

Legend:

- test
- config
- db
- app
- lib
- Misc

rmacconnell

root

Rails in the Large:

*Building the Biggest (Enterprise)
Rails Application in the World*

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twitter: neal4d



Buy

>> **Basic Search** >> **Advanced Search**

Type:

Make:

Model:

Trim:

Years: -

VIN:

Seller:

Vehicles with Condition Reports

>> **Facilitation Location** >> **Vehicle Location**

- All Locations
- **United States** -----
- All United States Locations
- AR - Central Arkansas Auto Auction (15)
- AZ - Manheim Arizona (205)
- AZ - Manheim Phoenix (250)
- AZ - Manheim Tucson (114)
- AZ - ADESA Phoenix (0)
- AZ - DAA Southwest (0)

>> **Sellers by Type** >> **Sellers A to Z**

- [Expand All](#) [Select All](#)
- [Collapse All](#) [Unselect All](#)
- Captive Finance (Credit Cars)
 - Dealer
 - Factory
 - Fleet/Lease
 - Rental

>> **Search**

QUICK LINKS

- [Make OVE your homepage](#)
- [Newly Listed!](#)
- [Expiring Soon!](#)
- [Fuel Efficient \(4-cylinders\)](#)
- [Hybrids / Alternative Fuel](#)
- [In-Service Rentals](#)
- [Specialty](#)
- [Salvage](#)

Announcement:

Chrysler Financial has suspended dealer floor plan accounts. Please contact your preferred Facilitation Service Provider to arrange for alternate payment terms.

BROWSE FOR VEHICLES

[Hide](#)

Vehicle Type

- Passenger Vehicles
- [Car \(16305\)](#)
- [Truck \(3591\)](#)
- [Van \(1904\)](#)
- [SUV \(6285\)](#)

Makes

- | | | |
|--------------------------------|-----------------------------------|---------------------------------|
| AM General (6) | Flagstaff (1) | Monaco (2) |
| Acura (202) | Fleetwood (12) | Monon (1) |
| Adventure (1) | Fontaine (3) | Monterey (1) |
| Airstream (3) | Ford (4367) | Nash (2) |
| Alfa (5) | Forest River (15) | Nautique (1) |
| Alfa Romeo (1) | Formula (1) | New Holland (1) |

ONLINE EVENT SALES

Sort By: MMR Low to High

Displaying 1 - 50 of 27934 vehicles

1 2 3 4 5 ... 559 Next >

Color Group	Year	Make	Model and Trim	Odometer	MMR	Buy Now	Current Bid	Time Left	Facilitation Location Vehicle Location	Seller
 Blue Add to Watchlist	2006	Mercedes-Benz	R-Class R350 4JGCB65E16A023560  Seller Disclosure	29,137	Above: \$25,100 Average: \$23,100 Below: \$21,100	\$23,750 BUY NOW		3d 17hr 56m	FL - Manheim Central Florida At Dealership CFP MOTORS LTD FL - FORT PIERCE	Cfp Motors Ltd
 Yellow Add to Watchlist	2004	Ford	E-250 1FTNE24W94HB24289 	119,919	Above: \$3,725 Average: \$2,900 Below: \$2,050	\$500 BUY NOW		2d 19hr 11m	PA - Manheim Pennsylvania At Auction Manheim Pennsylvania PA - MANHEIM	Manheim Pennsylvania
 Add to Watchlist	2003	Infiniti	G35 Base JNKCVC54E73M212262	1 mi	Above: \$16,050 Average: \$14,550 Below: \$13,050	\$3,900 BUY NOW	\$2,900 BID	0d 02hr 26m	UT - Brasher's Salt Lake Auto Auction At Dealership WORLDWIDE AUTO INC UT - SALT LAKE CITY	Worldwide Auto Inc
 Gold Add to Watchlist	2000	Chrysler	Cirrus LXI 1C3EJ56H0YN164882	1	Above: \$3,775 Average: \$3,225 Below: \$2,675	\$1,000 BUY NOW		10d 00hr 41m	LA - Manheim New Orleans At Dealership Jimmy Stockstill Motors Inc MS - PICAYUNE	Jimmy Stockstill Motors Inc
	2000	Oldsmobile	Alero GX	84,140	Above: \$3,450 Average: \$2,550	\$900	\$400	0d 15hr 11m	NJ - Manheim New Jersey	Fleet Street Remarketing Inc

Vehicle Details

[» Dealer View](#) [» Retail View](#)

[« Back to Search Results](#)



[« Previous](#) 1 of 17 [Next »](#)



[» View Larger Photos](#)

2004 Ford E-250

1FTNE24W94HB24289



[» Add to Watchlist](#)

PRICING

Buy Now Price: \$500 [»BUY NOW](#)

Time Left: 2d 19hr 09m
 End Date: 05/07/2009 12:00PM ET
 Views: 27
[View Fees](#)

Facilitated by: Manheim Pennsylvania
 Vehicle Location: At Auction MANHEIM, PA, US

MMR

Above: \$3,725
 Average: \$2,900
 Below: \$2,050
[+ View Details](#)

Black Book

Extra Clean: \$8,550
 Clean: \$5,125
 Average: \$4,075
 Rough: \$2,400
[+ Show Adds/Deducts](#)

VEHICLE SPECIFICATIONS

VIN: 1FTNE24W94HB24289
 Odometer: 119,919
 Transmission: Automatic
 Engine Cylinders: 8 Cylinder
 Drive Train: Not Specified
 Fuel Used: Not Specified
 Exterior Color: Yellow
 Interior Color: GRY
 Interior Type: Vinyl
 Body Style: Van
 Doors: Not Specified
 Audio: AM/FM
 Top Style: Hard Top

REPORTS

View the full [Condition Report](#) for additional details.

For more info, view the [Vehicle History Report](#)

