how uses github to build

zach holman

how uses gitXub to build

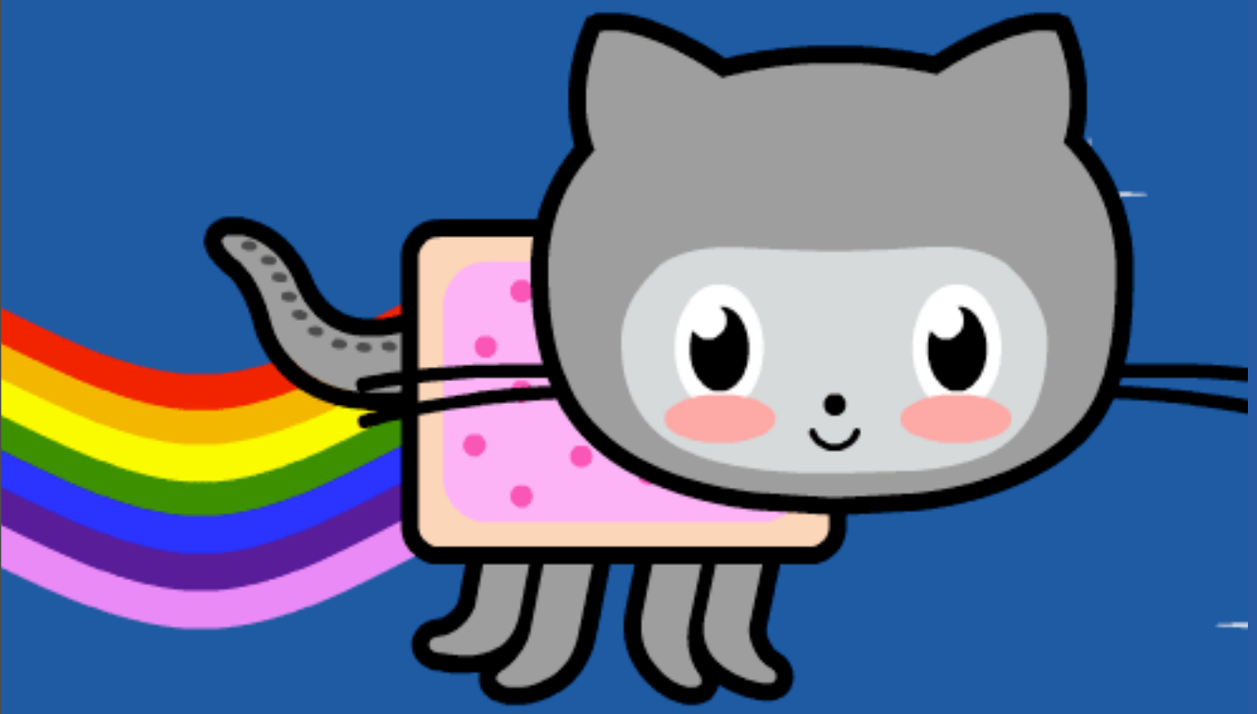
how github
uses github
to build github

how twitter
uses github
to build twitter

how facebook
uses github
to build facebook

how your company
uses github
to build your product

@holman



github

SOCIAL CODING

we work asynchronously

WORKING ASYNCHRONOUSLY:

YOU CAN DO SHIT WITHOUT NEEDING TO PULL ME OUT OF THE ZONE™.

