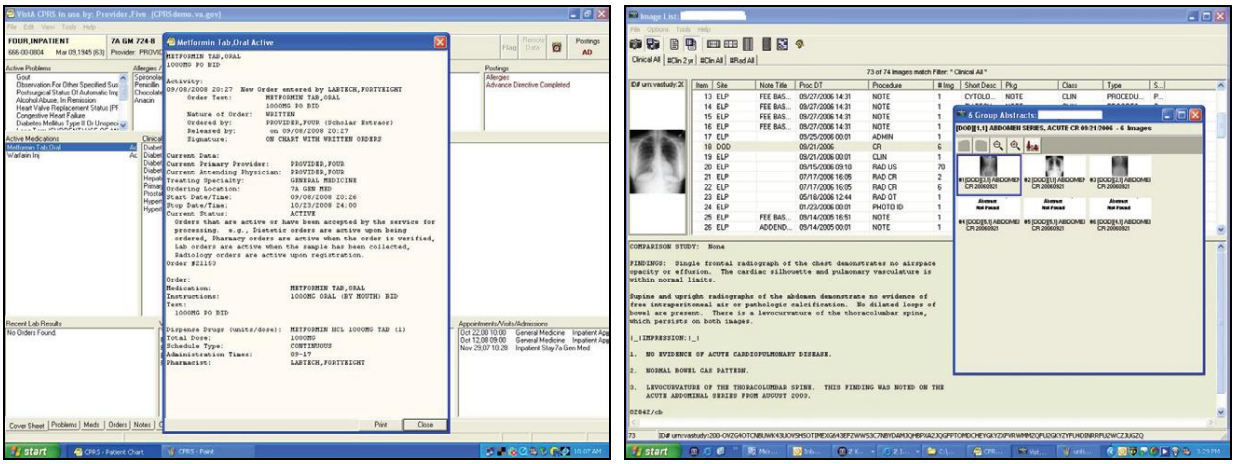

Figure 2. Sample Screen Images from VistA/CPRS and VistA Imaging

Faced with a mutual need to modernize their legacy EHR systems, the Department Secretaries on June 23, 2011, approved plans to implement a joint, common EHR platform going forward, purchasing commercially available components for joint use whenever possible and cost effective. As part of this effort, in July 2011, the Departments began piloting a common GUI designed by VA and DoD clinicians.

The Departments plan to leverage both open source and traditional approaches to software acquisition in order to foster innovation and speed delivery; please note that the custodian known as OSEHRA (www.osehra.org) was recently created and is already accepting code contributions.

3.0 iEHR Architecture

VA and DoD have agreed upon an iEHR conceptual architecture characterized by many common elements. The architecture is intended to align with the Departments' objectives to improve patient safety, clinician satisfaction, and lower operating costs through joint investments in health IT. Table 1 contrasts the current state VA and DoD health IT architectures with the iEHR architecture. While previous DoD and VA efforts have focused on interoperability between the Departments EHR systems, the iEHR architecture is a single architecture serving the needs of both Departments.

Table 1. Current State Health IT Architectures contrasted with the iEHR Architecture

Current VA & DoD Health IT Architecture Characteristics	iEHR Architecture Characteristics
Separately maintained requirements, business models, and business process flows	Common requirements, business reference model and target process flows
Separate presentation layers and GUIs for the same types of users and needs	Common presentation layer and GUIs for the same types of users and needs
Separately developed and maintained IT applications and services. Often multiple systems providing the same functions and services.	Common Applications and Services, supplemented by Department-unique capabilities **only** if they service a truly Department-unique business function.
Separately maintained interface standards (including need for specially-constructed inter-Department interoperability systems)	Common interface standards (eliminated need for specially constructed inter-Department interoperability systems)
Various infrastructure systems and connections developed to meet the needs of each developed system/function (i.e., few common services)	A common services broker, a set of common infrastructure services that includes an Enterprise Service Bus (ESB) and other common infrastructure services
Separate data centers	Common data centers
Independent information frameworks with some interoperability agreements developed and maintained for specific interoperability needs	Common information frameworks, limiting the long-term need for interoperability agreements and translation services
Disparate measures of effectiveness and performance	Common measures of effectiveness and performance

Figure 3 provides a graphical representation of the iEHR conceptual architecture, and conveys many of the characteristics described above. The Common Services Broker and the associated common interface standards serve a key role of providing interconnections among the various applications and services. They also provide the Presentation/Common GUI with access to the various applications, services, and data. The common GUI and Common Services Broker play a vital role in the successful transition from the current state to the target iEHR state:

- The **Common GUI** insulates the VA and DoD user community from the current complexity of multiple health IT systems that serve the same functions, and may be changing throughout the phases of the iEHR initiative. The common GUI also unifies the end user experience across the broad range of user communities (i.e., providers, specialists, support employees, patients/beneficiaries, and external partners). Unifying the end user experience facilitates the pursuit of common process flows as the iEHR initiative replaces various legacy systems.

