The Startup Hangover: Supporting 15 mil users

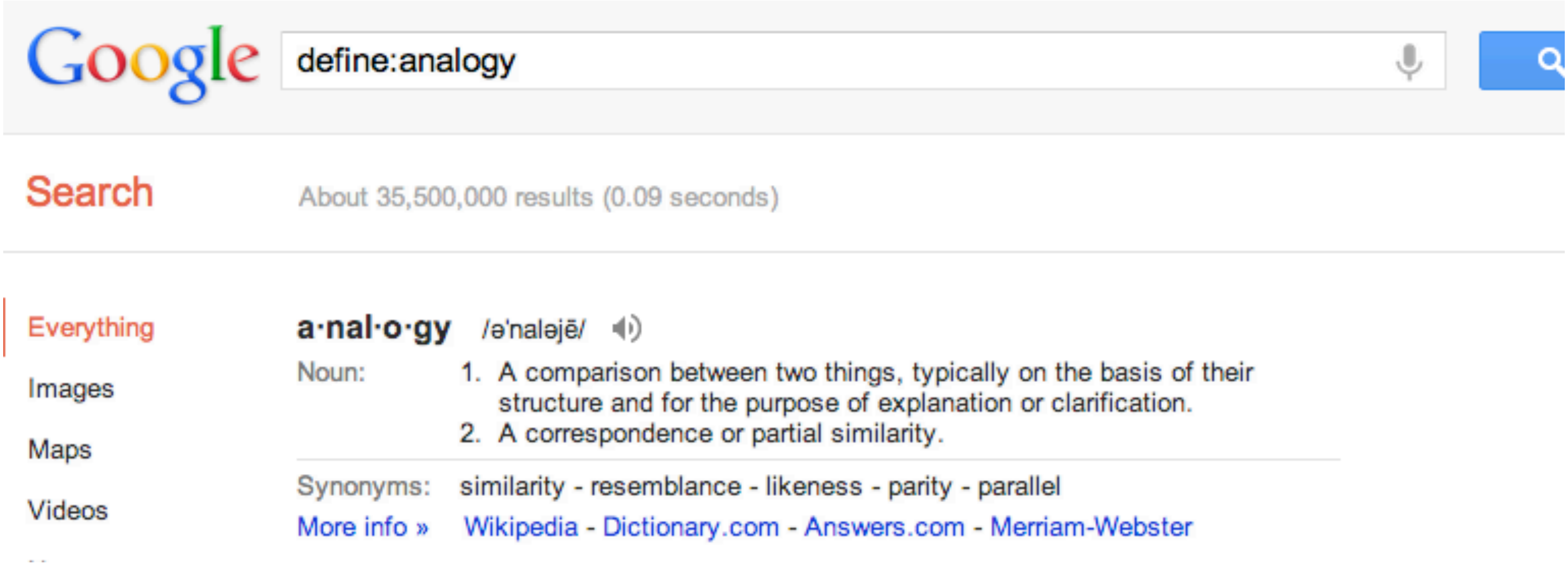
Phil Calçado – SoundCloud
@pcalcado
http://philcalcado.com

ohai!

i’m **phil**.

i work here:

SOUNDCLOUD


Google
Search
Everything
Images
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Videos

define:analogy

About 35,500,000 results (0.09 seconds)

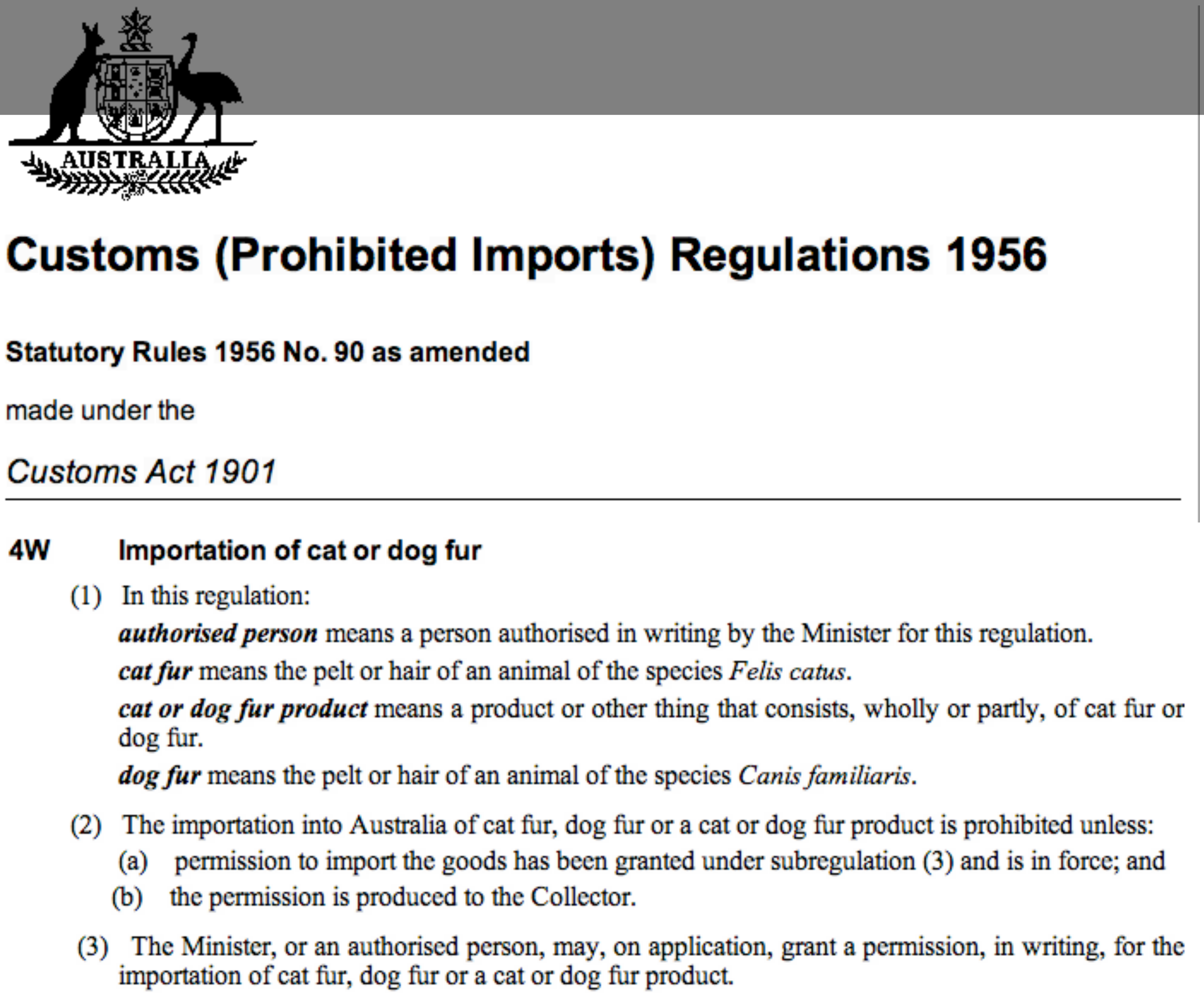
a·nal·o·gy /əˈnaləjē/

Noun:
1. A comparison between two things, typically on the basis of their structure and for the purpose of explanation or clarification.
2. A correspondence or partial similarity.

Synonyms: similarity - resemblance - likeness - parity - parallel

More info » Wikipedia - Dictionary.com - Answers.com - Merriam-Webster

law we make up



AUSTRALIA

Customs (Prohibited Imports) Regulations 1956

Statutory Rules 1956 No. 90 as amended

made under the

Customs Act 1901

4W Importation of cat or dog fur

(1) In this regulation:

authorised person means a person authorised in writing by the Minister for this regulation.

cat fur means the pelt or hair of an animal of the species *Felis catus*.

cat or dog fur product means a product or other thing that consists, wholly or partly, of cat fur or dog fur.

dog fur means the pelt or hair of an animal of the species *Canis familiaris*.

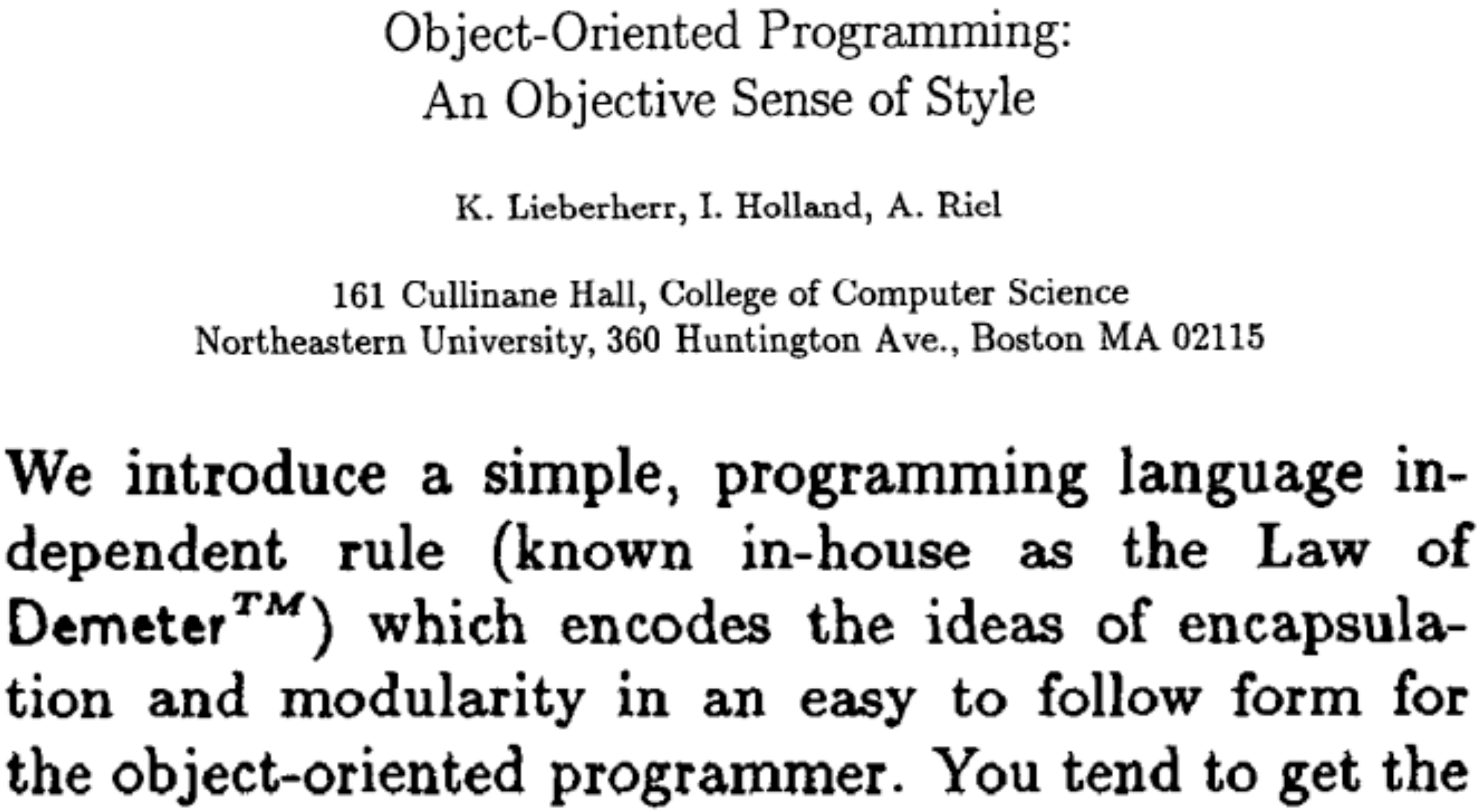
(2) The importation into Australia of cat fur, dog fur or a cat or dog fur product is prohibited unless:

(a) permission to import the goods has been granted under subregulation (3) and is in force; and

(b) the permission is produced to the Collector.

(3) The Minister, or an authorised person, may, on application, grant a permission, in writing, for the importation of cat fur, dog fur or a cat or dog fur product.

law we make up



Object-Oriented Programming:
An Objective Sense of Style

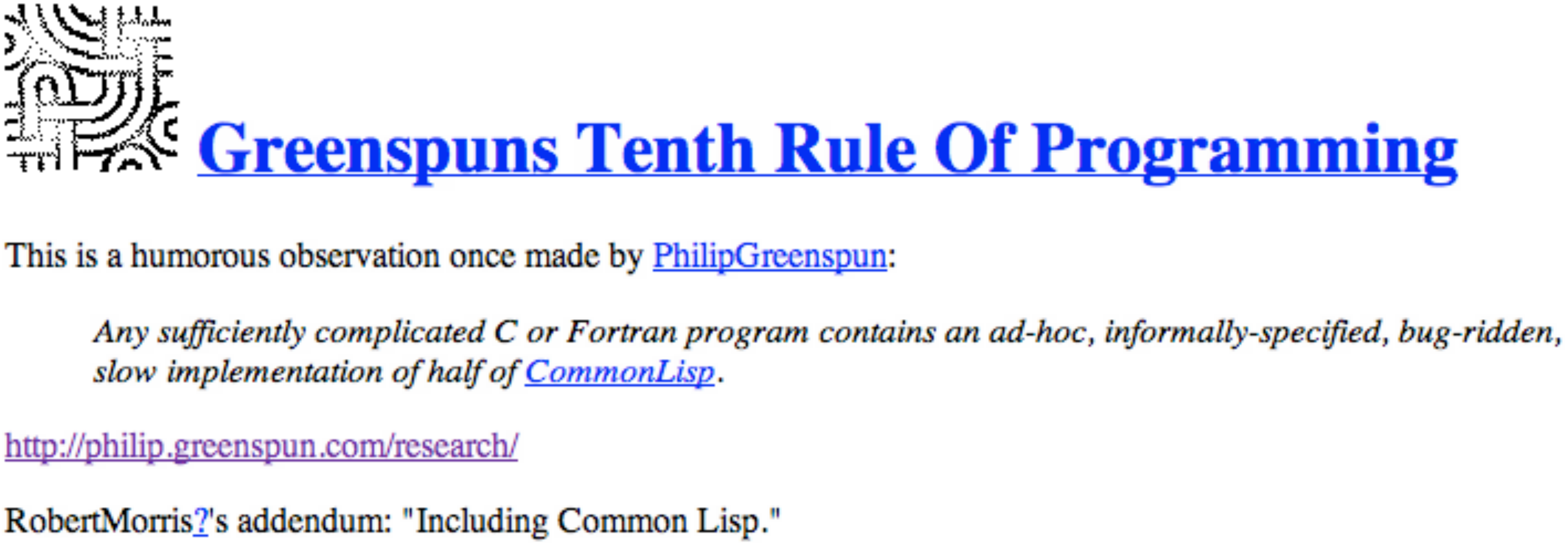
K. Lieberherr, I. Holland, A. Riel

161 Cullinane Hall, College of Computer Science
Northeastern University, 360 Huntington Ave., Boston MA 02115

We introduce a simple, programming language independent rule (known in-house as the Law of Demeter^{TM}) which encodes the ideas of encapsulation and modularity in an easy to follow form for the object-oriented programmer. You tend to get the

