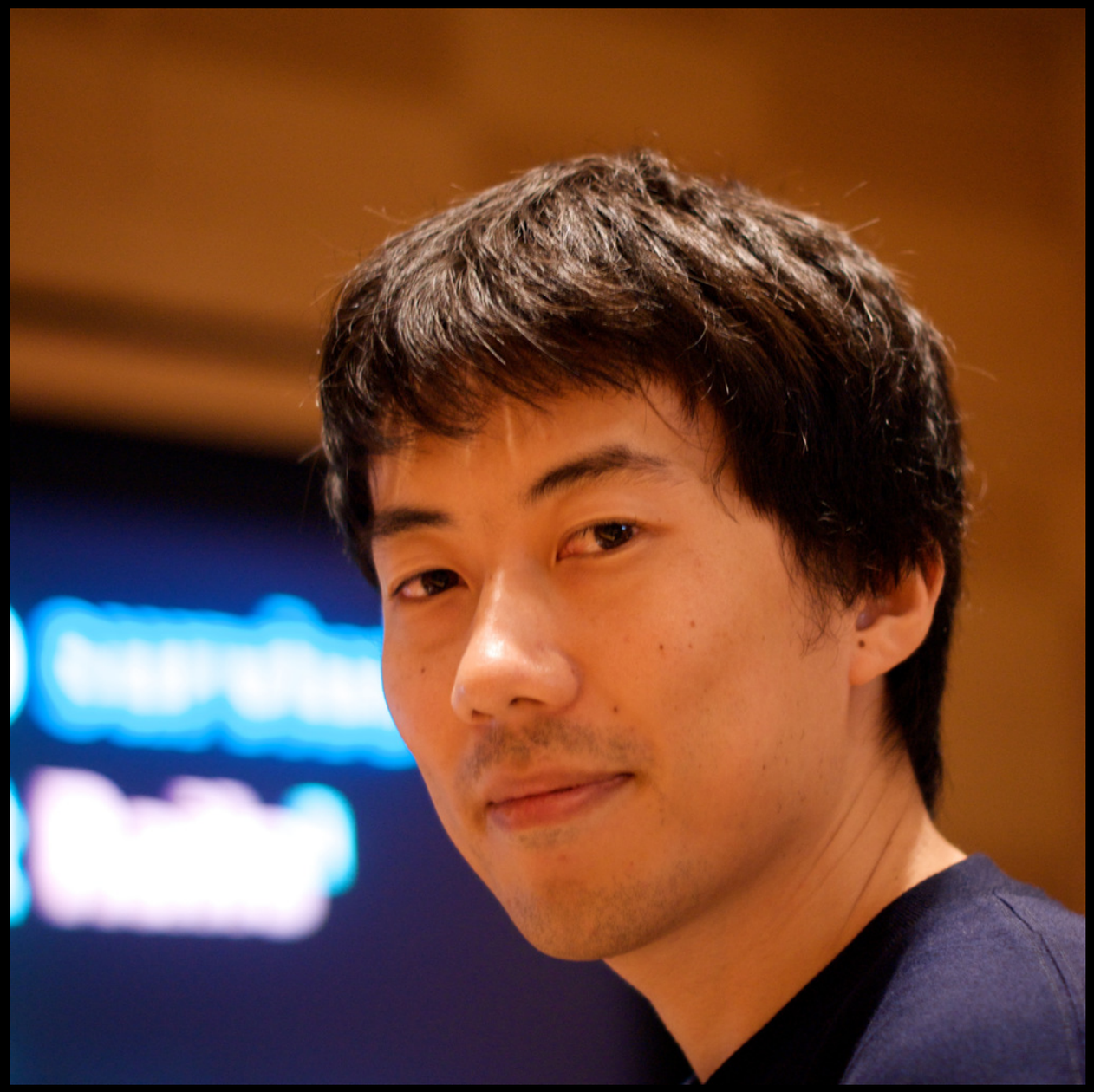
# Leave end-to-end testing to Capybara

SHIBATA Hiroshi
Eiwa System Management,Inc.

# Profile



# SHIBATA Hiroshi
# a.k.a hsbt

shibata.hiroshi@gmail.com

tDiary commiter

http://www.hsbt.org/



http://github.com/hsbt/

http://twitter.com/hsbt/


雷門
asakusa.rb

# SapporoRubyKaigi




13:45-14:00 (休憩)

14:00-14:25「わたしとtDiary」

**発表者**

柴田博志（hsbt）- tDiary.org

**概要**

わたしとtDiaryとの関わり、OSSの利用者からコミッタ

そしてadminになるまでの話と2006年以降のtDiaryの動き

これからのtDiaryについて紹介したいと思います。

**発表資料**

わたしとtDiary



# RubyKaigi 2010

How to survive in post Rails' world.

SHIBATA Hiroshi
Eiwa System Management,Inc.

# 提　供

おかげさまで３０周年
情報化技術を通じて社会と共生する

esm
永和システムマネジメント

# 今日話すこと


Ruby
Ruby Association Certified
System Integrator
株式会社 永和システムマネジメント
Serial Number : 00017
May 14 2010
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条件を満たしていることを認定します。
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# 中の人たち

# Ruby x Agile version:β

Rubyとアジャイルでふつうのシステム開発を実現する永和システムマネジメントのWebサイト



## 中の人たち

- kakutani (Shintaro Kakutani)
- fkino (Fumihiko Kinoshita)
- emeitch
- yattom
- thata
- nawoto
- hidenba
- ursm (Keita Urashima)
- kenchan (Kenichi TAKAHASHI)
- dot (Shuhei KONDO)
- koic (ITO Koichi)
- moro
- takkanm
- kchiba
- hsbt (SHIBATA Hiroshi)
- Akiyah
- haru01 (Eiji Ienaga)
- bekkou (Tsunokake Takumi)
- hibariya
- kanoposo
- tkywtnb

