

The Future of Enterprise Applications and Java at Penn State



The System Development Modernization Project – it's a Journey...

This multi-year project includes the following:

- Launching a major University initiative to modernize the architecture in AIS used to develop and deploy administrative services.
- Adopting the Java programming language as the standard development language for enterprise-level application development.
- Designing and implementing a Java enterprise environment including policies and procedures for using it.
- Deploying new administrative services developed in this language on the zSeries mainframes in AIS.
- Retraining our cadre of enterprise-level ¹ Natural and other programmer/analysts to use Java.

Penn State's Application Development Today

- There are approximately 170 full time enterprise application developers using a variety of tools at Penn State (Natural, Smalltalk, ColdFusion, Active Server Pages and Visual Basic). Some of them will continue to use these tools but use Java for the back end services. In fact, AIS will host .NET objects in the new environment so this support will be centralized.

What is an “Enterprise-level” Developer?

- A programmer/analyst whose current applications access or update the University’s institutional databases.
- This does not include those who only generate report data through queries on the Data Warehouse or EIS.

The Plan for Training & Re-tooling Developers

- Using the results from a University-wide survey to formulate the training and re-tooling requirements for Object-oriented ² and Java programming ³. The data will be used for a later Request for Proposal (RFP).
- Engaging University enterprise developers to form a developer community for sharing knowledge and expertise.
- Developing a Java training roadmap for the enterprise developers.
- Issuing the training RFP and completing the award process in order to begin scheduling training. The pre-requisite is that a Test development environment must be in place in AIS before training starts so that developers can begin to work in this environment as each training class is completed. Tentative start dates for training are Fall 07 or Spring 08 semester.
- Providing a standard Java developer desktop environment (IDE) to enterprise Java developers.

Benefits of the Training

- Penn State will have a higher probability of hiring and retaining experienced developers in this state of the art, industry standard development environment.
- Individual developers will gain more marketable skills.

Planning That Your Organization Needs to Do

- These programmers will need meaningful, low-stakes projects to do as they work through and complete the training.
- They need to immerse themselves in the new development environment to begin to master the skills acquired.

Planning – Continued

- It is estimated that it takes 12-18 months for a new Java programmer to become proficient in the language.

Anticipated Timeline

- Training sequences will likely begin in Fall 07 or Spring 08. The total training curriculum is approximately 50 complete days broken down into 3-5 day courses and it is possible that everyone may not need the full curriculum. Multiple tracks and sessions will be offered throughout the duration.

Where to Direct Questions

Kathy Plavko is serving as the Project Manager for the Systems Development Modernization so please direct any questions to her. Her contact information is KJP1@psu.edu or 814-777-4524.

- ¹ **Enterprise developers** – We consider an enterprise-level programmer/analyst to be one whose current applications access or update the University's institutional databases. Those who mainly report from the data through queries will not need to learn Java.
- ² **Object-oriented training** – Formal instruction and supervised practice that will provide baseline proficiency to transition from a structured programming environment (Natural, Cobol and other languages) into an object-oriented, Web services world. The training includes object-oriented architecture, standards and design, SOAP, SML and Web services. The exact number of days for training has not yet been determined. In some cases, those who have had this training in the past may wish to refresh their skills, especially if they have not yet worked on object-oriented applications but need to.
- ³ **Java training** – Formal instruction and supervised practice that will provide the specialized knowledge required for Java programming. It will include an introduction to the Java programming language as well as advanced tools and techniques to build a content-rich enterprise system. The exact number of days for training has not yet been determined.

Enterprise Applications and Java -- SESSION NOTES: