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Eclipse Higgins 1.0 Release Review

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Eclipse Higgins Project

Mission:

Higgins is an open source Internet identity framework designed to integrate identity, profile, and social relationship information across multiple sites, applications, and devices. Higgins is not a protocol, it is software infrastructure to support a consistent user experience that works with all popular digital identity protocols, including WS-Trust, OpenID, SAML, XDI, LDAP, and so on



Features

Higgins features have been packaged into seven Solutions

Identity Selector Applications (exemplarily applications)

- [Firefox-embedded Selector Solution](#) - for Firefox on Windows, Linux, and OSX (Requires hosted I-Card Service Component)
- [GTK and Cocoa-based Selector Solution](#) - for Firefox (or other applications) on Linux, FreeBSD and OSX (client-based native code app)
- [RCP-based Selector Solution](#) - for Eclipse RCP Applications (client-based Java app; requires JRE 1.4 or higher)



Features (cont)

Identity Web Services

- [STS IdP Solution](#) - WS-Trust Identity Provider (webapp and web service)
- [SAML2 IdP Solution](#) - SAML2 Identity Provider (webapp and web service)
- [Extensible Protocol RP Website Solution](#) - I-Card enabled Relying Party site (webapp) [supersedes: [RP Website Solution](#)]



Features (cont)

Higgins Global Graph

- [Higgins Global Graph](#) - Specifications for the Higgins Global Graph
- [Higgins Data Model](#) - Data model of the Higgins Global Graph
- [IdAS Solution](#) - Identity Attribute Service (local java component) and [Context Provider](#) plugins



Non-code Aspects

DocuOverview

Higgins continues to upgrade its online documentation and website to make Higgins more accessible and easy to adopt

- Updated Component wiki pages
- Made JavaDoc available on Component download pages - more work is needed
- Added Solutions wiki pages (A Solution is a group of Components for a specific use)
- Made extensive use of wiki to facilitate open communications



Non-code Aspects

Higgins has placed significant emphasis on outreach from the beginning of the project

- Dozens of Higgins presentations have been given at conferences and workshops. A list of speaking/demo events in 2007 can be found at [http://wiki.eclipse.org/Higgins Past Meetings and Events](http://wiki.eclipse.org/Higgins_Past_Meetings_and_Events)
- Many press releases have been made and dozens of articles and bog entries have mentioned Higgins [http://wiki.eclipse.org/Higgins In The News](http://wiki.eclipse.org/Higgins_In_The_News)



Non-code Aspects (cont)

- Papers have been written, and podcasts recorded
 - *Higgins – Towards a Foundation Layer for the Social Web*, Clippinger
 - *Interoperability in the New Digital Identity Infrastructure*, Trevithick, Rundle
 - *At a Crossroads: Personhood and Digital Identity in the Information Society* (In the final stages of being published by the Organization for Economic Co-operation and Development, OECD) Nadalin, Olds, Ruddy, Rundle, Trevithick, etc.



API's

- Higgins uses the term *component* to refer to a logical set of Eclipse projects. Components are assembled into entire *solutions*. Most of these components expose their own API (the exceptions are multiple plugins all supporting the same provider API).
- Various components have been used by Novell in their “Digital Me” product and Identity Provider product. IBM has announced that they will deliver commercial products based on Higgins components
- Oracle is considering using the IdAS API for their Identity Governance Framework project at Open Liberty, which is affiliated with the Liberty Alliance Organization
- Serena has a commercial solution that uses Higgins



API's (cont)

- We consider all of these component APIs to be “provisional”
- Qualifications:
 - We will be adding new components over time
 - We're early in the adoption process and have much to learn from community feedback, thus the APIs will continue to evolve
 - Working on performance of some components
 - Need to auto run the test suites



Architectural Features

- The Higgins architecture has evolved very rapidly and over multiple years
- Whereas we are adding new layers and functional capabilities, the basic architecture has been stable for at least one year
- There are multiple plug-points in the architecture:
 - Data stores are adapted by “context provider” plug-ins
 - New security token types are provided by plugins
 - New relying party security languages can be plugged in
 - Persistence of i-card objects is managed by “i-card provider” plugins
 - The Token Service alone has four plug-points
- We say plug-points because we need to support both OSGI-based and non-OSGI-based runtimes. We plan to continue to develop better support for OSGI-based bundles. We also support both C++ and Java components
- All components use a common Configuration component for deployment configuration



