

London

QCon 2009

Tutorials Mar. 9 - 10 / Conference Mar. 11-13

What I learned @ QCon

- Joonas

[<http://jole.fi> jole@jole.fi]

Contains opinions -
not just facts. **Beware!**

102 presentations

in 82 slides

in 30 minutes

"The Web Platform"

Dion Almaer, Ajaxian.com

Ben Galbraith, Ajaxian.com





please don't hurt the web
use open standards

Acceptable
delay

Instantaneous / Snappy

< 0.1 sec

User stays in flow

< 1 sec

Instantaneous / Snappy

< 0.1 sec



User stays in flow

< 1 sec

Instantaneous / Snappy

< 0.1 sec



User stays in flow

< 1 sec



Developers must

LOVE

the development tools

Managing

Expectations



mozilla LABS

Bespin

Bespin >

Dashboard

Projects					
ben_New_Project	.hg_archival.txt	css	bespin.js	actions.js	
bespin	.hgignore	dashboard.html	bootstrap.js	editor.js	
	LICENSE.txt	dashboard_...riment.html	client	model.js	
	backend	editor.html	commandline	syntaxhighlighter.js	
	bespin.iml	foo.html	editor	themes.js	
	bespin.ipr	images	events.js	toolbar.js	
	docs	index.html	external	undo.js	
	frontend	js	th		
	mocks	layout	util		
	myscript.js	tests			
	pavement.py				
	research				
	slices				
	template				

Open Sessions

.hg_archival.txt bespin: /	pavement.py bespin: /	index.html bespin: /frontend	dashboard.css bespin: /frontend/css
slider.js bespin: /frontend/js/...al/scriptaculous-1.8.2	foo.html bespin: /frontend	commands.js bespin: /frontend/js/commandline	themes.js bespin: /frontend/js/editor
events.js bespin: /frontend/js	LICENSE.txt bespin: /	myscript.js bespin: /	example.js ben_New_Project: /



Bepin >



bepin : frontend/js/editor/editor.js



AAA

```

293         args.newChar = String.fromCharCode(e.charCode),
294         actions.insertCharacter(args);
295     } else { // Allow user to move with the arrow continuously
296         var action = this.keyMap[[e.keyCode, e.metaKey, e.ctrlKey, e.altKey, e.shiftKey]];
297
298         if (this.lastAction == action) {
299             delete this.lastAction;
300         } else if (typeof action == "function") {
301             action(args);
302         }
303     }
304
305     Event.stop(e);
306 }
307 });
308
309
310 // ** {{{ Bepin.Editor.UI }}} **
311 //
312 // Holds the UI. The editor itself, the syntax highlighter, the actions, and more
313 Bepin.Editor.UI = Class.create({
314     initialize: function(editor) {
315         this.editor = editor;
316         this.colorHelper = new Bepin.Editor.DocumentColorHelper(editor);
317         this.selectionHelper = new Bepin.Editor.SelectionHelper(editor);
318         this.actions = new Bepin.Editor.Actions(this.editor);
319         this.status
320         this.history
321         this.GUTTER_WIDTH = 54;

```

Command History

ls
clear
status
history

```

this.GUTTER_WIDTH = 54;

```

> last cmd: history

Canvas for everything!

S P E E D !

[DOM is slow]

IE?



Jef Raskin

(March 9, 1943–February 26, 2005)

"As far as the customer
is concerned, the
interface is the
product."

"A computer shall not
waste your time or
require you to do more
work than is strictly
necessary."

"The system should
treat all user input as
sacred."

“Once the product's task is known, design the **interface first**; then implement to the interface design.”

Ask users what they
want, but **never let the
users design your
application.**

(not a quote)

"Pragmatic Real-World Scala"

Jonas Bonér, Scalable Solutions



A high-angle photograph of a white ceramic coffee cup filled with dark coffee, resting on a matching white saucer. A silver spoon is placed on the saucer to the left of the cup. The word "Java" is written in a white, serif font in the center of the coffee. The background is a dark, textured surface.