NO MEETINGS • NO DEADLINES • NO MANAGERS

CHATROOMS

NO PRESENCE NEEDED

LOG ALL THE THINGS

EVERYONE ON THE SAME PAGE

TIME FLEXIBILITY

WORK WHEN YOU WANT TO WORK

HOW GITHUB WORKS

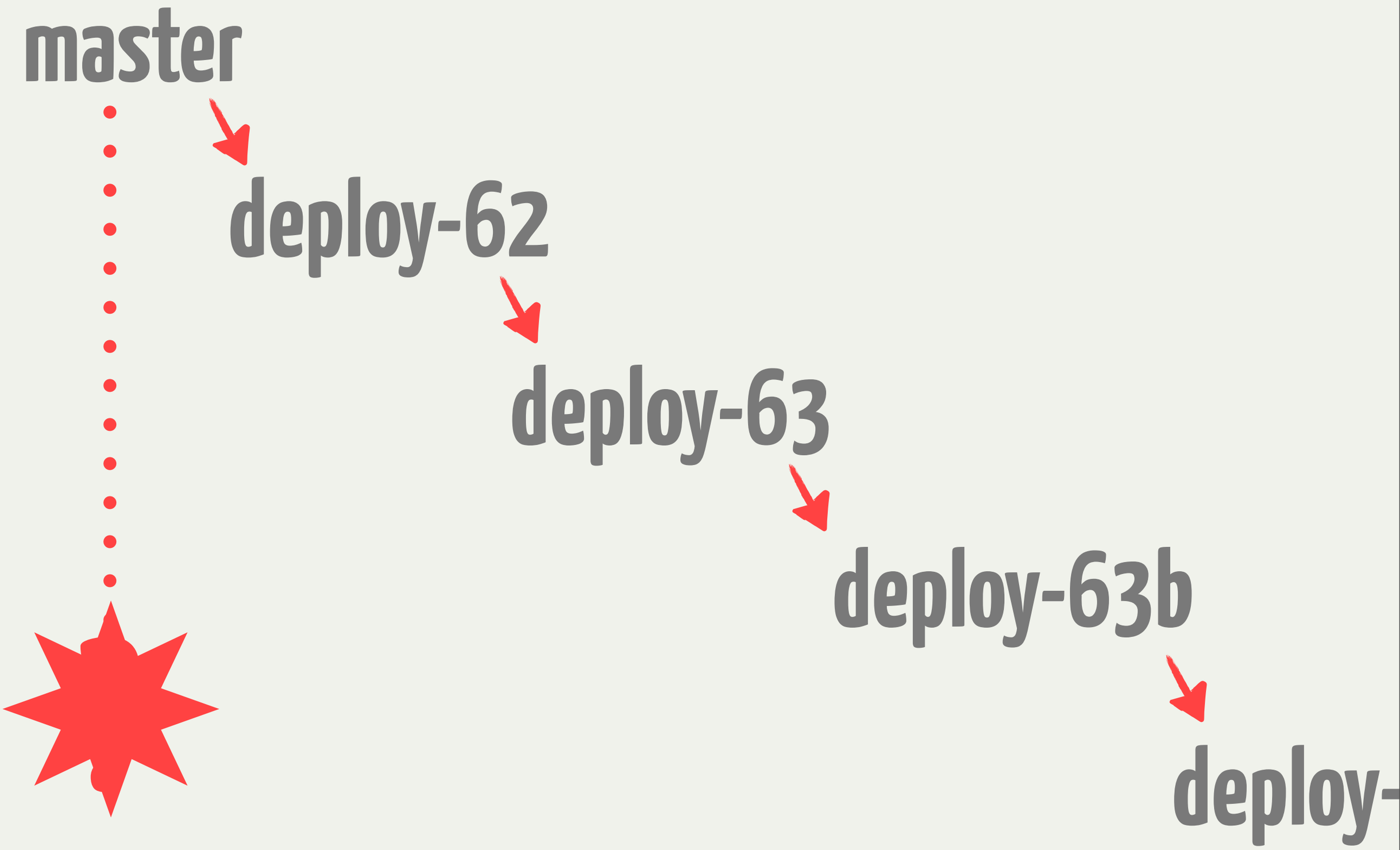
zachholman.com/posts/how-github-works