Webアプリケーション開発のためのプログラミング技術情報誌

FOR ALL WEB APPLICATION DEVELOPERS ウェブDBプレス

# WEB+DB PRESS

vol. 61 2011

実践! Titanium

# JavaScriptで iPhone&Android 本格アプリ開発

# Rails 3テスト 最前線

RSpec／Capybara／factory_girl／RR

## Scala&Clojureではじめる JVM言語



特集2

# Rails 3 テスト最前線

## RSpec、Capybara、factory_girl、RR

本誌Vol.58で特集し大好評だったRuby on Rails 3の正式リリースから約半年が経ち、Rails 3でのテスト環境が整ってきました。Railsはテスティングツールにも先進的なものが多く、ユニットテスト（RSpec）、エンドツーエンドテスト（Request Specs、Capybara）、テストデータのセットアップ（factory_girl）、スタブ／モック（RR）など、実にさまざまなものがあります。

本特集では、シンプルでわかりやすくメンテナンスしやすいクリーンなコードをアジャイルに開発するために、Rails 3時代のテスティングツールとテスト手法を基礎から解説していきます。




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他人のスライドでホッテントリを取る
(ことわざ)

6:55 AM Oct 23rd, 2010 TweetDeckから



kakutani
Kakutani Shintaro

# ふつうの Ruby on Rails テスティング環境

Testing Environment of Ruby on Rails


**角谷 信太郎**

日本Rubyの会
(株)永和システムマネジメント
kakutani@esm.co.jp

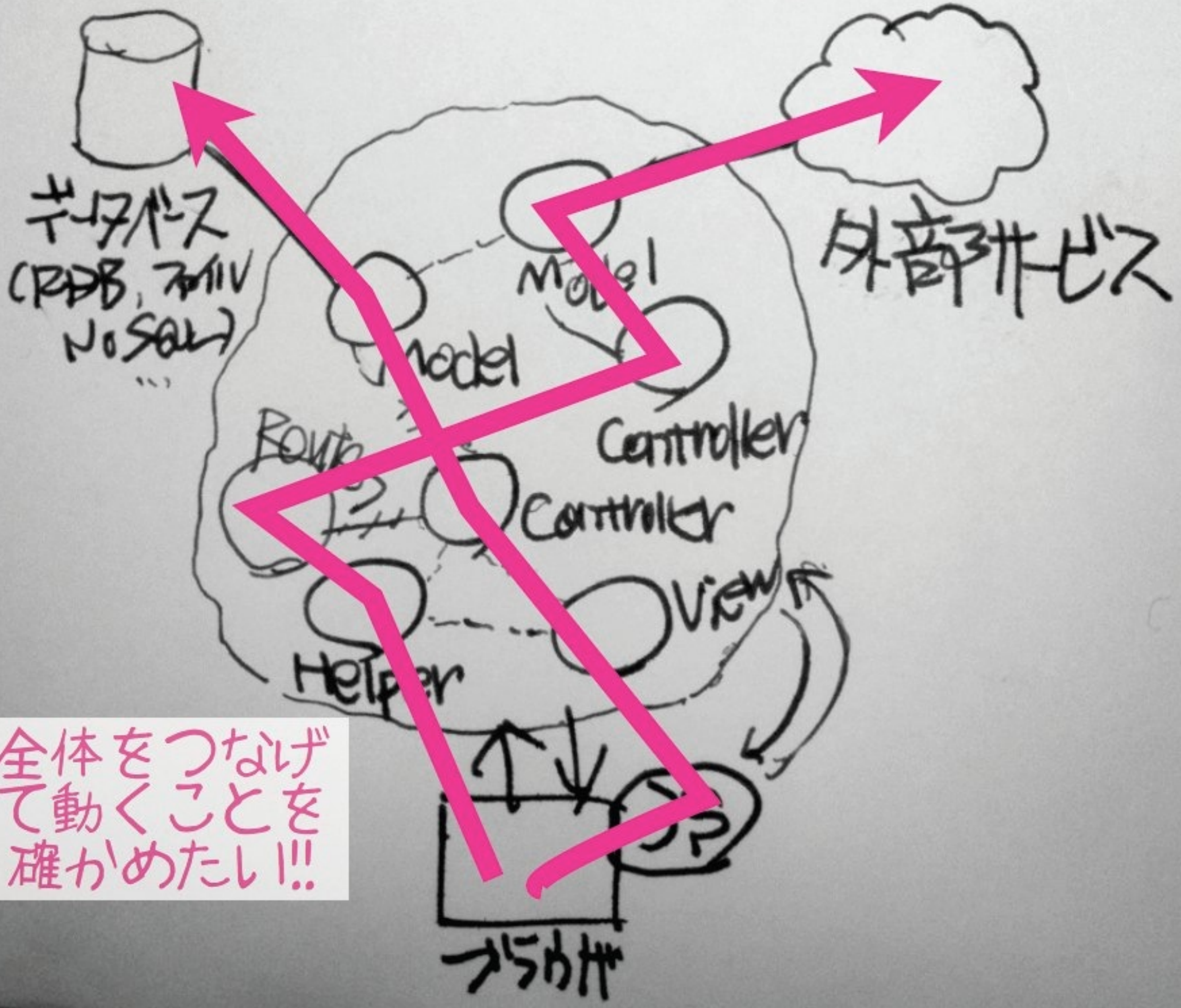
KAKUTANI Shintaro; Eiwa System Management,Inc.



第6回Rubyビジネスセミナー 福岡県Ruby・コンテンツ産業振興センター ; 2011-02-24(Thu)

# テストのレベル

- ✓ ユニット
  - ✓ 関心のあるオブジェクトがきちんと動くか?
- ✓ エンドツーエンド
  - ✓ システム全体として動くか?
- ✓ インテグレーション
  - ✓ 自分らの制御下にないコードと結合して動くか?