- The **Common Services Broker**, which will include an ESB and other infrastructure services, allows for multiple internal and external systems to exchange information with each other. The common services broker also exposes new systems to iEHR data and services in a common way (i.e., common interface standards, common information exchange standards, common data standards). VA and DoD are actively pursuing a Service Oriented Architecture (SOA) Suite as part of the Common Services Broker.

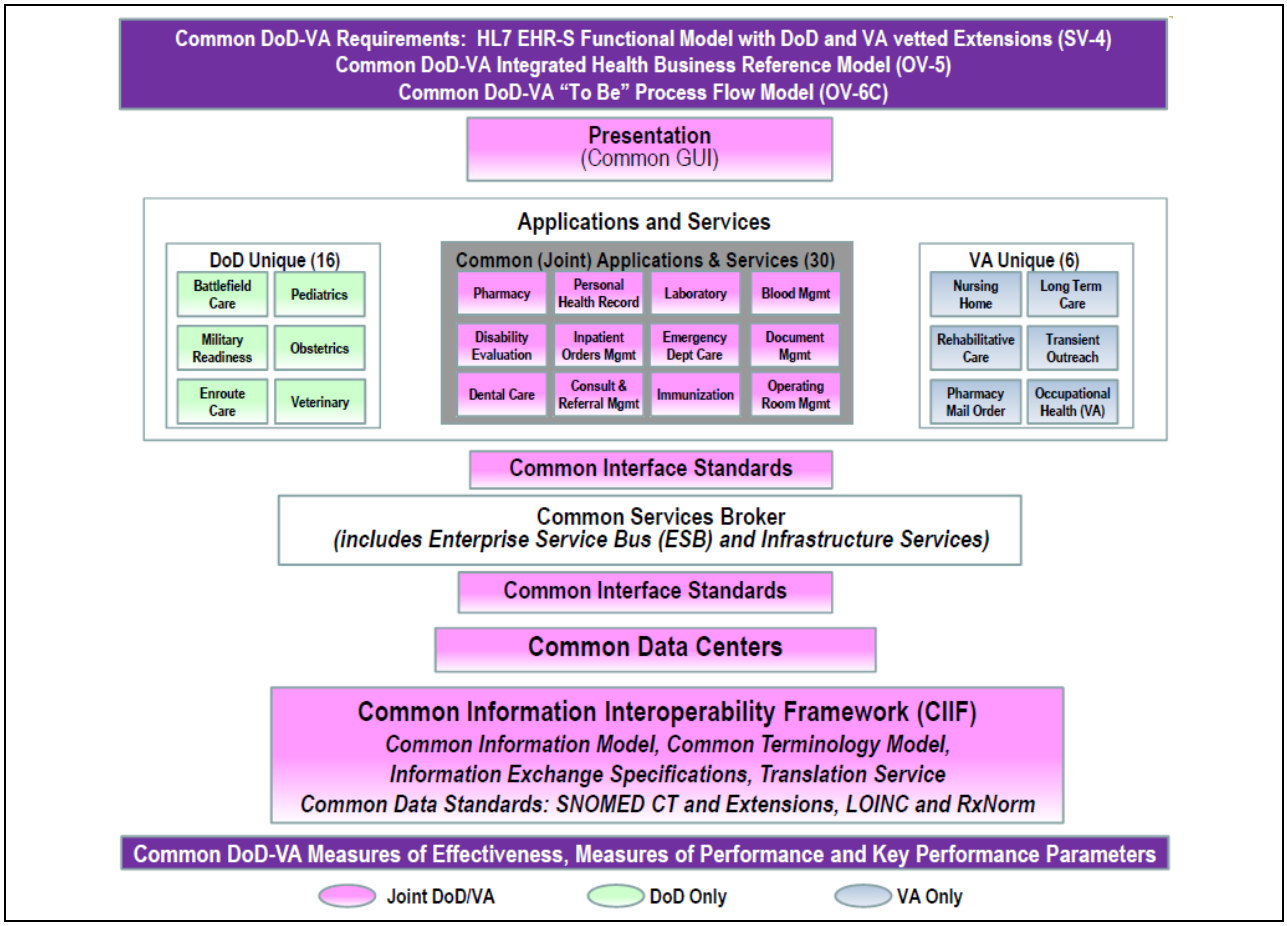

Figure 3. Conceptual iEHR Architecture

VA and DoD plan to achieve the objective iEHR architecture in phases. The Departments are currently establishing the organization that will guide this long-term initiative. VA and DoD plan to leverage commercial components whenever possible and cost effective. Thus, in the near term, the iEHR enterprise will be characterized by a mix of commercial components and disparate VA and DoD legacy applications and services. In many cases, the Departments will have multiple applications providing similar business functions and data in the near term.

