

# Úvod do Ruby On Rails

---

*Karel Minařík*

# Karel Minařík

- Absolvent FFUK, obor **filosofie**
  - Web designer a vývojář na volné noze od roku 2000
  - V minulosti Flash vývojář, art director, informační architekt ve studiích Sherwood Media, ILIKETHIS!
  - Doktorand **Studií nových médií**na FFUK
  - (Opuštěný) blog o **Ruby on Rails** na <http://blog.karmi.cz>
- KONTAKT: [karmi@karmi.cz](mailto:karmi@karmi.cz)

1

# Co je RubyOnRails?

# Proč používat webový framework?

*„Toto je sněhová vločka. Vaše aplikace není jedna z nich. Většina věcí, které většina lidí dělá, není nijak unikátní. Vaše potřeby nejsou nijak ,zvláštní.“*

David Heinemeier Hansson,  
přednáška na konferenci Future Of Web Applications, únor 2006

**SELECT \* FROM people WHERE id = 1;**

SELECT \* FROM people WHERE id = 1;



[ANN] Rails 0.5.0: The end of vaporware!

http://blade.nagaokaut.ac.jp/cgi-bin/scat.rb/ruby/ruby-talk/107370

[ANN] Rails 0.5.0: The end ...

< ^ > | P N | < > | ^ \_ > | < --- | + | ~ | . | .. | J Help

Subject: [ANN] Rails 0.5.0: The end of vaporware!  
From: David Heinemeier Hansson <david@loudthinking.com>  
Date: Sun, 25 Jul 2004 04:43:00 +0900

I've been talking (and hyping) Rails for so long that it's all wierd to finally have it out in the open. Mind you, we're still not talking about a 1.0 release, but the package currently on offer is still something I'm very comfortable to share with the world. Undoubtedly, there could be more documentation and more examples, but Real Artists Ship and this piece will grow in public. Enjoy Rails!

Documentation, download: <http://www.rubyonrails.org>

What is Rails?  
=====

Rails is an open source web-application framework for Ruby. It ships with an answer for every letter in MVC: Action Pack for the Controller and View, Active Record for the Model.

Everything needed to build real-world applications in less lines of code than other frameworks spend setting up their XML configuration files. Like Basecamp, which was launched after 4 KLOCs and two months of development by a single programmer.

Being a full-stack framework means that all layers are built to work seamlessly together. That way you Don't Repeat Yourself (DRY) and you can use a single language from top to bottom. Everything from templates to control flow to business logic is written in Ruby—the language of love for industry heavy-weights

In striving for DRY compliance, Rails shuns configuration files and annotations in favor of reflection and run-time extensions. This means the end of XML files telling a story that has already been told in code. It means no compilation phase: Make a change, see it work. Meta-data is an implementation detail left for the framework to handle.

/trunk (log) – Rails Trac – Trac

http://dev.rubyonrails.org/log/trunk?action=stop\_on\_copy&rev=5&stop\_rev=1&mode=stop\_on\_copy

RSS Google

{del.icio.us} ~ tumblr localhost doc \_tmp rails books/cds mephisto Pickaxe Rails API Prototype API rss (46)

/trunk (log) – Rails Trac – ...

Ruby on Rails | Screencasts | Download | Documentation | Weblog | Community | Source

Search

Login

Settings | Help/Guide | About Trac | Register

# Rails Trac

Wiki Timeline Roadmap Browse Source View Tickets Search

root/trunk

View Latest Revision

View log starting at 5 and back to 1

Mode:

Stop on copy  
 Follow copies  
 Show only adds, moves and deletes

Show full log messages

Added Modified Copied or renamed

[View changes](#)

		Rev	Chgset	Date	Author	Log Message
<input type="radio"/>	<input checked="" type="radio"/>	05	[5]	11/24/04 01:15:16	david	Allow form_tag with no arguments (resulting in a form posting to current ...
<input checked="" type="radio"/>	<input type="radio"/>	04	[4]	11/24/04 01:04:44	david	Initial

Note: See [TracRevisionLog](#) for help on using the revision log.

# 4 roky

Download in other formats:

[XML](#) [RSS Feed](#) | [ChangeLog](#)

Powered by Trac 0.10.5dev  
By Edgewall Software.

Visit the Ruby on Rails project at  
<http://rubyonrails.org/>



Powered by Trac 0.10.5dev  
By Edgewall Software.

Visit the Ruby on Rails project at  
<http://rubyonrails.org/>

**2004**

Ruby On Rails  
Django

**2005**

Zend Framework  
CakePHP

**2006**

Merb („lepší než Rails“)

rails's rails at master — GitHub

git <http://github.com/rails/rails/tree/master>

RSS Google

rails's rails at master — Gi...

**github**  
SOCIAL CODE HOSTING

karmi account | profile | guides | log out  
repositories: all | search

Source Commits Graphs Wiki (3) Watchers (2140) Network (339)

master all branches all tags

**rails / rails** fork unwatch download

Description: Ruby on Rails  
Homepage: <http://rubyonrails.org>  
Public Clone URL: <git://github.com/rails/rails.git>

Implement submit\_to\_remote as a wrapper around a more generic button\_to\_remote

tarmo (author)  
about 17 hours ago

lifo (committer)  
about 8 hours ago

commit 51b986619d88f7ba98be7d271188785cbbb541a0  
tree e0fb752ec252c8a1bef0a5cd96db9a3dd999fa3  
parent 8e50f0f96ef53ee8cc7ffa86ce0e71cc357b2b6c

**rails /**

name	age	message	history
.gitignore	August 26, 2008	The 'rails' command was broken by the last comm... [Hongli Lai (Phusion)]	
Rakefile	June 22, 2008	Horo rdoc template [jeremy]	
actionmailer/	2 days ago	Fixed load path for actionmailer and activesupp... [madlep]	
actionpack/	about 8 hours ago	Implement submit_to_remote as a wrapper around ... [tarmo]	
activemodel/	September 03, 2008	Merge docrails [lifo]	
activerecord/	1 day ago	Merge docrails [lifo]	
activeresource/	1 day ago	ActiveResource can load array of strings, like ... [moorage]	
activesupport/	about 13 hours ago	Fix a typo in ActiveSupport::Multibyte::NORMALI... [Manfred]	

# Open source, licence MIT

rails's rails at master — GitHub

git <http://github.com/rails/rails/tree/master>

RSS Google

rails's rails at master — Gi...

**github**  
SOCIAL CODE HOSTING

karmi account | profile | guides | log out  
repositories: all | search

Source Commits Graphs Wiki (3) Watchers (2140) Network (339)

master all branches all tags

**rails / rails** fork unwatch download

Description: Ruby on Rails  
Homepage: <http://rubyonrails.org>  
Public Clone URL: <git://github.com/rails/rails.git>

Implement submit\_to\_remote as a wrapper around a more generic button\_to\_remote

tarmo (author)  
about 17 hours ago

lifo (committer)  
about 8 hours ago

commit 51b986619d88f7ba98be7d271188785cbbb541a0  
tree e0fbc752ec252c8a1bef0a5cd96db9a3dd999fa3  
parent 8e50f0f96ef53ee8cc7ffa86ce0e71cc357b2b6c

**rails /**

name	age	message	history
.gitignore	August 26, 2008	The 'rails' command was broken by the last comm... [Hongli Lai (Phusion)]	
Rakefile	June 22, 2008	Horo rdoc template [jeremy]	
actionmailer/	2 days ago	Fixed load path for actionmailer and activesupp... [madlep]	
actionpack/	about 8 hours ago	Implement submit_to_remote as a wrapper around ... [tarmo]	
activemodel/	September 03, 2008	Merge docrails [lifo]	
activerecord/	1 day ago	Merge docrails [lifo]	
activeresource/	1 day ago	ActiveResource can load array of strings, like ... [moorage]	
activesupport/	about 13 hours ago	Fix a typo in ActiveSupport::Multibyte::NORMALI... [Manfred]	

# Open source, licence MIT

Ruby on Rails

http://www.rubyonrails.org/ Google

Ruby on Rails

Overview | Screencasts | Download | Documentation | Weblog | Community | Bugs/patches | Source

 **Web development that doesn't hurt**

Ruby on Rails™ is an open-source web framework that's optimized for programmer happiness and sustainable productivity. It lets you write beautiful code by favoring convention over configuration.

Rails 2.1: Time zones, dirty, caching, gem dependencies, caching, etc, Rails 2.0.4: Bug fixes, Rails 2.1.1: Bug fixes

**Get Excited**

Tags: flower 

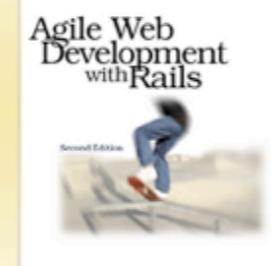
[Screencasts & presentations](#)

**Get Started**

  
**2.1**

[Released Sep 4, 2008](#)

**Get Better**



[API, Books, tutorials, samples](#)

**Get Involved**



[Join the community](#)

*“Rails is the most well thought-out web development framework I've ever used. And that's in a decade of doing web applications for a living. I've built my own frameworks, helped develop the Servlet API, and have created more than a few web servers from scratch. Nobody has done it like this before.”*

*-James Duncan Davidson, Creator of Tomcat and Ant*

[Read more quotes](#)

[www.rubyonrails.org](http://www.rubyonrails.org)



```
def create
  @post = Post.new(params[:post])
  if @post.save
    flash[:notice] = "Post was successfully"
    redirect_to :action => 'list'
  else
    render :action => 'new'
  end
end

def edit
  @post = Post.find(params[:id])
end

def update
  @post = Post.find(params[:id])
  if @post.update_attributes(params[:post])

```

[Creating a weblog in 15 minutes](#)

## Creating a weblog in 15 minutes

In 15 minutes, we go from scratch to complete weblog engine: with comments and an administrative interface. But since the actual application only took 58 lines to complete, we also have time left over to do unit testing, examine the logs, and play around with the domain model.



Basecamp



twitter

YELLOWPAGES.COM™



43 Things

crazyegg

# 3 pohledy na Rails

001110011  
000101110  
011001110  
011100110

\$

$a_{\Omega}$

```
001110011  
000101110  
011001110  
011100110
```

# Technologický

Model-View-Controller framework

Objektově relační mapování

Routování (→ REST)

Usnadnění práce (*helpers, extensions, pluginy, konvence, ...*)



# Ekonomický

Standardizace vývoje

Rychlejší a kvalitnější vývoj

Využití existujících řešení (RubyGems, pluginy)

~~Silver bullet~~

„PR-benefit“



# Filosofický

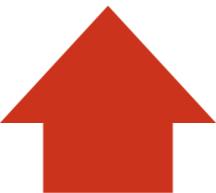
Konvence má přednost před konfigurací  
*Convention Over Configuration*

Kvalitativní posun celého vývoje pro web

Zavádění *best practices*

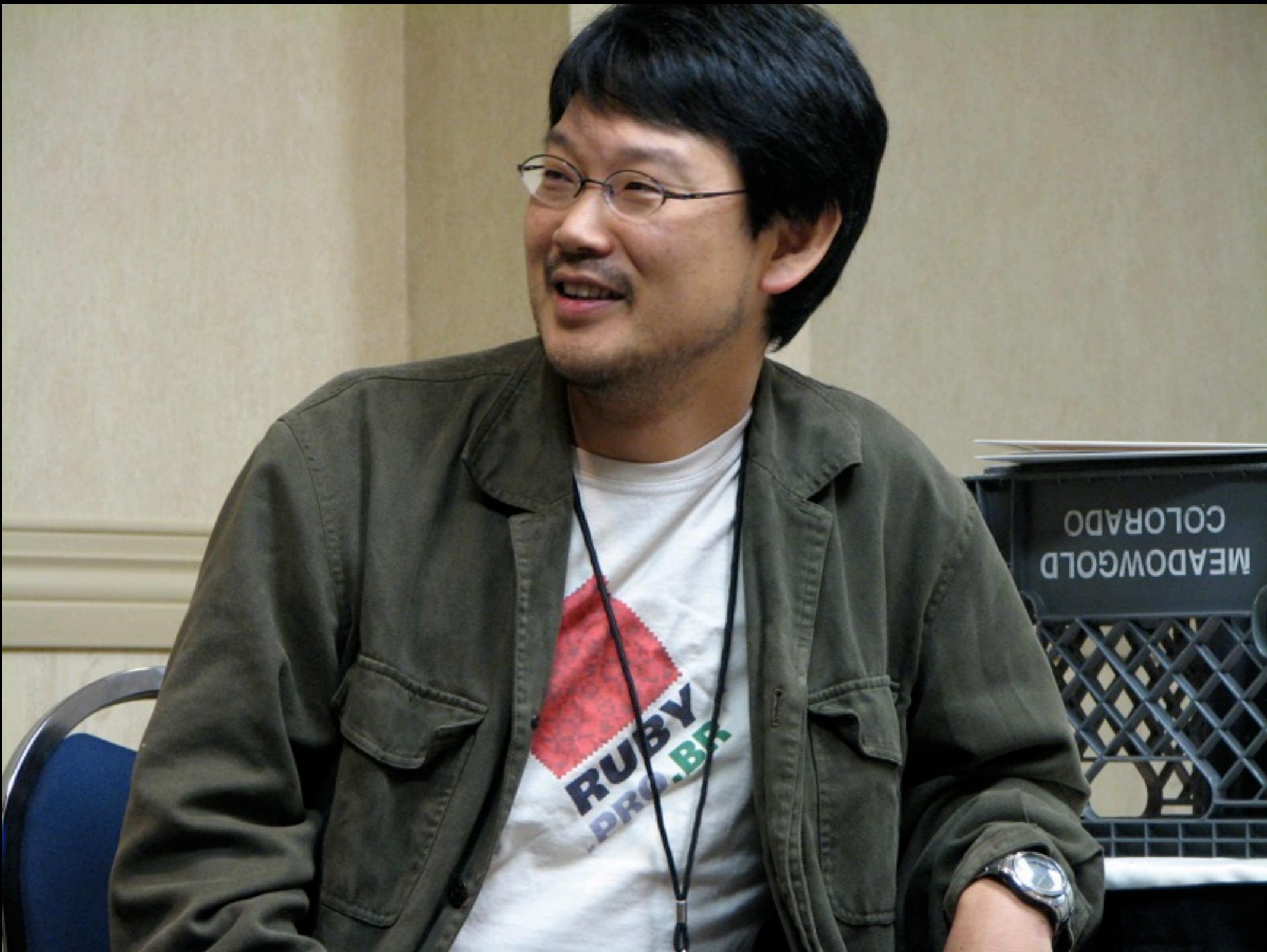
Agilní vývoj

Pragmatismus



**Ruby**  
*A Programmer's Best Friend*

# Programovací jazyk Ruby



— Yukihiro Matsumoto (Matz)

*„Věřím, že – alespoň do jisté míry – je smyslem života být šťastný.  
Na základě tohoto přesvědčení je Ruby navrženo tak, že je  
nejenom snadné, ale i zábavné v něm programovat. Ruby vám  
umožňuje soustředit se na kreativní stránku programování,  
a nepřidělává vám další starosti.“*

Yukihiro Matsumoto, předmluva k prvnímu vydání knihy *Programming Ruby*

## I Hope to See Ruby

- Helps World Programmers
  - to be Productive
  - to Enjoy Programming
  - to be Happy



Google Tech Talks, únor 2008, U.S.A.