全体をつなげて動くことを確かめたい!!

# どうやって？

# Capybara

jnicklas / capybara

Unwatch | Fork

Source | Commits | Network | Pull Requests (6) | Issues (37) | Wiki (1) | Graphs

Switch Branches (5) | Switch Tags (13) | Branch List

webrat alternative which aims to support all browser simulators — Read more

HTTP | Git Read-Only | https://github.com/jnicklas/capybara.git | This URL has **Read-Only** access

Better implem… f attributes for celerity, closes …6



jnicklas …nor)
5 days a…

commit b022…
tree e622…
parent 6fa8…

capybara /

| name | age | message |
|---|---|---|
| .gitignore | October 30, 2010 | do not track local gem files [byrnejb] |
| .rspec | November 17, 2010 | Added fuubar [jnicklas] |
| Gemfile | October 07, 2010 | Add bundler dependency itself to gemfile [jnicklas] |
| Gemfile.lock | November 21, 2010 | New bundler adds a metadata annotation [jnicklas] |
| History.txt | October 29, 2010 | Add note about new click_on method to History [Your Name] |
| README.rdoc | October 22, 2010 | changed Selector API. Now more like RSpec matchers [jnicklas] |
| Rakefile | November 21, 2010 | Move more of node functionality into subfolder [jnicklas] |

ABOUT US

## What, how, who?

We build bespoke web applications and websites using agile methodologies and **Ruby on Rails**. We work closely with our clients, taking great care to make sure that we're building the right thing, and that we're building it the right way.

We belive in great design and we always strive to create clean, fresh and easy to use web applications and sites that delivers a great user experince.

Our team (yep, that's us on the right) consists of a tight knit group of developers and designers, with great expertise in their respective fields and decades of experience under their collective belt.



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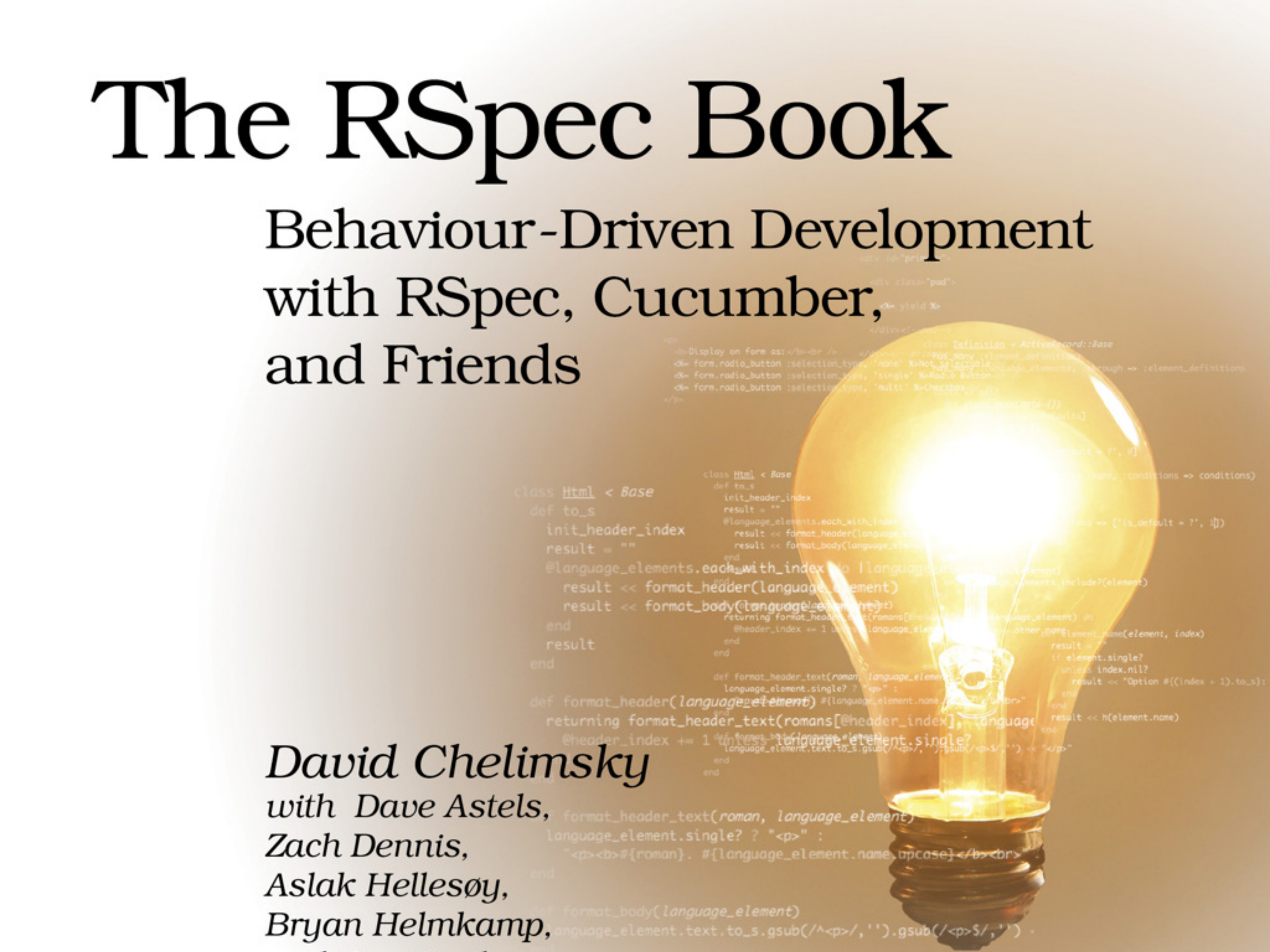
# Capybaraはエンドツーエンドテストを支えるフレームワーク

