

# Joomla, 40 Million Page Views, and You

Mitch Pirtle

NYPHP, January 2009

# Summary Overview

*MTV brought Mitch Pirtle in to recommend a platform for a very high-traffic website - he chose an open source platform and then led development to a successful release. Problems solved: lowering costs, fostering a can-do philosophy, promotion of the free software approach of sharing with others, unique development approaches learned from working on large FOSS projects*

# Obligatory 'Me' Slide

- ✦ American, married Swiss
- ✦ Lived in US and EU
- ✦ Currently in NYC
- ✦ Web-only since 1995
- ✦ VP at KickApps
- ✦ High traffic sites
- ✦ Pragmatic, not dogmatic
- ✦ Joomla! co-founder
- ✦ Former Mambo core
- ✦ Booster of many FOSS
- ✦ Co-founded NYCJUG
- ✦ Too many projects to list

Let's Get This Thing Started

# Audience Breakdown



# Technology

Are you a technologies person?



# Business

Are you a business person?



# Not Technology or Business

Are you neither?



Drum Roll, Please



Imagine it. Create it. Share it.



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**\$100,000 DREAM CAR**  
 AS SEEN IN  
**MIDNIGHT CLUB**  
 LOS ANGELES



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**QUIZ OF THE DAY**

## Is he the one?

*Is he the one that you are looking for? Is he worth it? Take the quiz and find out! -----  
 ----- Rate, & add me if u like!*

**FIND OUT NOW!**

Quiz created by [starviolinist96](#)

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**THE ULTIMATE LIST**

**TOP RATED**

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	<a href="#">Is he the one?</a>	<a href="#">starviolinist96</a>	10/09/2008	34,265	★★★★★



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# Quizilla

[www.quizilla.com](http://www.quizilla.com)

# The Challenge

- ✦ [www.quizilla.com](http://www.quizilla.com)
- ✦ Acquired in 2006
- ✦ Peaks of 40,000,000 unique pageviews in a week
- ✦ Mix of two codebases (perl & php)
- ✦ Difficult to maintain
- ✦ Difficult to augment/evolve

# The Objectives: New World

- ✦ High performance
- ✦ Reliable, stable
- ✦ Scale to extremes
- ✦ Easy to maintain
- ✦ Easy to extend

# The Shopping List

- ✦ Open Source
- ✦ Framework
- ✦ MVC
- ✦ Strong Community
- ✦ Active Development
- ✦ Common Language
- ✦ Available Resources
- ✦ Modular Architecture
- ✦ Flexible, Customizable

Joomla! 1.5 Documentation

- [Home](#)
- [API reference wiki](#)
- [Developer portal](#)
- [SVN repository](#)

Packages

Joomla-Framework

Package: Joomla-Framework

Joomla-Framework

- Class trees
- Element index
- Classes
- Functions
- Files
- Application
- Base
- Cache
- Client
- Compatibility
- Database
- Document
- Environment
- Error
- Event
- FileSystem
- Filter
- HTML
- Installer
- Language
- Mail

**Joomla! 1.5 API Reference**

These pages are automatically generated by the [phpDocumentor](#) package from an analysis of the Joomla! source code and making use of specially formatted comments embedded in the source code itself.

The Joomla! Content Management System (CMS) is an application built on top of the Joomla! Framework. This website documents the API of the Joomla! Framework and so does not include code from the Joomla! CMS. In particular, the legacy API is now implemented in a plug-in which is part of the CMS and so is no longer documented here.

This is what you will find here:

- The Joomla! Framework API, called simply [Joomla-Framework](#).
- A number of third-party libraries used by Joomla! and/or available for use by third-party Joomla! extension developers. Please note that the Joomla! Developer Documentation Team is not responsible for maintaining documentation, including this automatically generated documentation, for third-party libraries.

You can select which package to view using the drop-down list in the menu on the left of this screen.

Third-party libraries are documented here for completeness and because they contain valuable information not available elsewhere. However, to get the best out of the Joomla! Framework, please try to use the Joomla! API calls in preference to calling the libraries directly.

Additional documentation is available on the [Joomla! Documentation Wiki](#) website and in particular there is a manually produced [API reference](#) which has additional information and example code for classes and methods in the Joomla! Framework.

This website covers the latest official release of the Joomla! Framework. The equivalent to this site for the [latest SVN code](#) is available in the [svn](#) subdirectory.