law of nature

law of nature



Greenspuns Tenth Rule Of Programming

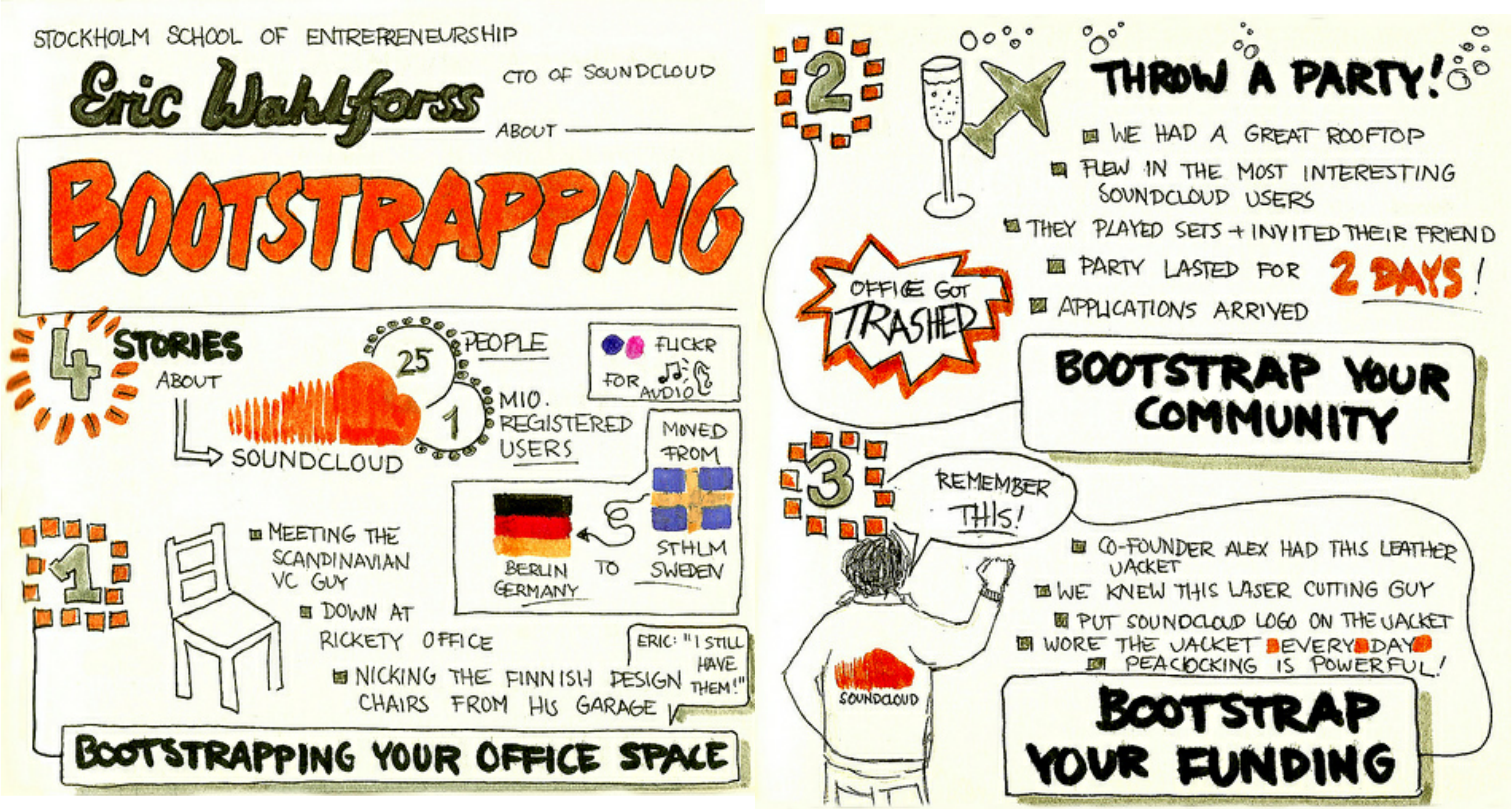
This is a humorous observation once made by PhilipGreenspun:

> *Any sufficiently complicated C or Fortran program contains an ad-hoc, informally-specified, bug-ridden, slow implementation of half of CommonLisp.*

http://philip.greenspun.com/research/

RobertMorris?'s addendum: "Including Common Lisp."

SOUNDCLOUD



STOCKHOLM SCHOOL OF ENTREPRENEURSHIP

Eric Wahlforss CTO OF SOUNDCLOUD

ABOUT

BOOTSTRAPPING

4 STORIES ABOUT SOUNDCLOUD

25 PEOPLE

1 MIO. REGISTERED USERS

FLICKR FOR AUDIO

MOVED FROM BERLIN GERMANY TO STHLM SWEDEN

1

- MEETING THE SCANDINAVIAN VC GUY
- DOWN AT RICKETY OFFICE
- NICKING THE FINNISH DESIGN CHAIRS FROM HIS GARAGE

ERIC: "I STILL HAVE THEM!"

BOOTSTRAPPING YOUR OFFICE SPACE

2

THROW A PARTY!

- WE HAD A GREAT ROOFTOP
- FLEW IN THE MOST INTERESTING SOUNDCLOUD USERS
- THEY PLAYED SETS + INVITED THEIR FRIEND
- PARTY LASTED FOR 2 DAYS!
- APPLICATIONS ARRIVED

OFFICE GOT TRASHED

BOOTSTRAP YOUR COMMUNITY

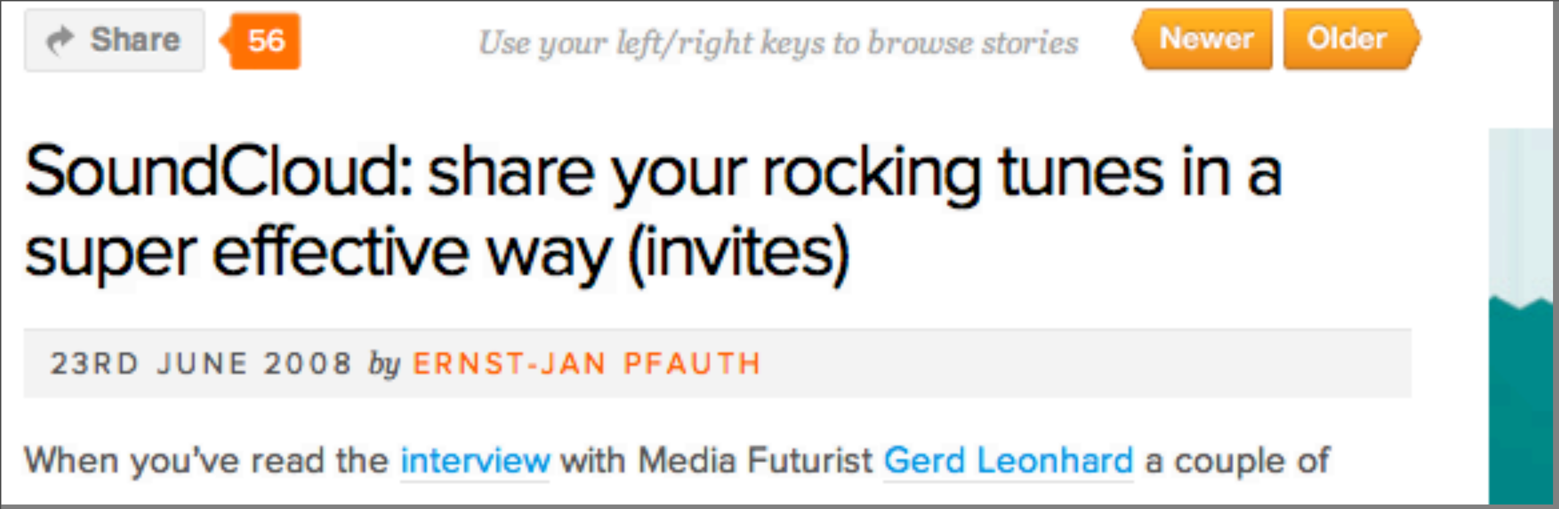
3

REMEMBER THIS!

- CO-FOUNDER ALEX HAD THIS LEATHER JACKET
- WE KNEW THIS LASER CUTTING GUY
- PUT SOUNDCLOUD LOGO ON THE JACKET
- WORE THE JACKET EVERY DAY
- PEACOCKING IS POWERFUL!

SOUNDCLOUD

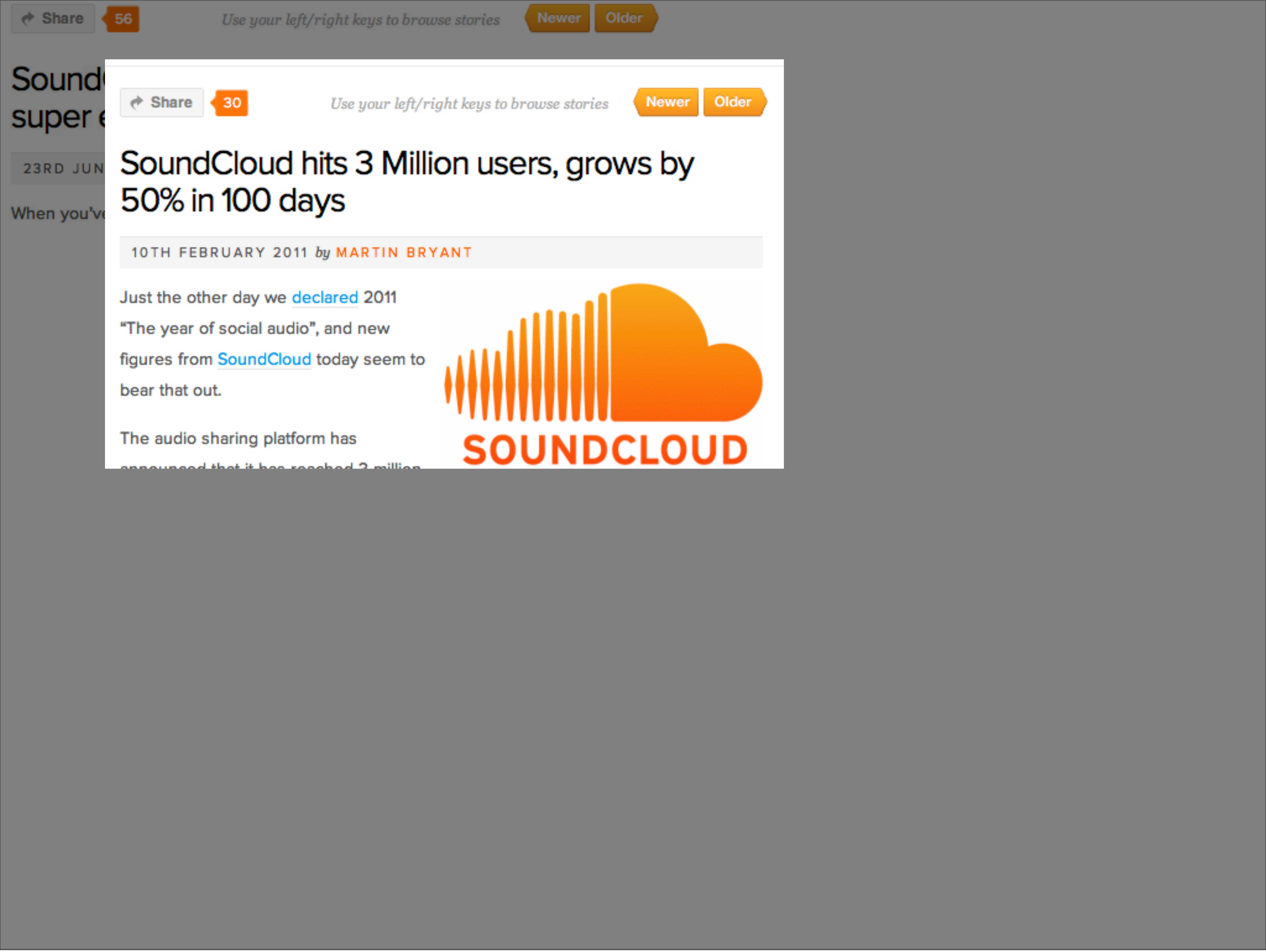
BOOTSTRAP YOUR FUNDING


Share
56
Use your left/right keys to browse stories
Newer
Older

SoundCloud: share your rocking tunes in a super effective way (invites)