ANNOUNCEMENTS

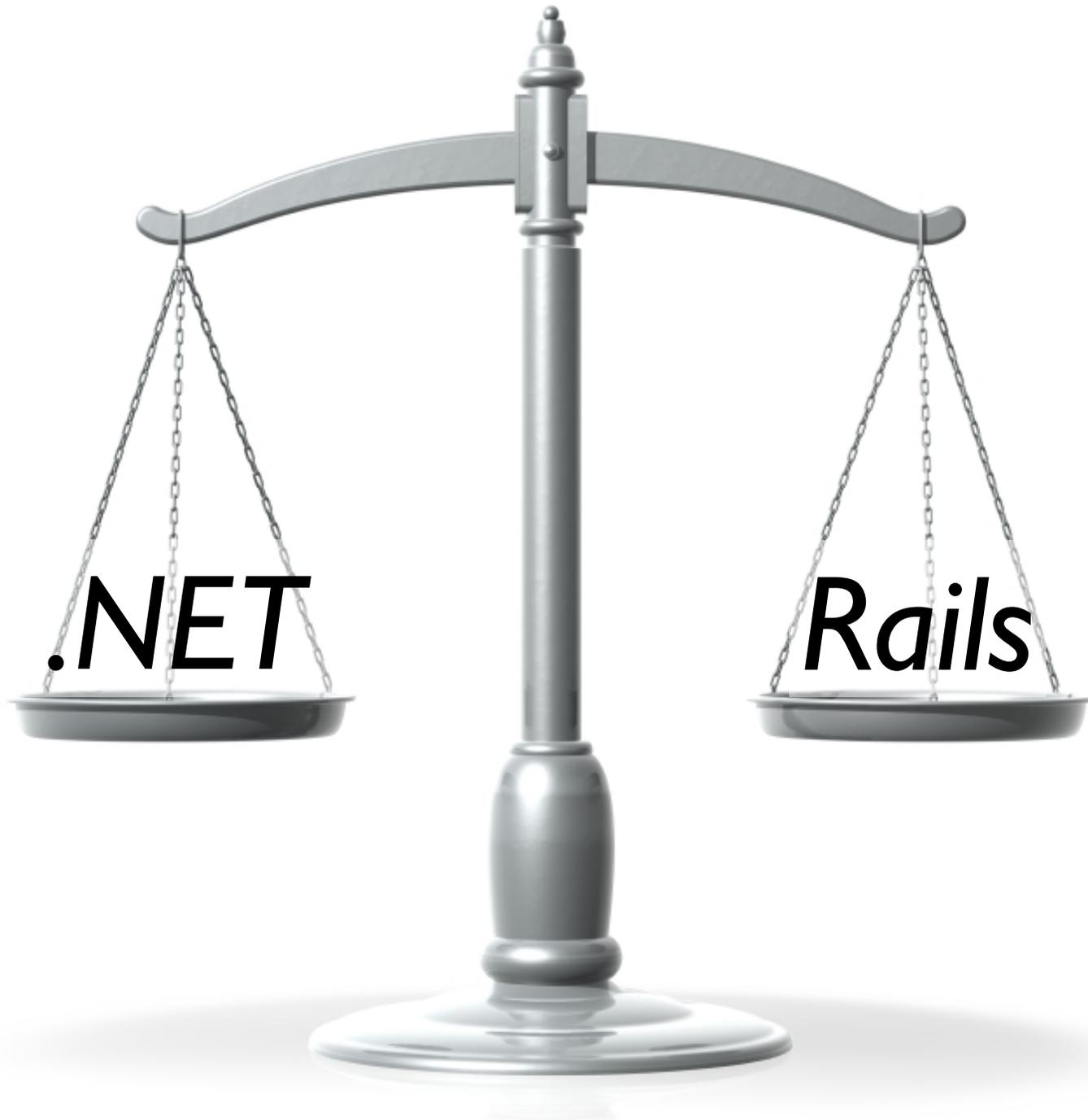
Title Status: Title Present
 Titled In: PA