[www.youtube.com/watch?v=oEkJvvGEtB4](http://www.youtube.com/watch?v=oEkJvvGEtB4)



**EURUKO Keynote, březen 2008, Česká republika**  
<http://www.avc-cvut.cz/avc.php?id=6830>

MagicPoint presentation foils

CS http://cs.byu.edu/colloquia\_files/2006Fall/presentations/Matz\_slides/ Google

## The Power of Ruby

Yukihiko "Matz" Matsumoto  
まつひと ゆきひろ  
matz@ruby-lang.org

**So Many Languages**

More than 4,000 years ago, when the tower was built, many languages were introduced to the Earth.  


It is the source of my suffer...  
...but we can conquer languages.

**Difference in Languages**

English vs Japanese

- Totally different syntax.
- Japanese has rich ways to express respect.

**Difference in Languages**

English vs Japanese

- Japanese has several thousands of characters.
- We need no icons.

**We Need No Icons**

山 Mountain  
愛 Love  
鬱 Depression

**Purpose of Languages**

Men use languages to

- Describe the facts.
- Express thoughts and feelings.
- Even think in.

**Tools for Thought**

Languages are not only tools to communicate, but also tools to think.

**For example,**

I think in Japanese.  
Every conversation is translated automatically and stored in my brain in Japanese, no matter what language is used.

**For example,**

thus in my brain:  
私は日本語で考える  
どの言語で会話しても自動的に翻訳されて日本語で私の脳に記憶される。

**Language Influence Thoughts**

Even though I think in Japanese, I feel like I have different personality when I speak in English.

**Sapir-Whorf hypothesis**

Language determines the way we think.

**Theorem #1**

Languages influence human thought, more than you think

**Programming Languages**

Do programming languages influence human thoughts?

**Thinking in Programming Language**

Natural languages are too ambiguous.  
Or, too verbose.  
Or, too indirect.

**Think in Programming Language**

If programmers think in programming languages, they must influence thoughts as much as natural languages do.

**Theorem #2**

"languages" in Theorem #1 includes programming languages.

**Sapir-Whorf in Programming**

- BASIC programmers never use recursion.
- Lisp programmers use macros for everything.
- FORTRAN programmers can write FORTRAN in any language.

**Why don't you choose a good language?**

Programming languages are so easy to learn.

**What is a good language?**

A language that

- helps human thought
- makes better programming experience

**How to help thoughts**

By providing computational model

- Procedural
- Object-Oriented
- Functional
- Etc.

**For better programming experience**

- Learnability
- Efficiency
- Memorability
- Errors
- Satisfaction

**Learnability**

How easy is it for users to accomplish basic tasks the first time they encounter the design?

**Learnability**

- Usability for beginners
- Important to acquire new users
- "Common Sense" is the key

**Efficiency**

Once users have learned the design, how quickly can they perform tasks?

**Efficiency**

- More important than learnability
- Efficiency is the top purpose of languages

**Memorability**

When users return to the design after a period of not using it, how easily can they reestablish proficiency?

**Memorability**

- Association
- Consistency
- Orthogonality
- Common Sense
- No Radical

**Errors**

How many errors do users make, how severe are these errors, and how easily can they recover from these errors?

**Errors**

- When you see repeated errors, you have to do something.
- Errors are the source of inspiration.

**Satisfaction**

How pleasant is it to use the design?

Přednáška **Ruby Design Principles**, 2006 (včetně MP3 záznamu)  
<http://itc.conversationsnetwork.org/shows/detail1638.html>

# Programovací jazyk Ruby

Interpretovaný

Expresivní, úsporná syntaxe

Dynamický

Objektový (1.upto 5)

Silné typování Duck typing

Reflektivní → Meta programování

*Core Library* [www.ruby-doc.org/core](http://www.ruby-doc.org/core)

*Standard Library* — YAML, Logger, FileStat, Net::HTTP, Iconv, RDoc, Test::Unit, Benchmark, ... [www.ruby-doc.org/stdlib](http://www.ruby-doc.org/stdlib)

*RubyGems* [www.rubyforge.org](http://www.rubyforge.org) | [www.github.com](http://www.github.com)

```
# The Greeter class
class Greeter
  def initialize(name)
    @name = name.capitalize
  end

  def salute
    puts "Hello #{@name}!"
  end
end

# Create a new object
g = Greeter.new("world")

# Output "Hello World!"
g.salute
```

# Klíčové součásti Ruby On Rails

# Přehled

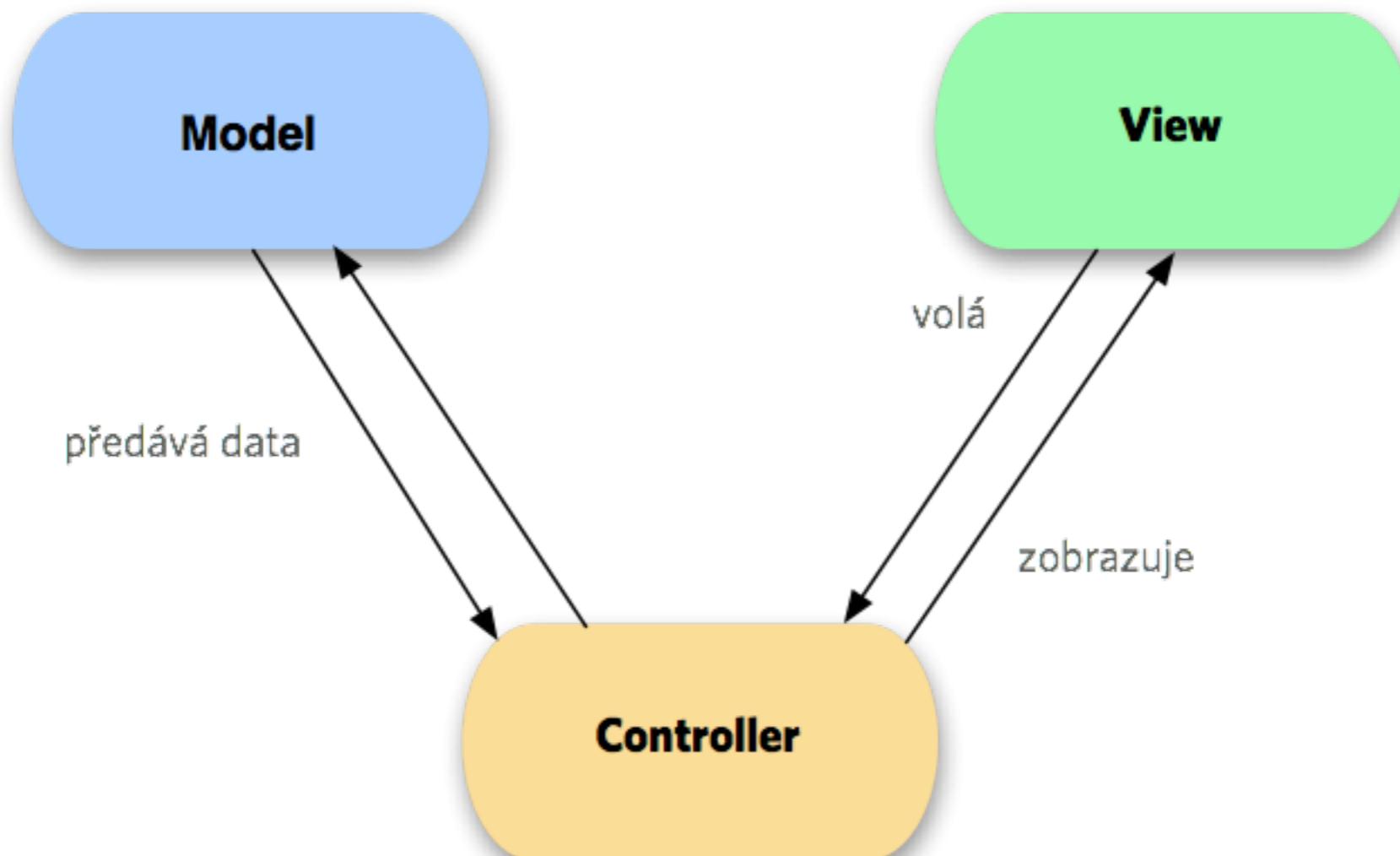
- 1) Model—View—Controller architektura
- 2) Generátory kódu
- 3) Objektově relační mapování *ActiveRecord*
- 4) Směrování HTTP požadavků na řídící prvky aplikace *ActionPack*  
(*ActionController* a *ActionView*)
- 5) Webové služby typu REST *ActiveResource*
- 6) Odesílání e-mailů *ActionMailer*
- 7) Rozšíření Ruby  *ActiveSupport*

# Model—View—Controller

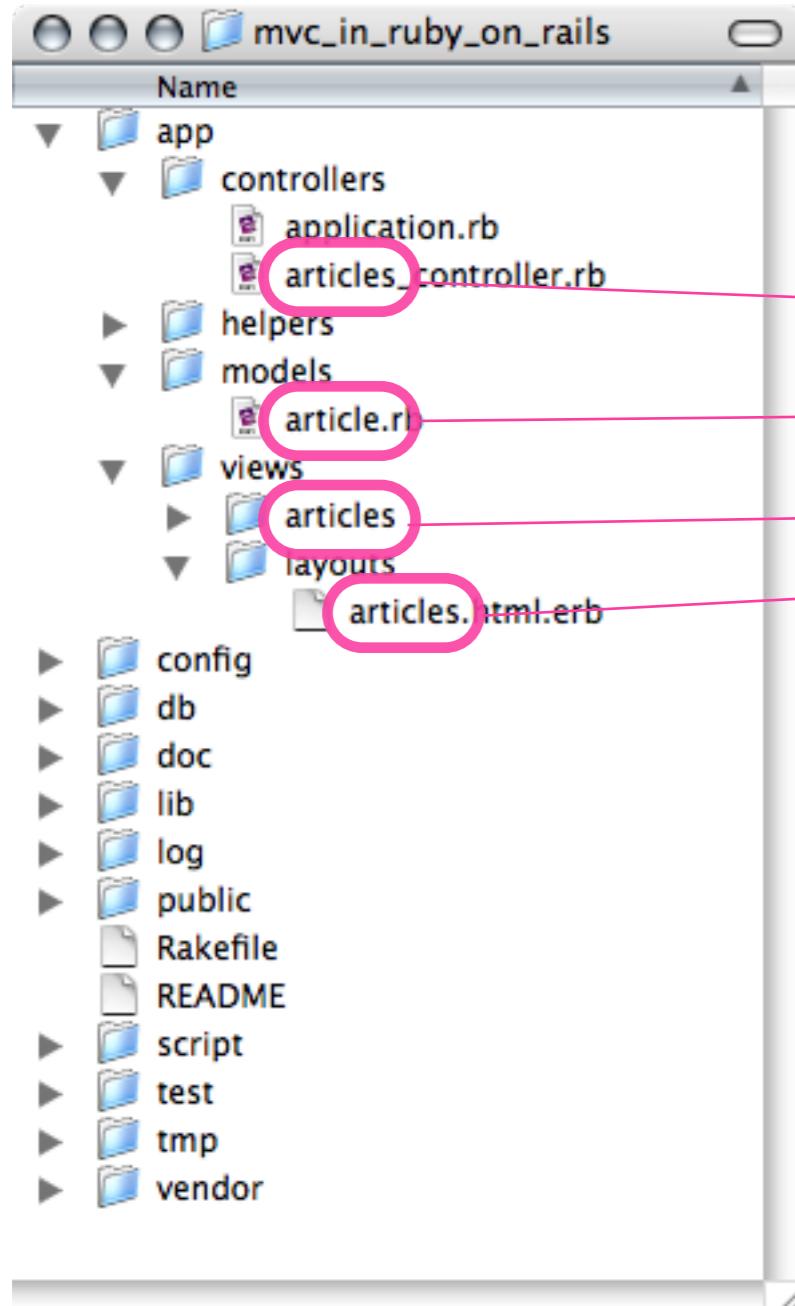
# Model—View—Controller

*Model* předává data *controlleru*, controller předává data modelu.