Tool Usability

- We have created an exemplary end-user application called and “Identity Selector” in multiple flavors. Many developers have already experimented with these apps
- At the services level we’ve developed reference Identity Provider and sample Relying Party components
- Together these solutions allow developers to deploy a complete suite of applications to issue i-cards, manage i-cards and rely on i-cards
- We have participated along with dozens of other vendors and projects in four public interoperability demonstrations at industry events. We’ve worked closely with Microsoft to ensure interoperability with CardSpace™



End-of-Life

- Does not apply as this is the first release



Bugzilla

Status

NEW	<u>1</u>
ASSIGNED	<u>9</u>
RESOLVED	<u>186</u>
CLOSED	<u>40</u>
Total	<u>236</u>



Key Standards Used

- WS-Security
- WS-Trust
- WS-Federation
- SAML Assertion 1.1 and SAML2 protocol
- XRI 2.0
- XML Canonicalization and Digital Signature
- LDAP
- OWL and RDF
- XRI XRDS

- The Higgins data model and Identity Interchange Framework (X.IDIF) are being proposed for adoption by the ITU-T (The International Telecommunications Union's Standards Sector)



UI Usability

- Higgins 1.0 components with a UI are:
 - FireFox-embedded Selector Solution
 - GTK- and Cocoa-based Selector Solution
 - RCP-based Selector Solution – conforms with Eclipse UI Guidelines

- Further work is underway to harmonize the existing and future UI elements

- Internationalization support in the UI (only) is uneven, but is a goal we'll keep working toward



Schedules

- Release 1.0 was originally scheduled for the Summer. Due to the IP backlog and the evolving understanding of what it means to interoperate with Microsoft CardSpace™ there were delays
- Higgins has missed many milestones. The main reason is that we're developing the first framework of its kind in an industry that is changing rapidly
- Getting to 1.0 with an architecture that we're happy with is a major achievement. We expect from here forwards be more predictable in planning and execution



Communities

- Higgins has attracted and build an activity community with contributions from Parity, IBM, Novell, Google...with additional involvement from Microsoft, CA, Serena, Oracle, etc.
- Committers - Higgins has 22 committers (three were just approved during the release process)
- Contributions were also made by other members of the community



Communities Process

- Open and transparent processes using the Higgins-dev list and wiki
- Weekly developers calls
- Periodic Face-to-Face meetings approximately every 8 weeks in various parts of the United States that draw attendees from Europe (10 held to date)
- Participation in ongoing identity interoperability events



Communities Open Source Projects Using Higgins

- This section lists open source solutions developed external to the Higgins project, but based on Higgins [Components](#)
- [Bandit STS/IdP Deployment](#) - Higgins-based STS/IdP service
- [Eclipse ALF Project](#)
- Other Eclipse projects (Aperi and Cosmos) are considering using Higgins



Community Process

- In addition to working with standards organizations and other open source projects, Higgins coordinates and participates with a number of identity related organizations and projects
 - IdCommons
 - OSIS
 - IIW
 - Identity Gang
 - Identity Schemas
 - VRM
 - OASIS
 - FSTC
 - Liberty Alliance
 - SocialPhysics - Berkman Center for Internet & Society at Harvard



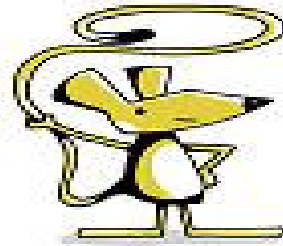
IP Issues

- Because of the nature of Higgins (it supports multiple identity protocols on multiple platforms) with both client and server components, Higgins 1.0 has many more third-parity dependencies (45) than most Eclipse projects
- The Higgins IP log can be found on the Higgins wiki at http://wiki.eclipse.org/Higgins_1.0_IP_Log
- Note that due to IP pedigree timing issues, we are not including OpenID or Idemix protocol support in Higgins 1.0



Project Plan

- Areas that we plan to target for future work can be found at http://wiki.eclipse.org/Beyond_Higgins_1.0
- Ongoing areas for work include
 - Performance
 - Automated running of tests
 - Messaging (marketing message)
- The next release of Higgins (probably 1.1) would like to participate in/shadow the Ganymede joined release in June 2008



Thank you!

Resources: www.eclipse.org/higgins