EQUIPMENT

the pursuit



*Go for the one that'll beat the
one that'll beat the one you
last did*

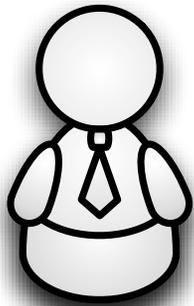


.NET

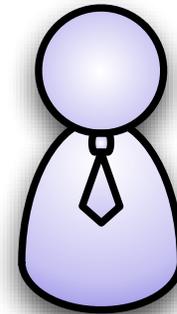
Rails



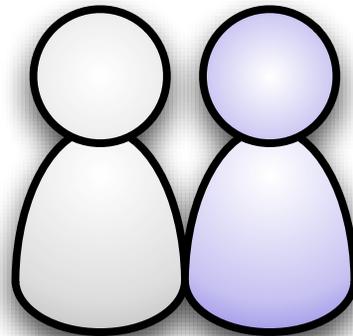
quick start: october 2006



Project manager



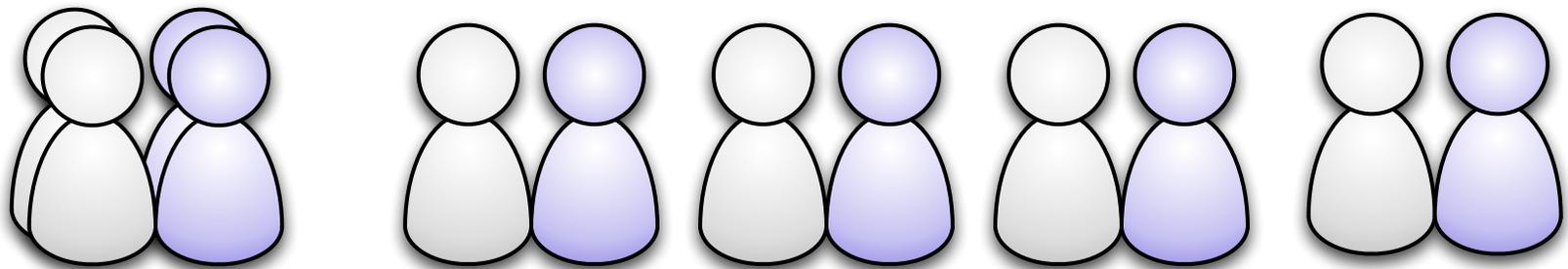
Business Analyst



Tech Lead

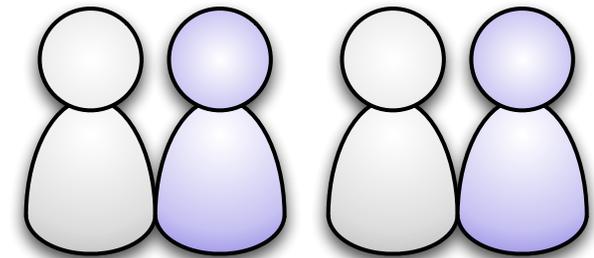
Developer

inception: Jan 17, 2007

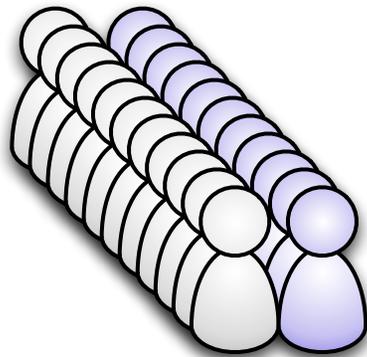


Started with 2 pairs

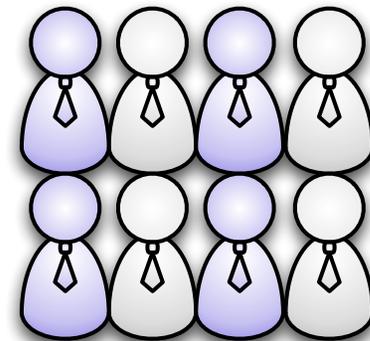
Added one pair every 2 weeks



8 or 9 pairs by July

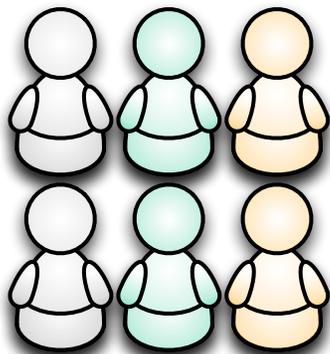


now

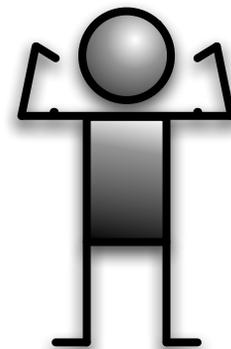


11 pairs of developers

8 business analysts



iteration manager



client principle



6 quality assurance

project manager

lessons learned



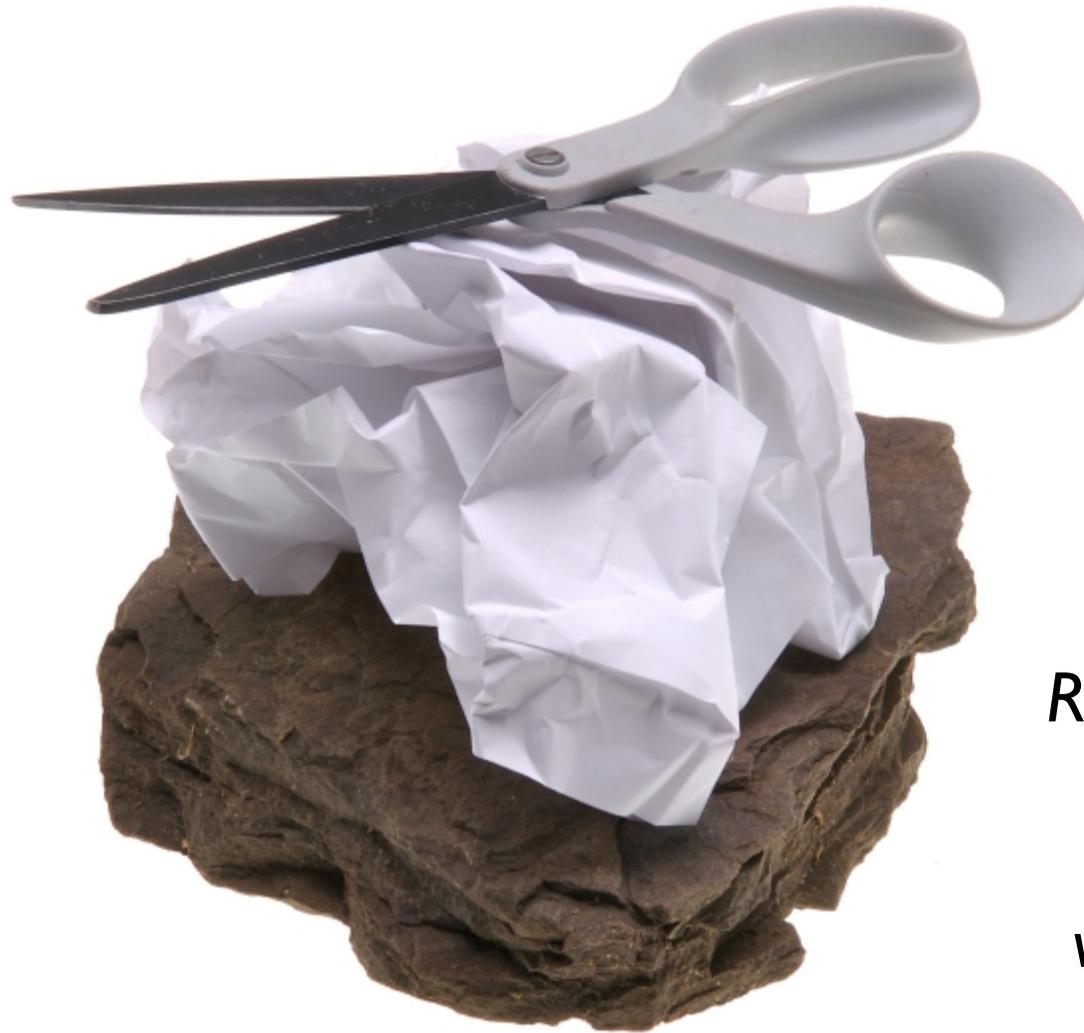
technology isn't as important as responsiveness
to business needs

don't try to convince too early

spikes are your friends!

demonstration over arguments

infrastructure



*Rock is for Rookies:
males have a
tendency to lead
with Rock on their
opening throw*

physical infrastructure



pairing workstations



XServe (Selenium Grid)



BA



standalone QA

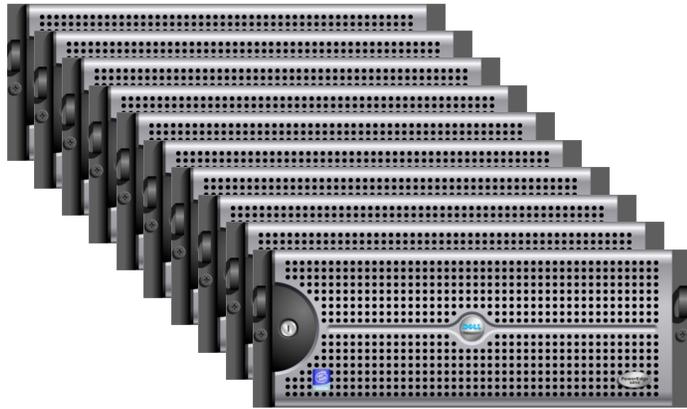


integrated QA

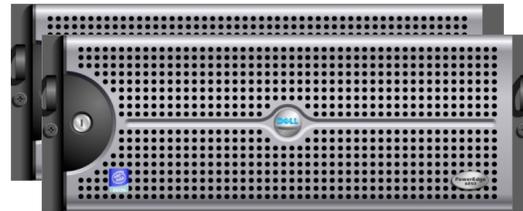


UAT
(sneak peak)

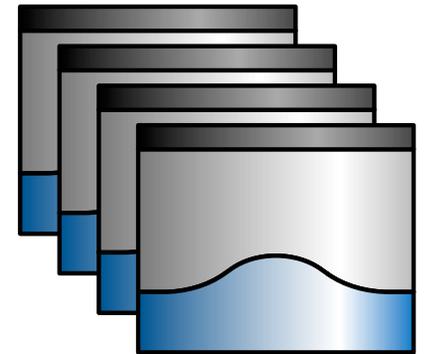
deployment stack



10 web boxes



2 image servers



4 database servers



background server



memcache

```
pgmac:~/work/ove-ruby% rake metrics:stats
(in /Users/pgross/work/ove-ruby)
```

Name	Lines	LOC	Classes	Methods	M/C	LOC/M
app/controllers	4283	3483	75	443	5	5
app/form_builders	102	83	4	16	4	3
app/handlers	98	85	2	10	5	6
app/helpers	871	704	0	95	0	5
app/models	17514	14239	311	1829	5	5
app/modules	1639	1340	3	189	63	5
app/observers	0	0	0	0	0	0
app/presenters	5913	4663	133	907	6	3
app/services	3431	2863	91	278	3	8
app/utils	85	72	5	9	1	6
app/view_states	780	624	10	98	9	4
app/workers	1043	867	37	112	3	5
extensions	2141	1743	16	237	14	5
lib	1929	1613	42	182	4	6
test/unit	54262	44757	681	150	0	296
test/functional	52858	43174	293	62	0	694
test/view	17056	13657	72	17	0	801
test/externals	1359	1063	23	8	0	130
test/search	598	512	5	2	0	254
test/vicki	295	258	4	11	2	21
Total	166257	135800	1807	4655	2	27

Code LOC: 32379

Test LOC: 103421

Code to Test Ratio: 1:3.2





lessons learned



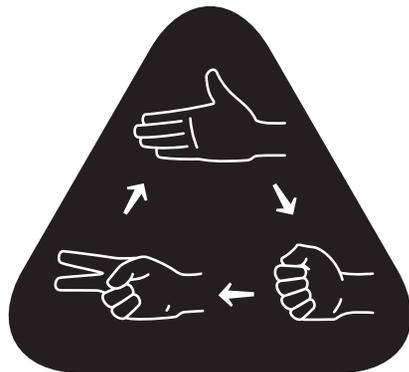
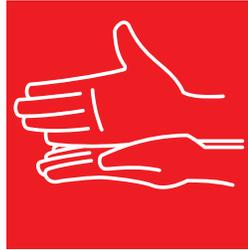
scale infrastructure opportunistically..