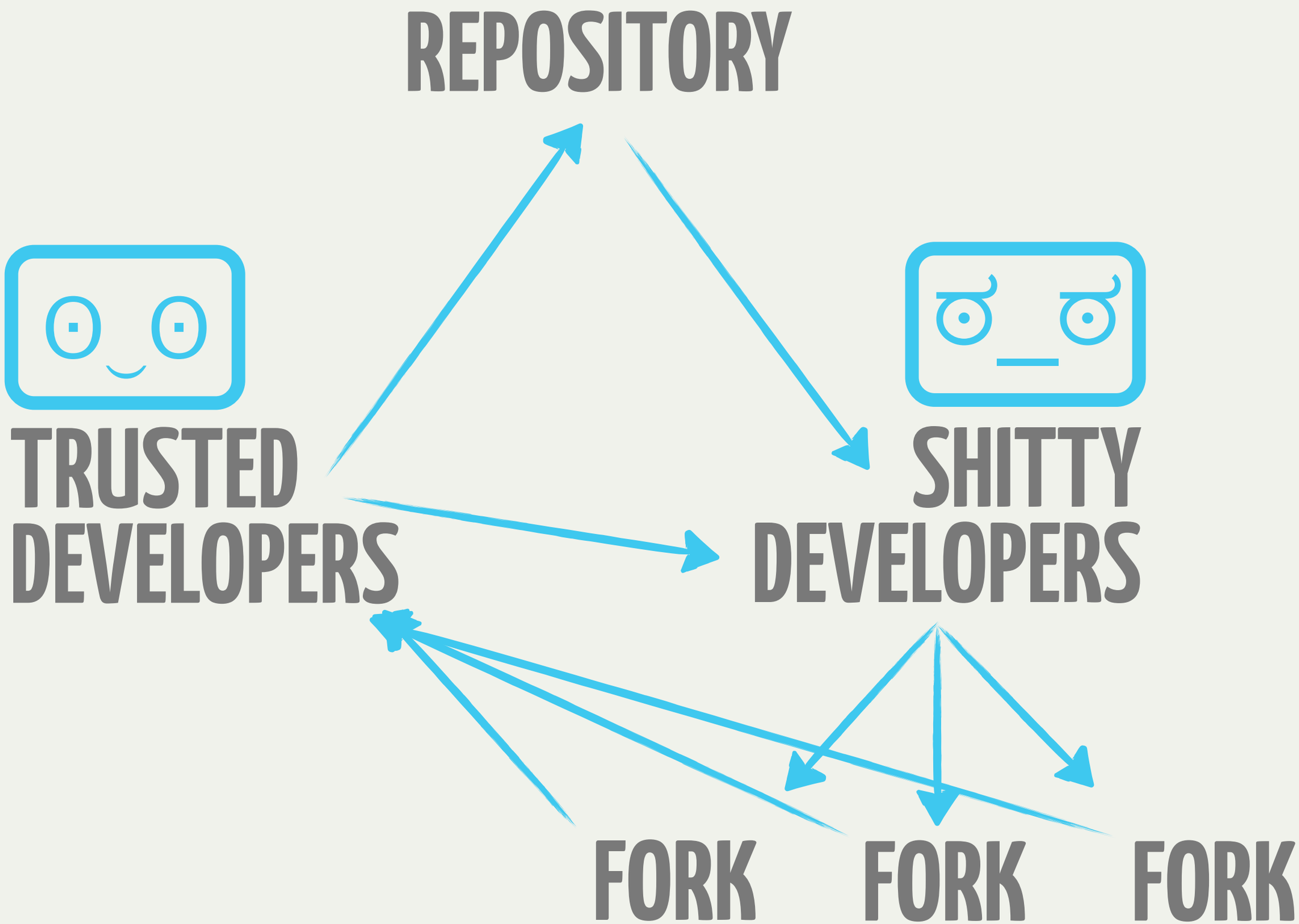
OKAY LET'S TALK ABOUT

PULL REQUESTS + BRANCHING
ISSUES
OAUTH AS IDENTITY
HOOKS & HUBOT
SECRETS

pull requests + branching

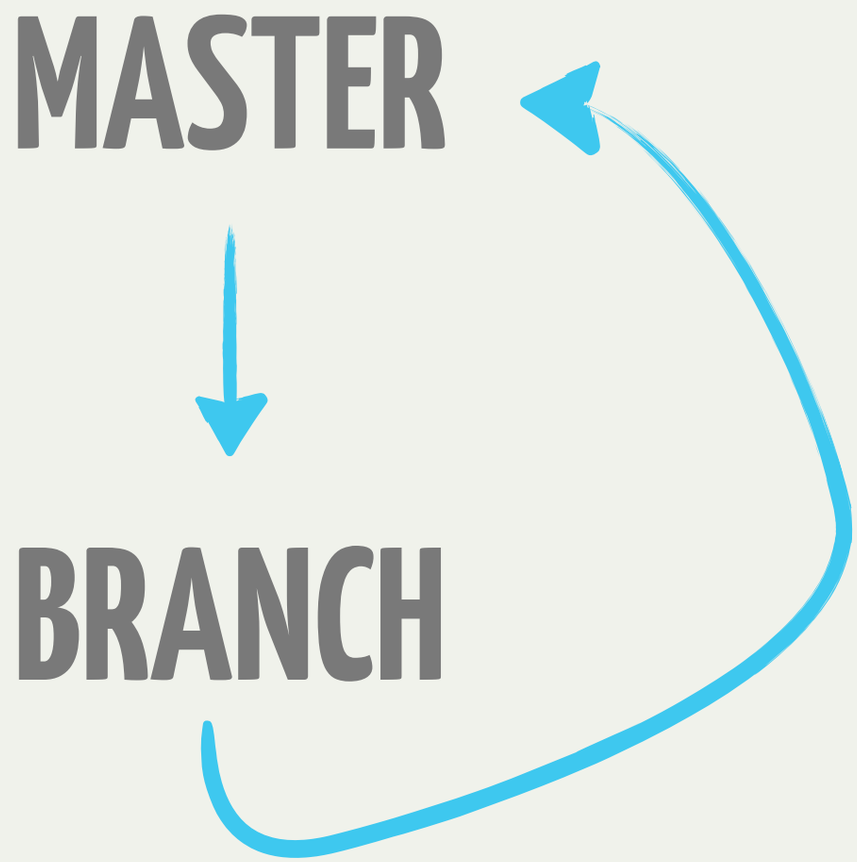
Y’all got some weird branches.