Controller zobrazuje *view*, view volá akce controlleru.



# Model—View—Controller



Adresářová struktura Rails aplikace

controllers/articles\_controller.rb

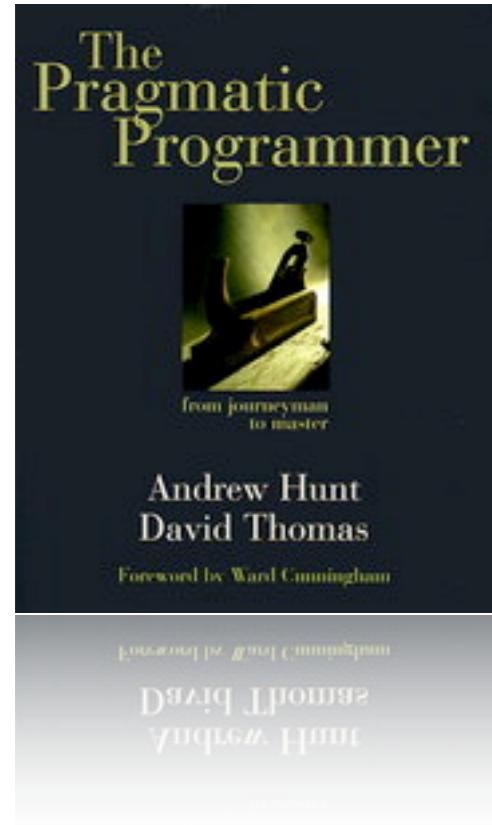
models/article.rb

views/articles/index, edit, new, atd

views/layouts/articles.html.erb

# Generátory kódu

# Generátory kódu



## The Pragmatic Programmer: From Journeyman to Master, Andrew Hunt and David Thomas

### Passive Code Generators

Passive code generators save typing. They are basically parameterized templates, generating a given output from a set of inputs. Once the result is produced, it becomes a full-fledged source file in the project; it will be edited, compiled, and placed under source control just like any other file. Its origins will be forgotten.

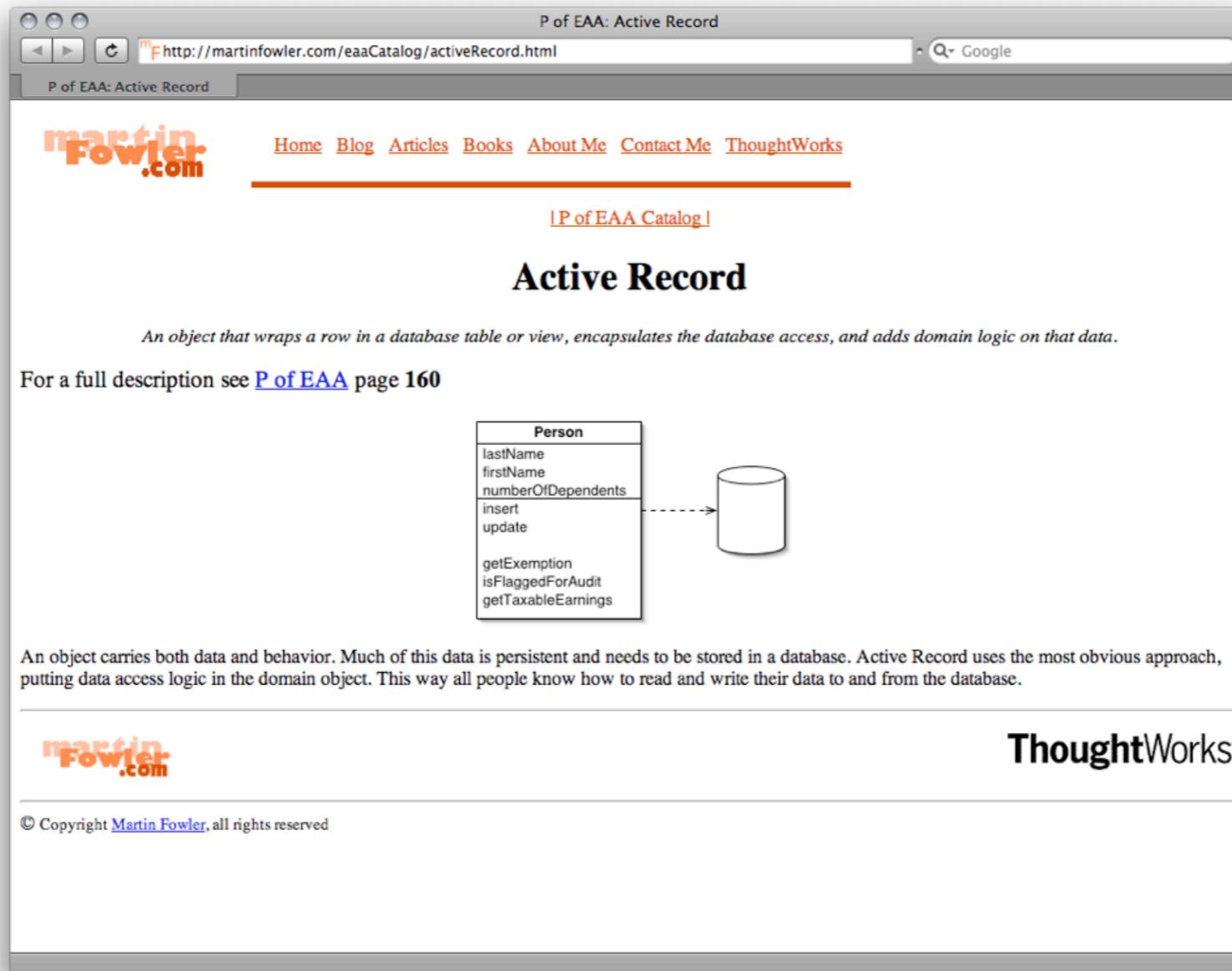
(str. 87)

# Generátory kódu

```
$ script/generate scaffold Person last_name:string date_of_birth:date  
create app/models/person.rb  
create test/unit/person_test.rb  
create test/fixtures/people.yml  
create db/migrate/20081007091729_create_people.rb  
create app/views/people/index.html.erb  
create app/views/people/show.html.erb  
create app/views/people/new.html.erb  
create app/views/people/edit.html.erb  
create app/views/layouts/people.html.erb  
create app/controllers/people_controller.rb  
create test/functional/people_controller_test.rb  
create app/helpers/people_helper.rb  
route map.resources :people
```

# ActiveRecord

# Objektově relační mapování – ActiveRecord



Martin Fowler, *Patterns of Enterprise Application Architecture*

# Objektově relační mapování – ActiveRecord

tabulka *people*

ID	Name	Surname	E-mail
1	John	Smith	smith@hotmail.com
2	Susanna	Reddick	susan@yahoo.com

```
INSERT INTO people (name, surname, email) VALUES( 'John', 'Smith', 'smith@hotmail.com' );
SELECT * FROM people;
SELECT * FROM people WHERE id = 1;
SELECT * FROM people WHERE surname = 'Smith';
```

```
# ActiveRecord::Base.establish_connection ...
Person.create(:name => 'John', :surname => 'Smith', :email => 'smith@hotmail.com')
Person.all
Person.find(1)
Person.find_by_surname('Smith')
```

# Objektově relační mapování – ActiveRecord

```
Person.all :order => 'last_name DESC'
```

```
Person.all :conditions => "administrator = 1"
```

```
Person.all(:conditions => [ "department = :department AND position = :position",
                             { :department => params[:department],
                               :position => params[:position] } ] )
```

```
Person.all :include => 'accounts'
```

```
Person.all :group => 'country'
```

```
Person.find_by_sql( "SELECT id AS complicated ..." )
```

# Objektově relační mapování – *ActiveRecord*

```
p = Person.find 1  
p.first_name = 'Robert'  
p.save  
p.destroy
```

# ActiveRecord – Validace

```
class Account < ActiveRecord::Base  
  validates_presence_of :account_number, owner_id  
  validates_numericality_of :balance  
  validates_length_of :password, :minimum=> 4  
  
  validates_format_of :email,  
    :with => /\A([^\s]+@[?:[-a-z0-9]+\.\.]+[a-z]{2,})\Z/i  
  
  validates_acceptance_of :terms_of_service, :on => 'create'  
end
```

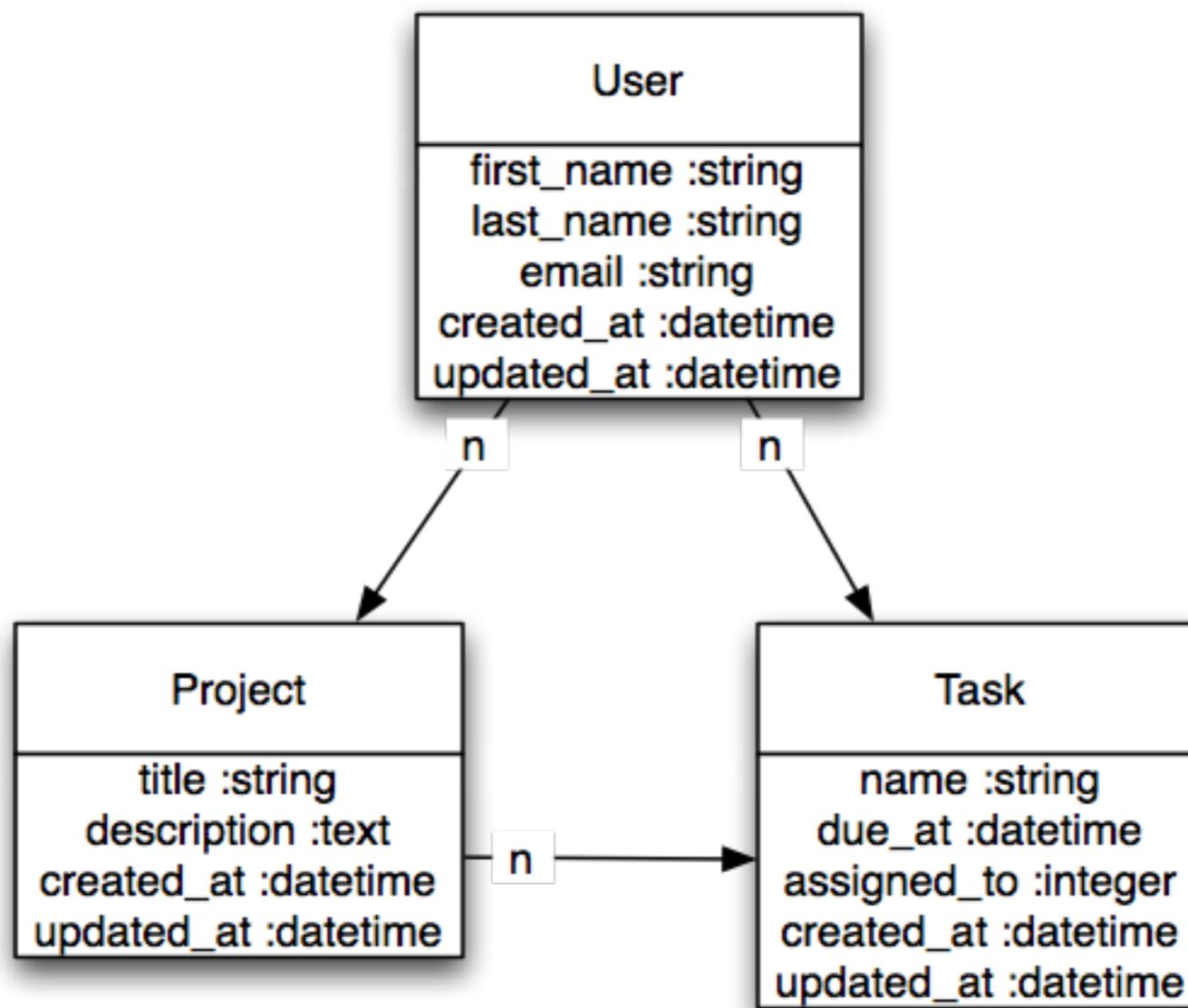
# ActiveRecord – Callbacks

```
class Article < ActiveRecord::Base  
  after_save :clean_up_html  
  after_destroy :audit_log  
  
  protected  
  
  def clean_up_html  
    self.body.gsub( ... )  
  end  
  
  def audit_log  
    audit_logger.info("Article #{self.title} has been removed by user #{current_user}")  
  end  
  
end
```

[http://www.railsbrain.com/api/rails-2.1.0/doc/index.html?a=M001715&name=after\\_save](http://www.railsbrain.com/api/rails-2.1.0/doc/index.html?a=M001715&name=after_save)

# ActiveRecord — Asociace, vazby

```
$ railroad -a -i -o full_models.dot -M
```



# ActiveRecord – Asociace

```
class Project < ActiveRecord::Base  
  belongs_to :project_manager  
end  
  
create_table :projects do |t|  
  t.string  :title  
  t.text   :description  
  t.integer :project_manager_id  
  t.timestamps  
end
```