4.0 Current iEHR Implementation and 2012 Needs

In January 2011, DoD and VA assembled a Clinician Focus Group comprised of clinicians from around the country to develop the initial iEHR Provider GUI. The session led to an initial deployment of an iEHR Provider GUI in July 2011. The initial deployment was at one joint DoD-VA facility, and the Departments plan a second deployment in December

2011. Figure 4 represents the system architecture overview of the current iEHR implementation that provides the iEHR GUI. The solution leverages three primary components to deliver the iEHR Provider GUI. A web application provides the GUI, which is accessible by standard web browsers. The current iEHR GUI application is a Java application, publishing JavaScript widgets that leverage AJAX and JavaScript Object Notation (JSON) technologies.

The Medical Domain Web Services, shown with other supporting web services, is the source of all services for the iEHR GUI Web Application. Those services provide the semantically-correct medical data to the GUI Web Application. Finally, the solution relies upon several indexes that support the web services. At the initial site, these indexes are managed locally, but will be implemented using other approaches for the December 2011 implementation. Both the Web Application and Web Services operate on a J2EE Application Server. Many of the current systems and services accessed are local, but the future direction for the platform is to access enterprise services, systems, and data. The web services integrate with commercial applications and legacy systems using Simple Object Access Protocol (SOAP) version 2.0, Representative State Transfer (REST), Remote Procedure Calls (RPCs), and Java Database Connector (JDBC) APIs. To manage user access, the current implementation leverages the access code and verify code inherent in the CHCS and VistA systems.

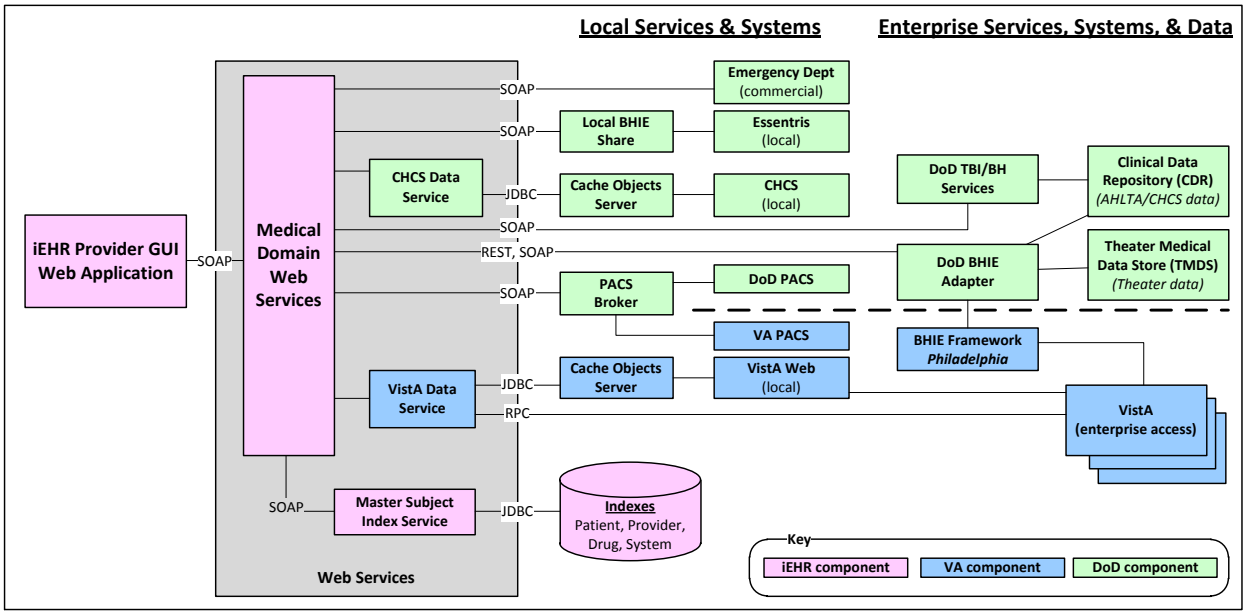

Figure 4. Current iEHR Implementation

The iEHR Provider GUI design delivers on the two highest-priority needs described by the VA-DoD Clinician Focus Group.

- A **Clinician Home Page** is oriented toward a clinician/provider rather than a specific patient. This Clinician Home Page is viewed as the primary source for clinicians to manage their overall clinical workload. It provides one or more launch points to direct a provider to a specific patient summary page. DoD and VA clinicians envisioned that the Clinician Home Page would provide launch points into other systems until those capabilities are fully integrated into the iEHR GUI.
- A **Patient Summary Page** provides a consistent at-a-glance view of a patient – independent of the DoD/VA affiliation of the patient or provider. The Patient Summary Page will pull data from multiple systems and data sources, eliminating the need for the provider to search/find data within disparate legacy systems. Like the Clinician Home Page, the clinicians envisioned that the Patient Summary Page would contain multiple launch points into the primary data source/system until those systems are fully integrated with the iEHR GUI. The patient summary page also includes the ability to access and display multiple modalities of medical imaging from picture archiving and communication systems (PACS) in an integrated manner that supports clinician workflow.

Both pages are structured as portals with a default view, and allow the user to modify the page to include or exclude specific widgets (i.e., sub-windows or portlets). Table 2 lists the business needs of the iEHR Provider GUI, and those that are desired for 2012. Figure 5 shows a sample of the current iEHR Patient Summary Page.