master
deploy-62
deploy-63
deploy-63b
deploy-


REPOSITORY
TRUSTED DEVELOPERS
SHITTY DEVELOPERS
FORK
FORK
FORK

Keep your branches simple.

How GitHub does branching:


MASTER
BRANCH

Everyone can push, everyone can deploy.

Frees up your time from micromanaging someone else's code.

Master is **always** deployable.

Master is **always** deployable. We deploy 10-40 times a day.

If you're nervous, deploy to **staging**. Or deploy a **branch**. Or deploy to a **subset** of our production boxes.

TWITTER-DRIVEN DEVELOPMENT

CHECK TWITTER, SEE IF YOU BONED A DEPLOY

Keep your branches simple.

What about code quality?

PULL REQUESTS

OOH! FUTURISTIC!

Pull Requests are our code review.

WHAT ARE PULL REQUESTS?

DISCUSSIONS

CODE DISCUSSION
FEATURE DISCUSSION
STRATEGY DISCUSSION

A PULL REQUEST IS A DISCUSSION

CODE DISCUSSION
FEATURE DISCUSSION
STRATEGY DISCUSSION

STRATEGY DISCUSSION

FEATURE DISCUSSION

CODE DISCUSSION

REFERENCE ISSUES

REVIEW CODE DIFFS

WRITE CODE COMMENTS

ALL ON A BRANCH

CODE DISCUSSION
FEATURE DISCUSSION
STRATEGY DISCUSSION

REFERENCE ISSUES
REVIEW CODE DIFFS
WRITE CODE COMMENTS

Open **Dlom** wants someone to merge 2 commits into `holman:master` from `Dlom:master`

Discussion | Commits 2 | Diff 3

Dlom opened this pull request October 13, 2011

Fixed "edit" command

On 'buntu 10.10, $EDITOR was always nil, and running xdg-open would open the default text editor... So now, if $EDITOR is nil, xdg-open runs instead.

Also, bad things happened if you tried to edit when the backend was set to something not locally stored (gists, for example). So now that gets checked. Also fixed a small error in keychain.rb.

Dlom is the only one participating right now. **Add a comment**

Dlom added some commits October 13, 2011

d2dcaa6	Fixed editing support for *nix (I hope)
d3ff35b	Made it so that you can't try to edit files not on the harddrive (Like w...

TITLE OF THE PULL REQUEST

DESCRIPTION

COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT
COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT
COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT
COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT

DISCUSS DISCUSS DISCUSS DISCUSS DISCUSS

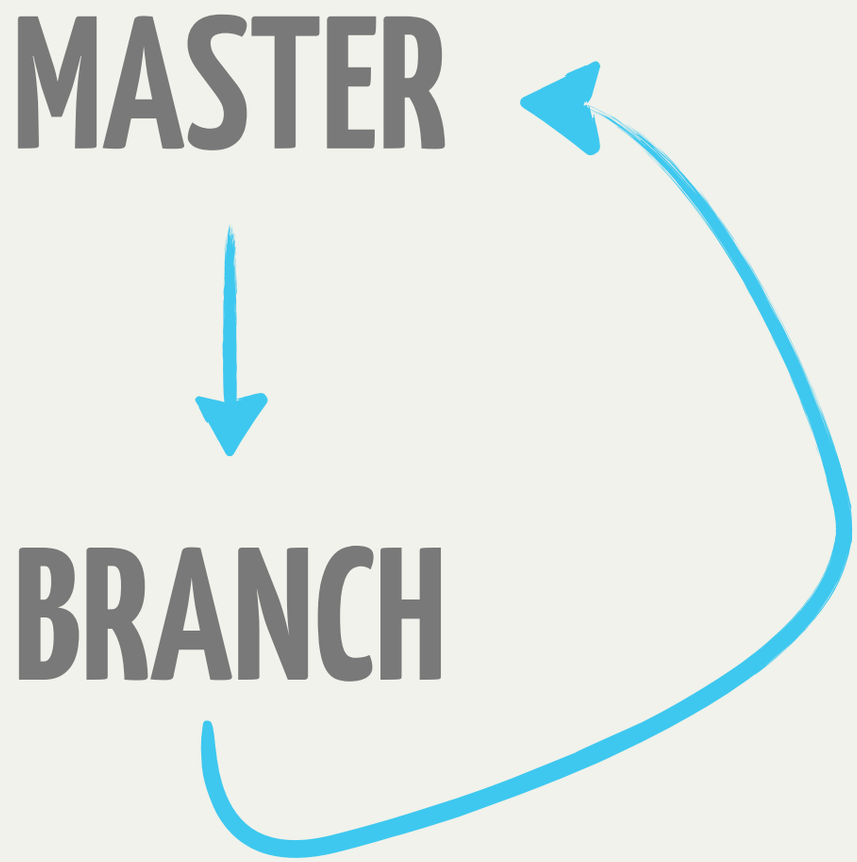
DISCUSS DISCUSS DISCUSS DISCUSS DISCUSS

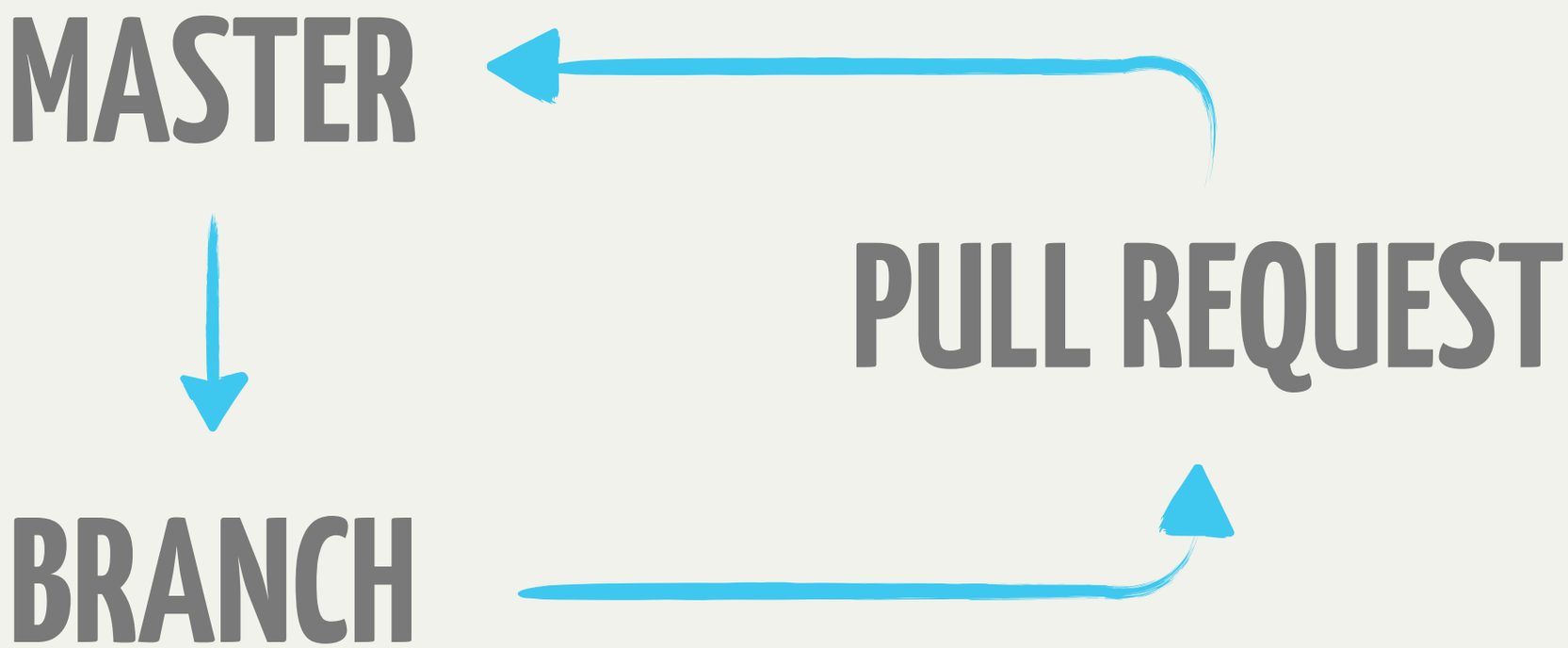
COMMIT COMMIT COMMIT COMMIT COMMIT COMMIT