# ActiveRecord — Asociace

```
class Project < ActiveRecord::Base
  belongs_to :project_manager, :class_name => "User"
  has_many :tasks
end

class User < ActiveRecord::Base
  has_many :projects
  has_many :tasks, :foreign_key => 'assigned_to'
end

class Task < ActiveRecord::Base
  belongs_to :project
  belongs_to :user, :foreign_key => "assigned_to"
end
```

Convention over configuration

# ActiveRecord – dočasné řešení



## Objektové databáze

# ActionController

# Routing – *ActionController*

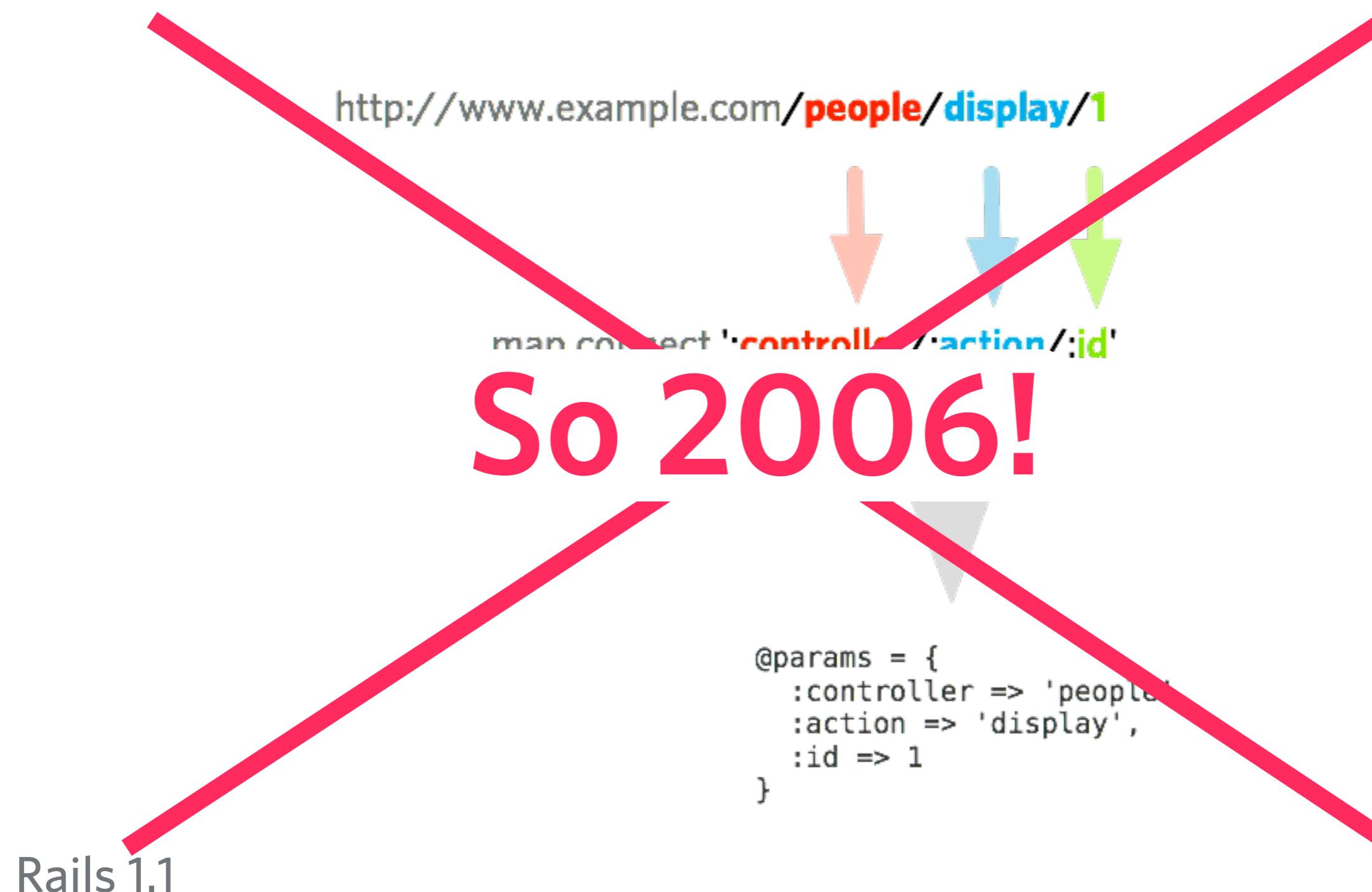
`http://www.example.com/people/display/1`



```
@params = {
  :controller => 'people',
  :action => 'display',
  :id => 1
}
```

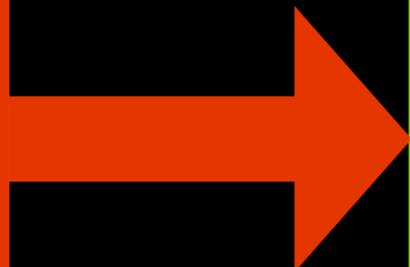
Rails 1.1

## Routing – *ActionController*



# RESTful

```
POST /people/create  
GET /people/show/1  
POST /people/update/1  
POST /people/destroy/1
```



```
POST /people  
GET /people/1  
PUT /people/1  
DELETE /people/1
```

— DHH, RailsConf 2007 Keynote, „The World Of Resources“

**GET**

**POST**

**PUT**

**DELETE**

**find**

**create**

**update**

**destroy**

**SELECT**

**INSERT**

**UPDATE**

**DELETE**

— DHH, RailsConf 2007 Keynote, „The World Of Resources“

# Routing + Resources – *ActionController*

```
ActionController::Routing::Routes.draw do |map|
  map.resources :people
end
```



people\_path  
person\_path(1)



<b>GET</b>	http://www.example.com/people	→	PeopleController#index()
<b>GET</b>	http://www.example.com/people/1	→	PeopleController#show()
<b>POST</b>	http://www.example.com/people	→	PeopleController#create()
<b>PUT</b>	http://www.example.com/people/1	→	PeopleController#update()
<b>DELETE</b>	http://www.example.com/people/1	→	PeopleController#destroy()

Rails 1.2.x

→ RESTful!

## REST *Representational State Transfer*

### REpresentational State Transfer

Mnohem více než „XML over HTTP“

Využití HTTP protokolu (GET, POST, PUT, DELETE)

S *resourcemi* (*noun*) je možné manipulovat (*verb*): **CRUD**: CREATE — UPDATE — DELETE

Žádná informace o stavu *resource* není uchovávána na serveru

*Resource* má různé reprezentace (HTML, XML, graf, ...)

Každá reprezentace *resource* má unikátní URI (staff.html, staff.xml, staff.png)

```
class PeopleController < ActionController::Base
  def index
    @people = Person.find(:all)

    respond_to do |format|
      format.html # renders index.rhtml
      format.js   # renders index.rjs
      format.xml  { render :xml => @people.to_xml }
      format.icl  { render_calendar(@people) }
      format.atom do
        render :action => "atom", :content_type => Mime::ATOM
      end
    end
  end
end
```

— DHH, RailsConf 2007 Keynote, „The World Of Resources“

# ActiveResource

```
class PeopleController < ActionController::Base
  def index
    @people = Person.find(:all)

    respond_to do |format|
      format.html # renders index.rhtml
      format.js   # renders index.rjs
      format.xml  { render :xml => @people.to_xml }
      format.icl  { render_calendar(@people) }
      format.atom do
        render :action => "atom", :content_type => Mime::ATOM
      end
    end
  end
end
```

— DHH, RailsConf 2007 Keynote, „The World Of Resources“

# ActiveResource — ORM pro webové služby

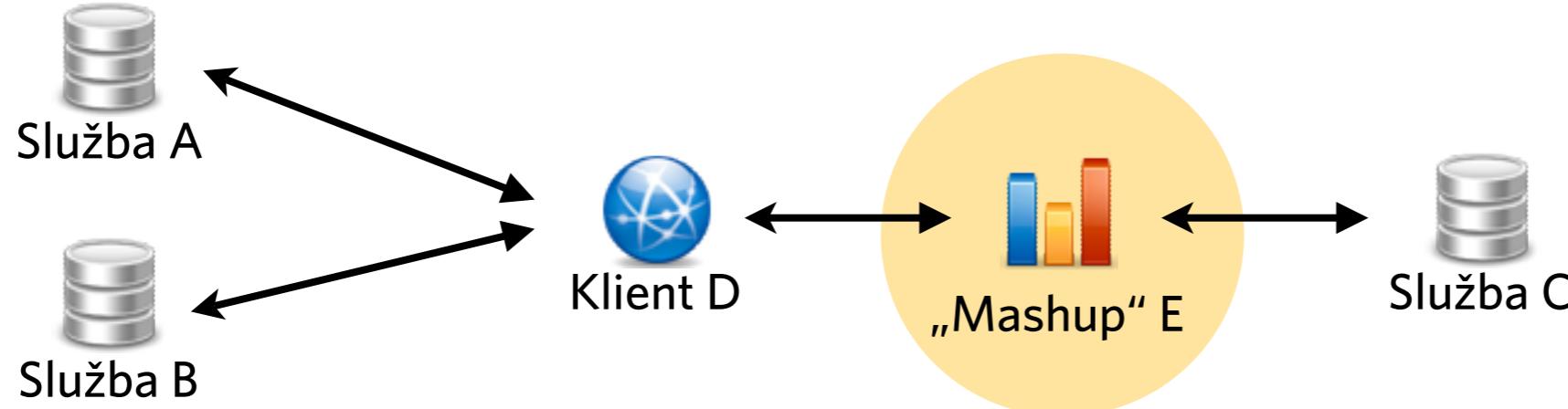
```
class Person < ActiveResource::Base
  self.site = "http://username:password@www.example.com:3000/"
end

# Expects a response of
#
# <person><id type="integer">1</id><attribute1>value1</attribute1><attribute2>..</attribute2></person>
#
# for GET http://api.people.com:3000/people/1.xml

ryan = Person.find(1)
ryan = Person.new(:first => 'Ryan', :last => 'Daigle')
ryan.save
# => true
ryan.id
# => 2
```

# ActiveResource — ORM pro webové služby

```
class Person < ActiveResource::Base  
  self.site = "http://username:password@www.example.com:3000/"  
end
```



# ActionView

# ActionView

people\_controller.rb

```
@person = Person.find params[:id]
```

display.html.erb

```
<h2>Jméno: <%= @person.name %></h2>
<p>E-Mail: <%= mail_to @person.email %></p>
```

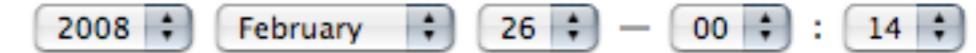
```
<hr />
```

```
<%= link_to "Seznam lidí", people_path %>
```

# ActionView

## Helpery pro formuláře, odkazy

```
<% form_for @person do |f| %>
  <%= f.text_field :name %>
  <%= f.datetime_select :date_of_birth %?>
<% end %>
```



```
<%= link_to @person.name, person_path(@person) %>
<a href="/person/show/1" ... />
```

## Helpery pro Ajax, Scriptaculous, JavaScript

```
<%= link_to_remote "Skrýt", "update" => 'list', :url => { :action =>
  'hide' } %>
<a href ... onclick="new Ajax.Updater ... />
```

# Automatizované testování

# Proč psát testy?

Proč **nepsat** testy víme — není čas, nejsou peníze, ...

## Automatizované testování aplikace

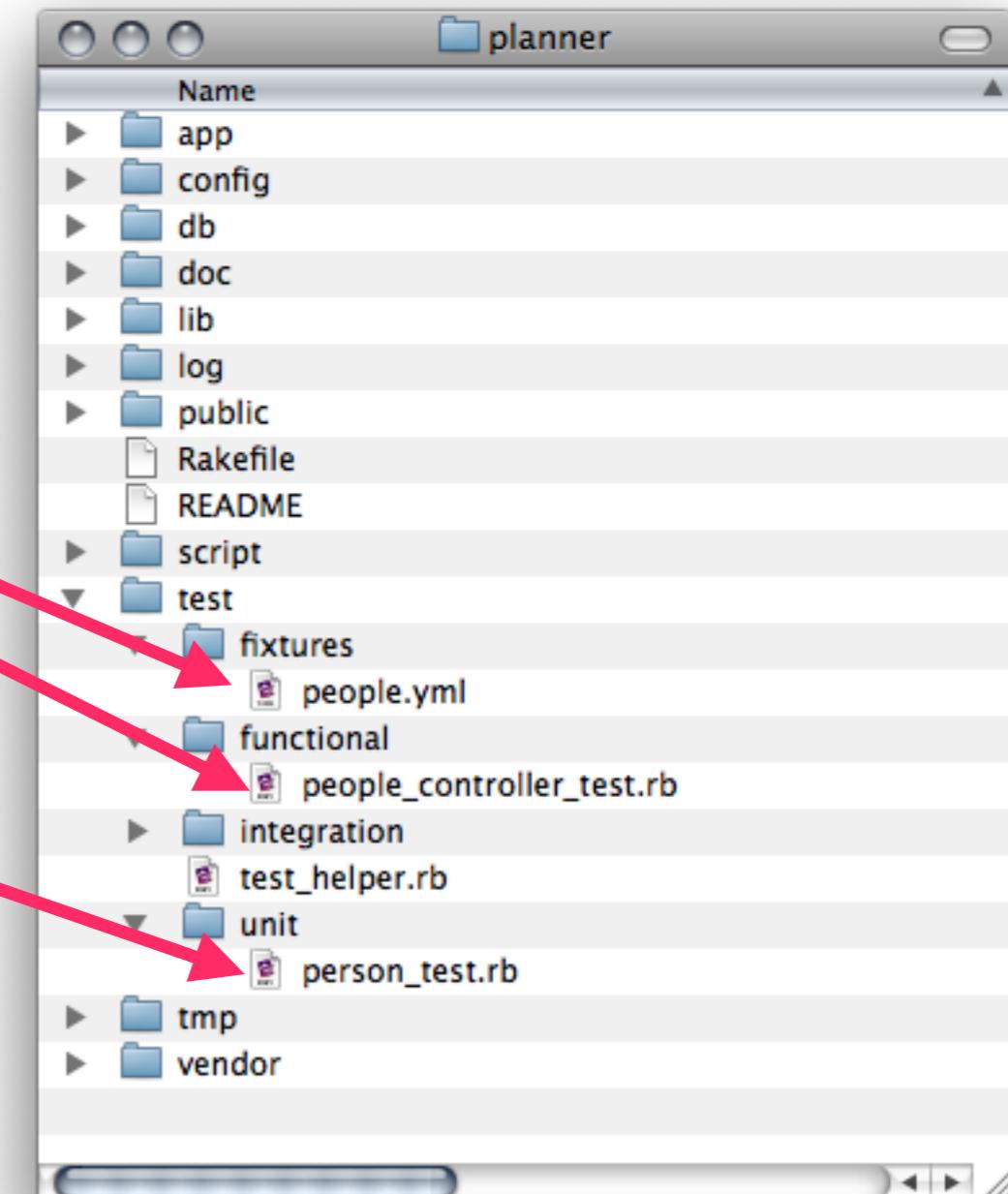
Testy jsou nejmocnějším pomocníkem **agilního vývoje**