23RD JUNE 2008 *by* ERNST-JAN PFAUTH

When you've read the interview with Media Futurist Gerd Leonhard a couple of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Use your left/right keys to browse stories
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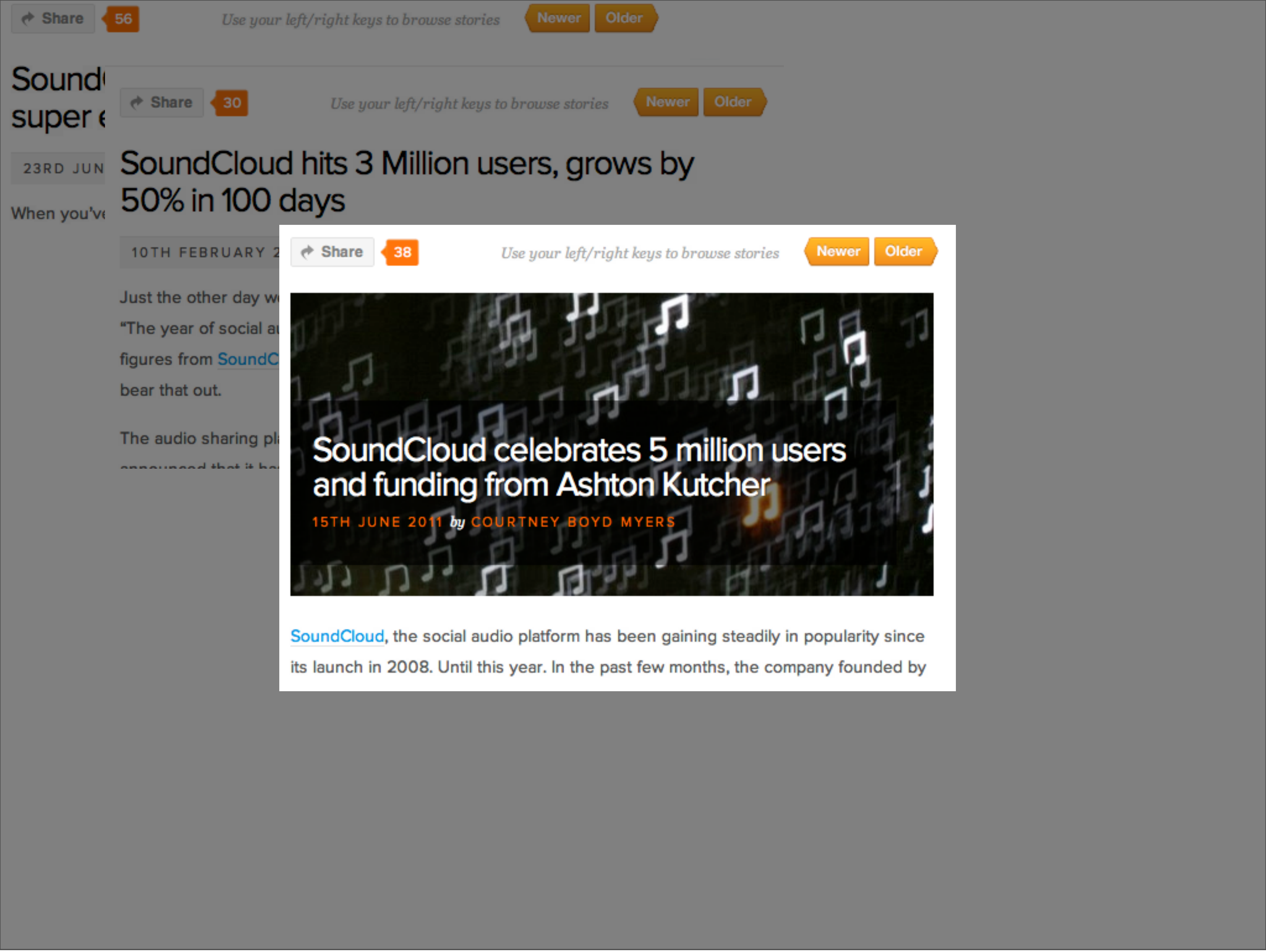
SOUNDCLOUD

SoundCloud hits 3 Million users, grows by 50% in 100 days

10TH FEBRUARY 2011 *by* MARTIN BRYANT

Just the other day we declared 2011 “The year of social audio”, and new figures from SoundCloud today seem to bear that out.

The audio sharing platform has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Sound
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When you've

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10TH FEBRUARY 2

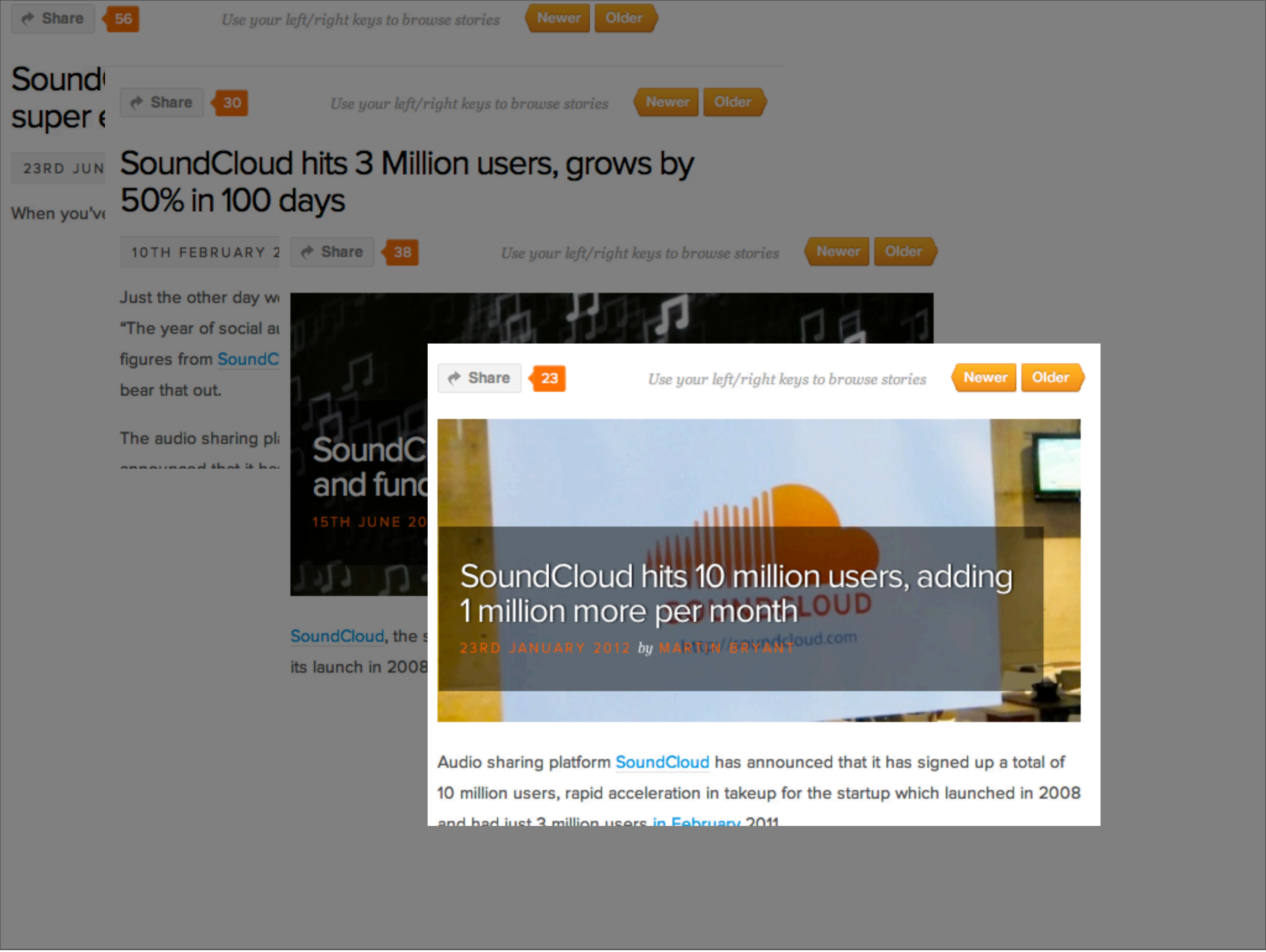
Just the other day w
"The year of social a
figures from SoundC
bear that out.

The audio sharing pl

SoundCloud celebrates 5 million users and funding from Ashton Kutcher

15TH JUNE 2011 *by* COURTNEY BOYD MYERS

SoundCloud, the social audio platform has been gaining steadily in popularity since its launch in 2008. Until this year. In the past few months, the company founded by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15TH JUNE 20

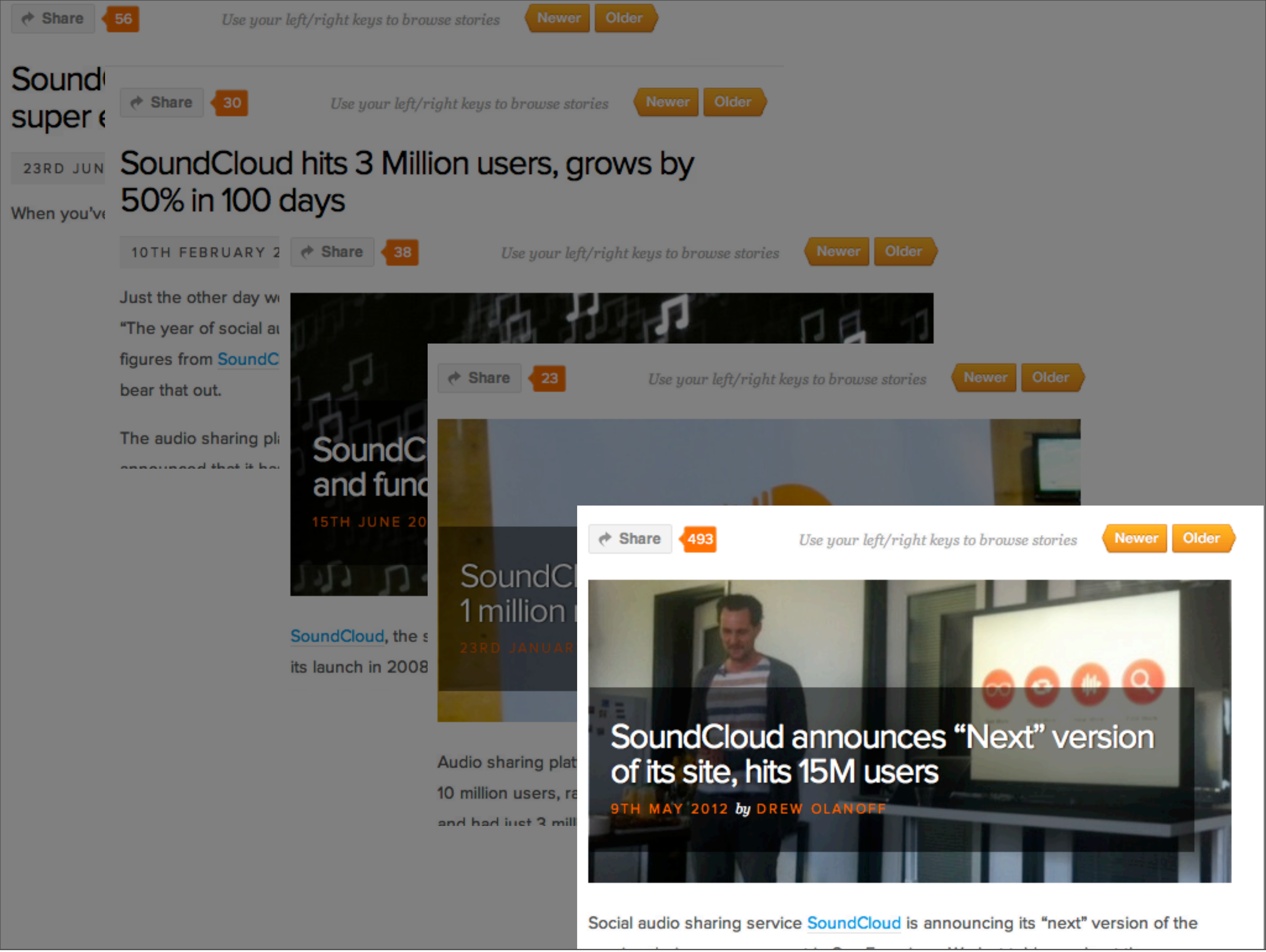
SoundCloud, the s
its launch in 2008

Share
23
Use your left/right keys to browse stories
Newer
Older
SOUNDCLOUD
http://soundcloud.com

SoundCloud hits 10 million users, adding 1 million more per month

23RD JANUARY 2012 *by* MARTIN BRYANT

Audio sharing platform SoundCloud has announced that it has signed up a total of 10 million users, rapid acceleration in takeup for the startup which launched in 2008 and had just 3 million users in February 2011



Share
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15TH JUNE 20

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23RD JANUAR

Audio sharing plat
10 million users, ra
and had just 3 mill

Share
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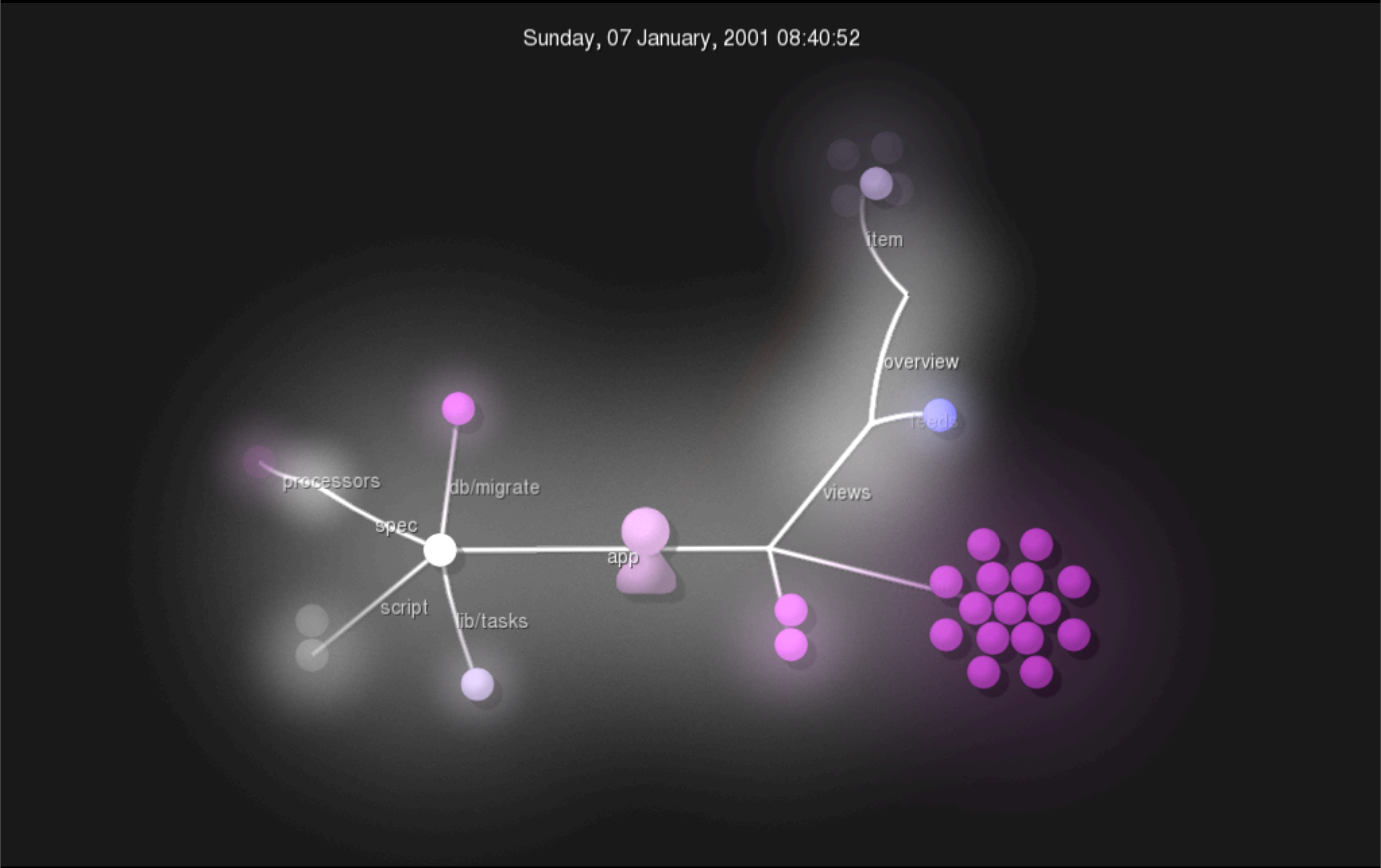
Use your left/right keys to browse stories
Newer
Older