...but don't wait too long

Mac OS X rocks

have fun

testing



*Scissors on First:
play scissors as your
opening move against a
more experienced player*

disconnected unit tests

UnitRecord and the evolution of unit tests that don't hit the database

<http://github.com/dan-manges/unit-record>

unit tests

.....
Finished in 41.353372 seconds.

8996 tests, 12746 assertions, 0 failures, 0 errors

the rule:

**unit tests don't hit the
database**

mock everything

zsh

ruby

.....
Finished in 248.573856 seconds.

3964 tests, 8288 assertions, 0 failures, 0 errors

**no mocking allowed in
functional tests**

**tests that hit the database are
sloooooow**

DeepTest

<http://github.com/qxjit/deep-test>



ruby zsh

```
tworker/work/release_1.31/db/deep_test_schema.sql
[2009-04-28 17:31:19] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_5_pid_13999 < /Users/
tworker/work/release_1.31/db/deep_test_schema.sql
Loaded suite #<DeepTest::Test::SupervisedTestSuite:0x530960c>
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_0_pid_13994_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_6_pid_14000_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_1_pid_13995_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_2_pid_13996_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_5_pid_13999_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_4_pid_13998_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_7_pid_14001_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
[2009-04-28 17:31:25] mysql -u ove -pove -S /tmp/mysql.sock deep_test_worker_3_pid_13997_parking_l
ot < /Users/tworker/work/release_1.31/db/deep_test_schema_parking_lot.sql
```

.....

DistributedDeepTest



**prefer factories over
fixtures**

CruiseControl.rb
Continuous Integration in Ruby

Continuous Integration isn't rocket science. We keep it simple!

CruiseControl.rb
Continuous Integration in Ruby

Continuous Integration isn't rocket science. We keep it simple!

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CruiseControl.rb
Continuous Integration in Ruby

Continuous Integration isn't rocket science. We keep it simple!

CruiseControl.rb
Continuous Integration in Ruby

Continuous Integration isn't rocket science. We keep it simple!

new instances added
as needed

cc.rb instances

Selenium view builds trunk

Selenium view builds release

core trunk build (commit build)

trunk + search infrastructure

core-release, externals, web services, datasets

VMware
Fusion



deployment & testing

lessons learned



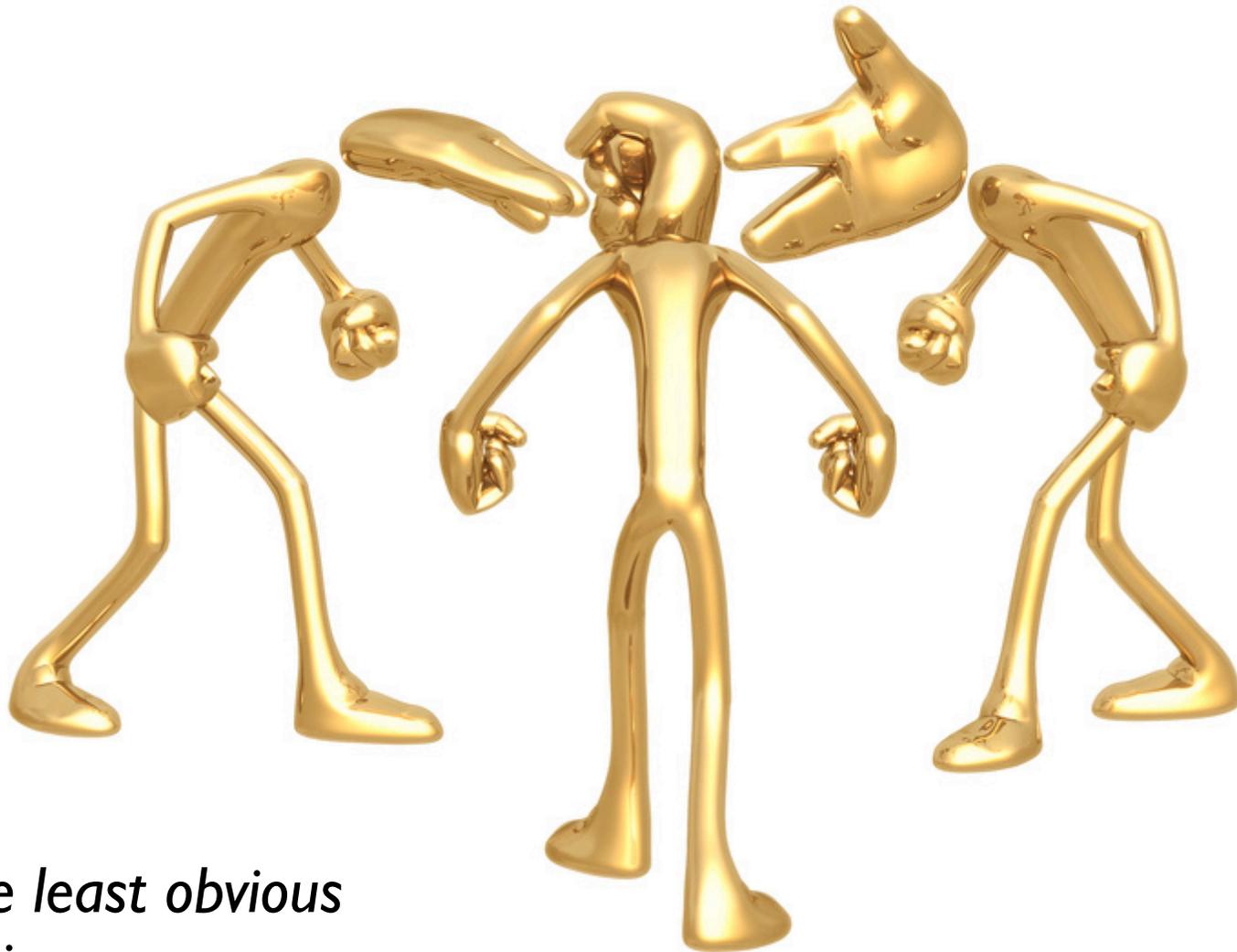
fight the battle to keep tests fast

invent stuff if you have to

write smart tests

scale development infrastructure just like
production infrastructure

knowledge transfer



*Paper is the least obvious
of opening moves.*



Firefox File Edit View History Bookmarks Tools Window Help
 Online Solutions Project Ruby Card Wall PE - Mingle
 Mon 3:40 PM

Link to this page Add / remove items

Blocked (0)	Ready for Development (0.25)	In development (7)
IQD - #9673 #8015: Seller information link can be provided with...	IQD - #9509 Mercedes-Benz site coming up instead of...	JEG - #9683 Shared JS Error for every page rendered...
	SUST - #9403 Handle hashed passwords upon checkout...	#9660 INDEVERSC - Auto Order Aging Report...
		UVIS - #9675 Inbound - Removal of Images for Non-Marketing...
		#9696 Employee Sales - Tasks to be done...
		SUST - #9678 Add guide and reference ids to Ruby...
		SUST - #9553 Setup ActiveMQ Infrastructure...
		Search #9521 Set up Endeca production...
		#9196 LISTINGS: Limit Auto-relist on...
		Selling #9182 Activity: No Listings appearing...
		PERFORMANCE #9058 Change bidding logic...
		PERFORMANCE #9882 Investigate Cache Memory...