Symbol	Description	Symbol	Description	Symbol	Description
	Class		Method		Variable
	Private class		Private method		Private variable
	Abstract class		Abstract method		Static variable
	Abstract private class		Static method		Global
	File folder		Constructor		Constant
	Class folder		Destructor		File

These pages were generated from Joomla! 1.5.7 Stable (9 September 2008)



Winner: Joomla! Framework

<http://docs.joomla.org/Category:Framework>

# Psssssst! Hey buddy!

Ok, we could have used CakePHP, Symfony, Zend Framework, Django, Ruby on Rails, Merb....

However PHP was desired, and I was available.

# Why Joomla! Framework?

- ✦ Meets all objectives
  - ✦ PHP, MySQL
  - ✦ FOSS
  - ✦ Flexible
  - ✦ Framework
  - ✦ MVC...



# Result: Success

- ✦ Only needed 3 webservers
- ✦ Only needed 2 database servers
- ✦ Becoming standard base platform for future development



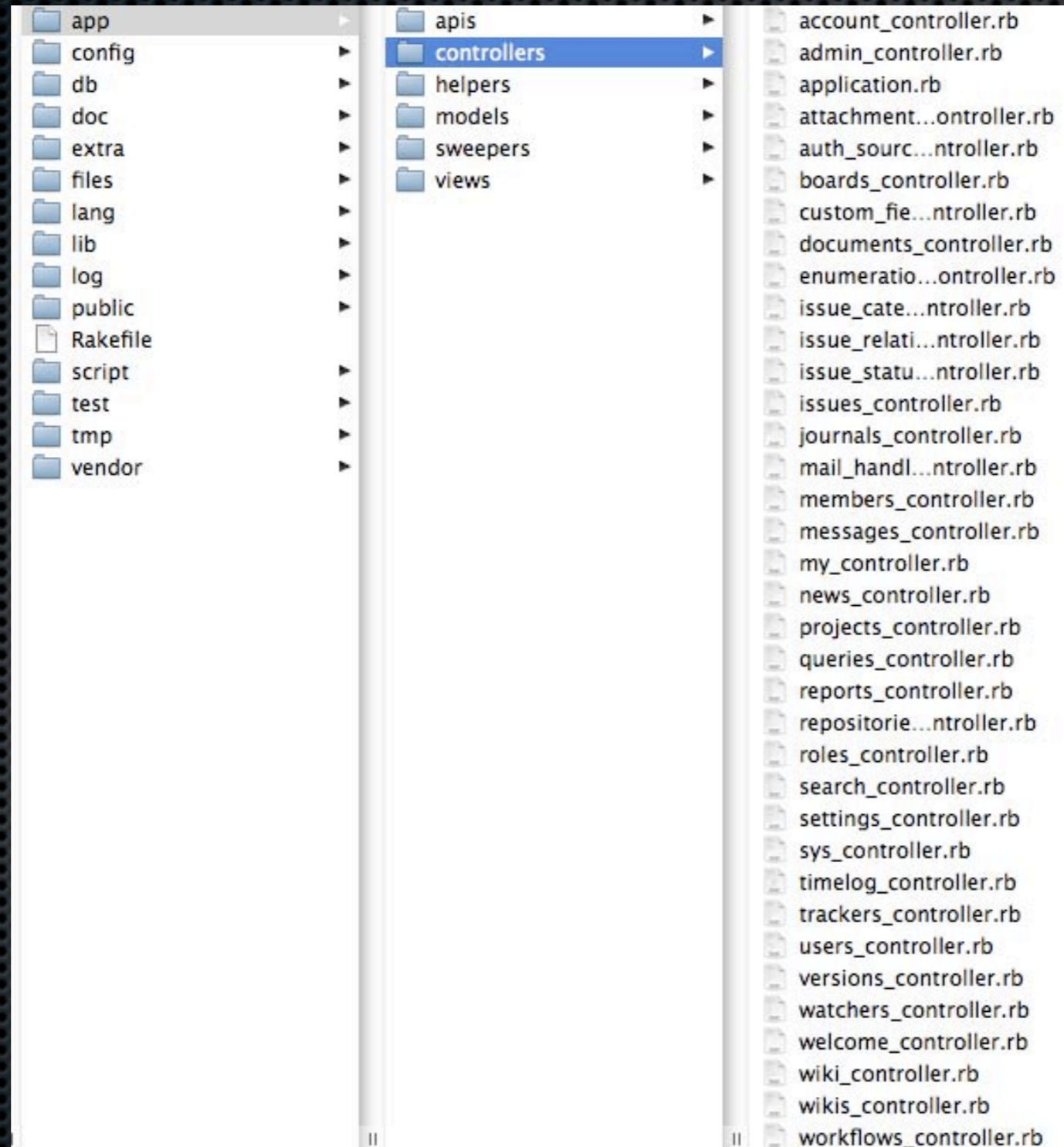
# Impact: Development

- ✦ Atomic MVC - many developers, few conflicts
- ✦ Source code - Tight reliance on revision control systems
- ✦ Issue Tracker - Daily SCRUM-style planning meet
- ✦ Change management - Build process with controls