SoundCloud announces "Next" version of its site, hits 15M users

9TH MAY 2012 *by* DREW OLANOFF

Social audio sharing service SoundCloud is announcing its "next" version of the

how to survive?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views
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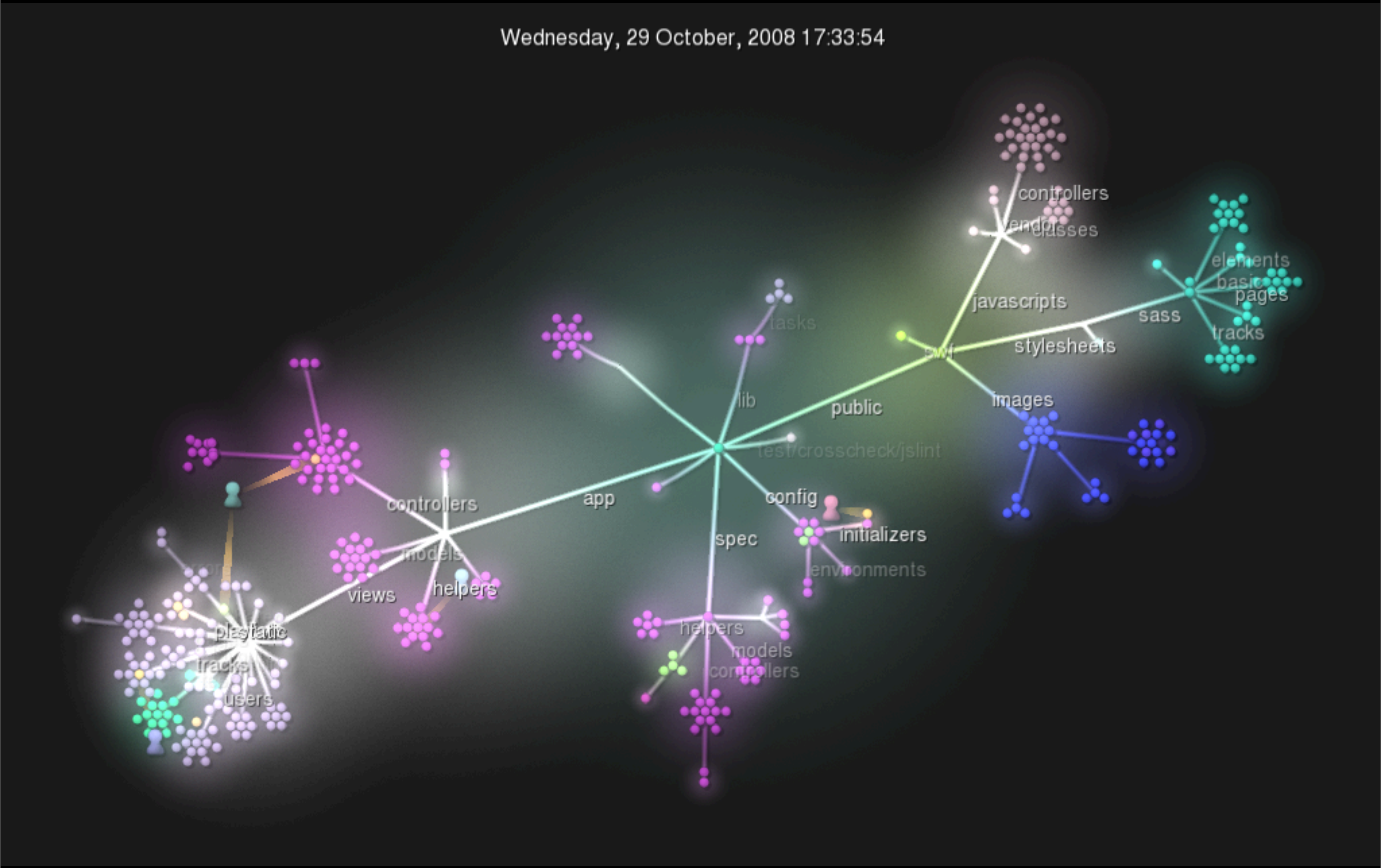
db/migrate
spec
app
script
lib/tasks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controllers
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elements
basic
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sass
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stylesheets
swf
tasks
lib
public
images
test/crosscheck/jslint
controllers
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initializers
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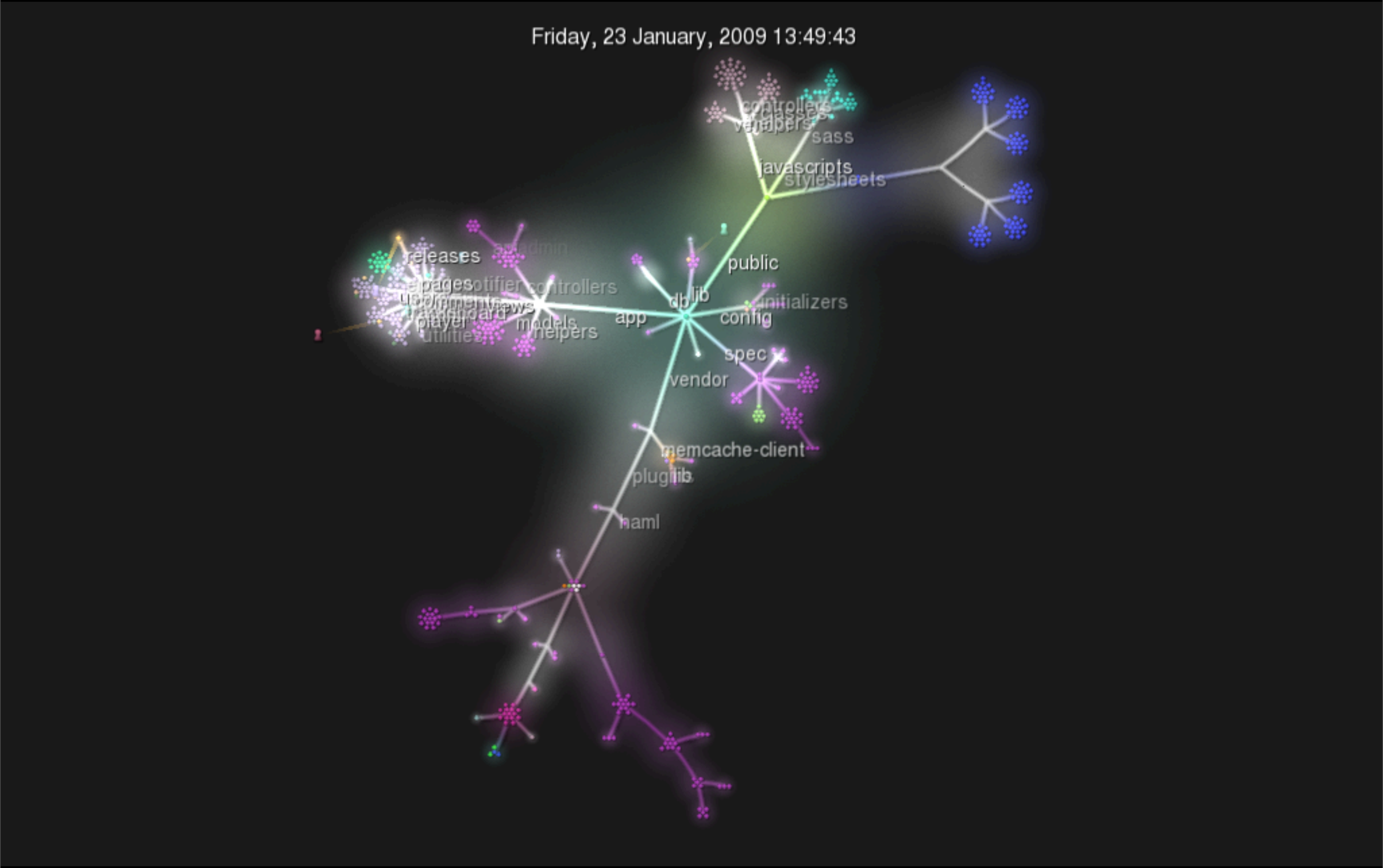
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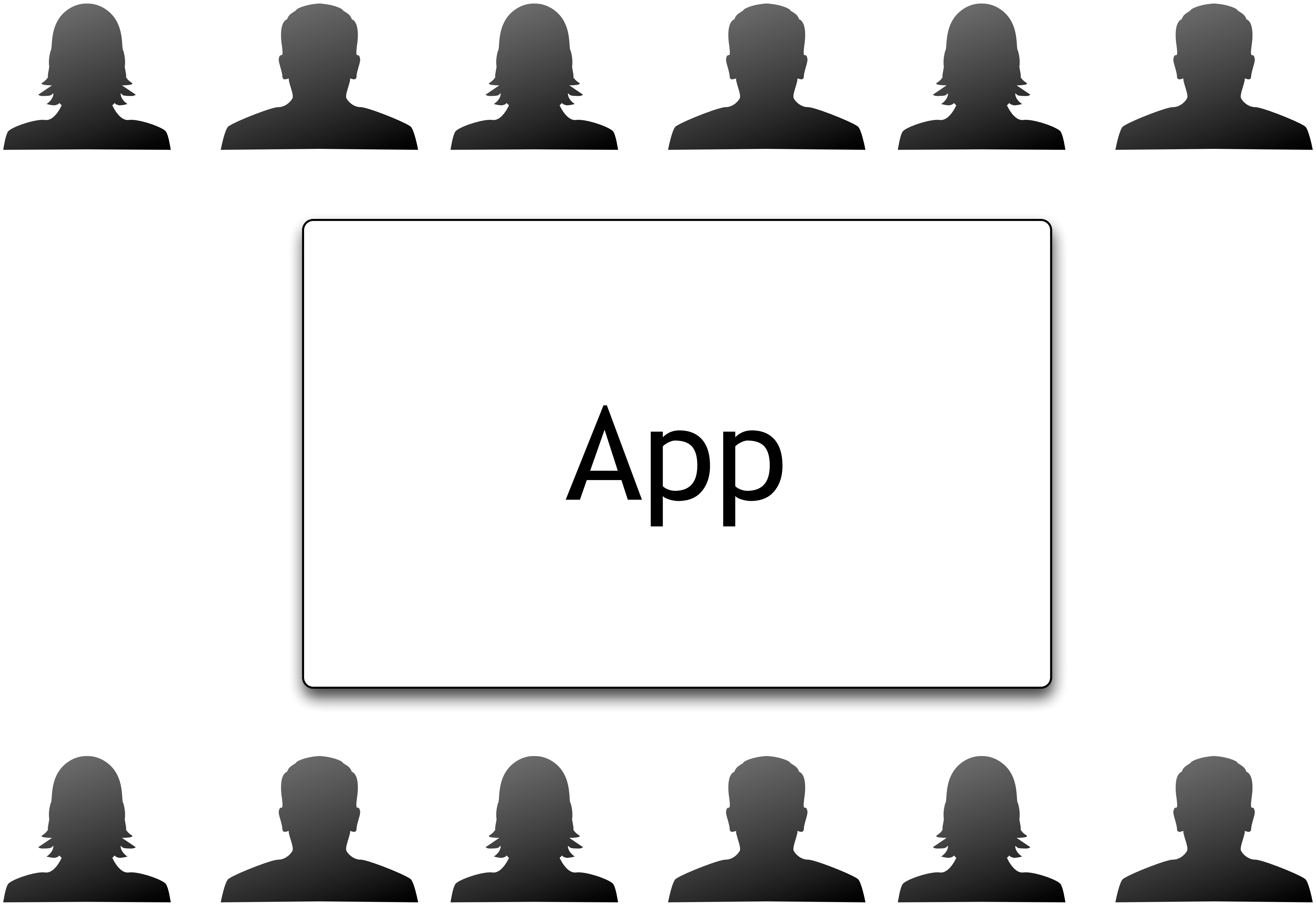
controllers
classes
helpers
sass
javascripts
stylesheets
public
releases
admin
pages
notifier
controllers
views
player
utilities
models
helpers
app
db
lib
initializers
config
spec
vendor
memcache-client
plugins
lib
haml

~2008

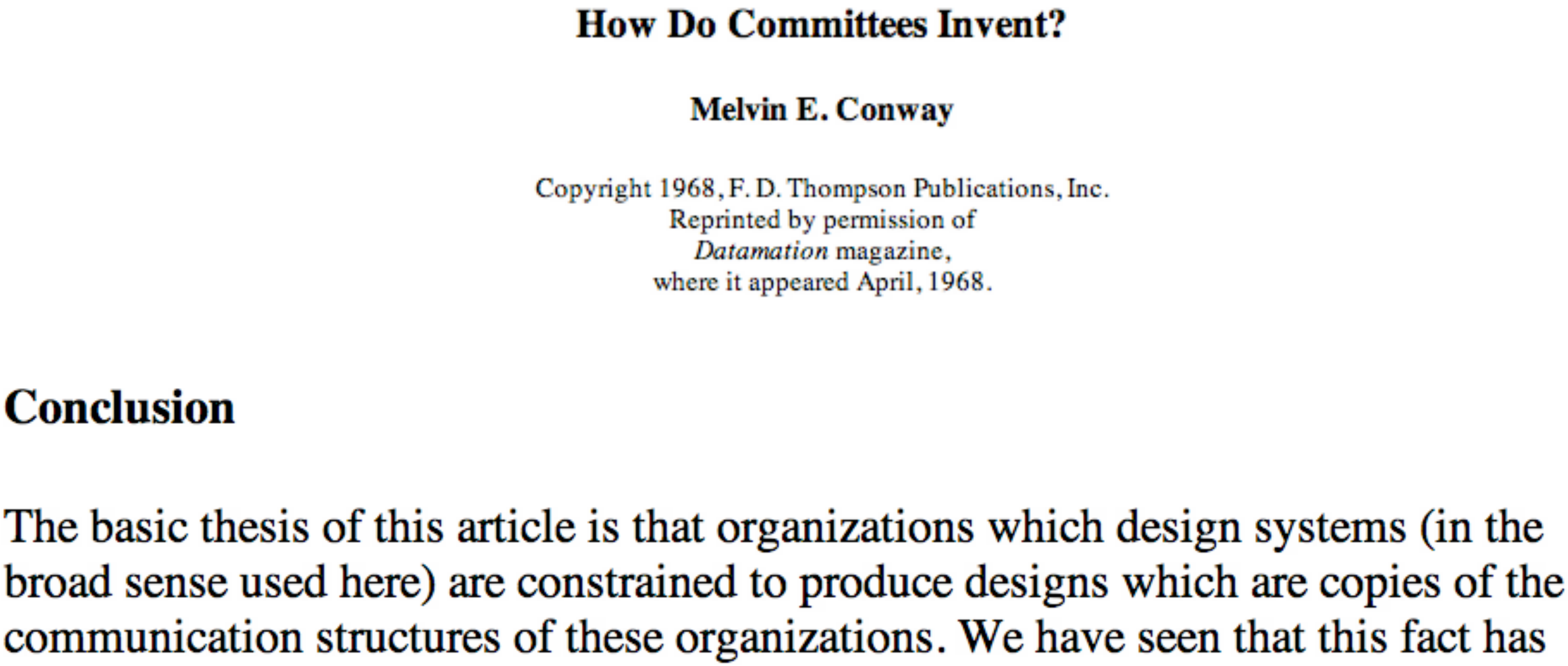
App

~2011



App

law of nature



How Do Committees Invent?