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Link to this page Add / remove items

Ready for BA Signoff (1)	In BA Signoff (6.75)	Ready for Testing (8.25)	In Standalone Testing (7)	Waiting for Defect Fix (2)
Search #9681 Endeca sort should handle transition from...	EVENT #9495 SALE - Selling Activity: Ability to offer call...	IQD - #9672 EMPLOYEE: Error displayed when changing...	#9478 PERFORMANCE: Investigate memory leaks...	#9132 Change Ruby Installation to Ruby...
#9455 Accommodate changes in transaction...	Search #9644 Add Pending Listings/Items to Endeca and...	IQD - #9674 EMPLOYEE: #8015: Seller Information...	#9430 SECURITY: Fix sorting of listings on My...	#9815 Employee Add "Need Financing?"...
#9106 SPECIALTY: Add listing id to request...	IN SERVICE: #9391 Increase the Mirage bands...	IQD - #9659 #7993 Change the price and click...	#9276 SEARCH: Counts in the Browse form...	#7903 Change the price and click save changes...
Search #9356 Use Endeca to Sort the Browse...	PROBLEM FILE #9039 Show Problem File...	#9639 IQD Field label "Quantity" is not changed to...	#9221 Implement oval-like background...	
#9994 PROBLEM FILE: Allow Problem File...	#9613 SUST: Set up event message loop...	#9173 CONCUSSION: INFO - Have Prior Part and Exam...	#9073 Search: Render Browse results page from...	
#9270 LISTINGS: Limit auto relist for Open...	#9603 IQD: Fix Issues with RubyEE...	Search #9549 Use memcache to cache endeca...	Search #9872 Create Browse form using...	
#9680 InService - E-mail scrub...	EVENT #9548 SALES - Selling Activity: No Sales tab...	#9825 ERing: Link Listings with Dots/Buttons...	#9283 Seller Information not populating...	

Dev Done



cc_board

01_trunk_commit 02_trunk_acceptance 03_trunk_apache
04_trunk externals 05_trunk_metrics 07_trunk_qa_tests
11_release_commit 12_release_acceptance 13_release_apache
14_release_externals 17_release_qa_tests 97_deploy_ba
98_deploy_staging 99_spider_production ove-search-infrastructure
in-service ove-core-trunk ove-core-release ove-datasets
ove-externals ove-externals-trunk ove-query-counts
webservices-core z-deploy-ba-trunk z-deploy-endeca-ba-trunk
z-deploy-iqa-release z-deploy-sqa-trunk *ove-view-trunk*
ove-view-release-branch

http://github.com/qxjit/cc_board/

play a song when a
build breaks



play theme song upon
successful checkin



jukebox.rb

currently in alpha

[http://subversion.hammersforge.com/
jukebox.rb/trunk/](http://subversion.hammersforge.com/jukebox.rb/trunk/)

pairing stations

adium

no email



internal Jabber server chat rooms

devs

BAs

QAs

shared buddy list

automatically set pair
name

adium

Mingle card (upon commit)

lessons learned



software is more about communication than
technology

use information radiators

co-location rocks

pairing really rocks

have fun



automate everything

When playing with someone who is not experienced at the RPS, look out for double runs or, in other words, the same throw twice.

**1-click deploy to any
environment**

**using cc.rb as easy deployment
tool**

rake commit

run all unit tests

run all functional tests

verification (language keys)

commit

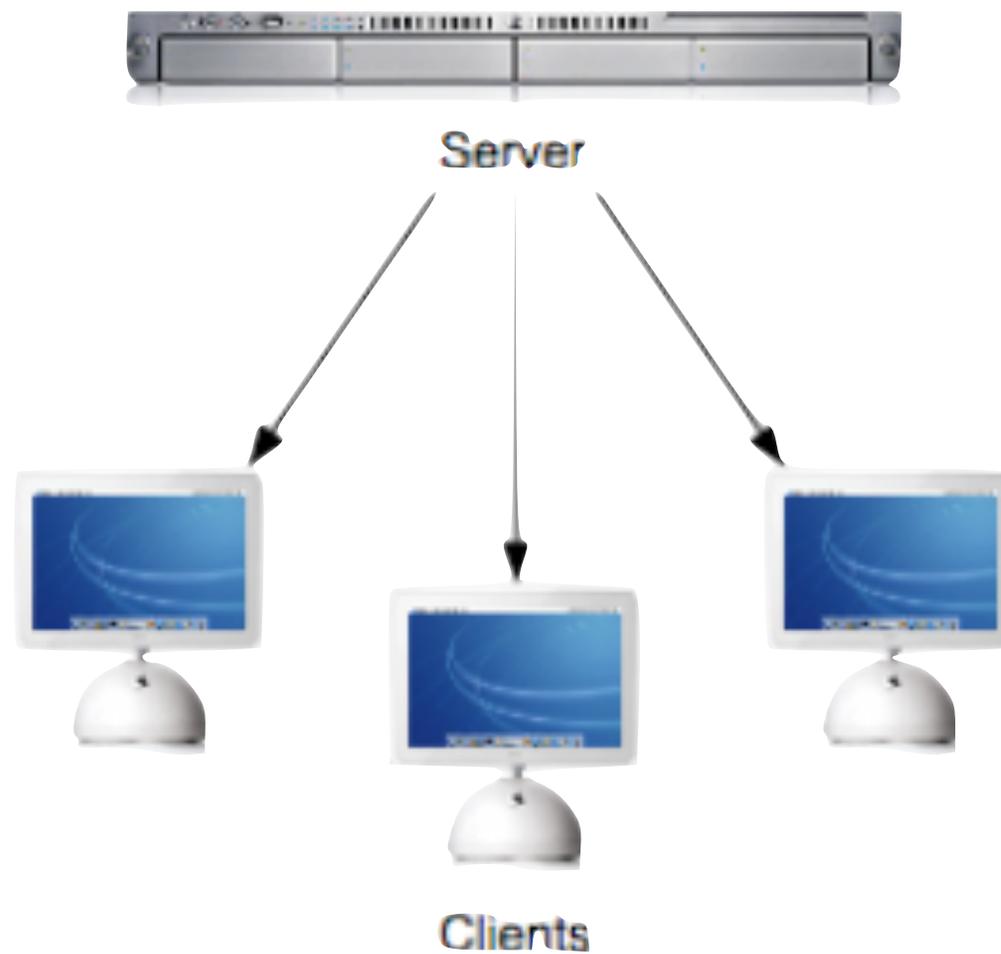
http://github.com/pgr0ss/rake_commit_tasks

canonical pairing station maintenance

cap pairing_stations

radmind

<http://rsug.itd.umich.edu/software/radmind/>



strict rules for advanced language features



Rock beats scissors.



Paper beats rock.



Scissors beats paper.