Table 2. iEHR Provider GUI High-Level Business Needs

Business Need	Currently Supported	Desired for 2012
Clinician Home Page	Yes	Yes
Patient Summary Page (see sample in Figure 5)	Yes	Yes
Default Page Content for each page	Yes	Yes
Widgets/portlets can be added/deleted/moved within Pages (see icons at bottom of Figure 5, showing portlets that can be added to the Patient Summary Page)	Yes	Yes
New user-defined pages/tabs can be added as part of Clinician Page Group or Patient Page Group (see Plus icon to right of Patient Chart tab)	Yes	Yes
Each widget/portlet provides for independent configuration by the user	Yes	Yes
User settings saved for future sessions	Yes	Yes
Displayed Information can be used to launch Related External Legacy or Commercial Health IT Systems (currently supports only to PACS Viewer/Broker)	Partial	Yes
User can enter information into iEHR GUI for write back into legacy or commercial health IT system	No	Yes
Provides single sign on using DoD Common Access Card (CAC), VA Personal Identity Verification (PIV) card.	No	Yes
GUI provides clinical context management with other health application	No	Yes
Systems hosted in iEHR Common Data Center, supporting all DoD and VA information assurance standards	No	Yes

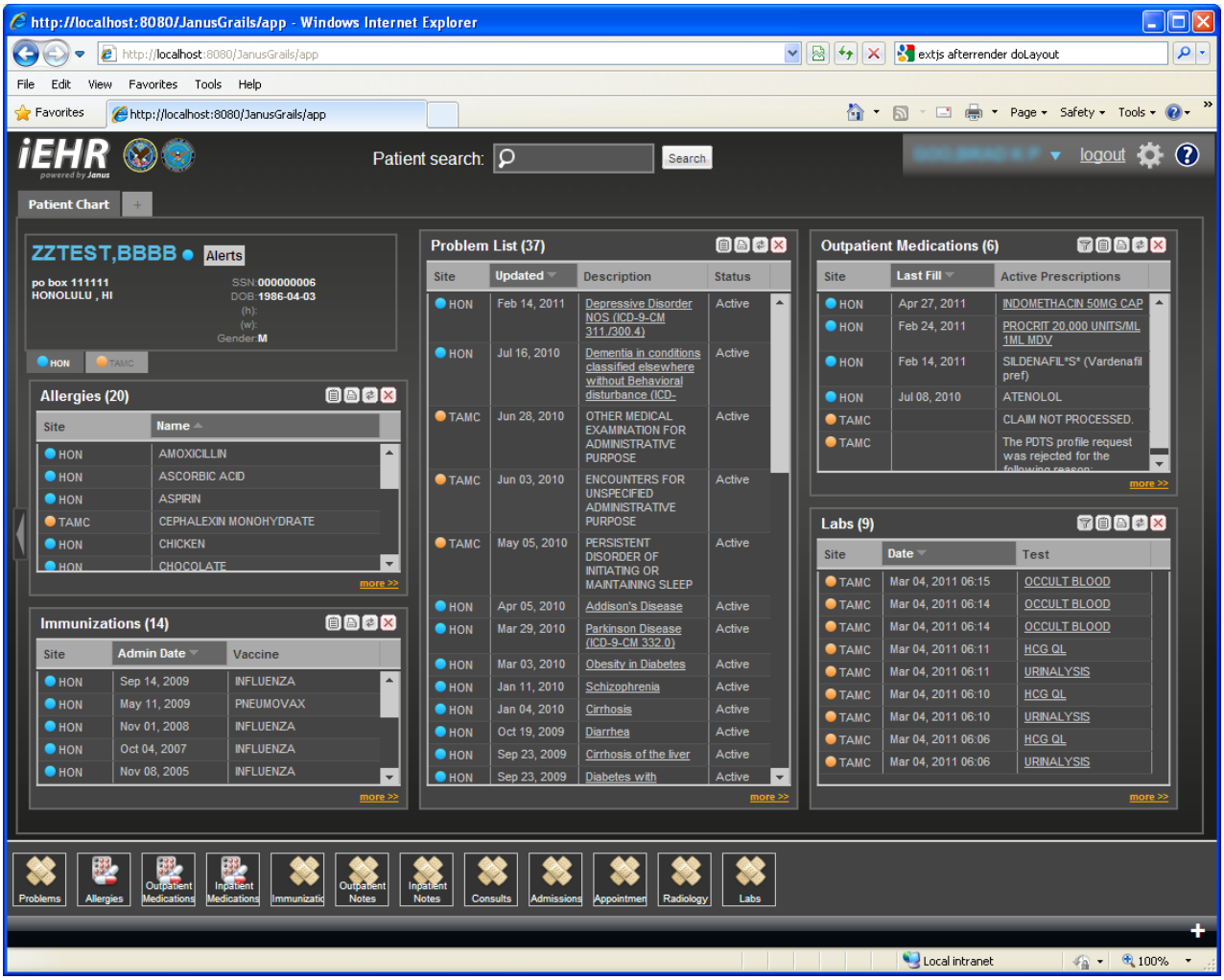

Figure 5. Sample Screen from iEHR GUI – Patient Summary Page

Tables 3 and 4 describe the widgets currently supported by the iEHR Provider GUI. These widgets maintain context with each other within the page. The VA and DoD are seeking a GUI solution that supports the use of widgets/portlets to display legacy and new iEHR information and allows the Departments to easily develop new widgets/portlets for various types of information needs.