Testy jsou **obrana** „proti sobě samému“

Testy jsou obrana proti **příšerám** (*legacy code*)

# Podpora pro automatizované testování aplikace v Rails

Podpora pro  
testovací data (fixtures)  
testování controllerů a views  
testování modelů



# Automatizované testování aplikace: Testovací data

 test/fixtures/people.yml

```
# Read about fixtures at http://ar.rubyonrails.org/classes/Fixtures.html

john:
  first_name: John
  last_name: Smith
  country: Great Britain
  department: Accounting
  position: Accountant
  administrator: true

robert:
  first_name: Roberto
  last_name: Callon
  country: Spain
  department: Marketing
  position: Graphic Designer
  administrator: false
```

# Automatizované testování aplikace: Unit Testing

## Test::Unit (standardní knihovna Ruby)

```
require 'test/unit'

class MyTest < Test::Unit::TestCase
  # def setup
  # end

  # def teardown
  # end

  def test_true_is_true
    assert_equal(true, true, 'Assertion was false.')
  end
end
```

# Automatizované testování aplikace: Logika aplikace

 test/unit/person\_test.rb

```
class PersonTest < ActiveSupport::TestCase
  # Replace this with your real tests.
  def test_truth
    assert true
  end
end
```

# Automatizované testování aplikace: Prezentační vrstva

 test/unit/people\_controller\_test.rb

```
class PeopleControllerTest < ActionController::TestCase

def test_should_get_index
  get :index
  assert_response :success
  assert_not_nil assigns(:people)
end

def test_should_get_new
  get :new
  assert_response :success
end

def test_should_create_person
  assert_difference('Person.count') do
    post :create, :person => { }
  end
  assert_redirected_to person_path(assigns(:person))
end

...
```

# Automatizované testování aplikace: Prezentační vrstva

```
class ProjectsControllerTest < ActionController::TestCase  
  
  def test_should_get_index  
    get :index  
    assert_response :success  
    assert_not_nil assigns(:projects)  
  end  
  
end
```

<http://www.railsbrain.com/api/rails-2.1.0/doc/index.html?a=C00000170&name=Assertions>

# Automatizované testování aplikace: Příklady

```
class ProjectsControllerTest < ActionController::TestCase

  def test_should_get_index
    get :index
    # HTTP odpoved (tedy "200 OK", nikoliv 302, 404, 403, 500, ...)
    assert_response :success
    # Naplnena promenna @projects
    assert_not_nil assigns(:projects)
    # Prave *dva* projekty
    assert_equal 2, assigns(:projects).size
    # Sablona pro vypis
    assert_template "index"
    # <title> stranky
    assert_select "title", "Projekty"
    # HTML kod
    assert_tag :tag => 'li',
      :attributes => { :id => "project_#{projects(:babylon).id}",
                      :class => 'in_progress' }
  end

end
```

<http://www.railsbrain.com/api/rails-2.1.0/doc/index.html?a=C00000170&name=Assertions>

# Dokumentování kódu

# Dokumentace (RDoc)

RDoc

```
# The program takes an initial word or phrase from
# ...
#
# Author::    Dave Thomas (mailto:dave@x.y)

# This class holds the letters in the original
# word or phrase. ...

class Anagram

  # Remember the letters in the initial word
  def initialize(text)
    @initial_letters = letters_of(text)
  end

  # Test to see if a new word contains the same
  # letters as the original
  def is_anagram?(text)
    @initial_letters == letters_of(text)
  end

  # Determine the letters in a word or phrase
  #
  # * all letters are converted to lower case
  # * anything not a letter is stripped out
  # * ...

  def letters_of(text)
    text.downcase.delete('a-z').split('').sort.join
  end

  tester = Anagram.new(ARGV.shift || gets)

  ARGF.each do |text|
    puts "Anagram! " if tester.is_anagram? text
  end
end
```

# KLÍČOVÉ SOUČÁSTI RUBY ON RAILS

## Dokumentace (RDoc)

```
# The program takes an initial word or phrase from
# ...
#
# Author::    Dave Thomas (mailto:dave@x.y)

# This class holds the letters in the original
# word or phrase. ...

class Anagram

  # Remember the letters in
  def initialize(text)
    @initial_letters = letters_of(text)
  end

  # Test to see if a new word contains the same
  # letters as the original
  def is_anagram?(text)
    @initial_letters == letters_of(text)
  end

  # Determine the letters in a word or phrase
  #
  # * all letters are converted to lower case
  # * anything not a letter is stripped out
  # * ...

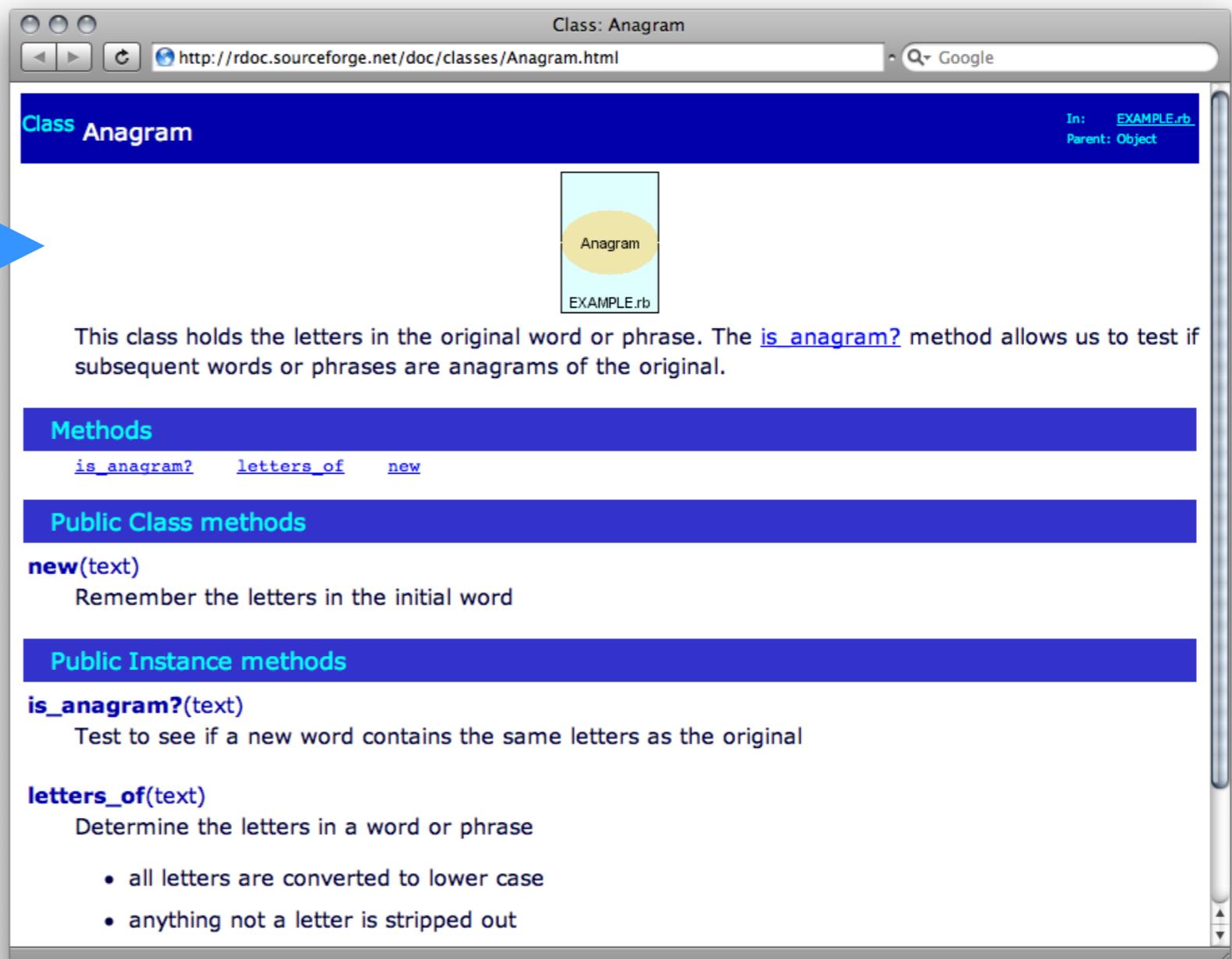
  def letters_of(text)
    text.downcase.delete('a-z').split('').sort.join
  end

  tester = Anagram.new(ARGV.shift || gets)

  ARGF.each do |text|
    puts "Anagram! " if tester.is_anagram? text
  end

```

\$ rdoc anagram.rb



# Dokumentace (RDoc)

\$ rake doc:app

Rails Application Documentation

file:///Users/karmi/Desktop/rails\_demonstration\_app/doc/app/index.html

Google

Rails Application Document...

**Files**

- app/controllers/application.rb
- app/controllers/photos\_controller.rb
- app/controllers/todos\_controller.rb
- app/helpers/application\_helper.rb
- app/helpers/photos\_helper.rb
- app/helpers/todos\_helper.rb
- app/models/photo.rb
- app/models/todo\_item.rb
- doc/README\_FOR\_APP

**Classes**

- ApplicationController
- ApplicationHelper
- Photo
- PhotosController
- PhotosHelper
- TodoItem
- TodosController
- TodosHelper

**Methods**

- create (PhotosController)
- css\_class (TodoItem)
- delete (PhotosController)
- edit (PhotosController)
- find\_all\_for\_last\_month (TodoItem)
- format\_due\_date (TodosHelper)
- index (TodosController)
- index (PhotosController)
- list (TodosController)
- move\_higher (TodosController)
- move\_lower (TodosController)

**Class TodoItem**

In: app/models/todo\_item.rb

Parent: ActiveRecord::Base

**Methods**

- css\_class
- find\_all\_for\_last\_month

**Public Class methods**

[find\\_all\\_for\\_last\\_month\(\)](#)

Složitejší logiku presunujeme z controlleru do modelu: model má být "tlustý", controller "stíhlý" Viz [weblog.jamisbuck.org/2006/10/18/skinny-controller-fat-model](http://weblog.jamisbuck.org/2006/10/18/skinny-controller-fat-model)

[\[Source\]](#)

**Public Instance methods**

[css\\_class\(\)](#)

Pomocné atributy udržuje tež views "stíhle", viz view: app/views/todos/\_todo\_item.rhtml, radek 1 V určitých případech může být vhodnější je použít místo helperu, zvláště v případech, že souvisí primárně s modelem až jsou jeho "vlastnosti"

[\[Source\]](#)