Melvin E. Conway

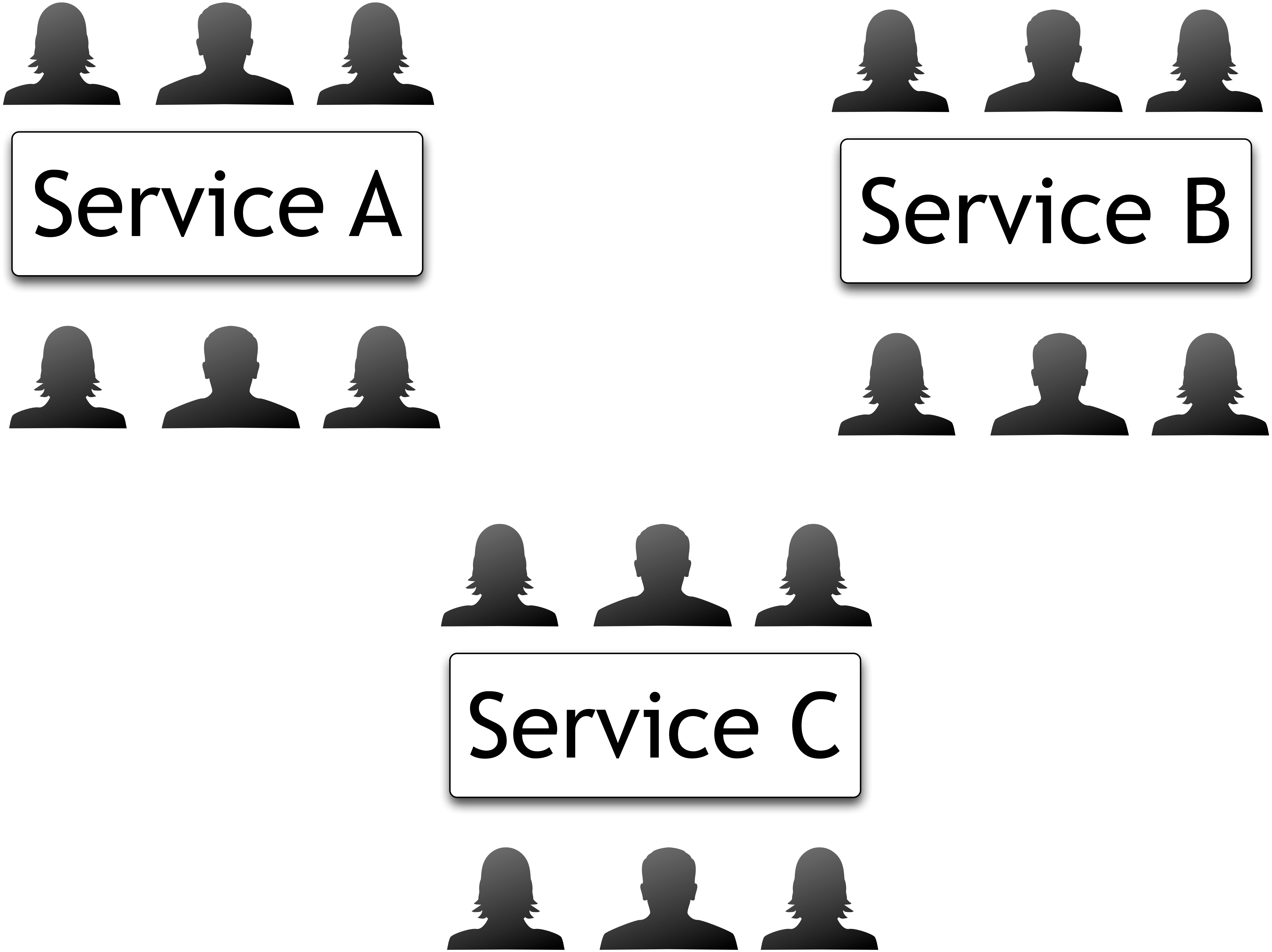
Copyright 1968, F. D. Thompson Publications, Inc.

Reprinted by permission of
Datamation magazine,
where it appeared April, 1968.

Conclusion

The basic thesis of this article is that organizations which design systems (in the broad sense used here) are constrained to produce designs which are copies of the communication structures of these organizations. We have seen that this fact has

no point in
fighting nature



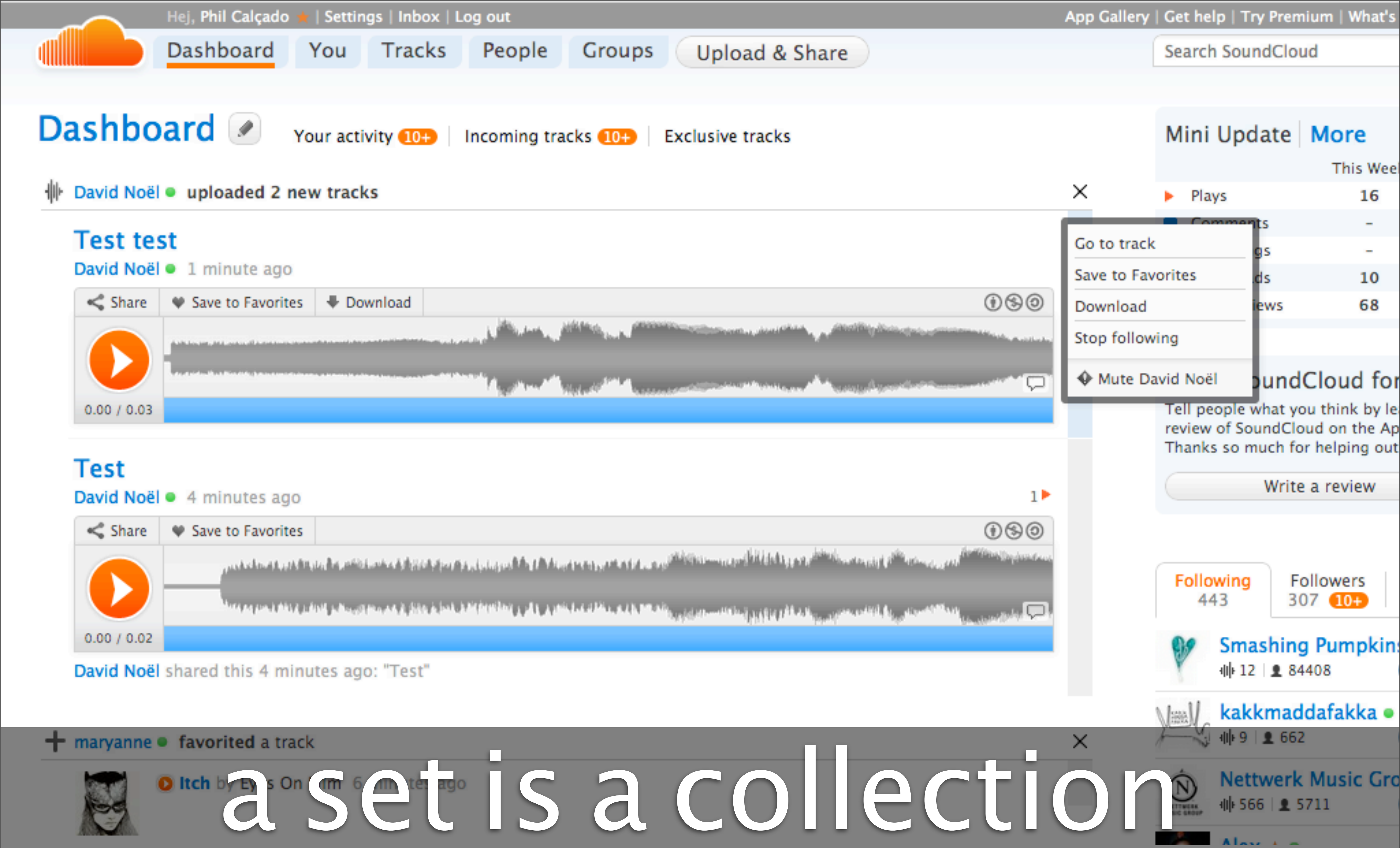
Service A

Service B

Service C

teams are built
around goals,
not systems

making layers explicit


Hej, Phil Calçado | Settings | Inbox | Log out
App Gallery | Get help | Try Premium | What's
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Groups
Upload & Share
Search SoundCloud
Dashboard
Your activity 10+
Incoming tracks 10+
Exclusive tracks
David Noël uploaded 2 new tracks
Test test
David Noël 1 minute ago
Share
Save to Favorites
Download
0.00 / 0.03
Go to track
Save to Favorites
Download
Stop following
Mute David Noël
Test
David Noël 4 minutes ago
1
Share
Save to Favorites
0.00 / 0.02
David Noël shared this 4 minutes ago: "Test"
maryanne favorited a track
Itch by Eyes On Film 6 minutes ago
Mini Update
More
This Wee
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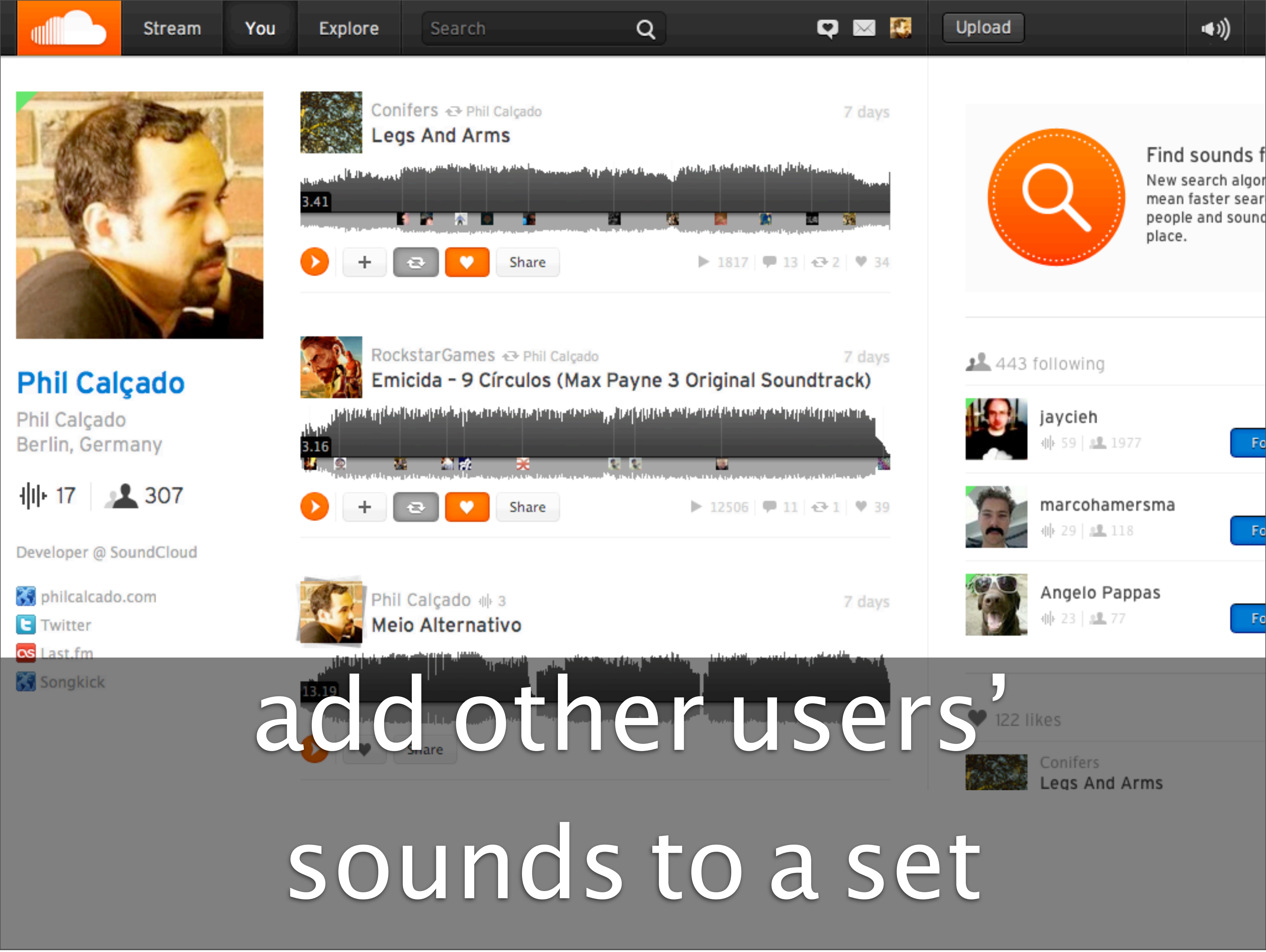
iews 68
oundCloud fo
Tell people what you think by le
review of SoundCloud on the Ap
Thanks so much for helping out
Write a review
Following 443
Followers 307 10+
Smashing Pumpkin
12 84408
kakkmaddafakka
9 662
Nettwerk Music Gro
566 5711
Alex

a set is a collection of your sounds


Stream
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Phil Calçado
Phil Calçado
Berlin, Germany
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Developer @ SoundCloud
philcalcado.com
Twitter
Last.fm
Songkick
Conifers
Phil Calçado
7 days
Legs And Arms
3.41
Share
1817
13
2
34
RockstarGames
Phil Calçado
7 days
Emicida - 9 Círculos (Max Payne 3 Original Soundtrack)
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Phil Calçado
3
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Meio Alternativo
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Find sounds f
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mean faster sear
people and sound
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443 following
jaycieh
59
1977
Fo
marcohamersma
29
118
Fo
Angelo Pappas
23
77
Fo
122 likes
Conifers
Legs And Arms

add other users' sounds to a set

application layer

vs.

