



A case study on using open source tools to build a platform for enterprise web applications using symfony and Yahoo! User Interface libraries.

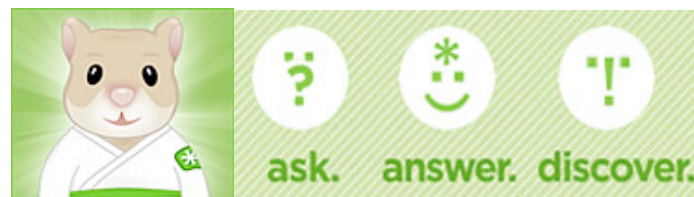
Dustin Whittle
Yahoo!

symfony + Yahoo! User Interface Libraries

- ▶ How did Yahoo! architect Yahoo! Answers with symfony and Yahoo! User Interface libraries?
- ▶ What worked and what did not when building a large web 2.0 product from open source tools?
- ▶ How to work with open source frameworks in the enterprise?
- ▶ How to develop, test, and deploy Web 2.0 applications for the enterprise using symfony and the Yahoo! UI libraries
- ▶ Q & A?

A look at Yahoo! Answers

- ▶ <http://answers.yahoo.com>
- ▶ Yahoo! Answers is the largest collection of human knowledge on the Web with more than 135 million users and 515 million answers worldwide (Yahoo! Internal Data, March 2008).
- ▶ Yahoo! Answers is the 2nd ranked education & reference site on the web (comScore)
- ▶ Available in 26 markets and 12 languages



A look at the open source Yahoo!

- ▶ Yahoo! is built from open source tools and communities
 - ▶ FreeBSD, Linux, Apache, PHP, MySQL
 - ▶ We contribute back and everyone wins

YAHOO! DEVELOPER NETWORK

- ▶ We share our tools, experience, and data through open APIs and web services
 - ▶ Yahoo! User Interface Libraries + Edge Caching
 - ▶ User Interface Design Patterns
 - ▶ Exceptional Performance Rules + YSlow
 - ▶ R3 Template + Translation Management

A look at Yahoo! User Interface Libraries

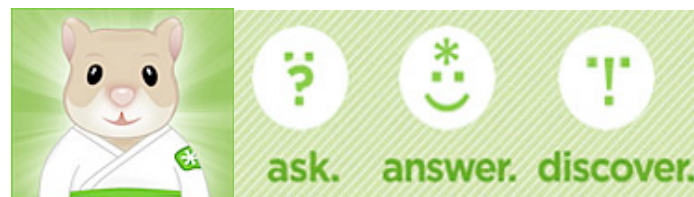
- ▶ JavaScript Framework
 - ▶ Utilities - YAHOO, Dom, Event, Animation, Browser History Manager, Connection Manager, Cookie, DataSource, Drag and Drop, Element, Get, ImageLoader, JSON, Resize, Selector, Loader
 - ▶ Controls / Widgets - AutoComplete, Button, Calendar, Charts, Color Picker, DataTable, ImageCropper, Rich Text Editor, Slider, Uploader
 - ▶ Container (Module, Overlay, Panel, Tooltip, Dialog), Layout Manager, Menu, TabView, TreeView
 - ▶ Debug – Logger, Profiler, Test