Java



Scala

"What happens when
David Hasselhoff meets
the cloud"

Chief Executive Monkey Stefan
Fountain, Soocial



Many places, one address book

Soocial provides a one address book solution to contact management. No matter where you add or change a contact, it will be changed in your other connected devices or web applications.



Hassle-free
contacts

elastic ip

elastic ip

haproxy

web server

pgpool

web server

pgpool

web server

pgpool

haproxy

sync server

pgpool

sync server

pgpool

postgresql server

postgresql server

postgresql server

...

...

"Cloud Data Persistence"

Geir Magnusson





BigTable

800TB in a Table

Read: 18GB/sec

Project name	Table size (TB)	Compression ratio	# Cells (billions)	# Column Families	# Locality Groups	% in memory	Latency-sensitive?
<i>Crawl</i>	800	11%	1000	16	8	0%	No
<i>Crawl</i>	50	33%	200	2	2	0%	No
<i>Google Analytics</i>	20	29%	10	1	1	0%	Yes
<i>Google Analytics</i>	200	14%	80	1	1	0%	Yes
<i>Google Base</i>	2	31%	10	29	3	15%	Yes
<i>Google Earth</i>	0.5	64%	8	7	2	33%	Yes
<i>Google Earth</i>	70	–	9	8	3	0%	No
<i>Orkut</i>	9	–	0.9	8	5	1%	Yes
<i>Personalized Search</i>	4	47%	6	93	11	5%	Yes

HBASE



Cassandra

[facebook]

⤴ Infrastructure Services

- Amazon Elastic Compute Cloud (Amazon EC2)
- **Amazon SimpleDB**
- Amazon Simple Storage Service (Amazon S3)
- Amazon CloudFront
- Amazon Simple Queue Service (Amazon SQS)
- AWS Premium Support

▾ Payments & Billing

▾ On-Demand Workforce

▾ Alexa Web Services

▾ Amazon Fulfillment & Associates

Related Services

- **Amazon EC2**
Scalable virtual compute environments in the cloud.
- **Amazon S3**
Reliable and inexpensive storage in the cloud.
- **AWS Premium Support**
Gain direct access to our

[Home](#) > [Products](#) > [Amazon SimpleDB](#)

Amazon SimpleDB™ BETA

Amazon SimpleDB is a web service providing the core database functions of data indexing and querying. This service works in close conjunction with Amazon Simple Storage Service (Amazon S3) and Amazon Elastic Compute Cloud (Amazon EC2), collectively providing the ability to store, process and query data sets in the cloud, making web-scale computing easier and more cost-effective for developers.

A traditional, clustered relational database requires a sizable upfront capital outlay, is complex to design, and often requires a DBA to maintain and administer. Amazon SimpleDB is dramatically simpler, requiring no schema, automatically indexing your data and providing a simple API for storage and access. This approach eliminates the administrative burden of data modeling, index maintenance, and performance tuning. Developers gain access to this functionality within Amazon's proven computing environment, are able to scale instantly, and pay only for what they use.

[Sign Up For Amazon SimpleDB](#) ▶

This page contains the following categories of information. Click to jump down:

↓ [Amazon SimpleDB Functionality](#)

↓ [Service Highlights](#)

↓ [Pricing](#)

↓ [Resources](#)

↓ [Detailed Description](#)

↓ [Intended Usage and Restrictions](#)