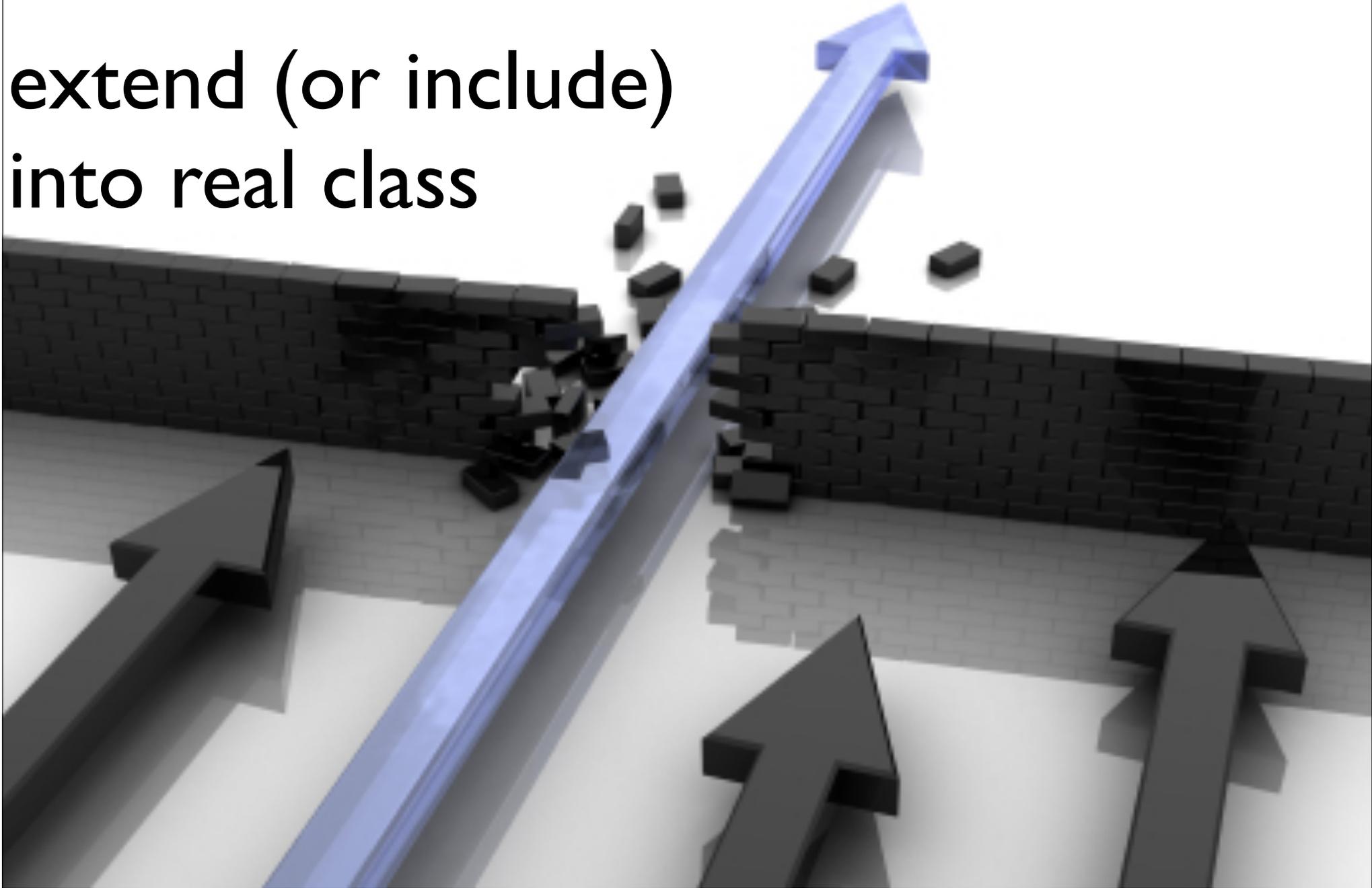
*Tell your opponent
what you are going to
throw and then actually
throw what you said.*

**monkey patches all live
in extensions folder**



modularize extensions

extend (or include)
into real class



ancestors

>> `String.ancestors`

=> `[String, StringExtension,
ActiveSupport::CoreExtensions::String::Multibyte,
ActiveSupport::CoreExtensions::String::Behavior,
ActiveSupport::CoreExtensions::String::Filters,
ActiveSupport::CoreExtensions::String::Conversions,
ActiveSupport::CoreExtensions::String::Access,
ActiveSupport::CoreExtensions::String::Inflections,
Enumerable, Comparable, Object, InstanceExecHelper,
Mixology, ActiveSupport::Dependencies::Loadable,
Base64::Deprecated, Base64, LocalMethods,
Wirble::Shortcuts, PP::ObjectMixin, Kernel]`

where did you come
from again?

```
"".method :md5sum  
#<Method: String(StringExtension)#md5sum>
```

test the extensions

duh!

