OpenEAI

OpenEAI Project Update - September 8, 2004

Dear OpenEAI Project Announcement Subscribers,

This is a fairly lengthy update, and for that I apologize in advance. There is a lot of ground to cover. The OpenEAI Project will try to post an update like this at least semi-annually if not quarterly from here on out to keep these updates shorter and to keep people more current on project status. This update covers major implementations, plans for upcoming releases of software and documentation, and planning for an OpenEAI conference.

In this update...

Major OpenEAI Implementations and Development

The University of Illinois

The University of Illinois has adopted OpenEAI as its integration strategy and integrated dozens of applications using OpenEAI. These include a wide range of applications on various platforms including new Java web applications, ColdFusion web applications, legacy mainframe systems, legacy PowerBuilder client/server applications, and others. The University of Illinois' collection of enterprise message objects is growing, and makes extensive use of many of the enterprise message object definitions provided by SunGard SCT and the OpenEAI project as well. The University of Illinois is presently working on a public presentation of all enterprise message objects in use there -- that will appear on the "Get Enterprise Data" section of its Administrative IT web site: http://www.aits.uillinois.edu.

Additionally, the University of Illinois has developed an authentication, authorization, and session management infrastructure for its applications using OpenEAI technology to communicate between these applications and the central service, called the Enterprise Application Service (EAS). UI uses it to perform some or all of these services for 42 of its enterprise systems. The authentication, authorization, and session management services EAS provides to these applications can be implemented differently. EAS defines the interface for each of these services. The University of Illinois decided to implement authentication and authorization services with an LDAP store and to implement enterprise session management with a relational database store. UI is presently working on refinements to EAS and plans to release it under the aegis of the OpenEAI project in early 2005.

SunGard SCT

Recently, SunGard SCT (http://www.sungardsct.com) announced it will release SunGard SCT Banner 7.0 in December 2004. Banner is a leading ERP system for higher education, and with version 7.0 it will be OpenEAI-aware. The 7.x releases of Banner will expose its data using OpenEAI for some 40 enterprise message objects. A list of these message objects will be posted on the SunGard SCT ActionWeb site. One can sign up to access ActionWeb from the main SunGard SCT web site. My understanding is that not all of these message objects will be supported with the December 2004 release of Banner, but that they will all be supported by the mid-year 2005 release of Banner. SunGard SCT has also announced plans to define more enterprise message objects with which to expose Banner data for subsequent releases. Additionally, SunGard SCT is working with partner companies such as HigherMarkets (procurement) and WebCT and Blackboard (learning management systems) on connections using OpenEAI technology. These connections are certified, proven integrations supported by these partners. Some of these OpenEAI-based connections can be used with Banner 6 and are already in use at sites such as the University of New Mexico and the University of Notre Dame.

It appears SunGard SCT may have plans to offer a suite of OpenEAI infrastructure applications and integration tools in its Luminis Data Integration Suite; however, these plans still seem a little sketchy, so we will have to wait and see.

What do we mean by "OpenEAI infrastructure applications and integration tools"? Well, OpenEAI specifies the need for at least several basic services to do the work of EAI through asynchronous messaging. These include data value translation and data transformation, as well as message routing and message proxying. OpenEAI addresses data translation and transformations in the OpenEAI foundation itself using the concept of enterprise fields and their values as specified in enterprise object documents (see the OpenEAI API Introduction document for more details). Clearly, there are a number of cool tools not yet developed that one can conceive of to help manage these artifacts. These could be developed as part of the OpenEAI project and/or as commercial products. Additionally, the OpenEAI project provides a reference implementation of a synchronization message router and a request/reply message proxy. Again, while the reference implementations of these functions are production quality and used to handle high volumes of messages at sites like the University of Illinois, the potential for increased elegance is great. A message router and proxy could have a neat console and incorporate advanced logging and dynamic reconfiguration features. None of these things are technically necessary, but they would be very useful and potentially enable new things we cannot even think of today. Again, at this time it is unclear how much of this SunGard SCT will be doing, and when, but it is clear that they have already developed some OpenEAI infrastructure applications---such as a message relay to translate OpenEAI messages to a foreign protocol and format---as part of the certified connections mentioned above. We will likely hear more from SunGard SCT on this in the coming months.

UNICON

UNICON (http://www.unicon.net) is a company that is very familiar with the open source model and already contributes significantly to the uPortal project managed by JA-SIG. UNICON has a commercial portal offering, Academus, based on uPortal technology, and is working on other products in that space. One of the other areas they are looking at is integration. In Spring 2004, members of the OpenEAI Software Foundation and a team from UNICON spent some focused time together at UNICON in Los Angeles determining which integration problems are most interesting and urgent to the uPortal user community and came up with some concrete examples. Specifically, these examples demonstrate a native uPortal channel accessing enterprise data using OpenEAI and synchronizing passwords among enterprise systems (such as the portal and an LDAP server) using OpenEAI. The product of this collaboration was some new example gateways and applications for the sample enterprise and a presentation for the JA-SIG community at the summer uPortal conference in Denver. Details on that presentation are available in the project CVS repository at http://www.openeai.org/cgi-bin/cvsweb.cgi/project/presentations/uPortal-1-hour. All of these examples are available now in the pre-release (version 1.1) of the sample enterprise and will be available in the next general release (version 2.0) of the sample enterprise.