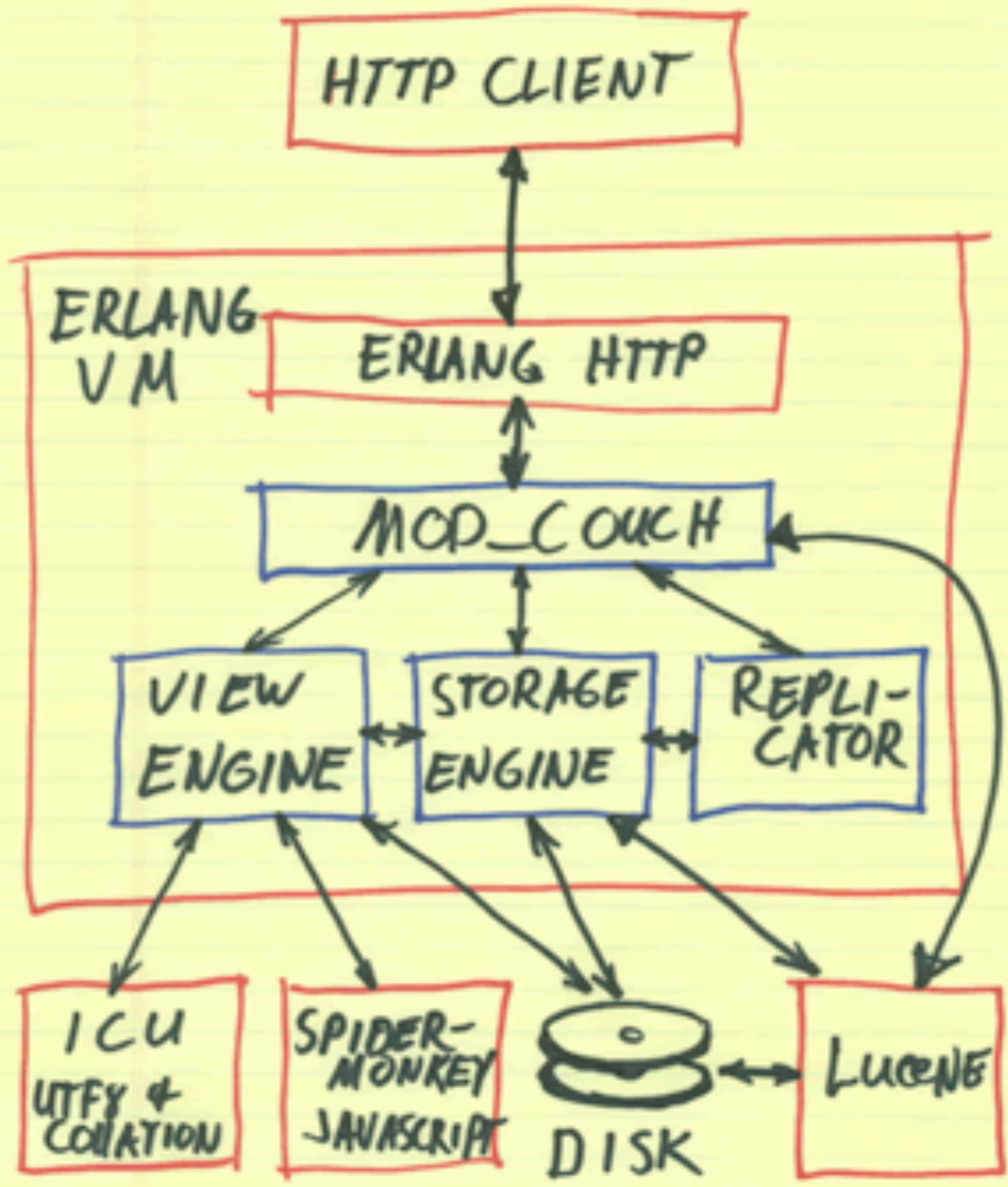
MongoDB

```
{ name: "mongo", type: "db" }
```



apache
CouchDB
relax

distributed, fault-tolerant
and schema-free **document-**
oriented database accessible
via a RESTful HTTP/JSON



"Situation normal,
everything must
change"

Simon Wardley, Canonical (Ubuntu)

Commoditization

innovation

innovation

bespoke



innovation

bespoke

products



innovation

bespoke

products

services



adas



data

app

platform

infra
[os, hw, ...]

enterprise

data

saas

app

paas

platform

iaas

infra
[os, hw, ...]