# 実行環境

# The RSpec Book

## Behaviour-Driven Development with RSpec, Cucumber, and Friends



*David Chelimsky*
*with Dave Astels,*
*Zach Dennis,*
*Aslak Hellesøy,*
*Bryan Helmkamp,*

# Cucumber

*behaviour driven development with elegance and joy*

## 1: Describe behaviour in plain text

```
Feature: Addition
  In order to avoid silly mistakes
  As a math idiot
  I want to be told the sum of two numbers

  Scenario: Add two numbers
    Given I have entered 50 into the calculator
    And I have entered 70 into the calculator
    When I press add
    Then the result should be 120 on the screen
```

## 2: Write a step definition in Ruby

```
Given /I have entered (.*) into the calculator/ do |n|
  calculator = Calculator.new
  calculator.push(n.to_i)
end
```

## 3: Run and watch it fail

```
$ cucumber features/addition.feature
Feature: Addition  # features/addition.feature
  In order to avoid silly mistakes
  As a math idiot
  I want to be told the sum of two numbers
  Scenario: Add two numbers                              # features/additi
    Given I have entered 50 into the calculator  # features/step_d
      uninitialized constant Calculator (NameError)
      ./features/step_definitons/calculator_steps.rb:2:in `Given /
      features/addition.feature:7:in `Given I have entered 50 into
    And I have entered 70 into the calculator    # features/step_d
    When I press add                             # features/additi
    Then the result should be 120 on the screen  # features/additi
```

## 4. Write code to make the step pass

```
class Calculator
  def push(n)
    @args ||= []
    @args << n
  end
end
```

## 5. Run again and see the step pass

```
$ cucumber features/addition.feature
Feature: Addition  # features/addition.feature
  In order to avoid silly mistakes
  As a math idiot
  I want to be told the sum of two numbers
  Scenario: Add two numbers                              # features/additi
    Given I have entered 50 into the calculator  # features/step_d
    And I have entered 70 into the calculator    # features/step_d
    When I press add                             # features/additi
    Then the result should be 120 on the screen  # features/additi
```

## 6. Repeat 2-5 until green like a cuke

```
$ cucumber features/addition.feature
Feature: Addition  # features/addition.feature
  In order to avoid silly mistakes
  As a math idiot
  I want to be told the sum of two numbers
  Scenario: Add two numbers                              # features/additi
    Given I have entered 50 into the calculator  # features/step_d
    And I have entered 70 into the calculator    # features/step_d
    When I press add                             # features/additi
    Then the result should be 120 on the screen  # features/step_d
```

## 7. Repeat 1-6 until the money runs out

Cucumber lets software development teams describe how software should behave in plain text. The text is written in a **business-readable domain-specific language** and

*London*
*March 24 2011*

# Cukeup!

## Download

You need Ruby installed. Then just run

```
gem install cucumber
```

from a command prompt. Now, run

```
cucumber --help
```

RSpec runner

RSpec DSL

cucumber runner

cucumber DSL(ja)

cucumber DSL

capybara

# RSpec

# Example

# DSL

```
feature '日記を読む' do
  background do
    setup_tdiary
  end
  scenario '最新の日記の表示' do
    visit '/'
    within('title') do
      page.should have_content('【日記】') }
    end
    within('h1') do
      page.should have_content('【日記】')
    end
    page.should have_css('a[href="update.rb"]')
  end
end
```

# Cucumber

# Example




買い物かごへ

# はじめる！ Cucumber

B! 10 いいね！ 21 Tweet 0

諸橋恭介

1,000円(税込)

β版 Cucumberの入門書がついに登場。Rubyの全ライブラリの中でも人気度ベスト10に入るほど(ruby-toolbox調べ)の知名度を誇るBDD向けツール、Cucumberを日本人（日本語）でも使いこなせるよう、分かりやすく解説。今日からテストを書くのも日本語で。

## β版について

本書のステータスは現在β版であり、現在、著者やレビュアの方々により修正が行われている段階です。 いま購入されてお読みいただけるのはその途上の原稿を元にしたものです。 最終的に正式公開されたものもダウンロードしお読みになることはできますが、 正式公開版を読みたい方には今しばらくお待ちいただくことになります。あらかじめご了承ください。