The University of Notre Dame

The University of Notre Dame is planning an OpenEAI pilot project. Notre Dame is reengineering its student, faculty and human resources information systems using different products, such as SunGard SCT Banner, BSR Advance, RMS Housing, FSA Atlas, WebCT Vista and others. These multiple sources for person data have proven to be a significant integration challenge, since the person data in all of these systems must be synchronized from a centrally-provisioned authoritative source as prescribed by the University's identity management program. As a first step towards a new identity management program, the core team reviewed various enterprise application integration and metadirectory strategies and proposed that OpenEAI might be a valuable strategy to adopt for solving this problem. An OpenEAI pilot project is currently in the design stage, with plans for the design to be finalized by October 2004 and deployment to be completed in February 2005.

Open Integration Incorporated

Open Integration Incorporated (OpenII) is now offering OpenEAI services and support (http://www.openii.com) and is working with various organizations on OpenEAI implementation projects. OpenII has also announced plans to develop commercial versions of some OpenEAI tools and infrastructure applications, similar to the SunGard SCT plans outlined above.

Other Initiatives

We are aware of a number of other initiatives from various contacts, interactions at conferences like Open Source in eGovernment and JA-SIG, and through various support requests. If you would like to share details about OpenEAI-related projects within your organizations, we would really like to hear about them. Please send any information about your projects to info@openeai.org and we will add these to the list of know OpenEAI-related projects and mention them in the next project update.

Plans for Upcoming Software Releases

We are currently preparing for and working on the 4.0 release of the core OpenEAI APIs. Our plan is to make the 4.0 release publicly available by March 2005. Beta versions of this release are already available from the OpenEAI CVS repository. Some of the enhancements that will be included:

- Notification mechanism added to ScheduledApps
- Database connection pool enhancements to leverage the JDBC Datasource

- Dynamic refreshing of certain configurable objects (such as PropertyConfigs) so an application doesn't have to be restarted to know about changes to those objects
- Add support for the use of the Java Management Extensions (JMX) to manage gateways and scheduled apps
- Update all dependent required libraries to latest releases
- Test and verify compatibility with JDK 1.5
- Add support for multiple query objects on a given parent object
- Add support for XML Schema
- Possible re-structuring of the class hierarchy for transport layer objects (such as producers and consumers) so we can leverage other transport mechanisms more easily
- Possible re-structuring of the command pattern currently being used to separate the command execution from the transport layer in gateways
- Possibly implement foundation that would allow guaranteed order of processing for sync messages
- Other enhancements based on input from project participants...

The project is presently also working on release 2.0 of the OpenEAI Sample Enterprise, and plans to release version 2.0 of the OpenEAI sample enterprise by November 2004. In addition to the examples included in the 1.0 release of the sample enterprise, the 2.0 release will include:

1. A directory service gateway that consumes relevant synchronization messages published by authoritative sources in the enterprise to keep relevant data in an LDAP directory server up to date, along with instructions for setting this up to run with OpenLDAP on UNIX, Linux or Windows. The data used to demonstrate the integration is person and password data.
2. An embedded version of uPortal with an example of a native uPortal channel that uses OpenEAI to communicate with an ERP system to allow the portal user to view and modify person and password data. In a recent presentation at JA-SIG we demonstrated this channel first communicating with the bogus "Any ERP System Gateway" included in the sample enterprise to emulate an ERP system, then pointed the same channel to a real OpenEAI-aware ERP system, SunGard SCT Banner, to demonstrate the flexibility of OpenEAI-based integrations. For more on that recent presentation and for access to the presentation materials, see the recent announcement at http://www.openeai.org/openeai.xml?document=PressRelease-2004-05-20.xml.
3. A uPortal gateway that consumes relevant synchronization messages published by authoritative sources in the enterprise to keep relevant data in uPortal up to date. Again, the data used to demonstrate this type of integration is person and password data.

4. A special gateway called the Enterprise Greeting Service. This is basically a "Hello, World!" example that some of the people who downloaded and used version 1.0 of the sample enterprise requested. While these users said they appreciated the realistic examples of the sample enterprise, some said that it would be nice to include a simple, trivial example as well.
5. A Java client application that accesses the Enterprise Greeting Service called the Greeting Application. This is provided as a trivial client for the trivial service mentioned in number 4 above.
6. A PERL client application that accesses the Enterprise Greeting Service called the PERL Greeting Application. This trivial client does the same thing as the Java client mentioned in number 5 above, but demonstrates how an OpenEAI service can be accessed from PERL using the PERL Java module.
7. A web service that exposes the Enterprise Greeting Service mentioned in number 4 above as a web service.
8. A Java web service client application for accessing the enterprise greeting service as a web service.