**include a version test
to break upon upgrade**

**use meta-names
somewhere**

ack is your friend

*Try playing the throw that would have
lost to your opponents last throw*



background

processing



3 kinds

continually run

updating cached values

counts

CRON-like behavior

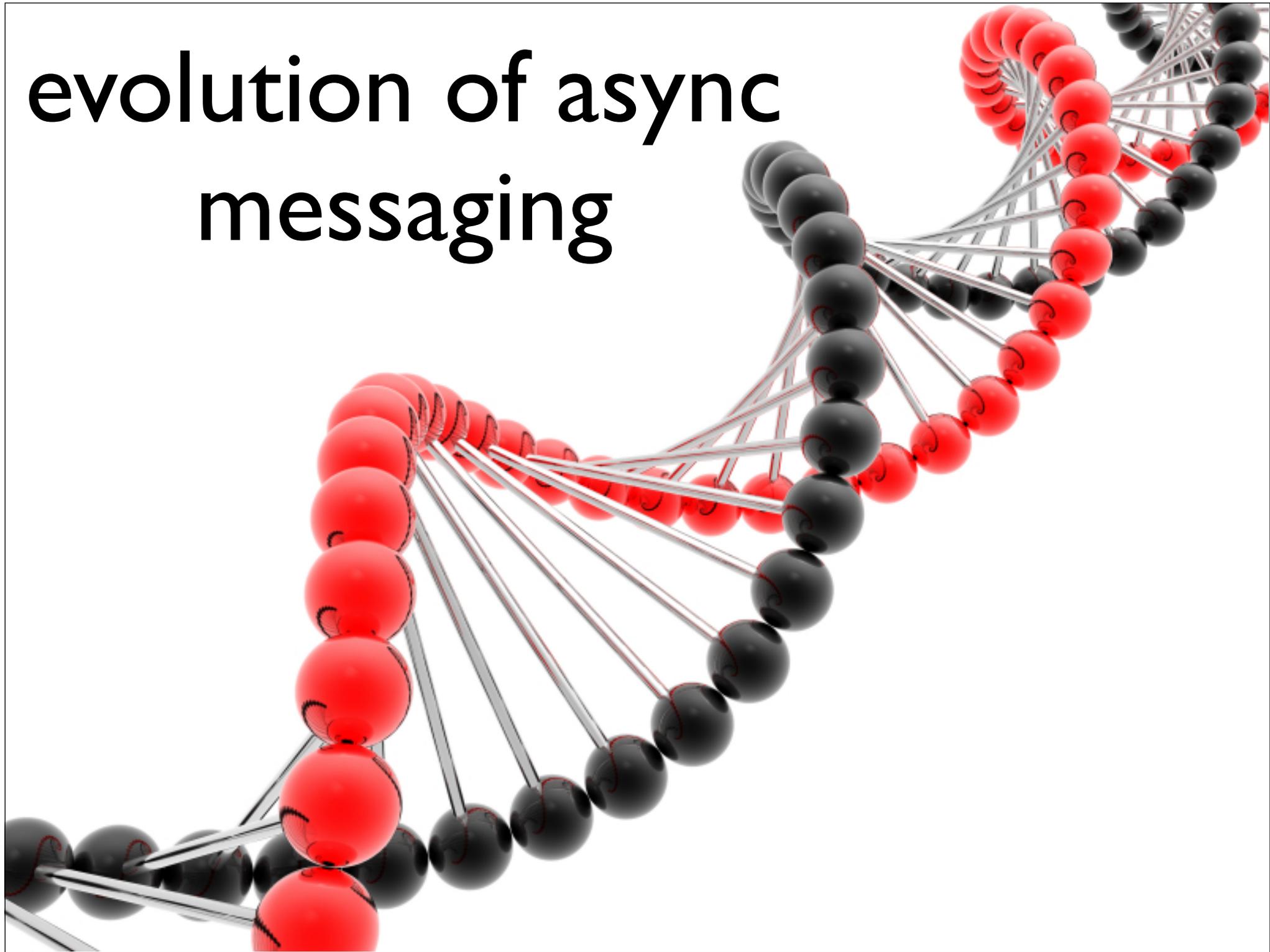
run at a certain time

Asynchronous behavior

progress bars

image downloading

evolution of async messaging



do work inline

gets slower over time

traffic goes up



**switch to a real
messaging queue
(Starling)**

YAGNI

emergent design around async
messaging

lessons learned



avoid anticipatory design

gradually add complexity

don't use databases as message queues (for too long anyway)

DBA's can sometimes get grumpy

external dependencies



When playing against someone who asks you to remind them about the rules, take the opportunity to subtly "suggest a throw" as you explain to them by physically showing them the throw you want them to play.

**make well defined
boundaries**

**mock and stub
boundaries**

external builds to test
service changes

we often catch bugs &
downtime in other services

**tests to validate WSDLs
haven't changed**

tests to call services

**check that responses haven't
changed**

**tests to check against
content & html editors**

non-printable characters

duplicate ids

performance & optimization



When all else fails, go with paper: Statistically, in competition play, it has been observed that scissors is thrown the least often.

not that many page
views...

...really complex pages!

custom hand-tuned SQL

```
Listing.find(:all,  
  :from => "listings USE INDEX (PRIMARY,  
    idx_listings_simple_basic_search,  
    idx_search_fsp)")
```

```
find :all,  
  :include => [{:fsp => [:parent_company, :state]},  
  :currency, :account, :default_image, :make,  
  :model, :trim, :vehicle_type, :exterior_color,  
  :high_bid, {:search_postal_code => :state},  
  :state, :vehicle_location, :distribution_center,  
  {:buyer_group => :owner_group}, :title_status, :event_sale]
```

**Memcache sessions &
many database lookups**

MySQL replication

**use separate boxes for
ETL schemas**

write priority

challenges



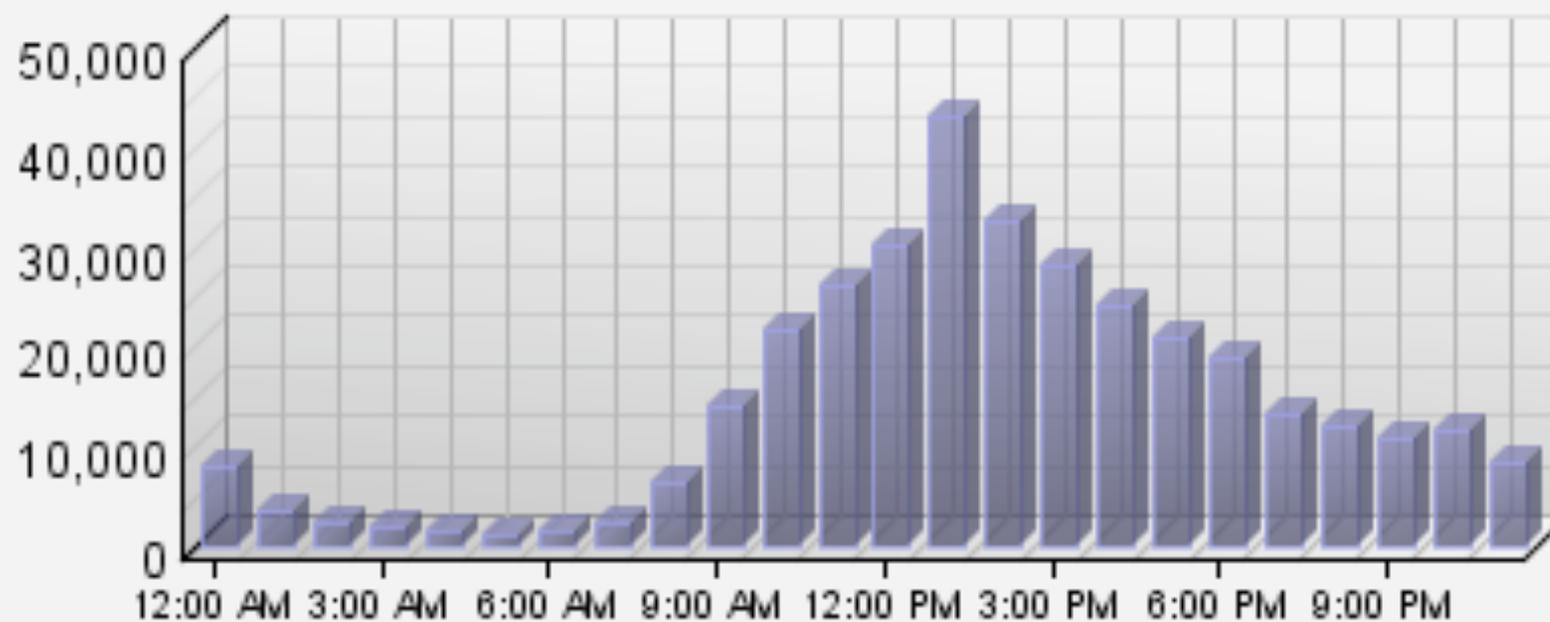
For tournament play, learn the Great Eight Gambits.

scaling is hard

no matter the technology

rails can scale!