Table 3. Clinician Home Page Widgets

Widget Name	Description
Consults Received	The provider's consults received information is displayed in reverse chronological order by consult date and includes site, consult date, patient name, and consult service
Consults Requested	The provider's consults requested information is displayed in reverse chronological order by consult date and includes site, consult date, patient name, and consult service.
Appointments	The provider's appointments information is displayed in reverse chronological order by appointment date and includes site, appointment date, clinic, and patient name.
Admissions	The provider's admissions information is displayed in reverse chronological order by admission date and includes site, admission date, ward, and patient name.

Widget Name	Description
References	The provider's references to online clinical medicine resources are provided as hyperlinks.
Orders Pending	The provider's pending orders (i.e., orders not yet fulfilled) are displayed in reverse chronological order by order date and includes site, order date, patient name, and description.
Orders Resulted	The provider's orders resulted information is displayed in reverse chronological order by order date and includes site, order date, patient name, and description.
Unsigned Notes	The provider's unsigned notes information is displayed in reverse chronological order by note date and includes site, note date, patient name, and type.
Abnormal Results	The provider's patient tests with abnormal results are displayed in reverse chronological order by date and includes site, date, patient name, and lab test.

Table 4. Patient Summary Page Widgets

Widget Name	Description
Problems	The patient's problem list information is displayed in reverse chronological order by the last modified date and includes site, updated date, description, and status.
Allergies	The patient's allergies information is displayed and includes site and allergy name.
Outpatient Medications	The patient's outpatient active medications information is displayed in reverse chronological order by the last fill order date and includes site, last fill order date, prescription, and status.
Inpatient Medications	The patient's inpatient active medications information is displayed in reverse chronological order by the last fill order date and includes site, last fill order date, and drug name.
Immunizations	The patient's immunization history is displayed in reverse chronological order by the immunization administration date and includes site, administered date, and vaccine name.
Outpatient Notes	The patient's outpatient notes information is displayed in reverse chronological order by note date and includes site, note date, type, and provider name.
Inpatient Notes	The patient's inpatient notes information is displayed in reverse chronological order by note date and includes site, note date, and type.
Consults	The patient's outpatient consult information is displayed in reverse chronological order by consult date and includes site, consult date, and consult service.
Admissions	The patient's admissions information is displayed in reverse chronological order by admission date and includes site, admission date, discharge date, ward, and registration number.
Appointments	The patient's appointments information is displayed in reverse chronological order by appointment date and includes site, appointment date, and clinic.
Radiology	The patient's radiology exam information is displayed in reverse chronological order by exam date and includes site, exam date, study, and image.
Labs	The patient's lab test information is displayed in reverse chronological order by lab test date and includes site, lab test date, and lab test.
Clinical Reminders	The patient's clinical reminders information is displayed in reverse chronological order by due date and includes site, due date, clinical reminder, and last recorded date/time taken.
Orders	The patient's orders information is displayed in reverse chronological order by the order date and includes site, order date, description, status, and type.
Vitals	The patient's vitals information is displayed in reverse chronological order by the date/time taken and includes site, type of vital sign, histogram, result, date/time taken.

5.0 Projected Future Direction

The joint common iEHR interface piloted in Tripler is currently a read-only Provider GUI that accesses a number of disparate DoD and VA health IT systems. Figure 6 shows the current implementation in the context of the overall iEHR architecture. The bright green elements reflect the items of the current iEHR implementation, which also are the focus for this RFI. VA and DoD anticipate several changes to the future environment based on the iEHR architecture and ongoing iEHR program activities, and which will require the interface and web services engine to be modular and easily re-targetable. These environmental changes include the following:

- Consolidation of iEHR applications and data into common iEHR data centers, either at a central or regional level.
- Implementation of a portal infrastructure to support a wide range of iEHR and other health IT users with various portals based on their role, attributes, and access privileges. See Appendix A for more information on the portal reference architecture.
- Selection of an iEHR SOA suite (as part of the Common Services Broker) based on a commercial enterprise service bus (ESB), which will provide a variety of components/services and would be the likely host of the iEHR Web Services.
- Potential for multiple consumers (i.e., in addition to the iEHR GUI) of the web services exposed by the Medical Domain Web Services.
- Development of new iEHR services for incorporation into the iEHR GUI.
- Integration with an external enterprise identity and access management solution.
- Potential for the current web services, which are currently synchronous, to initiate asynchronous messages by use of the iEHR ESB (e.g., pharmacy or lab order).
- Replacement of current indexes managed locally to support the current iEHR GUI with enterprise data services.