A look at Yahoo! User Interface Libraries

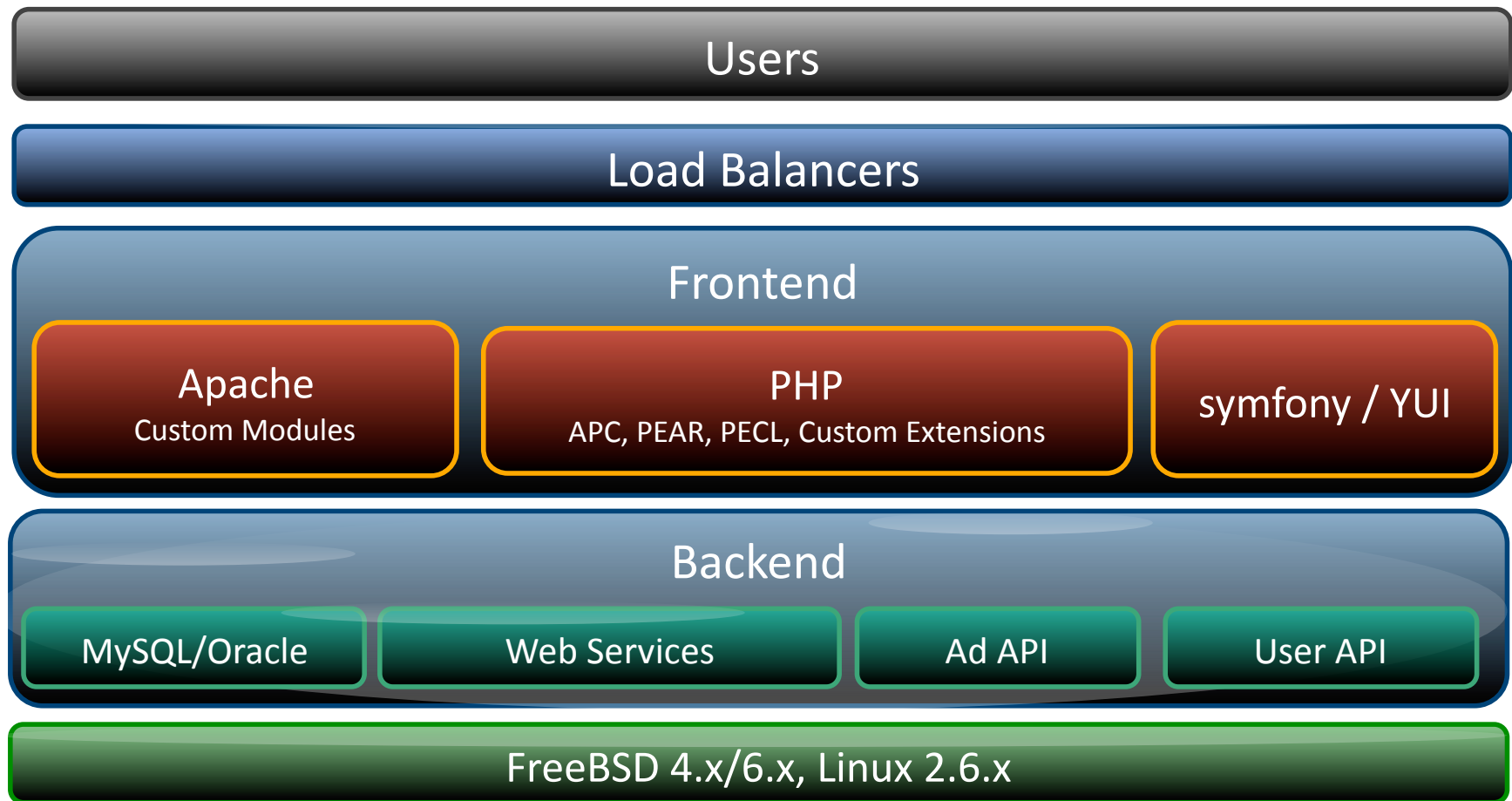
- ▶ CSS Foundation
 - ▶ Reset - Neutralizes browser CSS styles
 - ▶ Base - Applies consistent style foundation
 - ▶ Fonts - Foundation for typography and font-sizing
 - ▶ Grids - Thousands of wireframe layouts
- ▶ User Interface Design Patterns Library
 - ▶ Proven solutions to common interfaces
 - ▶ <http://developer.yahoo.com/ypatterns/>
- ▶ Grade Browser Support / Progressive Enhancement

Yahoo! Answers at the beginning

- ▶ Started as a small development team on PHP4 from a fork of Yahoo! Taiwan Knowledge+
- ▶ Launched December 2005 by December 2006 there were 60 million users and 65 million answers
- ▶ The code base eventually became difficult to maintain and iterate new features on
- ▶ Large distributed development teams (US / UK)



Y! Answers Architecture



The choice to use an open source framework

- ▶ symfony was investigated for use on Yahoo! Bookmarks as a test for the later re-architecture of Yahoo! Answers
- ▶ Investigation was performed in February 2006
- ▶ symfony, CakePHP, Prado, Zend Framework, Struts, Tapestry, Spring, Seaside, Ruby on Rails, Django
- ▶ PHP has most support internally, so the choice was really between symfony, CakePHP, Prado, php.MVC, and Zend Framework

What were the needs from a frontend platform?

- ▶ Fit existing environment (BSD/PHP5/Apache) for phased migration
- ▶ Development Cycle – How easy to develop, test, and deploy?
- ▶ Clean separation between data, logic, and display (MVC)
- ▶ Independent model layer to fit service oriented architecture
- ▶ Extensible and pluggable
- ▶ Internationalization and localization support
- ▶ Detailed documentation and active community of support
- ▶ Open source and ability to contribute back

The choice to use **symfony**

- ▶ Philosophy
 - ▶ Full-stack framework for building complex web applications
 - ▶ Adopt best ideas from anywhere, using existing code if available (Mojavi, Prado, Rails, Django)
- ▶ Design
 - ▶ Clean separation between Model, View, and Controller
 - ▶ Controller using modules and actions
 - ▶ Views using templates in straight PHP with helpers
 - ▶ Easy to reuse view modules to compose a page
 - ▶ Layouts, Components, Partials, Slots