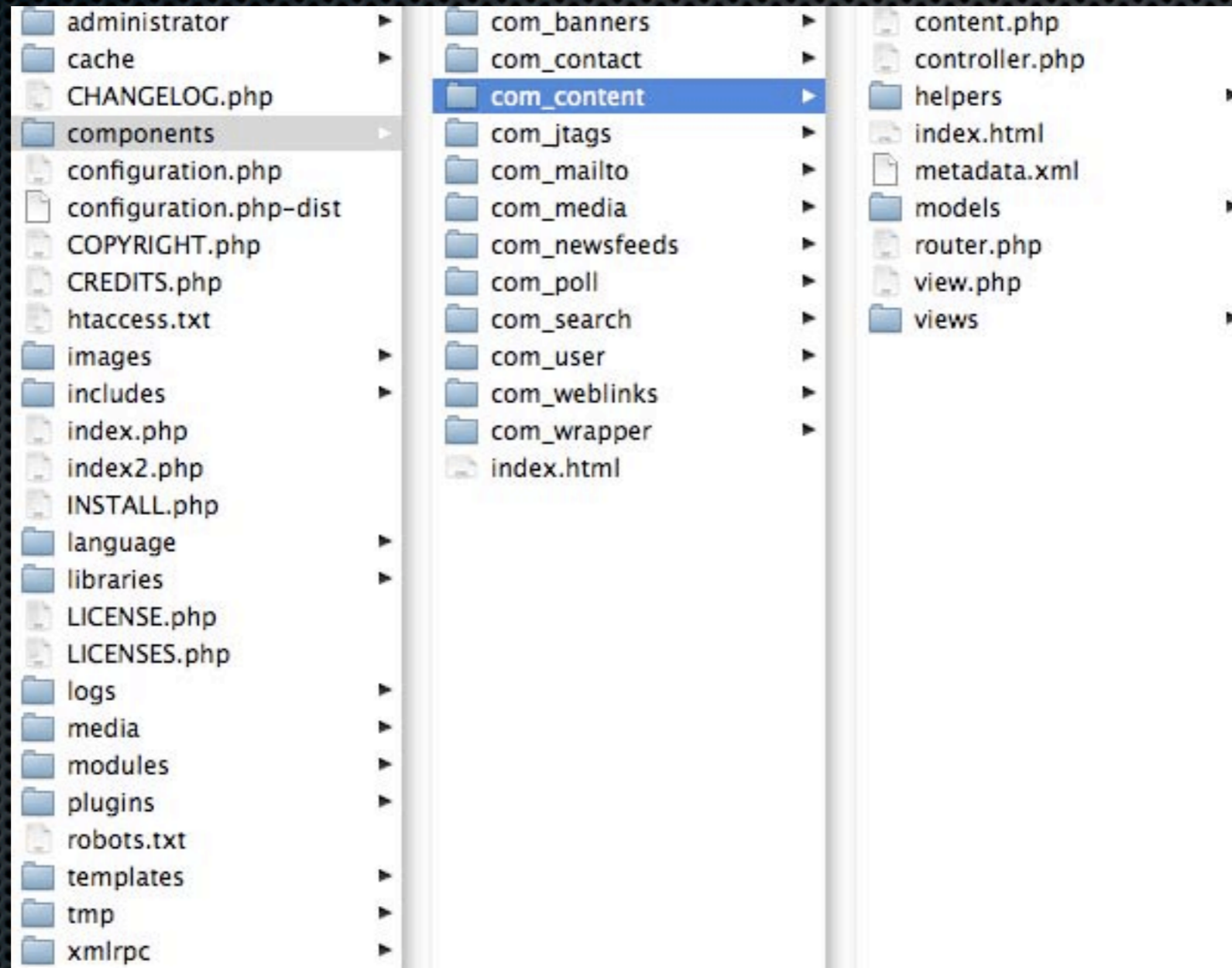
# Atomic MVC?

- Ok, I made that up. Sounds cool though.

