Title: Writing Eclipse plug-ins with PHP

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Abstract: The aim of this project is to leverage PHP/Java bridge for adding a PHP support into e4, the next generation of the Eclipse Platform and to extend PDE to support the creation of PHP plug-ins.

Content:

Personal Details

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Writing Eclipse plug-ins with PHP

Leverage one of existing PHP/Java bridges for adding a PHP support into e4.

Project Summary

The PHP Development Toolkit (PDT) project provides Eclipse for the PHP language. PDT and DLTK combined define more than 30 extension points, allowing PHP developers to integrate their own PHP frameworks and tools.

However, PHP developers are often not familiar with Java and they need to use PHP not only for dynamic capabilities but also to integrate PHP-written libraries inside Eclipse. Using PHP as a runtime language for plug-in is also an opportunity to script development workflows.

The aim of this project is to leverage PHP/Java bridge for adding a PHP support into e4, the next generation of the Eclipse Platform and to extend PDE to support the creation of PHP plug-ins.

Project Proposal

The aim of this project is to leverage PHP/Java bridge for adding a PHP support into e4, the next generation of the Eclipse Platform.

e4 has already a support for writing plug-ins in JavaScript using Rhino capabilities to interact between JavaScript and Java.

The PHP Bundles and the Extension Registry Support will be identical to the one for the JavaScript support.

The second step is to make this project get real around the PHP community by extending PDE to support PHP Plug-ins. This includes:

- Manifest validation

- Wizards for PHP Plug-in creation

- Static code Analysis to resolve bundle/package dependencies

- Writing extension points in PHP

- Evangelism to the PHP community through a screencast.

A summary of my proposal is available here: http://www.slideshare.net/wcandillon/e4php-google-summer-of-code-proposal

Your Commitment

I expect to spend about 30 hours per week on this project. This project is more than a cool summer experiment with Eclipse. My goal is to allow all PDT users in the industry to extend it with PHP. I attend to continue this contribution after the summer and to perform evangelism about this project.

Schedule of Code and Deliverables

The first week will be dedicated to use the open source Zend PHP/Java bridge in order to script Eclipse environnement in order to create a proof of concept that the bridge can used to write Eclipse plug-ins in PHP.

The next two weeks, I will write the support for PHP bundles and the registry extension mechanism based on e4 languages work.

In order to validate this early work, I will write a simple Eclipse Hello World plug-in.

The second phase of this project is the PDE support for PHP written plug-ins. I will spend a week writing the builder for PHP bundles and a PDE wizard to generate the Hello World plug-in.

Then I will work the extension points support for PHP plug-ins, for two weeks.

PDT has an amazing support for static analysis of PHP code and I will use PDT APIs to dynamically resolves Java packages and bundles.

The remaining time will be used to wrap-up the project, study the project perspectives and opportunities, creating a project screencast, writing documentation and examples.

The project timeline is available at http://www.google.com/calendar/embed?src=ap4f678a02d7qq2s3vv2dmn40s %40group.calendar.google.com&ctz=Europe/Paris

Open Source Development Experience

In 2007, I started the Aspect PHP Developement Tools (APDT) project (http://apdt.googlecode.com).

The Aspect PHP Development Tools (APDT) project provides Eclipse platform based tool support for AOSD with PHPAspect. The goal is to deliver a user experience that is consistent with the PHP Development Tools (PDT) when working with PHPAspect projects and resources. This plugin provides an integration layer between the PHPAspect weaver, runtime and Eclipse/PDT extension points.

Eclipse Development Experience

APDT is This project is 100% on PDT extension points and APIs.

This semester at school, I'm working on the e4 JavaScript support, by extending PDE builders and wizards.

Work/Internship Experience

In 2007, I worked at IBM UK Labs, Hursley. I was involved in IBM PHP Runtime. IBM PHP Runtime is an implementation of the PHP compiler in Java.

In 2008, I spent ten months at ETH Zurich. I implemented an XQuery remote debugger for Zorba. Zorba is an embeddable and high-performance XQuery engine in C++. I integrated the debugger for an web application server called Sausalito.

During this internship I also worked on a scalable distributed locking system built on top of Amazon's cloud computing services.

Academic Experience

I am an engineering student at Telecom Lille, France. I am 22 years-old and I will be graduated in 2010.

Mentoring

My mentor will be Micheal Spector, Technical Lead at Zend Technologies on the PDT project.

Micheal was my mentor during the 2008 edition of the Google Summer of Code.

Why Eclipse ?

This contribution is directly involved with the Eclipse project, bringing a new dimension for PHP developers who wish to extend and specialize their development environment.

What do you hope to gain from your participation?

The big picture of this project is to allow PHP developpers to extend and specialize their developement environnement with the same language they use in their every day life.

This project would be also an excellent showcase for people who want to support other dynamic languages.

Additional info: http://www.slideshare.net/wcandillon/e4php-google-summer-of-code-proposal

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