The choice to use **symfony**

- ▶ Configurability / Flexibility
 - ▶ Features we do not want are easily disabled
 - ▶ Use of factories for easy customization
- ▶ Documentation / Support Community
 - ▶ The Definitive Guide to symfony (free online)
 - ▶ Excellent tutorials and example applications - Askeet
 - ▶ Active community with wiki, mailing lists, forums, irc channel

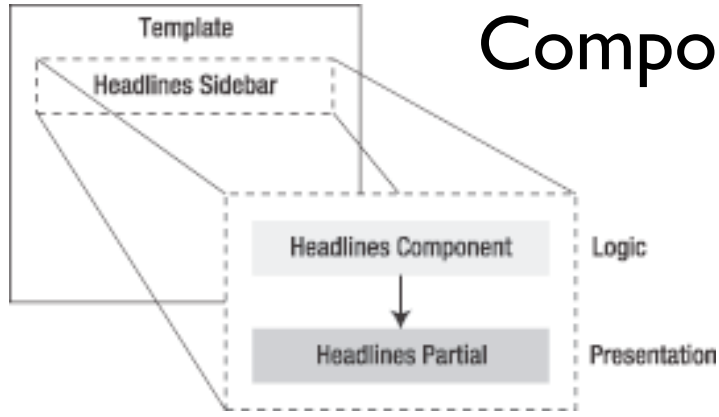
A look at symfony features

- ▶ MVC Design + Project/Application Structure
- ▶ Cascading Configuration System (YAML -> PHP)
 - ▶ Environments – Dev, Prod, Test, QA, Staging
- ▶ Task System – Tasks system for project management
- ▶ Internationalization + Localization Support
- ▶ Form / Widget / Validation System
- ▶ Security – CSRF + XSS Protection + User Management
- ▶ Caching – APC, Memcache, File, Database
- ▶ Testing Framework – LIME Unit + Functional

Views are organized and reusable

- ▶ Actions can render different views, a partial, or a component (think: same action for ajax)
- ▶ View.yml – Configures css, js, meta, layout (app/module/action)
- ▶ Layouts – Most web apps consist of full page and popup layout
- ▶ A partial is a static template fragment (think: footer)
- ▶ A component is a template fragment with business logic (think: popular list)
- ▶ Slots are placeholders in a page and can be set from anywhere

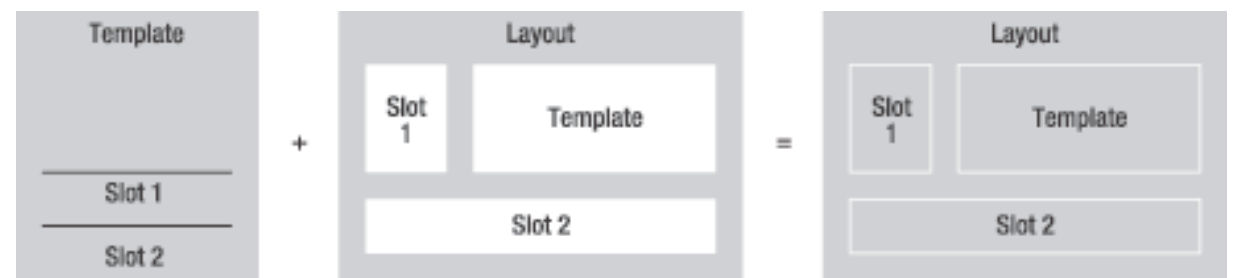
Component



Partials



Slots



Layouts



Yahoo! My Yahoo! Mail Search: Web Search

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What is symfony?

Ashish D 1 month ago

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Best Answer - Chosen by Voters

Computers and Internet :

Symfony is a web application framework written in PHP which follows the model-view-controller (MVC) paradigm. Released under the MIT license, Symfony is free software. The symfony-project.com website launched on October 18, 2005

Other:
Correction : Symphony : musical composition, often extended and usually for orchestra. "Symphony" does not imply a specific form. Although many symphonies are tonal works in four movements with the first in sonata form, and this is often described by music theorists as the structure of a "classical" symphony, even some symphonies by the acknowledged classical masters of the form Joseph Haydn, Wolfgang Amadeus Mozart and Ludwig van Beethoven do not conform to this mode

Good Luck with Your Search , I hope i helped you.
1 month ago

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A complete frontend platform

- ▶ A community maintained approach to building web applications from frameworks
 - ▶ PHP Framework
 - ▶ JavaScript Framework
 - ▶ CSS Framework
 - ▶ UI Design Patterns + Best Practices
 - ▶ Development Tools (logger, profiler, debugger, docs)
 - ▶ Unit + Functional Testing Frameworks (LIME / YUI Test)
 - ▶ Deployment Tools (rsync deployment system)

What does Yahoo! change?