Page Views Trend



■ Page Views

Page View Summary

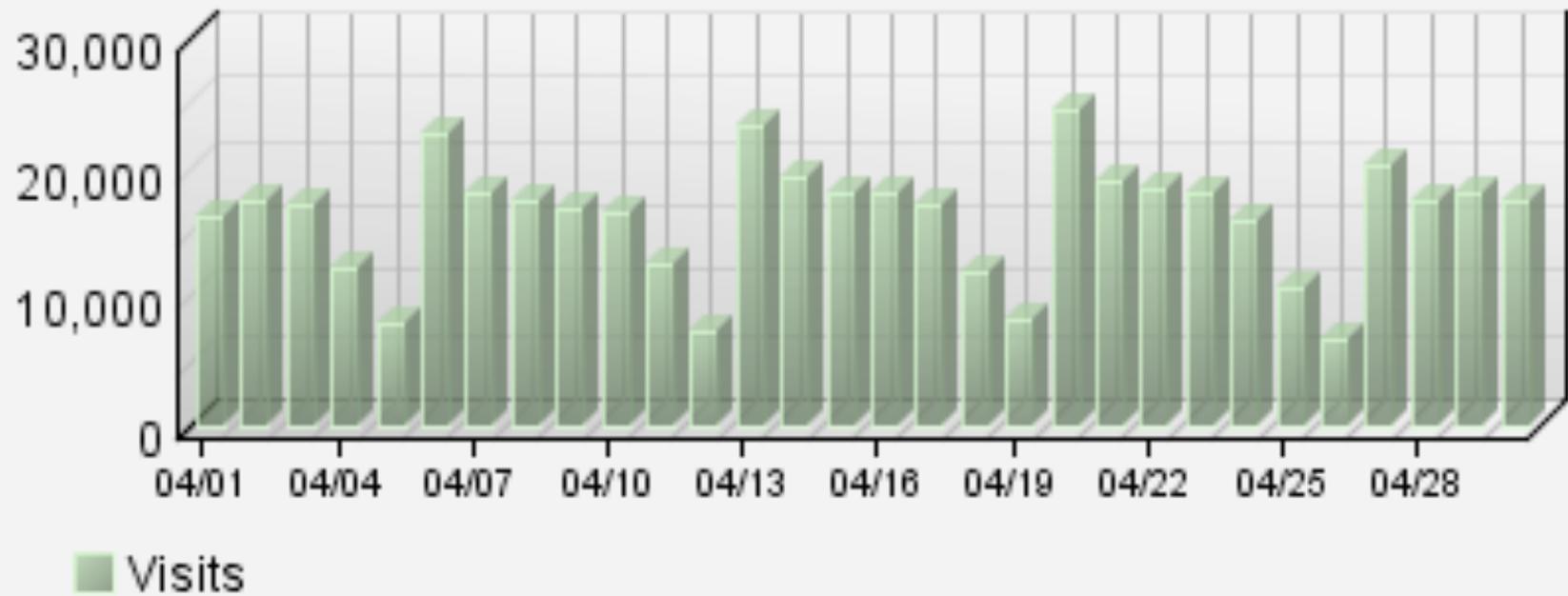


Page Views	346,265
Average per Day	346,265
Average Page Views per Visit	17.07

Visits Trend



Visits



Page View Summary

Page Views	7,160,586
Average per Day	238,686
Average Page Views per Visit	14.76

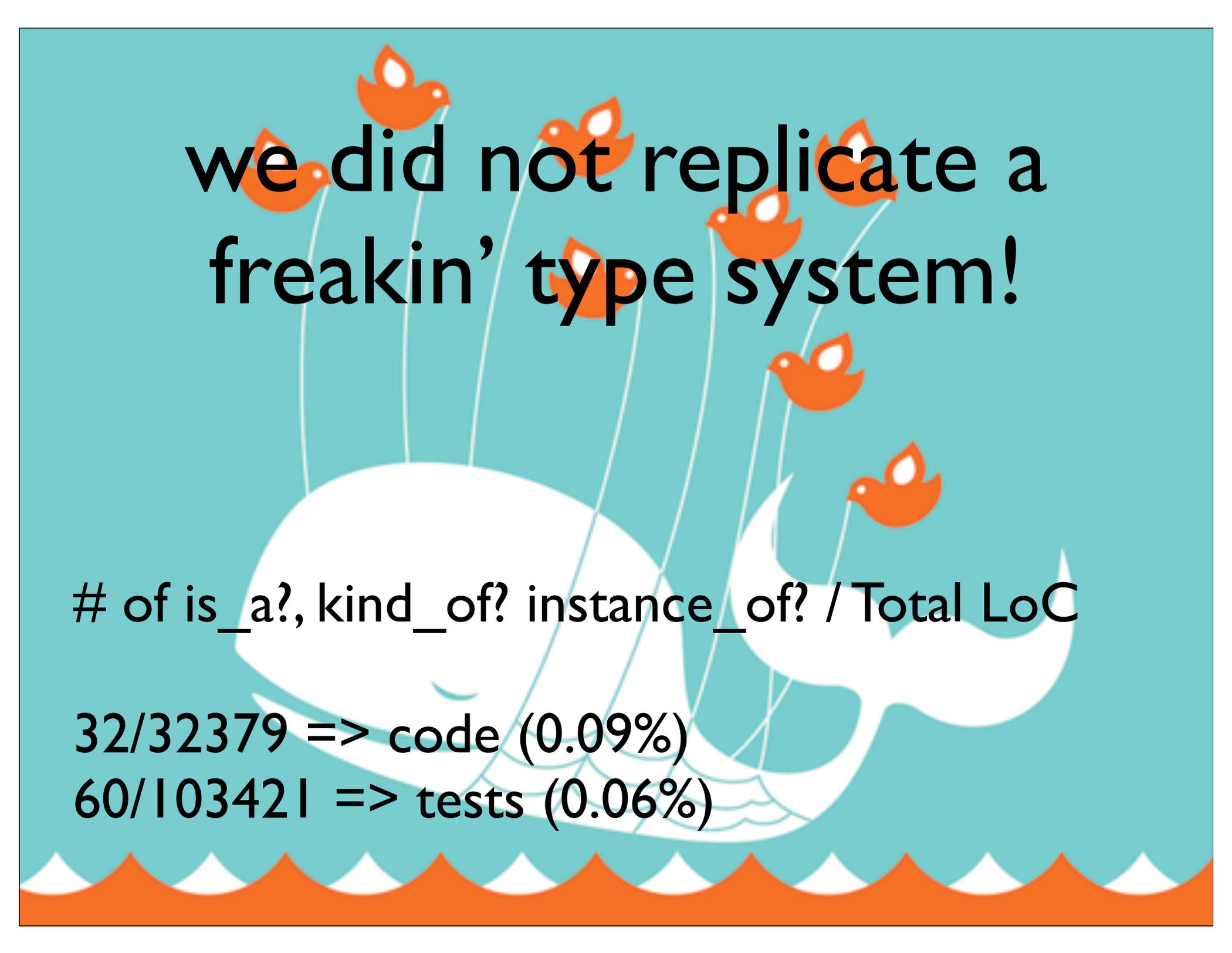
upgrading is hard

1 pair => 6 weeks to upgrade from 1.2.3 to 2.2

back port fixes & improvements

rails

other plugins



we did not replicate a
freakin' type system!

of is_a?, kind_of? instance_of? / Total LoC

32/32379 => code (0.09%)

60/103421 => tests (0.06%)



why all the
rochambeau stuff?

view builds are fragile =>

separate cc.rb build =>

view builds are slow =>

1 pair assigned as view
masters

worst...job...ever



today's view master
assigned by
yesterday's...

...or play RPS



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Polls

What do you think of Rock?

- Most overrated throw in the game
- Solid throw, I use it often
- Only when backed into a corner
- Rock is for rookies



would we do it again?

hell yeah!

?'S



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