# Nástroj *Rake*

# Nástroj Rake

alu:planner karmi\$ **rake -T**

```
(in /Users/karmi/tmp/planner)
rake db:abort_if_pending_migrations          # Raises an error if there are pending...
rake db:charset                                # Retrieves the charset for the current...
rake db:collation                               # Retrieves the collation for the current...
rake db:create                                 # Create the database defined in config...
rake db:create:all                            # Create all the local databases defined...
rake db:drop                                    # Drops the database for the current R...
rake db:drop:all                             # Drops all the local databases defined...
rake db:fixtures:identify                     # Search for a fixture given a LABEL or ...
rake db:fixtures:load                          # Load fixtures into the current environment
rake db:migrate                                # Migrate the database through scripts...
rake db:migrate:down                           # Runs the "down" for a given migration...
rake db:migrate:redo                           # Rollbacks the database one migration...
rake db:migrate:reset                           # Resets your database using your migrati...
rake db:migrate:up                            # Runs the "up" for a given migration ...
rake db:reset                                  # Drops and recreates the database from s...
rake db:rollback                                # Rolls the schema back to the previous ...
rake db:schema:dump                           # Create a db/schema.rb file that can be ...
rake db:schema:load                           # Load a schema.rb file into the database
rake db:sessions:clear                         # Clear the sessions table
rake db:sessions:create                        # Creates a sessions migration for use ...
rake db:structure:dump                         # Dump the database structure to a SQL ...
rake db:test:clone                            # Recreate the test database from the ...
rake db:test:clone_structure                   # Recreate the test databases from the ...
rake db:test:prepare                           # Prepare the test database and load t ...
rake db:test:purge                            # Empty the test database
rake db:version                                # Retrieves the current schema version ...
rake doc:app                                   # Build the app HTML Files
rake doc:clobber_app                          # Remove rdoc products
rake doc:clobber_plugins                      # Remove plugin documentation
rake doc:clobber_rails                         # Remove rdoc products
rake doc:plugins                               # Generate documentation for all installed ...
rake doc:rails                                 # Build the rails HTML Files
rake doc:reapp                                 # Force a rebuild of the RDOC files
rake doc:rerails                               # Force a rebuild of the RDOC files
rake gems                                     # List the gems that this rails application ...
rake gems:build                               # Build any native extensions for unpatched ...
```

```
# Build any native extensions for unpatched ...
rake gems:install                            # Installs all required native extensions
rake gems:unpack                            # Unpacks the specified gem's source code
rake gems:unpack:dependencies             # Unpacks the specified gem's dependencies
rake log:clear                                # Truncates all *.log files
rake notes                                    # Enumerate all annotations
rake notes:fixme                            # Enumerate all FIXME annotations
rake notes:optimize                          # Enumerate all OPTIMIZE annotations
rake notes:todo                             # Enumerate all TODO annotations
rake rails:freeze:edge                       # Lock to latest Edge version
rake rails:freeze:gems                      # Lock this application to a specific gem
rake rails:unfreeze                         # Unlock this application
rake rails:update                           # Update both configs, assets and database
rake rails:update:configs                    # Update config/boot.rake
rake rails:update:javascripts              # Update your javascripts
rake rails:update:scripts                   # Add new scripts to the application
rake routes                                 # Print out all defined routes
rake secret                                 # Generate a cryptographic secret
rake stats                                   # Report code statistics
rake test                                    # Run all unit, functional and integration tests
rake test:functionals                        # Run tests for functionals
rake test:integration                       # Run tests for integrations
rake test:plugins                           # Run tests for plugins
rake test:recent                            # Run tests for recent changes
rake test:uncommitted                      # Run tests for uncommitted changes
rake test:units                             # Run tests for units
rake time:zones:all                         # Displays names of all time zones
rake time:zones:local                       # Displays names of time zones in local ...
rake time:zones:us                          # Displays names of US time zones
rake tmp:cache:clear                        # Clears all files and directories in tmp/cache
rake tmp:clear                             # Clear session, cache and tmp files
rake tmp:create                            # Creates tmp directory
rake tmp:pids:clear                         # Clears all files in tmp/pids
rake tmp:sessions:clear                     # Clears all files in tmp/sessions
rake tmp:sockets:clear                      # Clears all files in tmp/sockets
```

# Nástroj Rake

alu:planner karmi\$ **rake -T**

```
(in /Users/karmi/tmp/planner)
rake db:abort_if_pending_migrations
rake db:charset
rake db:collation
rake db:create
rake db:create:all
rake db:drop
rake db:drop:all
rake db:fixtures:identify
rake db:fixtures:load
rake db:migrate
rake db:migrate:down
rake db:migrate:redo
rake db:migrate:reset
rake db:migrate:up
rake db:reset
rake db:rollback
rake db:schema:dump
rake db:schema:load
rake db:sessions:clear
rake db:sessions:create
rake db:structure:dump
rake db:test:clone
rake db:test:clone_structure
rake db:test:prepare
rake db:test:purge
rake db:version
rake doc:app
rake doc:clobber_app
rake doc:clobber_plugins
rake doc:clobber_rails
rake doc:plugins
rake doc:rails
rake doc:reapp
rake doc:rerails
rake gems
rake gems:build
```

# Raises an error if there are pending...
# Retrieves the charset for the current database
# Retrieves the collation for the current database
# Create the database defined in configuration
# Create all the local databases defined in configuration
# Drops the database for the current Rails environment
# Drops all the local databases defined in configuration
# Search for a fixture given a LABEL or pattern
# Load fixtures into the current environment
# Migrate the database through scripts
# Runs the "down" for a given migration
# Rollbacks the database one migration at a time
# Resets your database using your migrations
# Runs the "up" for a given migration
# Drops and recreates the database from scratch
# Rolls the schema back to the previous migration
# Create a db/schema.rb file that can be checked into version control
# Load a schema.rb file into the database
# Clear the sessions table
# Creates a sessions migration for use with migrations
# Dump the database structure to a SQL dump file
# Recreate the test database from the schema
# Recreate the test databases from the schema
# Prepare the test database and load test fixtures
# Empty the test database
# Retrieves the current schema version
# Build the app HTML Files
# Remove rdoc products
# Remove plugin documentation
# Remove rdoc products
# Generate documentation for all installed gems
# Build the rails HTML Files
# Force a rebuild of the RDOC files
# Force a rebuild of the RDOC files
# List the gems that this rails application depends on
# Build any native extensions for unparsed gems

```
rake gems:install # Build any native extensions for unparsed gems
rake gems:unpack
rake gems:unpack:dependencies
rake log:clear
rake notes
rake notes:fixme
rake notes:optimize
rake notes:todo
rake rails:freeze:edge
rake rails:freeze:gems
rake rails:unfreeze
rake rails:update
rake rails:update:configs
rake rails:update:javascripts
rake rails:update:scripts
rake routes
rake secret
rake stats
rake test
rake test:functionals
rake test:integration
rake test:plugins
rake test:recent
rake test:uncommitted
rake test:units
rake time:zones:all
rake time:zones:local
rake time:zones:us
rake tmp:cache:clear
rake tmp:clear
rake tmp:create
rake tmp:pids:clear
rake tmp:sessions:clear
rake tmp:sockets:clear
```

# Installs all required native extensions
# Unpacks the specified gem
# Unpacks the specified gem's dependencies
# Truncates all log files
# Enumerate all annotations
# Enumerate all FIXME annotations
# Enumerate all OPTIMIZE annotations
# Enumerate all TODO annotations
# Lock to latest Edge Rails version
# Lock this application to a specific version
# Unlock this application
# Update both config files
# Update config/boot.rake
# Update your javascripts
# Add new scripts to the application
# Print out all defined routes
# Generate a cryptographic secret
# Report code statistics
# Run all unit, functional, and integration tests
# Run tests for functionals
# Run tests for integrations
# Run tests for plugins
# Run tests for recent migrations
# Run tests for uncommitted migrations
# Run tests for units
# Displays names of all zones
# Displays names of time zones
# Displays names of US time zones
# Clears all files and directories
# Clear session, cache, and plugin data
# Creates tmp directory
# Clears all files in tmp directory
# Clears all files in tmp/pids directory
# Clears all files in tmp/sessions directory
# Clears all files in tmp/sockets directory

# Nástroj *Rake*

```
$ rake -T (rake --tasks)
$ rake -T db
$ rake rake -D db:migrate (rake --describe)
```

## Vlastní *Rake* příkazy

```
# lib/tasks/users.rake
namespace :users do
  desc "Vypise uživatele s prekroceným limitem"
  task :over_quota => :environment do
    User.all( :conditions => [ 'quota > :limit', { :limit => User.quota_limit } ] ).each do |user|
      puts "Uživatel '#{user.username}' prekročil limit o #{user.quota - User.quota_limit} MB"
    end
  end
end
```

# Pluginy Rozšíření Rails

# Rozšíření Ruby on Rails, znovu-použitelný kód

## Jak fungují pluginy v Rails?

```
module Life
  def answer
    42
  end
end

class Universe
end

u = Universe.new
begin
  puts u.answer          # NoMethodError: undefined method 'answer' (unless rescue'ed)
rescue NoMethodError
  puts "ERROR! I don't know any 'answer'!"
end

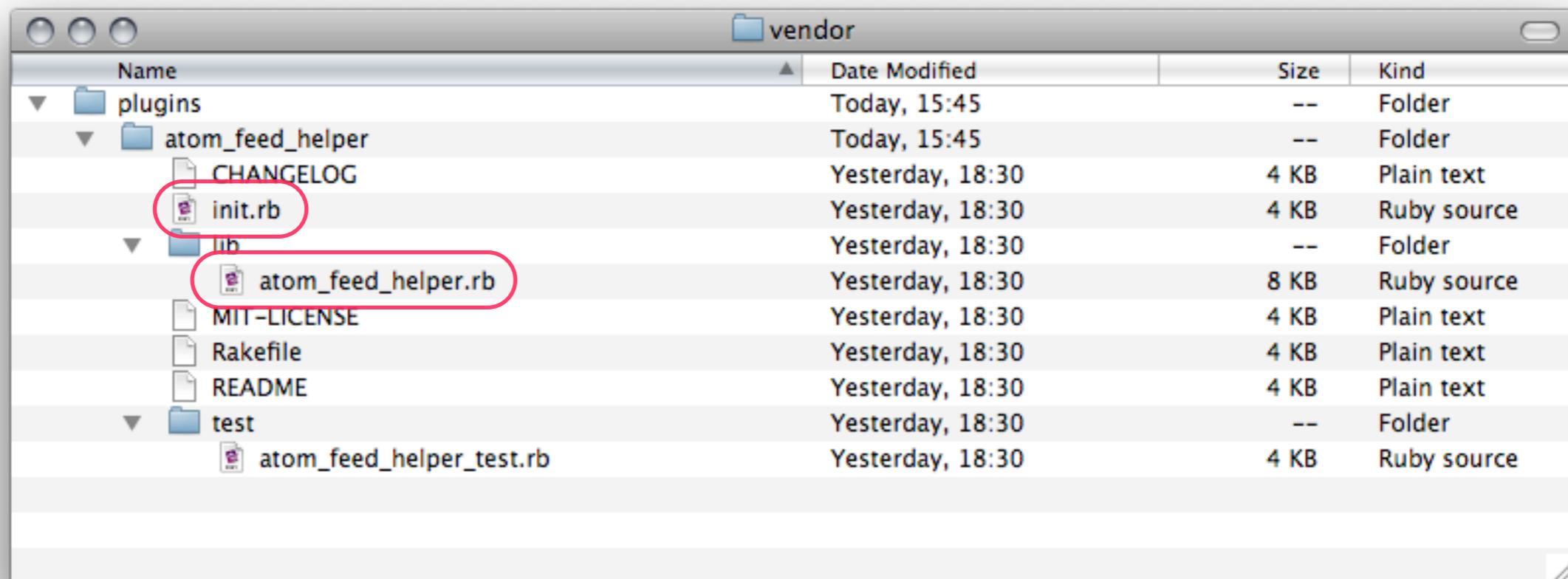
class Universe
  include Life
end

u = Universe.new
puts u.answer          # => 42
```

# Rozšíření Ruby on Rails, znovu-použitelný kód

## Atom Feed Helper

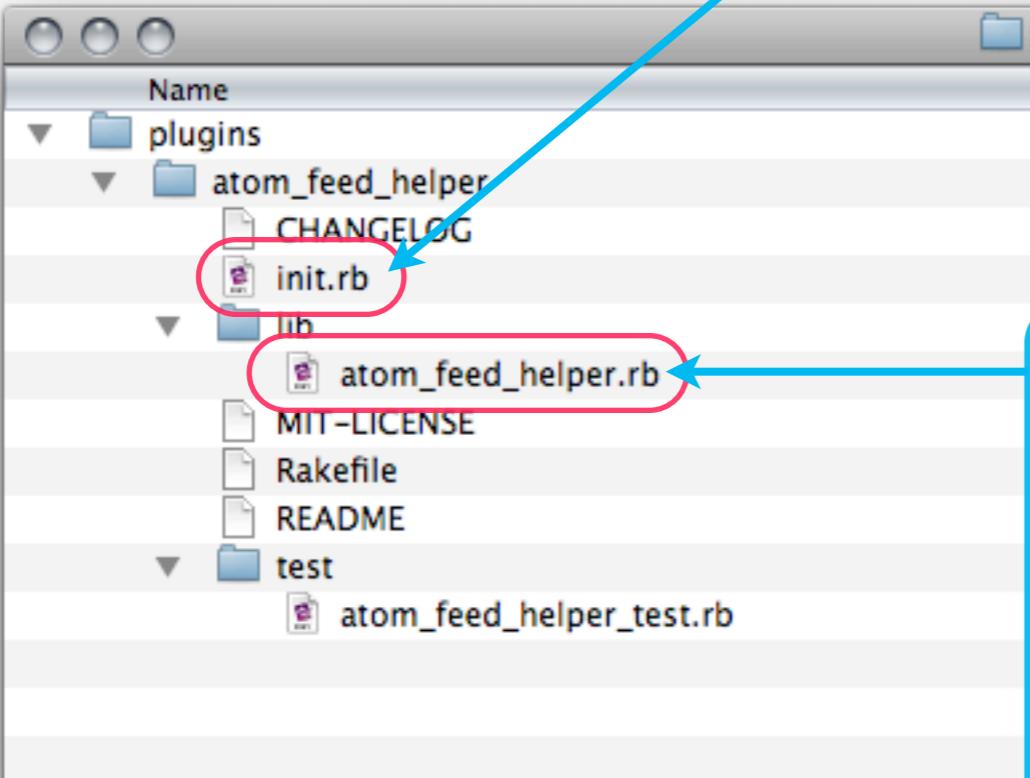
(Snadné generování Atom syndikace)



[www.github.com/rails/atom\\_feed\\_helper](https://github.com/rails/atom_feed_helper)