talk about changes

show all commits

show specific code changes


MASTER
BRANCH


MASTER
PULL REQUEST
BRANCH

BIG SECRET #1

PULL REQUESTS:
YOU DON'T NEED TO FORK ANYTHING.

WHY PULL REQUESTS ARE RAD:

4 REASONS

WHY PULL REQUESTS ARE RAD: ASYNCHRONOUS

No meetings.

WHY PULL REQUESTS ARE RAD: NOTIFICATIONS

Email is your interface.

WHY PULL REQUESTS ARE RAD: ACCESSIBLE

Designers can evolve mockups and entire workflows.

Non-technical staff can add their two cents.

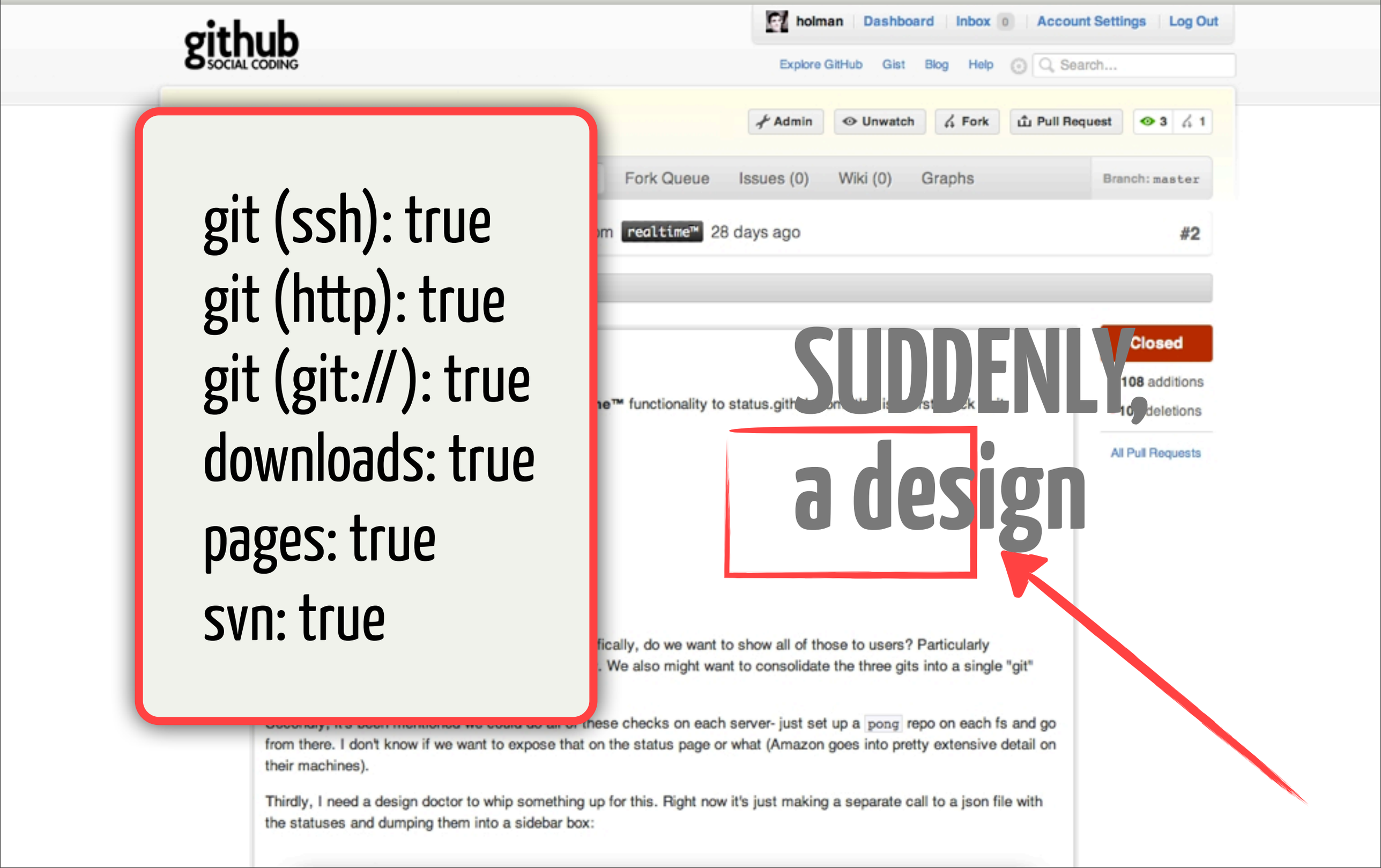
WHY PULL REQUESTS ARE RAD: HISTORICAL

Pull Requests can be experiments.

Try something out, throw it away, retain a history.

GitHub's Pull Requests

Realtime™ status.github.com real-time polling



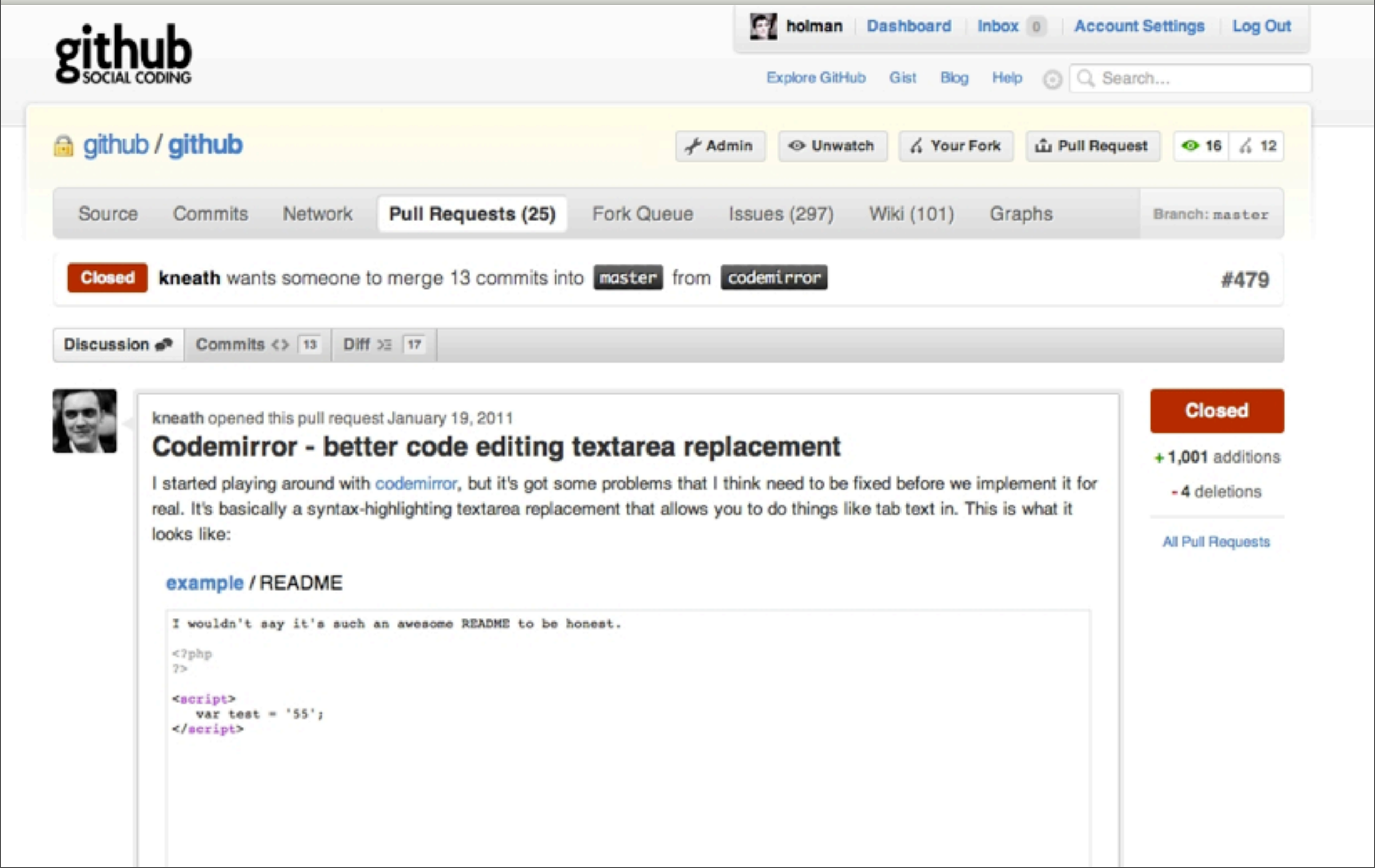
git (ssh): true
git (http): true
git (git://): true
downloads: true
pages: true
svn: true