# What MVC Looks Like



# This is Atomic MVC



# Plain MVC



# Atomic MVC



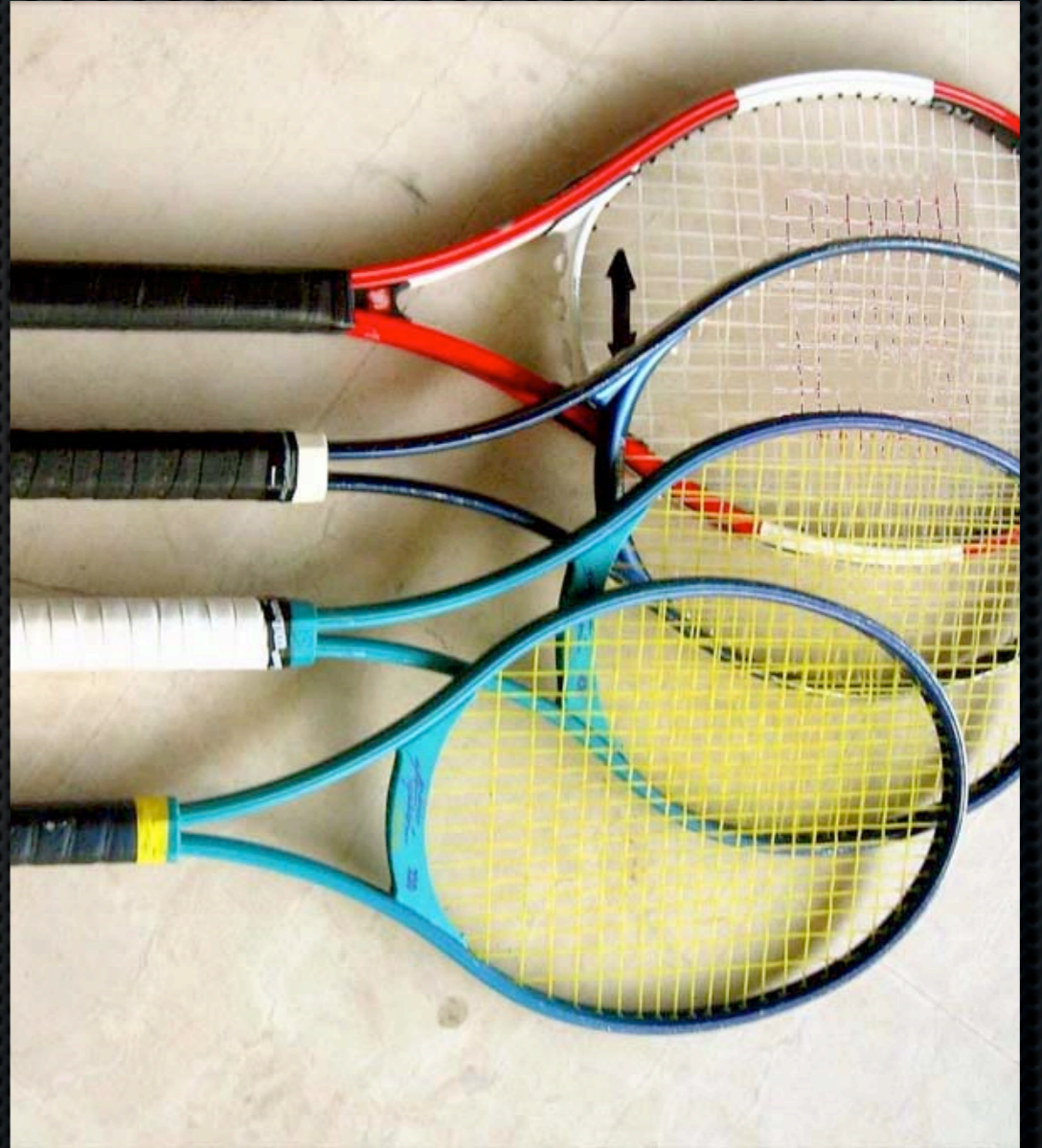
# Impact: Philosophy

- ✦ Anything developed that wasn't a proprietary feature or function was contributed back to the project
- ✦ All code was packaged for ease of reuse on other projects within the enterprise



So What Did We Learn?

One Size  
Fits All  
Ok, almost.