# Rozšíření Ruby on Rails, znovu-použitelný kód

ActionController::Base.helper(AtomFeedHelper)



Name	Date Modified	Size	Kind
CHANGELOG	Today, 15:45	--	Folder
init.rb	Today, 15:45	--	Plain text
atom_feed_helper	Yesterday, 18:30	4 KB	Ruby source
MIT-LICENSE	Yesterday, 18:30	--	Plain text
Rakefile	Yesterday, 18:30	--	Plain text
README	Yesterday, 18:30	--	Plain text
test	Yesterday, 18:30	--	Folder
atom_feed_helper_test.rb	Yesterday, 18:30	4 KB	Ruby source

```
# Adds easy defaults to writing Atom feeds with the Builder template
module AtomFeedHelper
  # ...
  def atom_feed(options = {}, &block)
    # ...
    xml.feed "xml:lang" => options[:language] || "en-US", "xmlns"
    # ...
    yield AtomFeedBuilder.new(xml, self, options)
  end
end

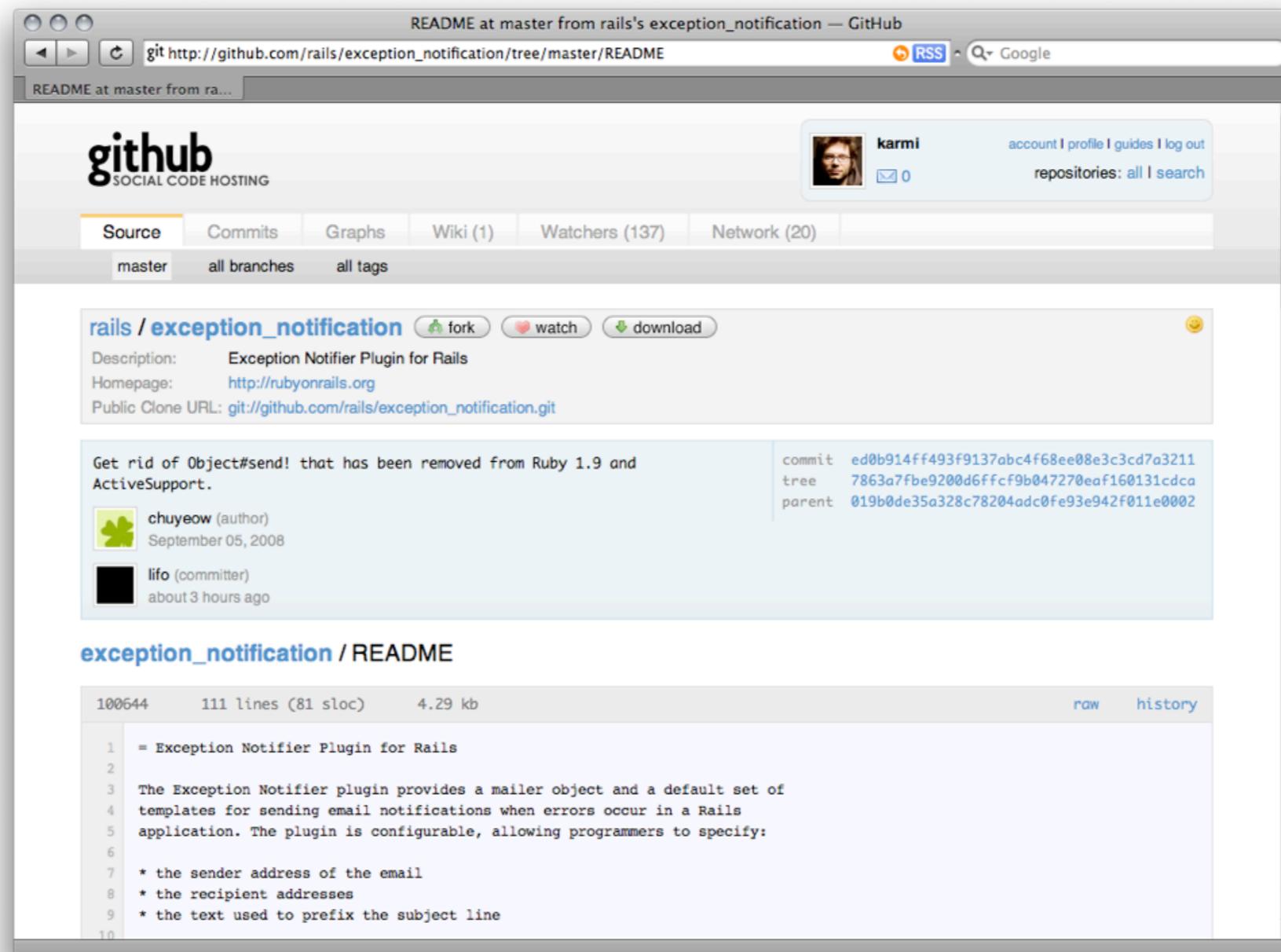
class AtomFeedBuilder
  # ...
  def entry(record, options = {})
    @xml.entry do
      @xml.id("tag:#{@view.request.host},#{@feed_options[:schema]||"http://www.atomen.org/0.3"}) do
        # ...
      end
    # ...
  end
  # ...
end
```

# Rozšíření Ruby on Rails, znovu-použitelný kód

The screenshot shows a web browser window with the title "Ruby on Rails Plugins – Agile Web Development". The URL in the address bar is <http://agilewebdevelopment.com/plugins/>. The page features a prominent orange header with the text "Agile Web Development" and "Build it. Launch it. Love it.". Below the header is a navigation menu with links to HOME, JOBS, RESOURCES, PLUGINS, COMMUNITY, TRAINING, GUIDES, ABOUT, and LOG IN. The main content area is titled "Ruby on Rails Plugins" and contains several paragraphs of text. To the right of the main content is a sidebar with sections for "My favorite plugins", "Add a plugin", and "Subscribe to the feed". Below these are sections for "Search Plugins" (with a search bar and "Query syntax" link), "Plugins by Category" (listing "Recently Added", "Top-Rated", "Assets", "Controllers", "Internationalization", "Misc. Enhancements", "Model", "Rails Engines", "Searching and Queries", "Security", "Statistics and Logs", "Testing", and "View Extensions"), and a "Comments" section at the bottom.

[www.agilewebdevelopment.com/plugins](http://agilewebdevelopment.com/plugins/)

# Rozšíření Ruby on Rails, znovu-použitelný kód



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

# Deployment Rails aplikací

## *Deployment*

*„Deployment“ — Instalace a aktualizace kódu aplikace na serveru*

„Model PHP“ → „Upload and forget“



Synchronizace přes FTP  
.BAK, .OLD, ...

Správa verzí kódu aplikace (Subversion, Git)

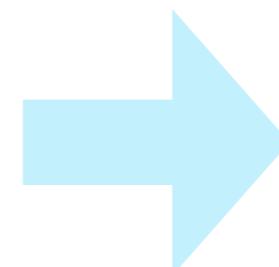
Aktualizace kódu aplikace

Návrat ke starší („funkční“ :) verzi

Spouštění příkazů na serveru

Monitoring stavu aplikace a serveru

(Testy, testy, testy, ...)



Efektivita

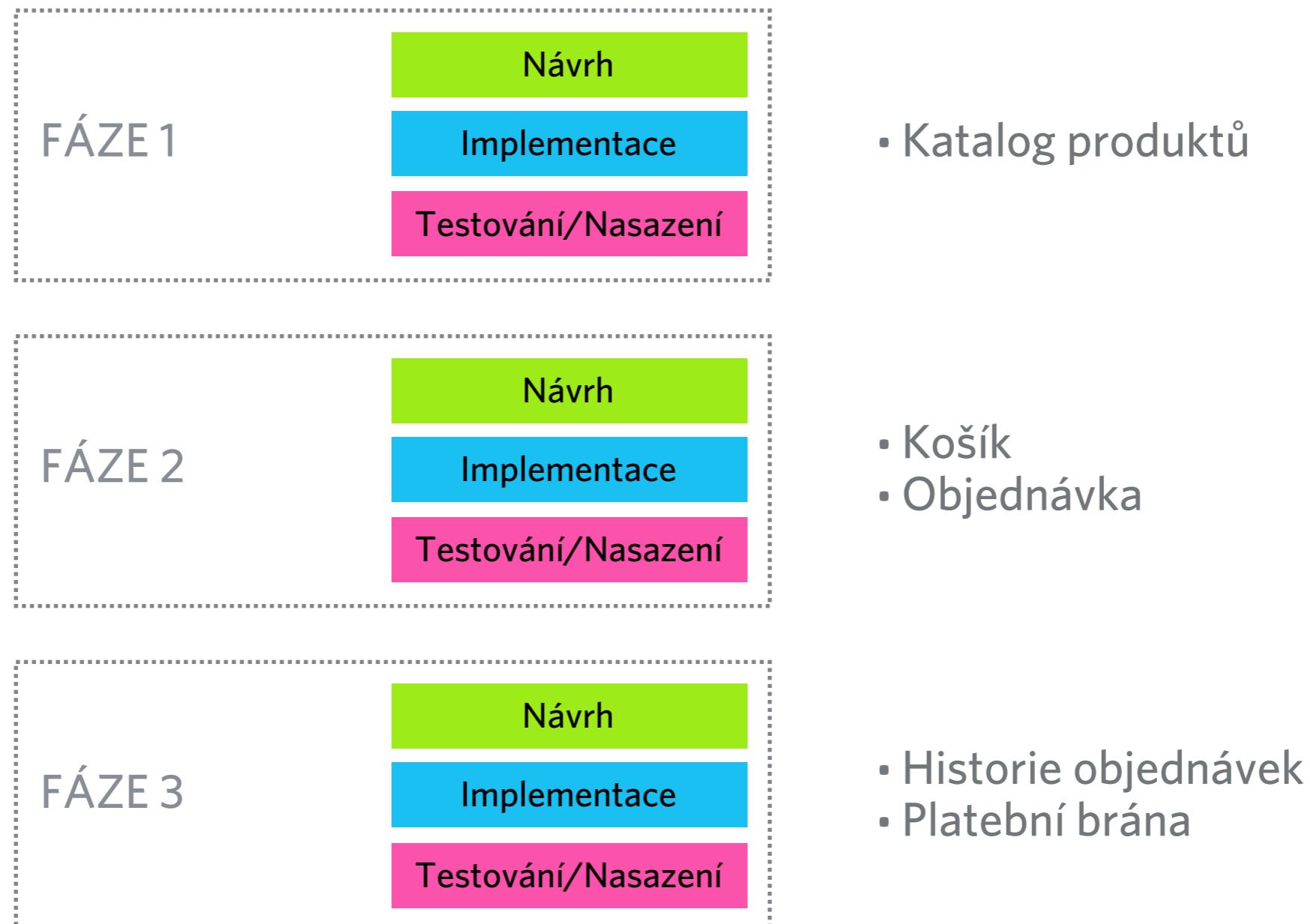
# Průběh softwarového projektu: *Vodopádový model*

Návrh

Implementace

Testování/Nasazení

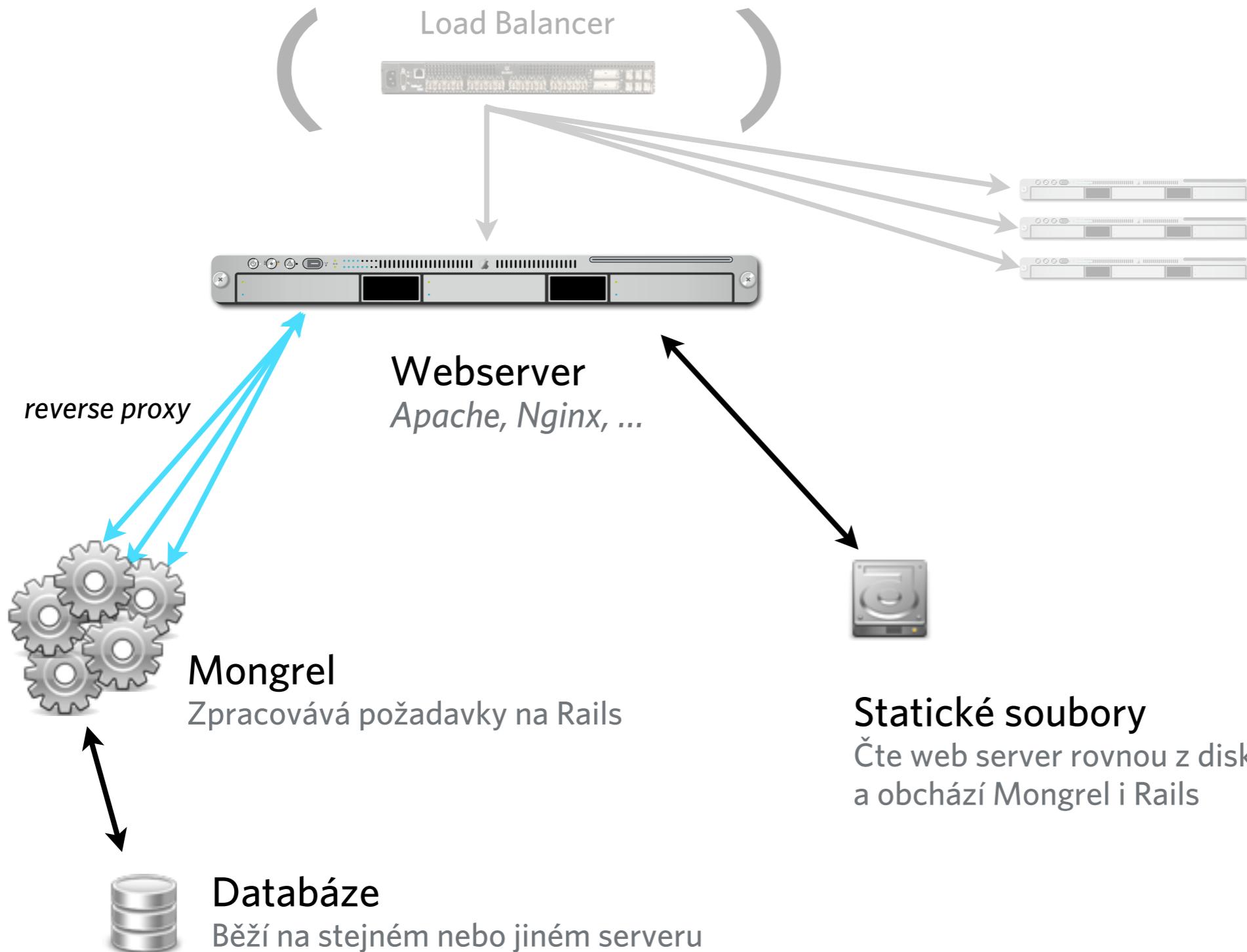
# Průběh softwarového projektu: Agilní vývoj