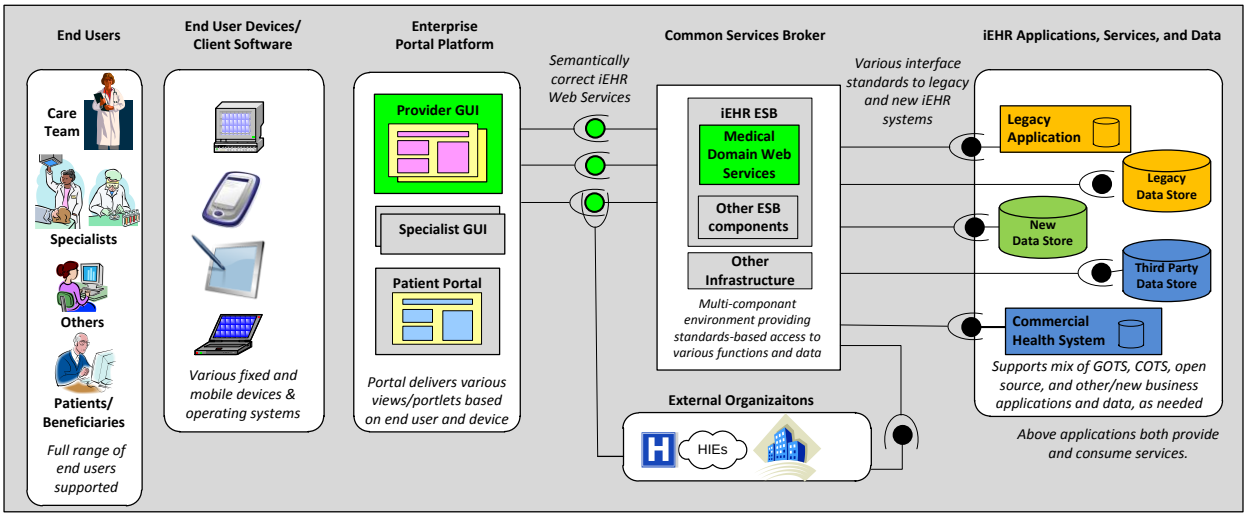

Figure 6. Current iEHR Implementation in Context of Future iEHR

VA and DoD seek iEHR user interfaces that both drive value for healthcare and also boost the efficiency and satisfaction of users. The Departments have identified some of the user-interaction behaviors that have effectively helped users process complex information in health information technology and other settings.

Look & Feel (consistent across widgets or portlets)

User interfaces should be intuitive and help drive clinical work flows. Thus, the user interface should be maximally consistent within a particular user category. Examples of user categories include clinicians (people providing direct patient care), laboratory technicians, pharmacy technicians, quality managers, clerks, and biomedical engineers.

Additionally, the user interface should be consistent within special categories of enabled users. For user-computer interfaces, vision is the defining characteristic for categories: blind, low vision, normal vision. Of course, the look and feel must also accommodate motor limitations of individuals within the sight categories.

VA and DoD desire a means to control the overall metaphor of presentation and interaction. This includes, but is not limited, to the following user interface features:

- Symbols (e.g., shapes, icons, etc.)
- Attributes such as fonts and colors
- Control and label layouts (e.g., OK buttons at bottom right)
- Information layouts (e.g., select area on left, work area on right)
- Mouse and finger behaviors (e.g., click/tap selects, right-click/two-finger click)
- Keyboard-navigation behaviors
- Object behaviors (e.g., dragging certain classes of objects on other objects draws line between them, selecting text updates information in other windows, which objects are selectable, movable, initiate actions)

End User Device Considerations

To accommodate user interaction in multiple user categories and settings, the user interface must be deployed on various platforms. These platforms have various display sizes and input characteristics. Rather the presentation layer infrastructure must be designed and implemented to accommodate these platforms. End user devices are expected to include single-screen or multi-screen desktop or laptop computers, touch screen devices, tablets, and handheld or mobile devices. Various operating systems (e.g., Windows, MacOS, iOS, Android) must be supported.

Interaction with Display Elements

For applications that require a rich information environment typical of clinical applications, highly interactive user interfaces will be used to help users understand and act on that information. To accommodate desired interactions, all important data objects on the screen should support the following requirements:

- Object can be selected
- Object can be dragged and dropped on another object
- Object can be engaged in other ways such as through contextual menus
- Object has an associated semantic, such as:
    - In text: zip code, gender, age
    - Point on a chart: person, age

- Column in a table: a day/month or collection of people reported sick
- Area on a map: ZIP code, county

Integration of actions between widgets

The new integrated user interfaces will pull from data sources that are rich and longitudinal. The clinical user often will want to see multiple simultaneous perspectives of data, and we expect that rapidly configurable widgets and components will provide different perspectives and user-customized views. For example, one widget may display events along a timeline, another may display interactions between cross-sectional data, and another may display changes on a two-dimensional graph. In many cases, changes in one widget might drive changes to others. Examples are changing the time frame of reference, or changing the focus on a group of patients to a single patient. These are required behaviors to be supported between widgets.