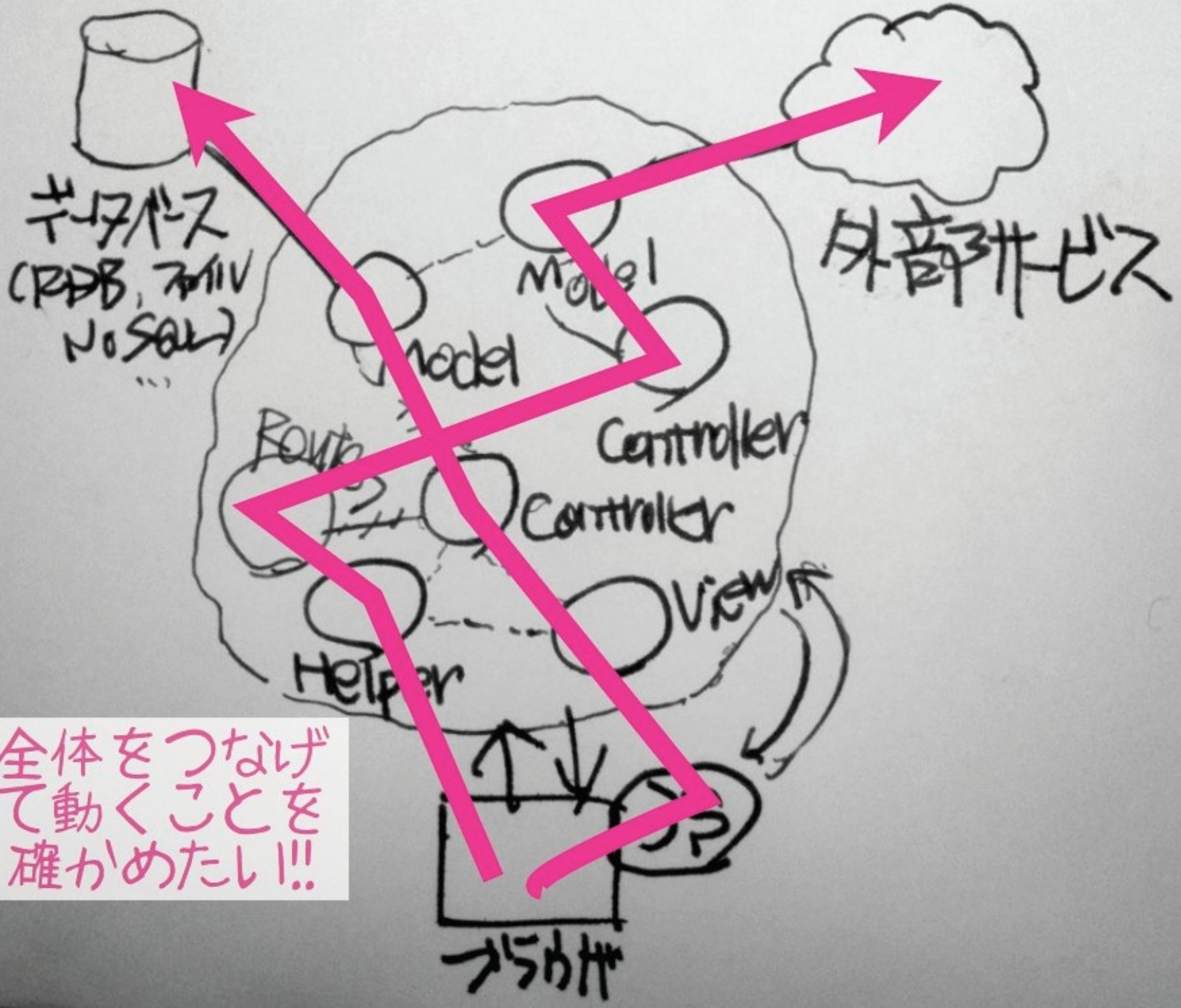
概要 サンプル インタビュー

## 書誌情報

著者: 諸橋恭介

発行日: 2010-10-31

# Driver




全体をつなげて動くことを確かめたい!!

# Driverø

# 仲間達

Rack

早い、jsが動かないかも

HtmlUnit

そこそこ早い、jsが動く

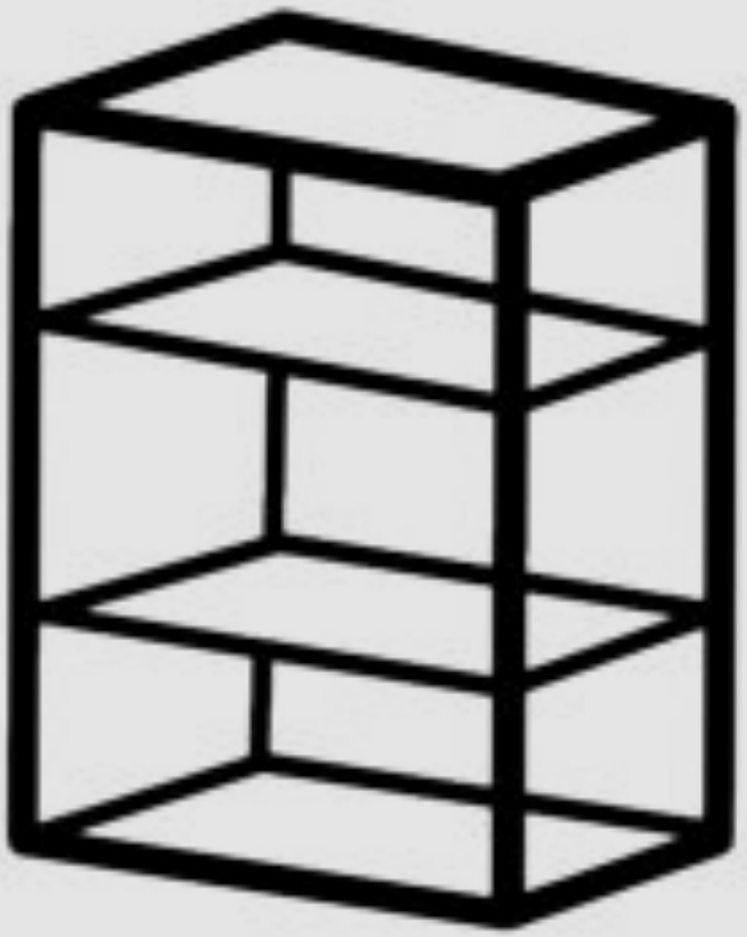
javascript engine

jsがわりとよく動く

selenium

ブラウザそのもの

# Rack: a Ruby Webserver Interface



rack

powers web applications

**Rack** provides a minimal interface between webservers supporting Ruby and Ruby frameworks.

**SourceForge.net**
- Project Page
- Download

**How do I...**
- Get started
- Use the Keyboard
- Use Tables
- Use Frames
- Use Windows
- Use JavaScript
- Use ActiveX

**User docs**
- Logging
- NTLM authentication
- FAQ

**Support**
- Mailing lists
- Professional support

**Developer docs**
- Getting Latest Code
- Coding conventions
- Submitting bugs
- Submitting JavaScript bugs
- Submitting patches
- JavaScript engine
- Packaging a release
- TODO

**Project Documentation**
- Project Information
- Project Reports

**Parent Project**
- Sonatype OSS Parent

# HtmlUnit

HtmlUnit is a "GUI-Less browser for Java programs". It models HTML documents and provides an API that allows you to invoke pages, fill out forms, click links, etc... just like you do in your "normal" browser.