## *Deployment*

**Bez efektivního procesu deploymentu nelze vyvíjet agilně**

# Struktura Rails aplikace běžící v produkčním prostředí

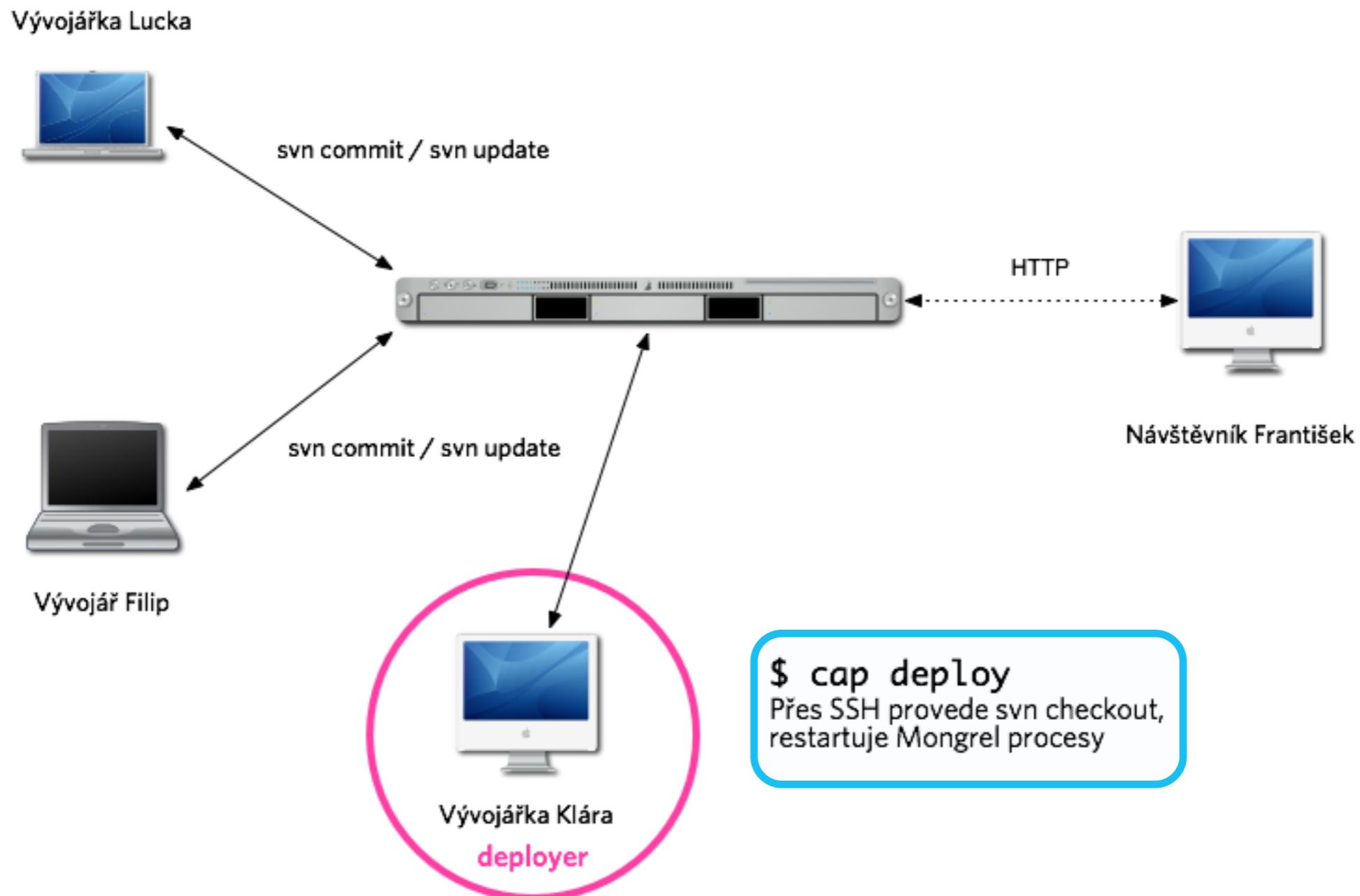


# Budoucnost?



The screenshot shows the official website for Phusion Passenger. At the top, there's a navigation bar with links for HOME, BLOG, CLIENTS, PRODUCTS (which is highlighted in pink), SERVICES, and ABOUT. A search bar on the right contains the text "mod\_rails". The main heading is "Phusion Passenger™". To the left, there's a logo for "passenger" with the tagline "Rails deployment that just works" and a "beta" badge. A green button says "INSTALL PASSENGER NOW - FREE FOR APACHE WEBSERVING (LINUX, BSD, OS X)". Below this, a large text block reads: "Easy and robust deployment of Ruby on Rails™ applications on Apache Webservers". To the right, there are several logos: "Ruby enterprise edition", "RAILS™", "The Apache Software Foundation", and "PHUSION THE COMPUTER SCIENCE COMPANY AT RAILS CONF". A quote from David Heinemeier Hansson is displayed: "This could become very popular, very fast!" followed by his name and title "(Creator of Ruby on Rails™)". At the bottom, there's a navigation bar with links for Overview, Testimonials, Install, Documentation, (Commercial) Support, Development, Enterprise, and Blog. A green box at the bottom left contains the command: "\$ gem install passenger" and "\$ passenger-install-apache2-module".

# Struktura deploymentu Rails aplikace





The screenshot shows a web browser window with the title "Capistrano: Home". The address bar displays "http://www.capify.org/". The page content includes a navigation bar with links to Home, Download, Install, Community, Getting Started, and Upgrading. A prominent message "Upgrading from 1.x to 2.x? Click here for important information!" is displayed in red. Below this is a logo featuring a palm tree on a small island with a sunset, and the word "Capistrano" in large blue letters. A sub-headline "Simple. The way it should be." is present. A section titled "Capistrano is..." lists several bullet points about the tool's features:

- Great for automating tasks via SSH on remote servers, like **software installation, application deployment, configuration management**, ad hoc **server monitoring**, and more.
- Ideal for **system administrators**, whether professional or incidental.
- Easy to customize. Its configuration files use the **Ruby** programming language syntax, but you don't need to know Ruby to do most things with **Capistrano**.
- Easy to extend. **Capistrano** is written in the **Ruby** programming language, and may be extended easily by writing additional Ruby modules.

**The Pitch.**

```
$ cap -T  
$ cap deploy:migrations  
$ cap invoke 'cd /home/deployer/app/current; grep -in error log/production.log'
```

[www.capify.org](http://www.capify.org)

# Další zdroje a informace

# Editory a IDE pro Ruby a Rails



**TextMate** Mac OS X



**Vim** + rails.vim plugin



**NetBeans**

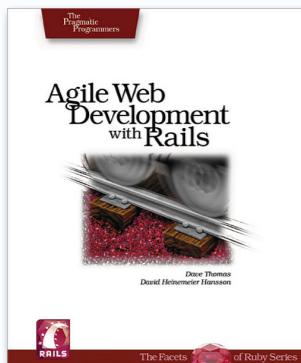


**Aptana RadRails**

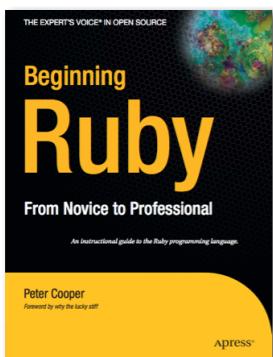


**CodeGear 3rd Rail**

# Zdroje a informace

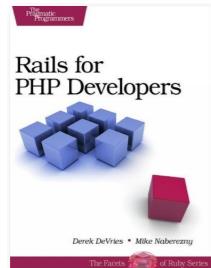


Dave Thomas, David Heinemeier Hansson, et al.  
**Agile Web Development With Ruby On Rails, 2nd edition**  
Pragmatic Bookshelf 2006 říjen 2008 **NEW**



Peter Cooper, **Beginning Ruby**  
Apress 2007

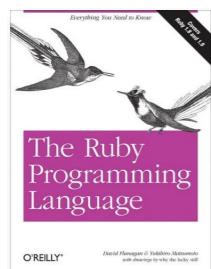
# Zdroje a informace



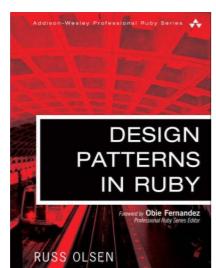
**Mike Naberezny and Derek DeVries, Rails for PHP Developers**  
*Pragmatic Bookshelf, 2008*



**Why The Lucky Stiff, Poignant Guide to Ruby**  
<http://www.poignantguide.net/ruby/>



**David Flanagan a Jukihiro Macumoto, The Ruby Programming Language**  
*Pragmatic Bookshelf 2007*



**Russ Olsen, Design Patterns in Ruby**  
*Pragmatic Bookshelf 2007*

# Zdroje a informace



<http://weblog.rubyonrails.org>  
[www.rubyinside.com](http://www.rubyinside.com)  
[www.railsinside.com](http://www.railsinside.com)  
[www.planetrubyonrails.com](http://www.planetrubyonrails.com)  
[www.railscasts.com](http://www.railscasts.com)  
[www.ruby-lang.org/en/documentation/quickstart](http://www.ruby-lang.org/en/documentation/quickstart)



<http://forum.rubyonrails.cz>  
[#rubyonrails](#) (IRC kanál na IRCNet)  
[www.csrug.cz](http://www.csrug.cz)



[www.railsforphp.com](http://www.railsforphp.com)  
<http://www.ruby-lang.org/en/documentation/ruby-from-other-languages/to-ruby-from-php>

**2**

## Živá ukázka tvorby aplikace v Rails

To do list, simple, easy, fast, sharable: Ta-da List

<http://www.tadalist.com/>

To do list, simple, easy, fas...

Ta-da Lists™ [Log into your account](#)

37signals

# It's easy to-do.

OVER 4,000,000 TO-DO'S CREATED!

Ta-da is the web's easiest to-do list tool. Make lists for yourself or share them with others. It couldn't be simpler.

**Sign up for free in 10 seconds**

Ta-da is 100% free 100% of the time.

"Ta-da List is a Hot Site of the Day!"

USA TODAY

## Things to pack for my trip

- Sunscreen
- Sandals (maybe the green ones)
- Toothpaste
- Socks, socks, and more socks
- Thomas Jefferson biography
- 8 t-shirts
- 4 pairs of shorts
- Blue suit and orange tie
- Black and brown belt

Over 4 million to-dos added to Ta-da! Ta-da List is the easiest web-based to-do list maker.

[Check out](#) some lists people have made public or [read the buzz](#) about Ta-da, or [get inspired](#) by uses for Ta-da.

**Things I need to do this week**

- Wash the car
- Stock the fridge with things that have to be eaten
- Finish reading *Cast of Shadows*
- [Add another item](#)
- Book hotels for Seattle

**Check 'em off**

There's nothing as satisfying as finishing something. When you're done, just check a box and the to-do is marked Done!

**MY LISTS**

[Movies to see before](#)  
[Bills to pay](#) — 1 left  
[Holiday shopping list](#)

**Lists for everything**

Make lists of things you need to do, your favorite songs, your homework assignments, people to call back, or...

**You can share this list in two ways**

1. You can publicly share the list out the URL. Note that public lists  Yes, allow anyone to see this!
2. You can privately share a list via email or through a link on your website.



**Share your lists**

Share your lists with friends, family, spouses, collaborators, co-workers, or keep them to yourself. It's up to you.

**Wide browser support**

Ta-da List works in the most popular web browsers (IE 6/7, Firefox 2, and Safari 2) on the Mac, PC, and the iPhone.

[www.tadalist.com](http://www.tadalist.com) od 37Signals

```
$ sudo gem install rails  
$ rails -v  
$ rails planner
```

```
create app/controllers  
create app/helpers  
create app/models  
create app/views/layouts  
create config/environments  
create config/initializers  
create db  
create doc  
create lib  
create lib/tasks  
create log  
create public/images  
create public/javascripts  
create public/stylesheets  
create script/performance  
create script/process  
create test/fixtures  
create test/functional  
create test/integration  
create test/mocks/development  
create test/mocks/test  
create test/unit  
create vendor  
create vendor/plugins  
create tmp/sessions  
create tmp/sockets  
create tmp/cache
```

## Ukázka

# Děkuji!