Eucalyptus

<http://www.ubuntu.com/ec2>

"Groovy and Grails In Depth"

Graeme Rocher, Grails Project Lead





Good ideas from Ruby,
Python, Small Talk
Integrates with Java
Runs on JVM

Grails

Web platform - End-to-end from mvn to ORM

[on top of Hibernate, Maven, Web Flow, Quartz, Spring, ...]

Unbelievable plugin -system

grails create-auth-domains

grails create-registration

grails create-wiki

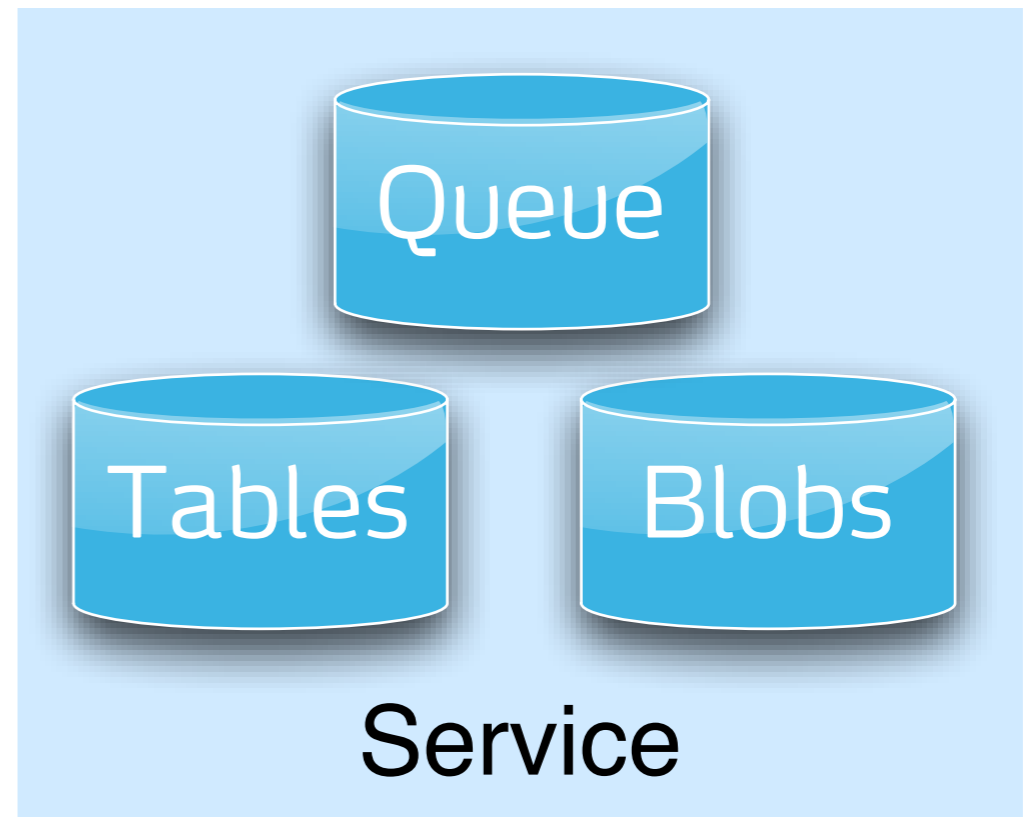
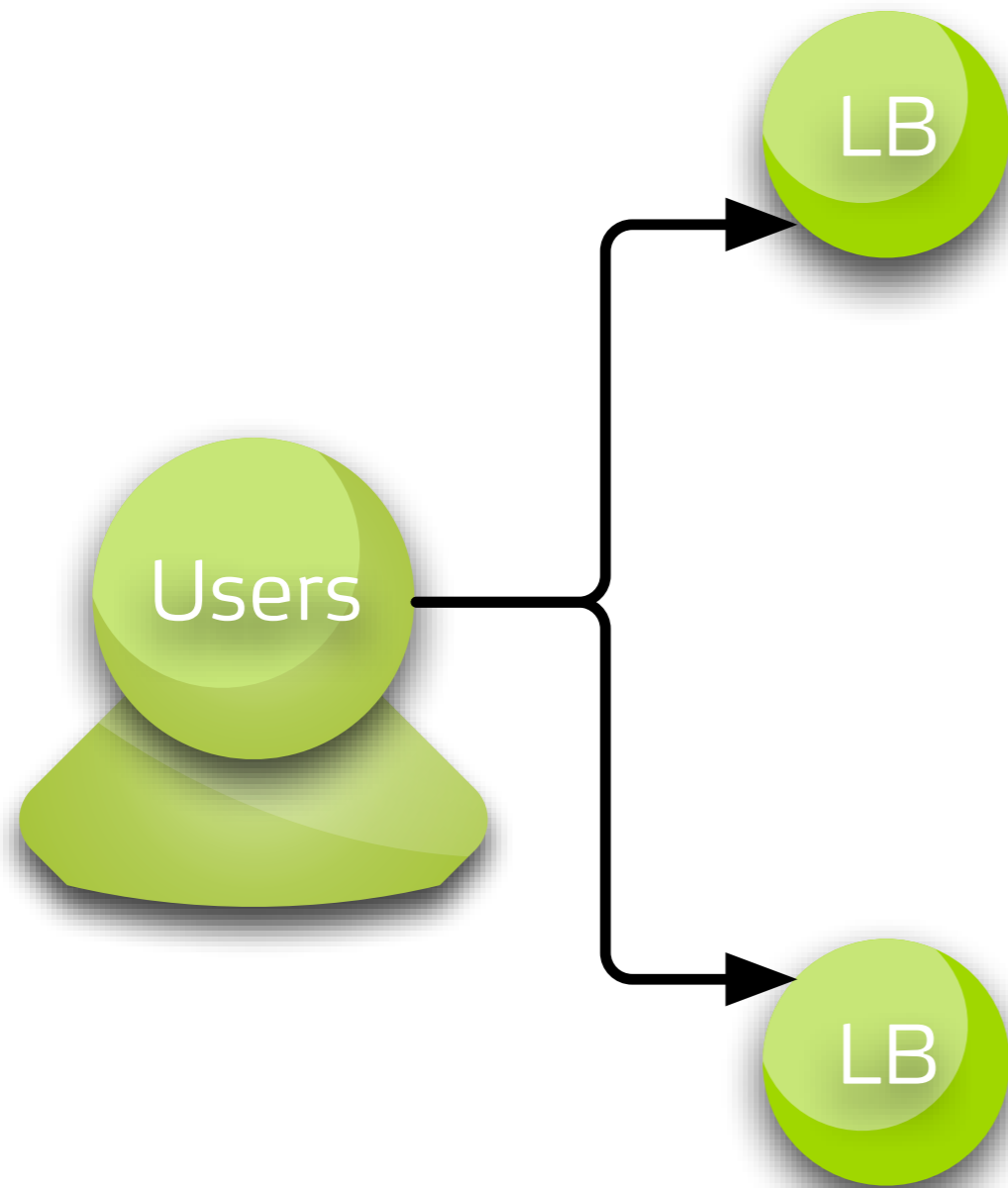
...