It has fairly good JavaScript support (which is constantly improving) and is able to work even with quite complex AJAX libraries, simulating either Firefox or Internet Explorer depending on the configuration you want to use.

It is typically used for testing purposes or to retrieve information from web sites.

HtmlUnit is not a generic unit testing framework. It is specifically a way to simulate a browser for testing purposes and is intended to be used within another testing framework such as JUnit or TestNG. Refer to the document "Getting Started with HtmlUnit" for an introduction.

HtmlUnit is used as the underlying "browser" by different Open Source tools like Canoo WebTest, JWebUnit, WebDriver, JSFUnit, Celerity, ...

HtmlUnit was originally written by Mike Bowler of Gargoyle Software and is released under the Apache 2 license. Since then, it has received many contributions from other developers, and would not be where it is today without their assistance.

HtmlUnit

## Wh to d...

Latest
Latest Aug
v 2.8

Docume

- Javadoc API documentation
- Change history
- Frequently Asked Questions
- HtmlUnit project page on SourceForge.net
- HtmlUnit mailing list
- HtmlUnit coding conventions
- Submitting bugs
- Submitting patches
- Getting and building the most recent code

Tutorials

- Getting Started
- Tables
- Logging
- Windows and frames
- Keyboard navigation

## Features

- Support for the HTTP and HTTPS protocols
- Support for cookies
- Ability to specify whether failing responses from the server should throw exceptions or should be returned as pages of the appropriate type (based on content type)
- Support for submit methods POST and GET (as well as HEAD, DELETE, ...)

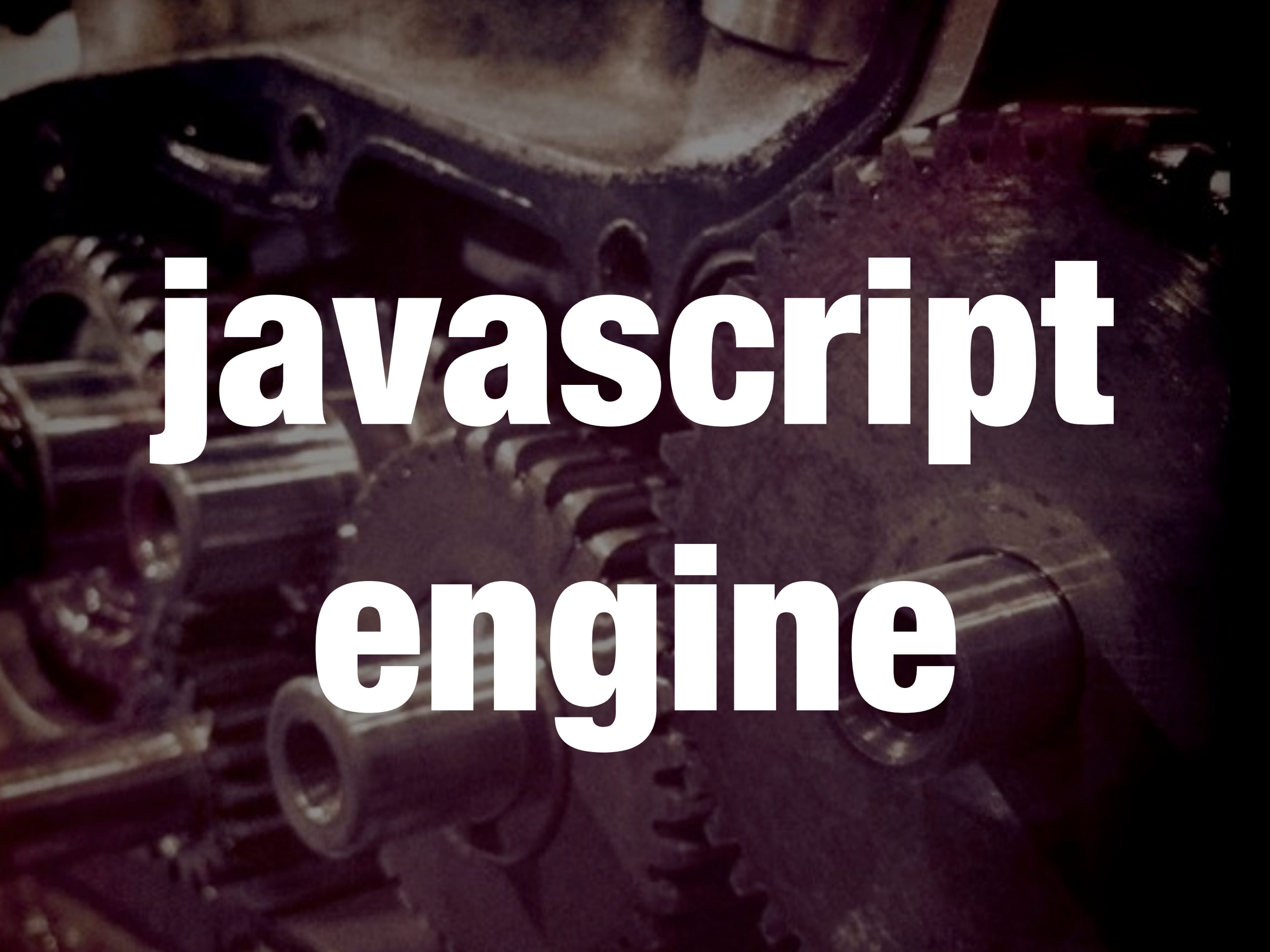
akephalos

IE6/7/8

Firefox 3/3.6

culerity/celerity

JRuby


javascript
engine

envjs

jhonson

webkit

QT

zonbie

testing for node.js

selenium
*Browser automation framework*

Project Home | Downloads | Wiki | Issues | Source

Search Current pages for Search

**RubyBindings**

*Ruby bindings*

# Introductio

The Ruby bindings for the ve ai a ur bd ge

The bindings support 1 rd 1. JR ar ubi

- API docs
- Changelog

## API Example

The bindings pro a s y r d version of th ebDriver API:

```
require "se m v

driver = Sel e fo
driver.navig "h oog m"

element = dri nd_ t(:n
element.send_keys "Hello WebDriver!"
element.submit

puts driver.title

driver.quit
```

The ruby bindings have drivers for Firefox, IE, Chrome and the remote server.