domain layer

law we make up

teams are end_to_end

great for
“lateral hires”
to a team

law we make up

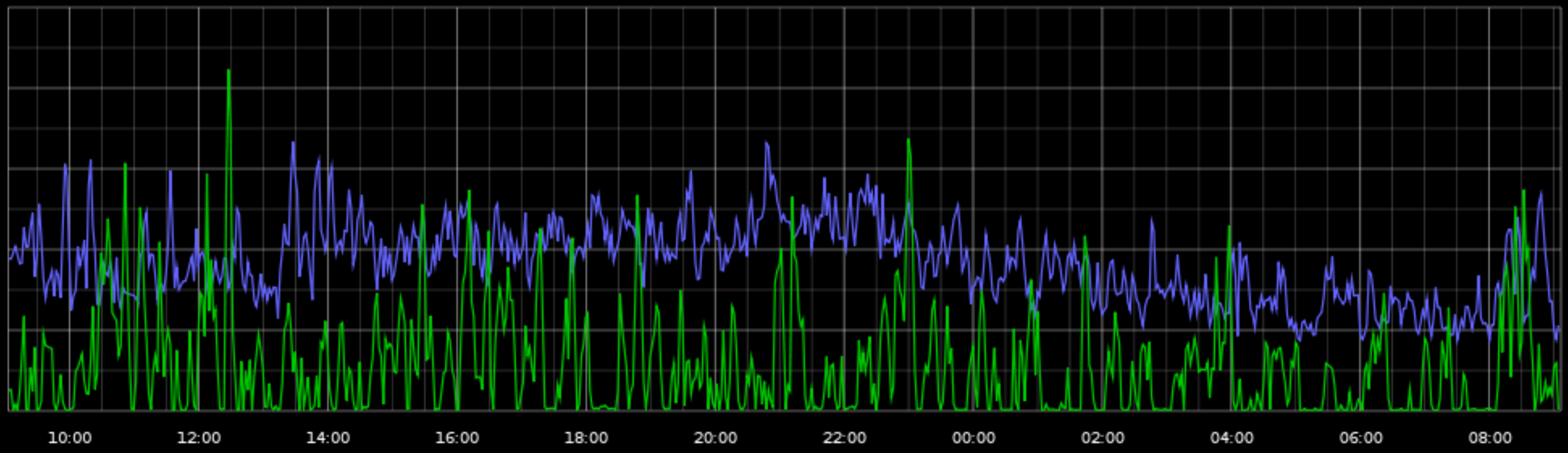
you built it?

you support it

automate yourself out of support

law we make up

async by default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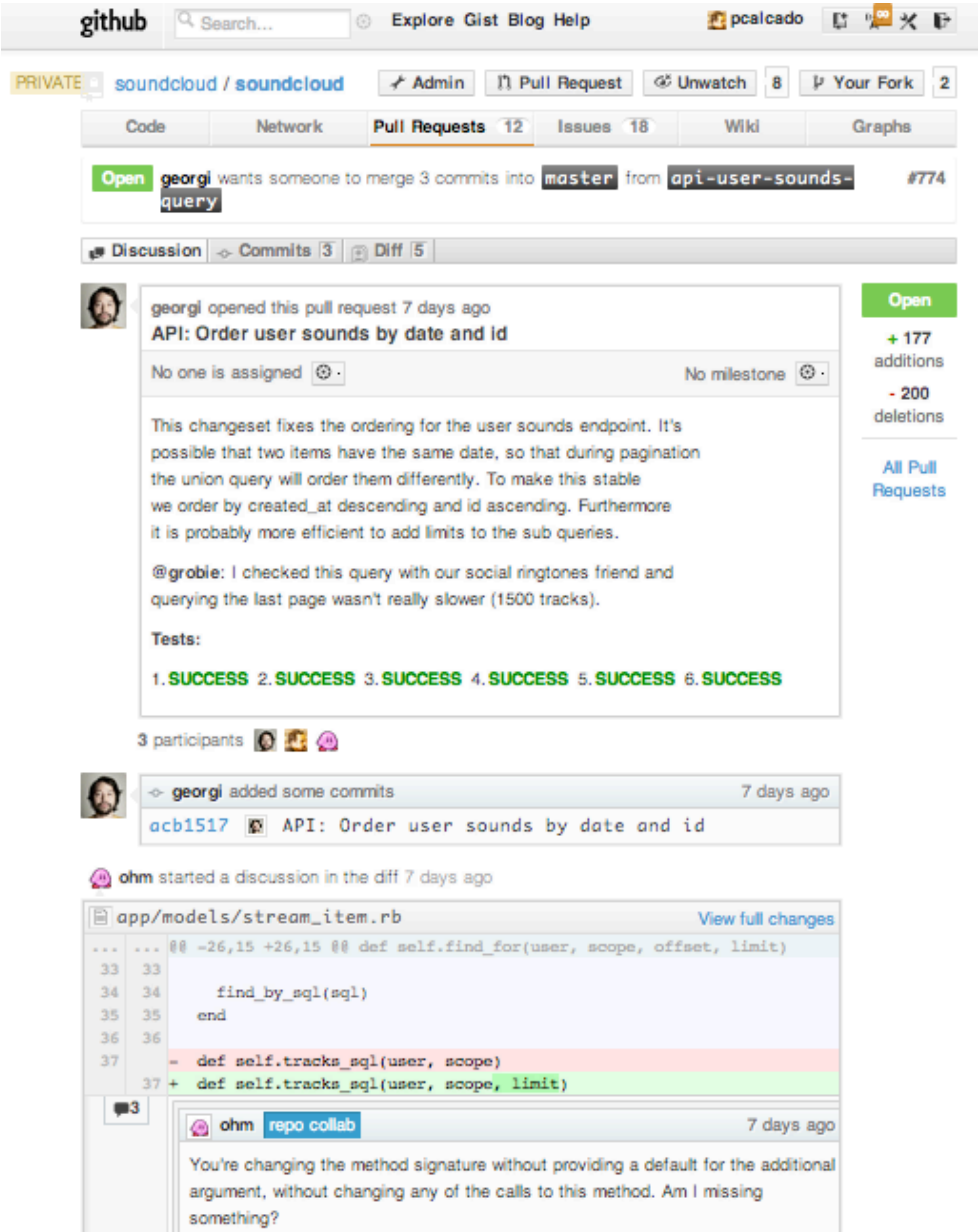
law we make up

pull requests or pairing

as

code review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Search...
Explore Gist Blog Help
pcalcado
PRIVATE
soundcloud / soundcloud
Admin
Pull Request
Unwatch 8
Your Fork 2
Code
Network
Pull Requests 12
Issues 18
Wiki
Graphs

Open **georgi** wants someone to merge 3 commits into `master` from `api-user-sounds-query` #774

Discussion
Commits 3
Diff 5

georgi opened this pull request 7 days ago

API: Order user sounds by date and id

No one is assigned · No milestone

This changeset fixes the ordering for the user sounds endpoint. It's possible that two items have the same date, so that during pagination the union query will order them differently. To make this stable we order by created_at descending and id ascending. Furthermore it is probably more efficient to add limits to the sub queries.

@grobie: I checked this query with our social ringtones friend and querying the last page wasn't really slower (1500 tracks).

Tests:

1. **SUCCESS** 2. **SUCCESS** 3. **SUCCESS** 4. **SUCCESS** 5. **SUCCESS** 6. **SUCCESS**

Open

+ 177 additions

- 200 deletions

All Pull Requests

3 participants

georgi added some commits 7 days ago

`acb1517` API: Order user sounds by date and id

ohm started a discussion in the diff 7 days ago

app/models/stream_item.rb View full changes

```
...  ... @@ -26,15 +26,15 @@ def self.find_for(user, scope, offset, limit)
33   33
34   34        find_by_sql(sql)
35   35      end
36   36
37      -    def self.tracks_sql(user, scope)
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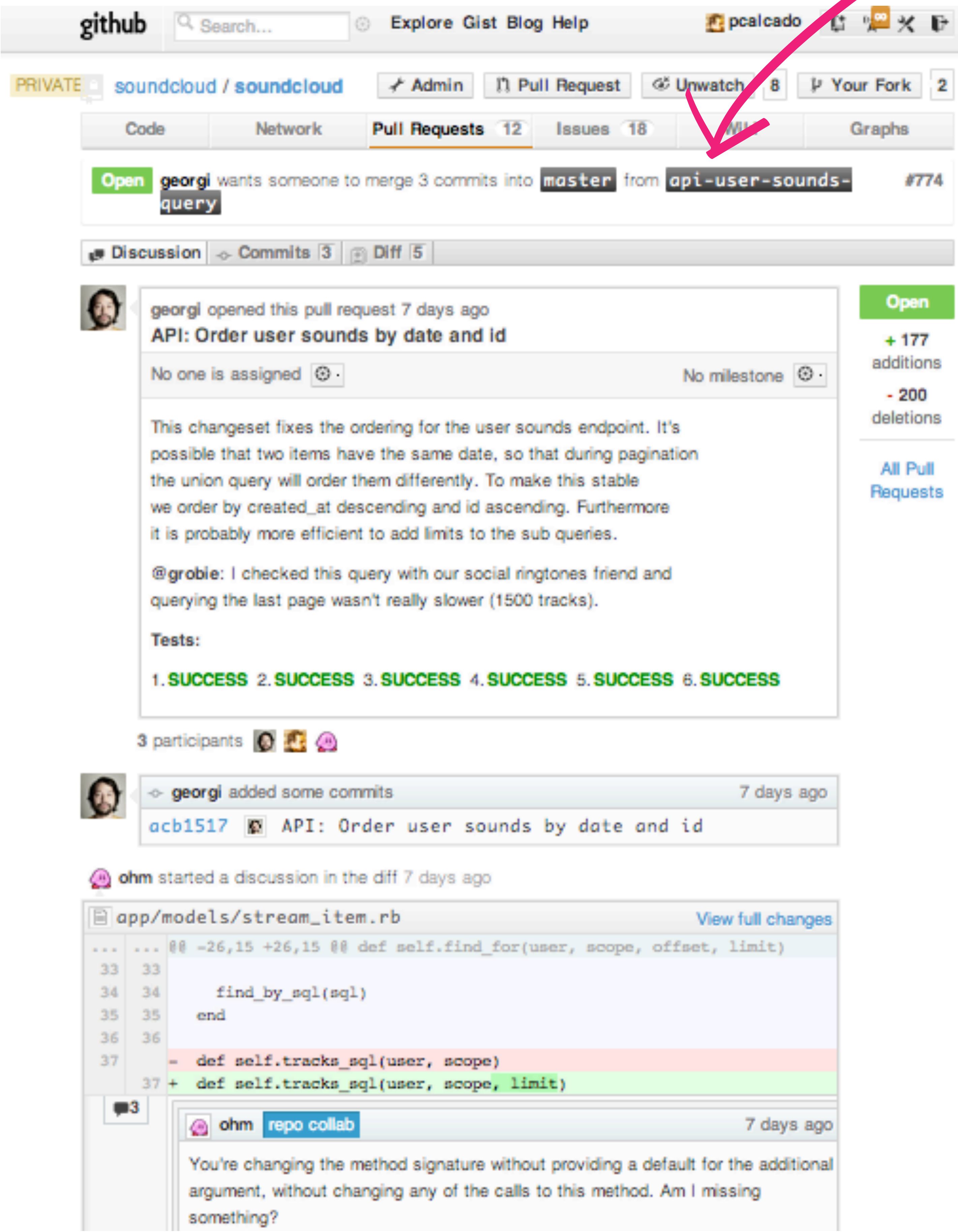
3

ohm repo collab 7 days ago

You're changing the method signature without providing a default for the additional argument, without changing any of the calls to this method. Am I missing something?



github
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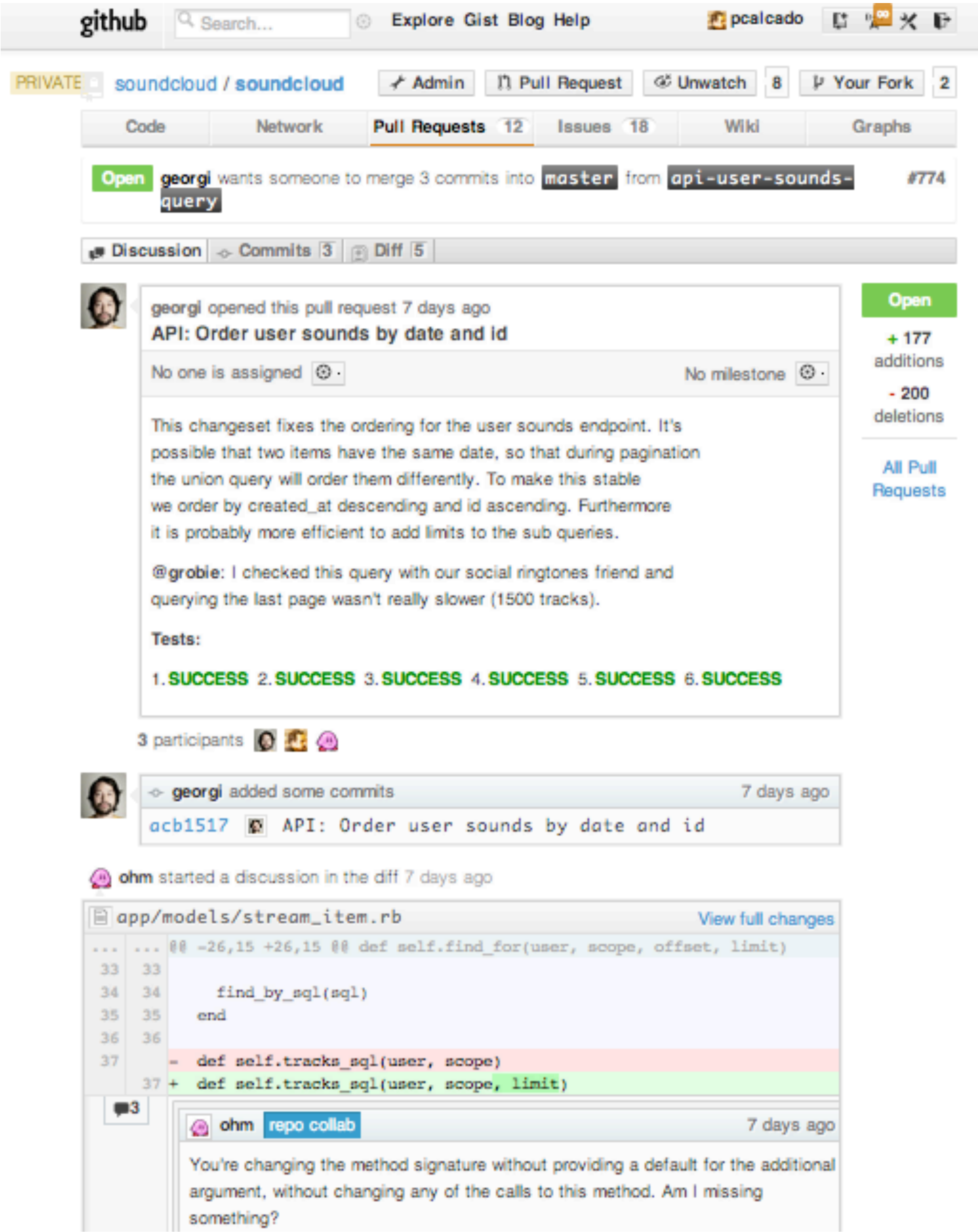
short-lived branch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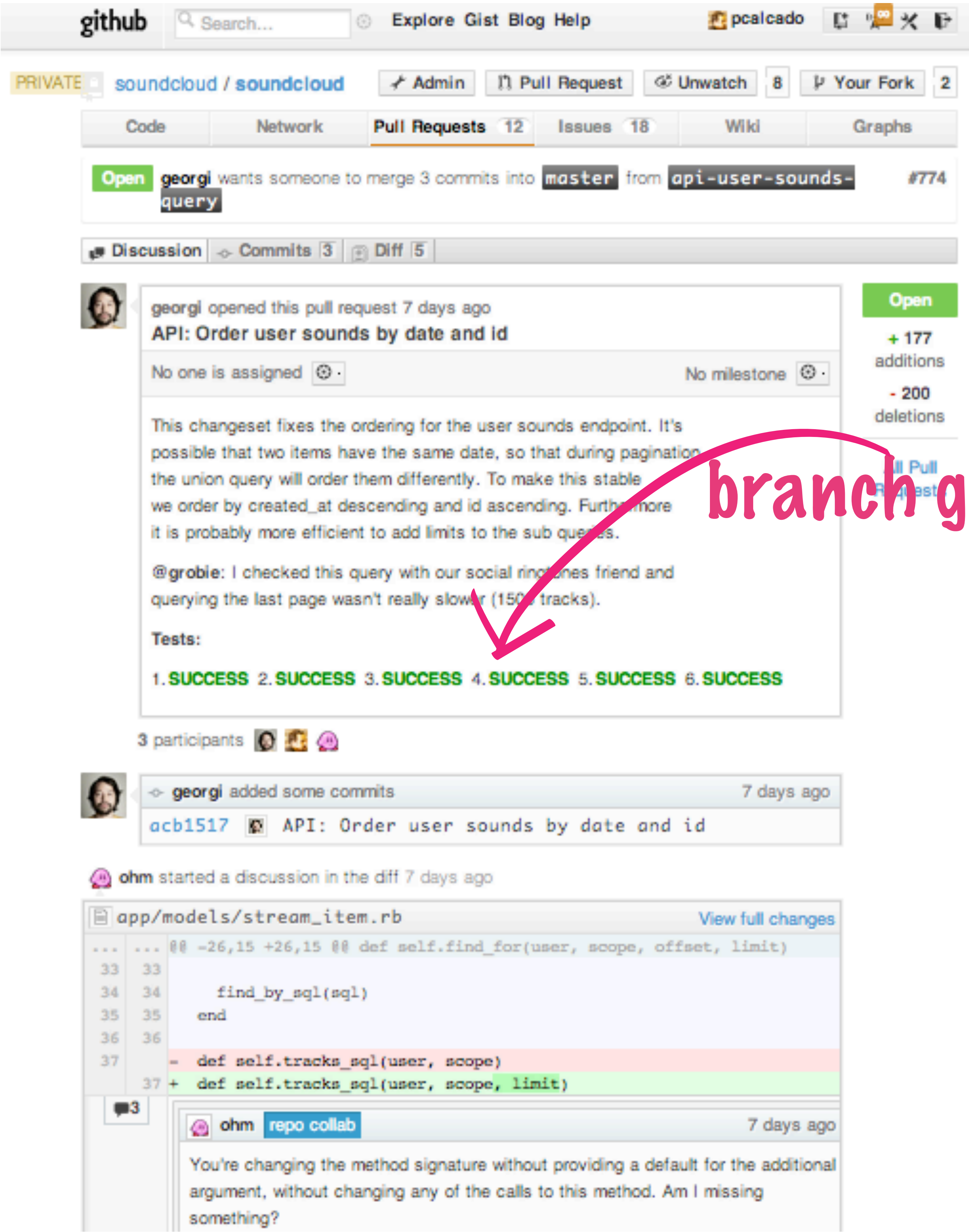
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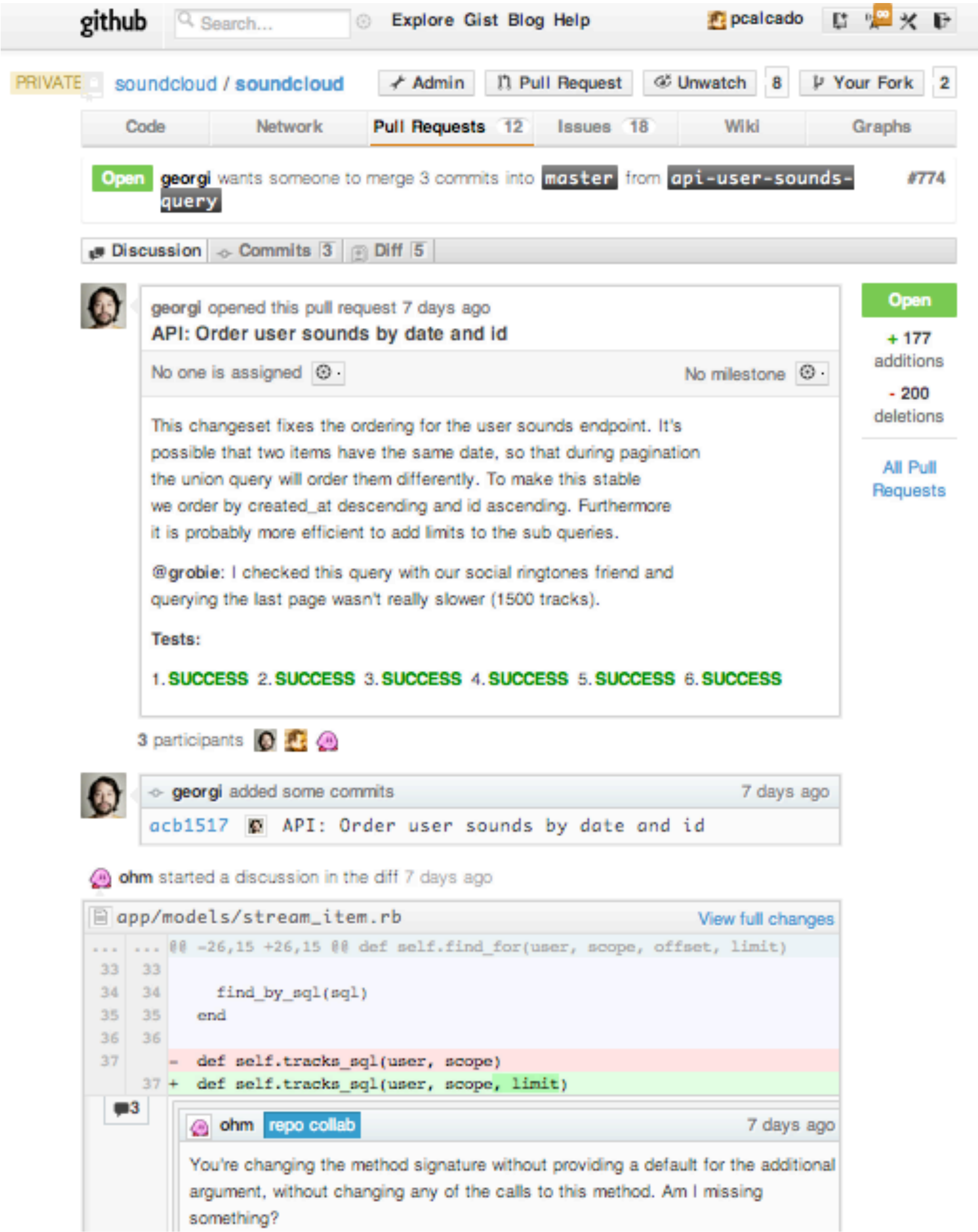
branch goes green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@grobie: I checked this query with our social ringtones friend and querying the last page wasn't really slower (1500 tracks).

Tests:

1. **SUCCESS** 2. **SUCCESS** 3. **SUCCESS** 4. **SUCCESS** 5. **SUCCESS** 6. **SUCCESS**

3 participants

georgi added some commits 7 days ago

acb1517 `API: Order user sounds by date and id`

ohm started a discussion in the diff 7 days ago

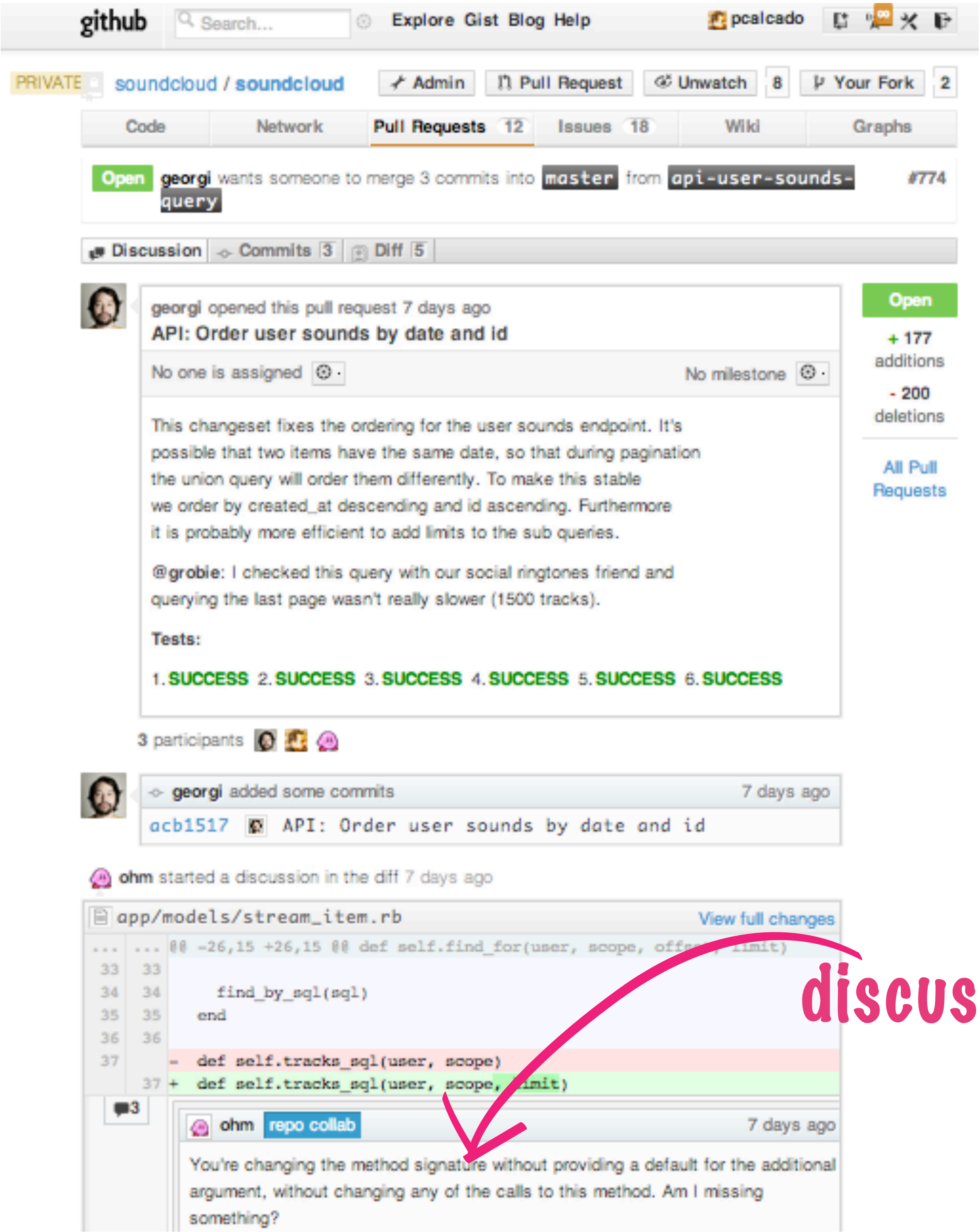
app/models/stream_item.rb