Grails -
Weapon of mass
destruction?

"Windows Azure"

Beat Schwegler





64 bit Window Server 2008

1.5-1.7 GHz x64 CPU

100Mps Network

250GB local storage

1.7GB Memory

"Systems that never
stop (and Erlang)"

Joe Armstrong



Six Laws of reliability

-

How to make a system that runs for ever?

I

ISOLATION

Are two Java threads running in
one VM **really** isolated?

||

CONCURRENCY

You must have at least TWO
computers

[computers might crash]

“They forgot to put concurrency in programming languages”

III

MUST DETECT FAILURES

How to correct them if you do not
know about them?

IV

FAILURE IDENTIFICATION

V

LIVE CODE UPGRADE

VI

STABLE STORAGE

No backups!



ERLANG

"Improving Running Components"

Evan Weaver, Twitter



twitter

Rails

C

Scala

Java

MySQL

“Ruby is optimization
resistant”

=> Scala

Optimization plan

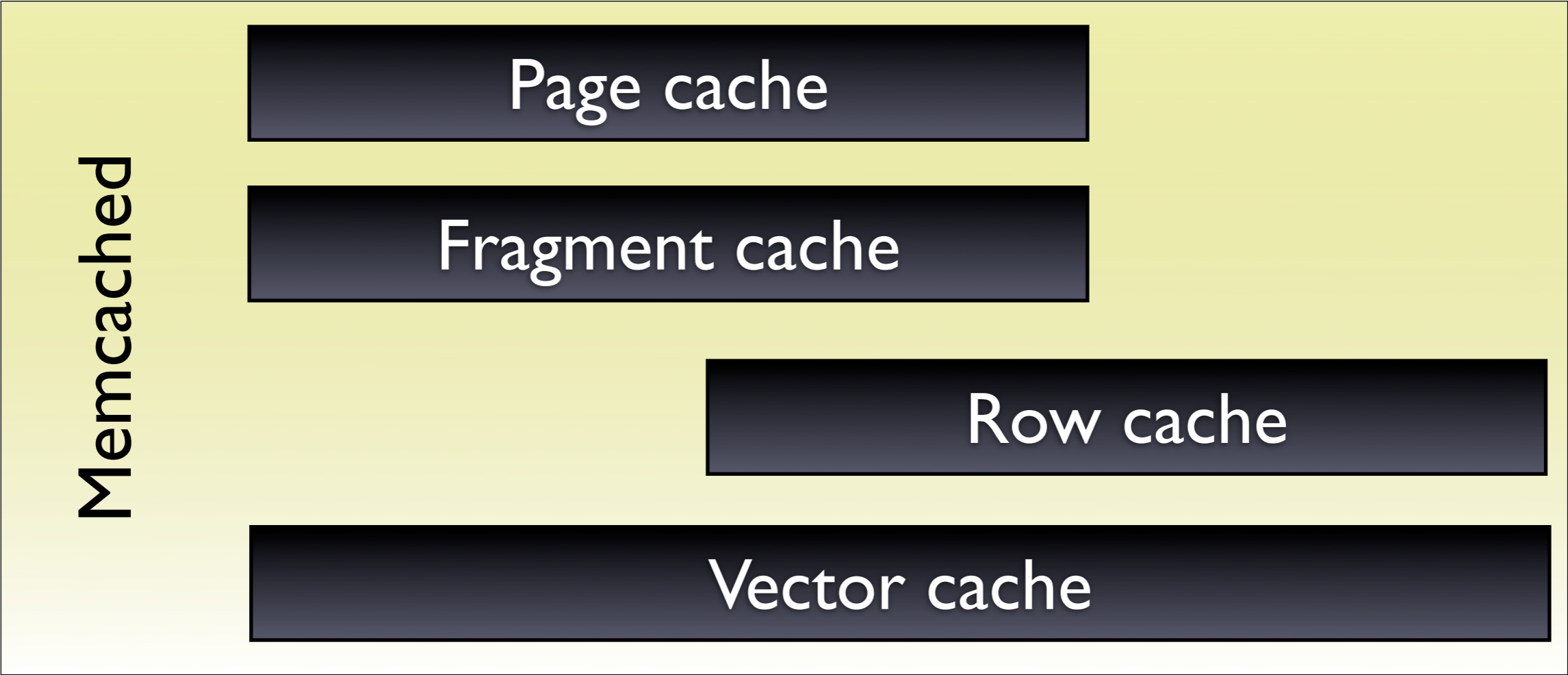
1. stop working
2. share the work
3. work faster

“Everything runs from
memory in Web 2.0”

[in many cases memcached is the key]

API

Web



Obama mania

350 tweets / sec

Normally

80 tweets / sec

each is delivered to
around 120 followers

Adds up to ~1 billion
tweet deliveries / day