## Remote

The RemoteWebDriver makes it easy to control a browser running on another machine. Download the jar (from Downloads) and launch the server:

Selenium
Webdriver

# legacy testing with capybara/mechanize

By *Sarah* | February 15, 2011

I spent a little time working on some tests for a legacy web app that we plan to re-write in Ruby. Before the big re-write, I thought it would be wise to write some integration tests to call the app v http and verify responses. I wanted to use vanilla http and not have the overhead of launching a browser and was frustrated that Capybara didn't have a driver to suit my needs.

I started down the path of writing tests from scratch using Net::HTTP, but figured that there had be someone else who had run into this before. @kakutani told me about capybara-mechanize whi seems to be exactly what I need.

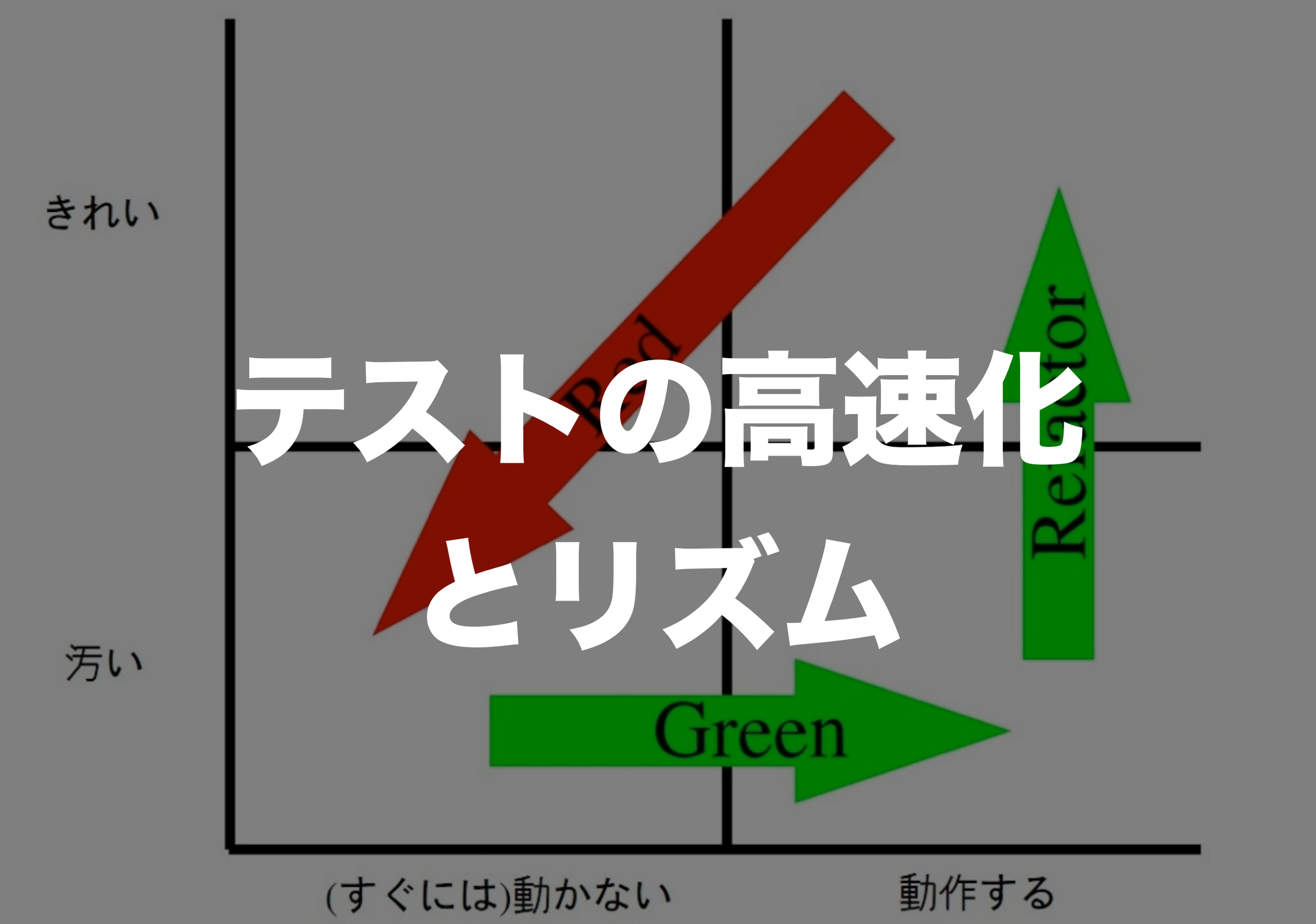
Here's my first really basic experiment using RSpec to test a well-known web site:

```
require 'capybara/rspec'
require 'capybara/mechanize'
Capybara.default_driver = :mechanize

describe 'web app' do
  include Capybara
```

```
require ‘capybara/dsl’

RSpec.configure do |config|
  config.include Capybara
  config.before(:all, :selenium => true) do
    Capybara.current_driver = :selenium
  end
end
```