- Direct interactions, such as drag and drop of elements, and drawing lines between elements that move and scroll with the elements
- Indirect interactions, such as brushing, where one can select/highlight data in one widget thereby changing the display in other widgets
- Nesting, where widget data look & feel and behavior depends on its context. (note that a nested widget may look different or show different data)

Workflow

People with different roles, expertise, and authority will want to interact with the GUI in different ways. VA and DoD have a need to automate management of how widgets present to users in the context of their role and expertise.

Management of the GUI for roles includes presenting components for specific workflows. These workflows may be linear and recursive or non-linear requiring random access. VA and DoD desire tools to help manage UI components to support workflows that extend beyond a static screen configuration. Such tools may be based on user-configurable libraries or based on artificial intelligence that learns how the user works and automatically configures the GUI. Management of GUI for levels of expertise may provide simple, powerful, and pre-configured workflows or modes that make it easier for novice users to complete tasks.

Display of meta data

One of the problems with EHR data is that, because the data space is so big and complex, the user is often unsure which data element is right for a given purpose. A potential solution to this problem is to expose meta data through the GUI. VA and DoD envision a mode or inspection tool that will let a user see meta data that describes the data and its transformations down to the authoritative data store. Meta data may be used for test and review of solution design. It may also be used by business intelligence professionals to select variables from the data warehouse.

6.0 Information and Recommendation that VA and DoD are Seeking

Semantically-Correct Assembly of Data

1. What products, services, and/or solutions does the vendor recommend for developing and maintaining semantically-correct medical domain web services?
2. Are there specific products on the market that already provide standards-based web services for complex, heterogeneous, medical IT enterprises?
3. What are the options for enterprise deployment of the recommended solutions?
4. How would the vendor recommend that VA and DoD address the issues of multiple data structures during the transition from current state to future state?
5. What does the vendor believe are the major challenges to creating semantically-correct data, and what approaches are recommended for each challenge?
6. What specific protocols, data standards, and/or open APIs does the vendor and its product(s) support in terms of assembly and integration?
7. Please address any additional information that the vendor believes is relevant to the development of semantically-correct data.
8. VA and DoD have agreed to support the following data standards – Systematized Nomenclature of Medicine – Clinical Terms (SNOMED CT) with extensions, Logical Observation Identifiers Names and Codes (LOINC), and RXNorm. Does the vendor's product offer any specific tools to assist in assembling, translating, or managing data services that include these and other medically relevant data standards?

Medical Domain Web Services

9. What products, services, and/or solutions does the vendor recommend for providing the medical domain web services that would serve up semantically-correct web services to various consuming applications, to include Portals and User Interface Applications, other medical applications, and external organizations' systems?
10. With the VA and DoD pursuing a common SOA Suite based upon an Enterprise Service Bus, please explain what elements of a commercial SOA Suite/ESB would be integrated to the web services engine. If applicable, what specific commercial or open source SOA Suites/ESBs are supported?
11. Are there existing web services standards related to the medical domain that the vendor could recommend that would inform the design, development, and the deployment of the joint common interface? Please explain.
12. Are there existing web services standards that the vendor would recommend **not** adopting? Please explain.
13. What approach to securing the web services does the vendor recommend and why?

14. What is the largest implementation of this type of architecture that the vendor has supported? Define both complexity/number of services and both tested and operational load.
15. Please provide any additional information that would indicate the vendor's ability to address the current and future needs of the DoD and VA in developing standards-based services.
16. Does the vendor already have published, open-source, Web Services Definition Language (WSDL) and/or XML Schema Definitions (XSDs) relevant to medical web services? If not, how would the vendor address this development effort?

Browser-Based GUI

17. How does the vendor recommend that the VA and DoD acquire a user interface that is intuitive and promotes clinical work flow?
18. Does the vendor have any commercial products that provide (or assist in providing) the same type of user-customizable, component-based interface as described above? Please address whether those products can be configured to provide, at a minimum, the same look and function described in Section 4 (current implementation). Please also address which of the specialized user behaviors described in Section 5 that the vendor's products may support.
19. Does the vendor's product or solution make use of a portal product or portal infrastructure? If so, which specific portal products or infrastructure does the vendor support?
20. Does the vendor recommend particular technologies be used in developing the iEHR GUI? Please define and explain those recommended. Please provide a listing or documentation of standards supported. Please provide specific information on current support for the following:
    - Health Level 7 (HL7), including the Context Management Standard from the Clinical Context Object Workgroup (CCOW)
    - Digital Imaging and Communications in Medicine (DICOM)
    - Identity Management Federation Standards (e.g., SAML, WS-Trust, WS-Security, WS-Federation, Liberty ID-FF)
21. Does the vendor recommend that the Government avoid any particular technologies or product types in developing the iEHR GUI? Please explain to address a typical provider GUI (such as the current iEHR Provider GUI) and, if different, to address the advanced user interfaces described in Section 5.
22. The Government has developed only a Provider GUI for iEHR. What approach does the vendor recommend as other types of users (e.g., Specialists such as lab technicians, pharmacists, radiologists, Support Employees, and Patients/Beneficiaries) are addressed by the iEHR Program?
23. What physical architecture would the vendor recommend be implemented? In addressing this question, please explain what IT components the vendor would

recommend be placed at local installations, regional data centers, or central data centers.