```
...  ... @@ -26,15 +26,15 @@ def self.find_for(user, scope, offset, limit)
33   33
34   34       find_by_sql(sql)
35   35     end
36   36
37        -   def self.tracks_sql(user, scope)
     37   +   def self.tracks_sql(user, scope, limit)
```

3

ohm repo collab 7 days ago

You're changing the method signature without providing a default for the additional argument, without changing any of the calls to this method. Am I missing something?


github
Search...
Explore Gist Blog Help
pcalcado
PRIVATE
soundcloud / soundcloud
Admin
Pull Request
Unwatch 8
Your Fork 2
Code
Network
Pull Requests 12
Issues 18
Wiki
Graphs
Discussion
Commits 3
Diff 5
Open
All Pull Requests
View full changes
repo collab

Open **georgi** wants someone to merge 3 commits into `master` from `api-user-sounds-query` #774

georgi opened this pull request 7 days ago

API: Order user sounds by date and id

No one is assigned

No milestone

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+ 177 additions

- 200 deletions

3 participants

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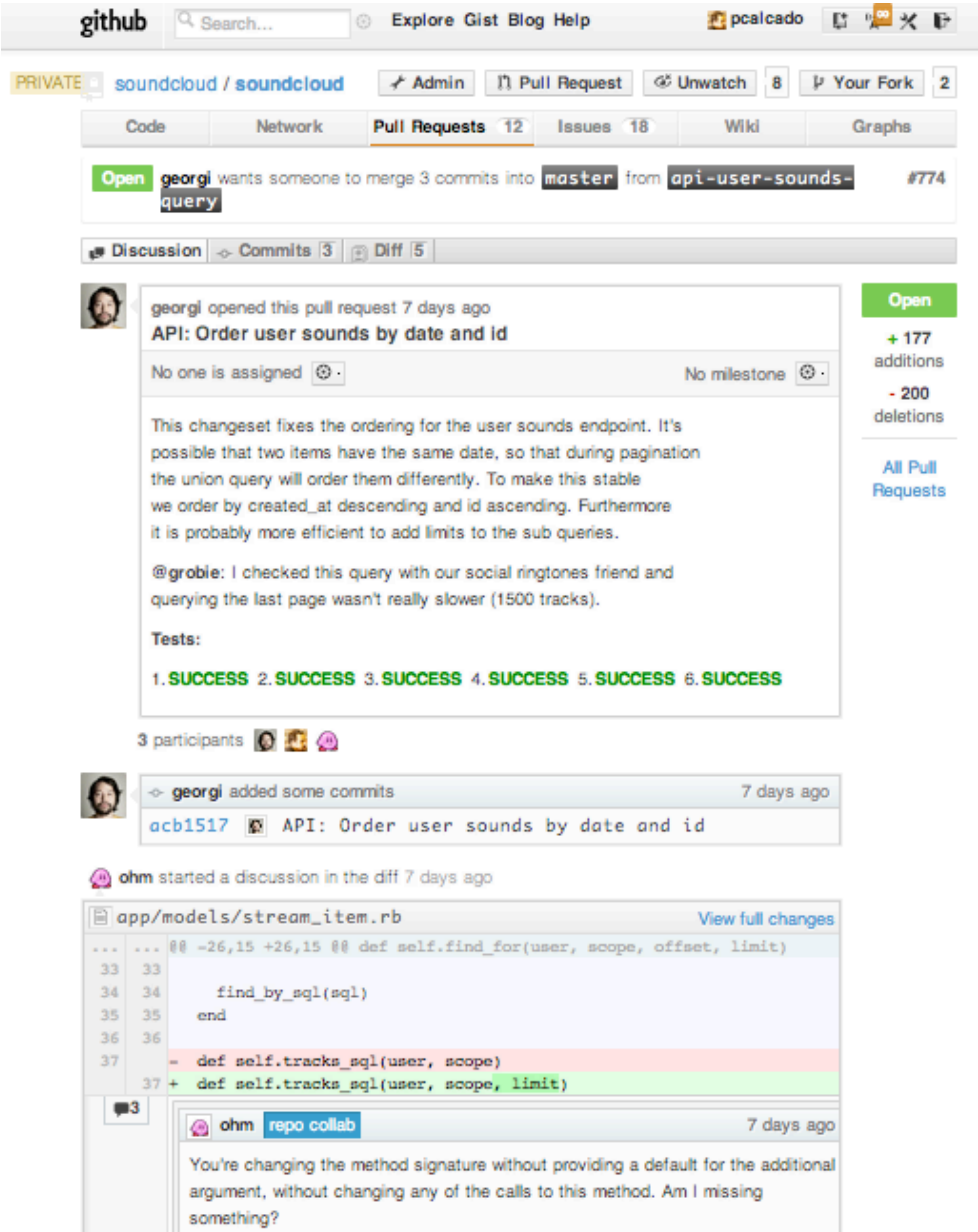
discussion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3

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law we make up

use the best tool for the job, but practice empathy

no_brainer choices:
ruby, go, scala, java, R

our fav outliers:
node.js, clojure,
haskell, python

law we make up

everyone is an architect

bad calls are ok,
gather feedback fast and
make sure we can revert it
when needed

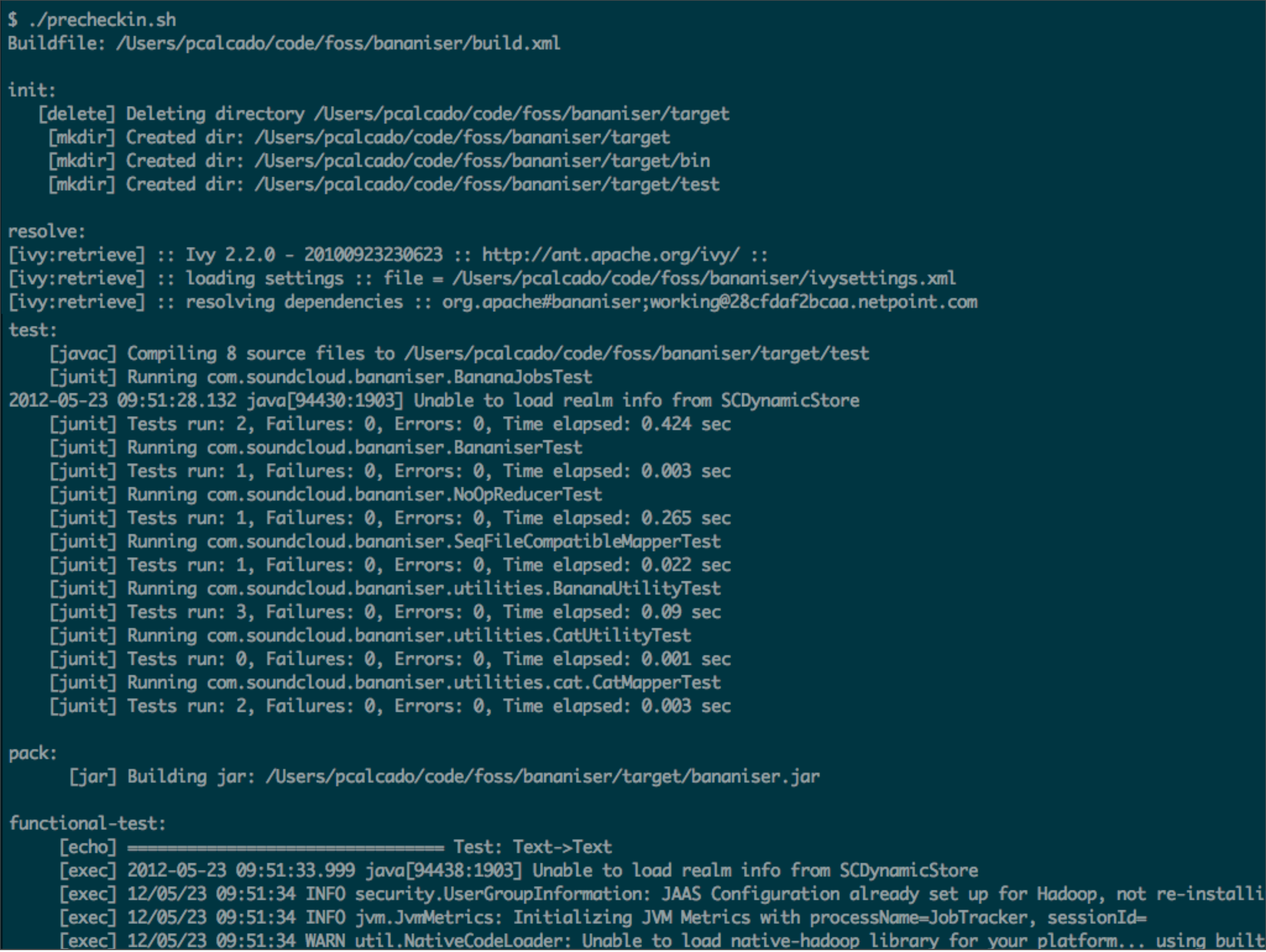
law we make up

end_to_end testing

before checking in code

impersonators / stubs /
mocks
for everything we can

and we often can



```
$ ./precheckin.sh
Buildfile: /Users/pcalcado/code/foss/bananiser/build.xml

init:
   [delete] Deleting directory /Users/pcalcado/code/foss/bananiser/target
    [mkdir] Created dir: /Users/pcalcado/code/foss/bananiser/target
    [mkdir] Created dir: /Users/pcalcado/code/foss/bananiser/target/bin
    [mkdir] Created dir: /Users/pcalcado/code/foss/bananiser/target/test

resolve:
[ivy:retrieve] :: Ivy 2.2.0 - 20100923230623 :: http://ant.apache.org/ivy/ ::
[ivy:retrieve] :: loading settings :: file = /Users/pcalcado/code/foss/bananiser/ivysettings.xml
[ivy:retrieve] :: resolving dependencies :: org.apache#bananiser;working@28cfdaf2bcaa.netpoint.com
test:
    [javac] Compiling 8 source files to /Users/pcalcado/code/foss/bananiser/target/test
    [junit] Running com.soundcloud.bananiser.BananaJobsTest
2012-05-23 09:51:28.132 java[94430:1903] Unable to load realm info from SCDynamicStore
    [junit] Tests run: 2, Failures: 0, Errors: 0, Time elapsed: 0.424 sec
    [junit] Running com.soundcloud.bananiser.BananiserTest
    [junit] Tests run: 1, Failures: 0, Errors: 0, Time elapsed: 0.003 sec
    [junit] Running com.soundcloud.bananiser.NoOpReducerTest
    [junit] Tests run: 1, Failures: 0, Errors: 0, Time elapsed: 0.265 sec
    [junit] Running com.soundcloud.bananiser.SeqFileCompatibleMapperTest
    [junit] Tests run: 1, Failures: 0, Errors: 0, Time elapsed: 0.022 sec
    [junit] Running com.soundcloud.bananiser.utilities.BananaUtilityTest
    [junit] Tests run: 3, Failures: 0, Errors: 0, Time elapsed: 0.09 sec
    [junit] Running com.soundcloud.bananiser.utilities.CatUtilityTest
    [junit] Tests run: 0, Failures: 0, Errors: 0, Time elapsed: 0.001 sec
    [junit] Running com.soundcloud.bananiser.utilities.cat.CatMapperTest
    [junit] Tests run: 2, Failures: 0, Errors: 0, Time elapsed: 0.003 sec

pack:
      [jar] Building jar: /Users/pcalcado/code/foss/bananiser/target/bananiser.jar

functional-test:
     [echo] ================================ Test: Text->Text
     [exec] 2012-05-23 09:51:33.999 java[94438:1903] Unable to load realm info from SCDynamicStore
     [exec] 12/05/23 09:51:34 INFO security.UserGroupInformation: JAAS Configuration already set up for Hadoop, not re-installi
     [exec] 12/05/23 09:51:34 INFO jvm.JvmMetrics: Initializing JVM Metrics with processName=JobTracker, sessionId=
     [exec] 12/05/23 09:51:34 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using built
```

law we make up

product manager
is a benevolent dictator

and they often can code

law we make up

20% time is sacred

just don’t have the whole team going away at once

law we make up

no multi_tasking

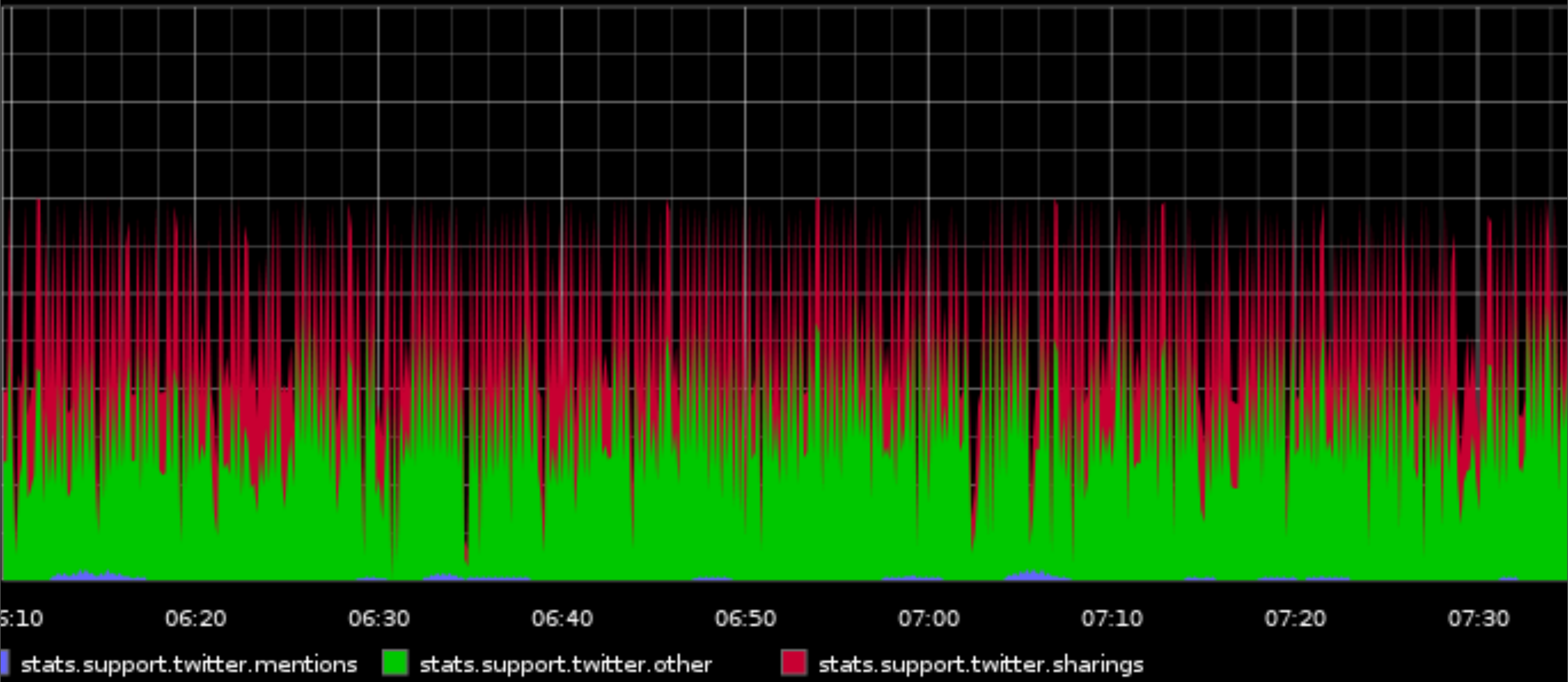
everyone is a singleton

law we make up

"done" means someone is using it (a.k.a. continuous deployment) cycle time: ~3 days

law we make up

measure all the things



:10
06:20
06:30
06:40
06:50
07:00
07:10
07:20
07:30
stats.support.twitter.mentions
stats.support.twitter.other
stats.support.twitter.sharings

Qs?

Phil Calçado – SoundCloud

@pcalcado

http://philcalcado.com

SOUNDCLOUD

http://bit.ly/work-at-soundcloud