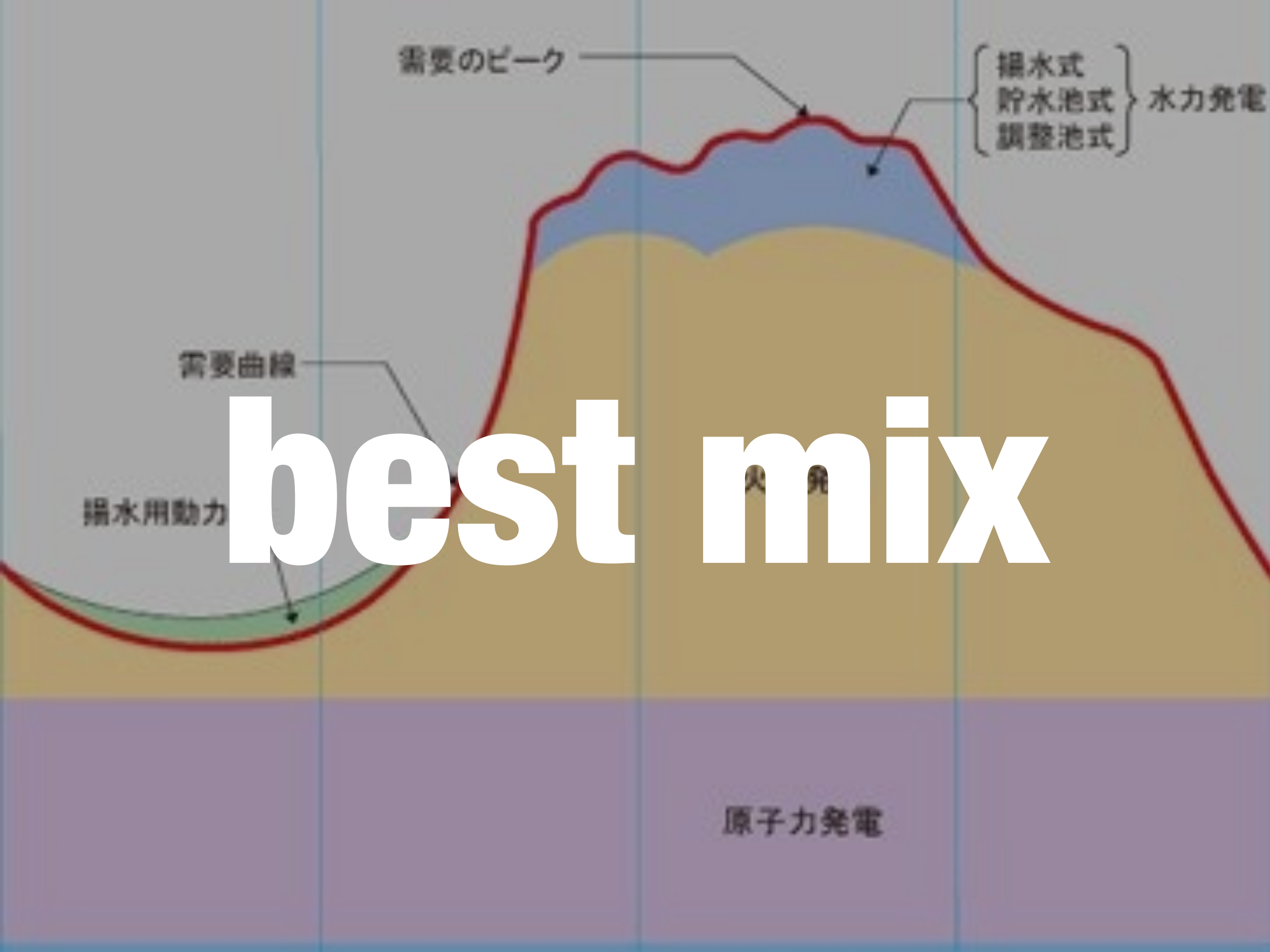



# テストの高速化とリズム

http://www.ne.jp/asahi/t/wada/articles/Refactoring_and_Test.pdf

# selenium や mechanize はだいたい遅






# best mix

# DSL

```
config.before(:all, :selenium => true) do
  Capybara.current_driver = :selenium
end
```

```
config.after(:all, :selenium => true) do
  Capybara.use_default_driver
end
```

# DSL

```
feature "お客様新規追加", :selenium => true do
  let!(:administrator) { User.make! }

  before do
    login_as administrator
    visit new_admin_user_path
  end

  scenario "管理者を登録できること" do
    (省略)
  end
end
```

# capybara/rspec

# DSL

```
feature "お客様新規追加", :driver => :akephalos do
  scenario "管理者を登録できること" do
    (省略)
  end
end
```

```
feature "お客様変更", :js => true do
  scenario "管理者を変更できること" do
    (省略)
  end
end

=> :driver = :selenium と同じ
```

# 便利!!!

特集2

# Rails 3 テスト最前線

## RSpec、Capybara、factory_girl、RR

本誌Vol.58で特集し大好評だったRuby on Rails 3の正式リリースから約半年が経ち、Rails 3でのテスト環境が整ってきました。Railsはテスティングツールにも先進的なものが多く、ユニットテスト（RSpec）、エンドツーエンドテスト（Request Specs、Capybara）、テストデータのセットアップ（factory_girl）、スタブ／モック（RR）など、実にさまざまなものがあります。

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# FinalRubyKaigi に来る(らしい)よ!

ABOUT US

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Our team (yep, that's us on the right) consists of a tight knit group of developers and designers, with great expertise in their respective fields and decades of experience under their collective belt.



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# RubyKaigi 2011

# 練馬で僕と握手

# Good Ruby Life