24. Some use cases require that the GUI be operated in an untethered mode (i.e., not connected to network). Does the vendor have any approaches to this challenge?
25. Does the vendor offer any specific style guides, style sheets, templates, or other tools for the development of user interfaces? Are any of those style guides, style sheets, templates, or tools specific to the medical domain?
26. Please explain how clinical context between individual portlets/screen elements is maintained (i.e., ensure that the same patient's information is being viewed in all portlets/screen elements)?
27. What limitations (if any) would the vendor recommend that Government impose in creating an integrated GUI?
28. How would the vendor recommend addressing the current legacy GUIs that provide access to legacy DoD and VA systems?
29. How does the vendors' product/solution support multiple device experiences? Describe any support for HTML 5.
30. Please provide any additional product or service information that indicates the flexibility of the vendor's products and/or services to support the desired configurable, component-based GUI.

General

31. Does the vendor have any specific experience working with DoD or VA information security regulations? Have any of the recommended products been through formal Government certification and accreditation processes?
32. Does the vendor have existing partnerships with other health IT vendors or service providers? Please explain to the extent possible.
33. Please provide any product literature, technical specifications, case studies, and/or materials that relate to the subject of this RFI.

7.0 How to Respond

THIS IS A REQUEST FOR INFORMATION (RFI) ONLY. This RFI is issued solely for information and planning purposes – it does not constitute a solicitation nor does it restrict the Government as to the ultimate acquisition approach. In accordance with FAR 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. Any contract that might be awarded based on information received or derived from this market research will be the outcome of a competitive process. Responders are advised that the U.S. Government will not pay for any information or administrative costs incurred in response to this RFI. All costs associated with responding to this RFI will be solely at the interested vendor's expense. Not responding to this RFI does not preclude participation in any future RFP, if any is issued. The formal closing date for this RFI and for the submission of responses is **October 28, 2011**. All responses should be submitted electronically in MS Word format to the following Email address with subject "**RFI VA118-11-RI-0721**": asif.damji@va.gov with a copy to mark.junda@va.gov

Total e-mail file limit size is restricted to 5MB. Files exceeding this threshold shall be submitted over multiple messages, and be identified as "Message #x of #x**".*

The official VA contacts for this RFI to whom all requests and communications should be addressed are:

Contracting Officer (CO): Mark Junda, mark.junda@va.gov (732) 578-5428

Contract Specialist (CS): Asif Damji, asif.damji@va.gov (732) 578-5503

Appendix A - Acronym List

AHLTA	Armed Forces Health Longitudinal Technology Application
API	Application Programming Interface
BHIE	Bidirectional Health Information Exchange
CAC	Common Access Card (DoD)
CCOW	Clinical Context Object Workgroup
CDR	Clinical Data Repository
CHCS	Composite Health Care System
COTS	Commercial Off-the-Shelf
CPRS	Computerized Patient Record System
DICOM	Digital Imaging and Communications in Medicine
DoD	Department of Defense
EHR	Electronic Health Record
ESB	Enterprise Service Bus
GUI	Graphical User Interface
GOTS	Government Off-the-Shelf
HIE	Health Information Exchange
HL7	Health Level 7
iEHR	integrated DoD-VA Electronic Health Record
IT	Information Technology
JDBC	Java Database Connector
JSON	JavaScript Object Notation
LOINC	Logical Observation Identifiers Names and Codes
MHS	Military Health System
PACS	Picture Archiving and Communication System
PIV	Personal Identity Verification (VA)
RFI	Request for Information
REST	Representative State Transfer
RPC	Remote Procedure Call
SNOMED CT	Systematized Nomenclature of Medicine – Clinical Terms
SOA	Service Oriented Architecture
SOAP	Simple Object Access Protocol
TBI/BH	Traumatic Brain Injury/Behavioral Health
TMDS	Theater Medical Data Store
VA	Department of Veterans Affairs
VHA	Veterans Health Administration
VistA	Veterans Health Information Systems and Technology Architecture
WSDL	Web Service Definition Language
XSD	XML Schema Definition

Appendix B – Portal Reference Architecture

See attached summary of the DoD-VA iEHR Portal Reference Architecture. This reference architecture shows the currently defined plans for the DoD and VA as it relates to the use of a portal infrastructure. The black box in the center of the diagram represents the Portal infrastructure. This is a Portal technology framework/platform that enables content to be aggregated and personalized while supporting rich user experiences.

Appendix C – Information Security Terms

See Attached: NIST IR 7298, rev. 1 , Glossary of Key Information Security Terms, February 2011.