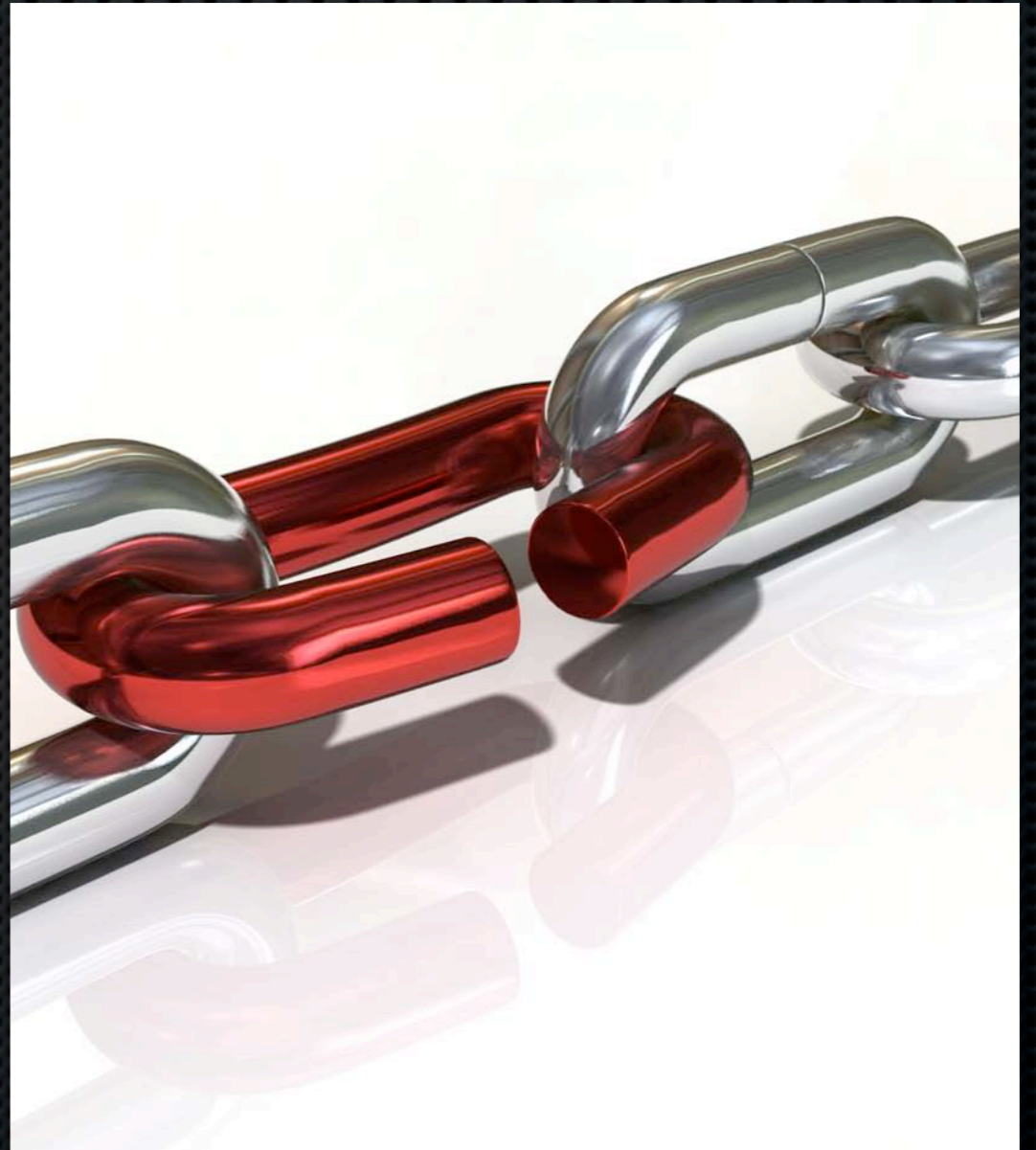
# Modular Framework

Not fully decoupled  
from CMS (yet)



# Database Class

Still very specific to  
one instance - no  
tiers or pools





# So How Does It End?

No biggie. We didn't fall ALL the way down.

# One Size Fits All: Classes!

- ✦ Joomla is a *stack* framework
- ✦ No need for language support
- ✦ No need for dynamic navigation
- ✦ No need for third party API support
- ✦ JDate? A date class? Are you freaking kidding me?

# Modular Framework: Extend

- ✦ Extended existing classes for specific needs
- ✦ Introduced helper classes to simplify complex tasks

# Taming JDatabase

- ✦ We cheated. And we're proud of it.
- ✦ Extended jConf with a constructor for poor-man's query pool
- ✦ Extended JDatabase mysql driver to have one connection for reads, one for writes



# JSession Ate My Brain

- ✦ Changes too numerous to mention :-)
- ✦ Fixes to storage driver
- ✦ Fixes to cookie mechanism
  - ✦ Auto-remember
  - ✦ Auto-resume

# Input, Output

- ✦ Hacked the output buffers so modules could share information with components

# Special Note on Caching

- ✦ JCache needs help. Serious help.
- ✦ Used memcached driver
- ✦ Chose our own key namespace strategy
- ✦ Switched to a write-through cache approach
- ✦ Dropped output caching entirely
- ✦ Added per-item expiration TTL

# Current Status

- ✦ Codebase is now part of the standard offering for MTV websites that would like to take advantage of the platform



Questions?

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