A preliminary release with many of these features (but no additional documentation) was used for a recent presentation at JA-SIG and is available for download on the Downloads > Pre-releases page of the project web site as OpenEAI Sample Enterprise 1.1.

Full Read-Only CVS Repository Access

Recently, the OpenEAI project CVS repository became available for anonymous read-only access. In the past, the repository was only available via web interface. The purpose of this change, which involved a change in project's hosting agreement and service deployment, was to provide more convenient and complete access to the most current artifacts in the repository for project participants working with committers on enhancements to the OpenEAI foundational APIs, reference implementations, sample enterprise and documentation. See the OpenEAI project web site's CVS repository page (http://www.openeai.org/openeai.xml?document=CvsRepository.xml) for details on accessing the project's CVS repository.

The changes in our hosting deployment mentioned above also enable the project to implement and distribute nightly builds of key project products. Project committers are presently working on automated nightly builds for the OpenEAI foundational APIs, reference implementations and sample enterprise. An announcement will follow to the project announcements list when these nightly builds are available.

Plans for Upcoming Documentation Releases

Shortly after the project’s inception, participants came up with a roadmap for "core documentation" to provide. This roadmap included the following:

1. a "Getting Started with OpenEAI" document to accompany the OpenEAI examples in the sample enterprise;
2. an "OpenEAI Message Protocol" document to cover the underlying fundamentals and nature of the EAI problem space;
3. an "OpenEAI Methodology" document to describe a chain of events and artifacts that can be used to implement integrations;
4. an "OpenEAI Message Definitions" document to outline how to define any message object for any message category according to OpenEAI practices which allow one to then share these definitions in a meaningful way and to generate a Message Object API (MOA) from these artifacts;
5. an "OpenEAI API Introduction" document to explain the purpose and usage of the OpenEAI APIs and their configuration artifacts;
6. an "OpenEAI Implementation Strategies" document to explain frequently-used strategies for implementing integrations with OpenEAI;
7. an "OpenEAI Deployment Patterns" document outlining patterns for deploying and running OpenEAI-based applications and gateways.

Initial versions of five of these seven core documents are presently available on the project web site’s documentation page (http://www.openeai.org/openeai.xml?document=Documentation.xml). Initial versions of the "OpenEAI Methodology" and "OpenEAI Message Definitions" are not yet available. The project plans to provide an initial version of the "OpenEAI Methodology Document" by December 2004 and an initial version of the "OpenEAI Message Definitions" document sometime in 2005. A project committer and participant have already been identified to work on the methodology document, and several other participants have volunteered to serve as reviewers. Please send any feedback on the existing five core documents (or any other documentation artifacts) to info@openeai.org. We have received helpful feedback over the past year.

Planning for an OpenEAI Conference

At recent events and in correspondence, some project participants have suggested creating a forum for more in-depth discussions of OpenEAI concepts, technology and implementations in various products and at various sites. The project participants we have talked with about this, project members, and the OpenEAI Software Foundation Board of Directors all seem to support creating such a forum.

An OpenEAI conference would include presentations about commercial applications of OpenEAI from vendors with products that use the technology, presentations from sites that use OpenEAI technology in conjunction with various technologies, and detailed technical presentations from OpenEAI experts on how to use OpenEAI concepts and technology to implement integrations.

Are you interested in attending an OpenEAI Project event?

The project would like to poll the OpenEAI community to get some idea of how many people would be interested in attending a project event. The initial event would most likely be held in a central US location that is easy for many to get to, such as Chicago, Illinois. The OpenEAI Software Foundation has a number of resources available there through contacts at the University of Illinois. We've noticed that there is also a lot of OpenEAI activity originating from sites across Europe, so similar events in a central location in Europe are also a possibility if there is interest. For example, the OpenEAI Software Foundation has a number of resources available in Vienna, Austria through contacts at the Wirtschaftsuniversität Wien.

If you would be interested in attending such an event, please take a moment to report your interest and a few other details to us using the form at http://www.openeai.org/openeai.xml?document=ConfSurvey.xml.

In order to draw higher attention to this request, the project will also send out a similar request for interest as a separate message to the OpenEAI announcement list and other channels.

Thank you for your interest in and support for OpenEAI. As always, we appreciate your feedback, so please send any questions, comments or concerns, suggestions, or brainstorms to info@openeai.org.

Sincerely,
Steve Wheat
steve@openeai.org

Enterprise Architect, Admin. IT Services, University of Illinois
Member, OpenEAI Software Foundation