- ▶ Minor changes to fit our environment (bsd/php/apache)
- ▶ Most of our changes are easily implemented via factories
- ▶ Added dimensions to configurations (ysfDimensionsPlugin)
- ▶ Integrate R3 translation/template management (ysfR3Plugin)
 - ▶ R3 - <http://developer.yahoo.com/r3/>
- ▶ Dropped the ORM and pushed down the stack (SOA)
- ▶ Added a parallel API Dispatcher (ysfAPIClientPlugin)
- ▶ Created a build and deployment solution (ysfBuildPlugin)
- ▶ Integrate support for Y! User Interface libraries (ysfYUIPlugin)

Localizing the experience with dimensions

- ▶ Cascading Configuration based on YAML
 - ▶ Framework -> Project -> Application -> Module
 - ▶ Extending the cascade to be based on dimensions
 - ▶ Dimensions can be anything (and can be chained together)
 - ▶ Data Center + Environment for customizing configurations
 - ▶ Culture for localizing user interface + data
 - ▶ Theme for customizing look and feel
 - ▶ User info (is user on corporate intranet?)
- ▶ Caching

Extending the view + i18n system with R3

- ▶ Translation + Template Management
 - ▶ Integrated with symfony i18n + view layers
 - ▶ `<r3:trans>hello</r3:trans>` vs `__('hello')`
 - ▶ Dictionary Management
 - ▶ SQLite/XLIFF Backend
 - ▶ `r3:include`, `r3:var`, `r3:cphp`
- ▶ Added tasks
 - ▶ Importing/Exporting XLIFF dictionary
 - ▶ Generating translations for projects

A build and deployment system

- ▶ Aggregate and minify stylesheets and javascripts
- ▶ Rewrite templates, css, js for CDN (Akamai, S3, ...)
- ▶ Generate translations for configurations + templates
- ▶ Generate configuration cache
- ▶ Aggregate core classes + remove debug statements
- ▶ Run lint, unit, functional tests
- ▶ Package applications as .tgz
- ▶ Deployment via rsync

Real World Performance

- ▶ symfony is not targeted for building hello world -- It is targeted at building complex web applications
- ▶ symfony can provide many features (db, i18n, security, orm) disable the ones you will not use
- ▶ Yahoo! Bookmarks
- ▶ Yahoo! Answers
 - ▶ 100% dynamic (no view caching)
 - ▶ 40-120qps with < 100ms frontend latency
- ▶ Yahoo! Widgets

symfony Documentation

- ▶ The Definitive Guide to symfony
 - ▶ http://symfony-project.com/book/1_1
 - ▶ Licensed under GFDL (read it free)
- ▶ API Documentation
 - ▶ http://www.symfony-project.org/api/1_1/
- ▶ Wiki
 - ▶ <http://trac.symfony-project.com/wiki>
 - ▶ Many useful tutorials, how to, and translations

Askeet Advent + Community Support

- ▶ Askeet.com
 - ▶ <http://symfony-project.com/askeet>
 - ▶ 24 Day Tutorial
 - ▶ How to build a real web 2.0 application
 - ▶ In-depth coverage of all aspects of symfony
- ▶ IRC, Mailing List, and Forums
 - ▶ <irc://irc.freenode.net/#symfony>
 - ▶ symfony-users@googlegroups.com
 - ▶ <http://symfony-project.com/forum>

YUI Examples + Documentation

- ▶ More than 275 functional examples
 - ▶ <http://developer.yahoo.com/yui/examples/>
- ▶ Yslow + Performance Rules
 - ▶ <http://developer.yahoo.com/performance>
- ▶ YUI Blog
 - ▶ <http://yuiblog.com/>
- ▶ Mailing List @ Yahoo! Groups
 - ▶ <http://tech.groups.yahoo.com/group/ydn-javascript/>

Getting started in 10 minutes

- ▶ **Install symfony from PEAR**
 - ▶ pear channel-discover pear.symfony-project.com
 - ▶ pear install symfony/symfony-beta

- ▶ **Create a project with symfony cli**
 - ▶ mkdir web2expo ; cd web2expo
 - ▶ symfony generate:project web2expo
 - ▶ symfony generate:app frontend
 - ▶ symfony generate:module frontend demo

Install a foundation from plugins

- ▶ **Community plugins**
 - ▶ symfony plugin:install sfGuardPlugin
 - ▶ symfony plugin:install sfFeed2Plugin

- ▶ **Yahoo! Plugins (will be released with 1.1 stable)**
 - ▶ symfony plugin:install ysfDimensionsPlugin
 - ▶ symfony plugin:install ysfR3Plugin
 - ▶ symfony plugin:install ysfBuildPlugin
 - ▶ symfony plugin:install ysfYUIPlugin

web2.0
EXPO



Questions?

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YAHOO! DEVELOPER NETWORK

Thanks for listening and enjoy the rest of the
Web 2.0 Expo!