Realtime™ status.github.com real-time polling

MIX YOUR DESIGNERS + DEVELOPERS

POST SCREENSHOTS (AND .GIFs!)

CodeMirror syntax highlighting as you type



CodeMirror syntax highlighting as you type

PULL REQUESTS ARE CHEAP AS HELL
DON'T BE AFRAID TO TOSS IT ALL AWAY

Don't be afraid to try to (gently) break GitHub.

8 months,
couple hundred commits,
dozens of mockups

Pull Requests are
about getting shit done
without wasting a lot of time.

Can your workflow be improved?
Do you really need all that process?

USE PULL REQUESTS MORE

SPEND LESS TIME AVOIDING SHIPPING

we have issues

where am i anyway

rich media things

Tracker * Bug

Subject *

Description B I S C H1 H2 H3 pre Text formatting

more priorities

priorities

wat

redundant

Status * New

Priority * Normal

Assignee

Parent task

Start date 2011-09-16

Due date

Estimated time Hours

% Done 0 %

Files Choose File No file chosen

Add another file (Maximum size: 100 kB)

Optional description

Watchers holman

just trolling us now

deadlines

estimates

Title

No one is assigned

No milestone

Write Preview

Comments are parsed with GitHub Flavored Markdown

Submit new issue

Can you survive on

SIMPLER

tools?

Can you work faster on

SIMPLER

tools?

Can you work better on

SIMPLER

tools?

Merlin Mann

@hotdogsladies

on email priorities :

“

A priority is observed, not manufactured or assigned.

Otherwise, it's necessarily not a priority.

“

Making something a **BIG RED TOP TOP BIG HIGHEST #1 PRIORITY** changes nothing but text styling.

If it were really important, it'd already be done. Period.

”

PRIORITIES ESTIMATES

ASSIGNEES DEADLINES

Resist adding meta-work. It gets in the way of doing real work. (The real work will get done anyway.)

3

We use Issues for three things.

shit, something is broken

kevinsawicki opened this pull request September 08, 2011

Can't reopen pull request using using v3 API

Looks like sending a state field of `open` is being ignored and preventing a closed pull request from being re-opened using the API

hey, this could be cool

kneath opened this issue September 10, 2011

Build a [REDACTED] so everyone can [REDACTED]

No one is assigned

No milestone

REDACTED REDACTED LOL LOL

todo lists

kneath opened this issue February 25, 2011

Ship Issues 2.0

No one is assigned

Milestone: **Ship Issues 2.0: ...**

Current issues was great for 1.0. 2.0 is gonna be better.

If a comp is referenced, they're all in Dropbox under GitHub -> designs -> issues. Don't assume comps are 100% or correct / up to date.

Must Haves

- ~~Search~~
  - ~~Finalize design~~
  - ~~Implement design~~
  - ~~Finish dismax ranking config~~
- Milestones
  - ~~Implement show page (comp in dro x)~~
  - ~~Design & implement create new milestone form</del~~
  - ~~Edit / delete a milestone~~
- ~~Flush out issues show page~~

Do you need more than that?

Think about it.

Most of the time, you don’t.

ISSUES RECAP

SIMPLE TOOLS MEANS MORE TIME BUILDING YOUR PRODUCT

oauth as identity

RUBY IS SO FAST

FLICK

I LOVE IT

SO MUCH

♥

~/Development/SECRETARYOFLABOR

was super hammered when I wrote this
single LABOR.RB web app
self-referential symlink `what`

~/Development/unmarked_van

an app that stalks people's locations

~/Development/trace

real-time stats graphing

internal talk videos

ios licensing + provisioning

haystack exceptions

internal app distribution

30

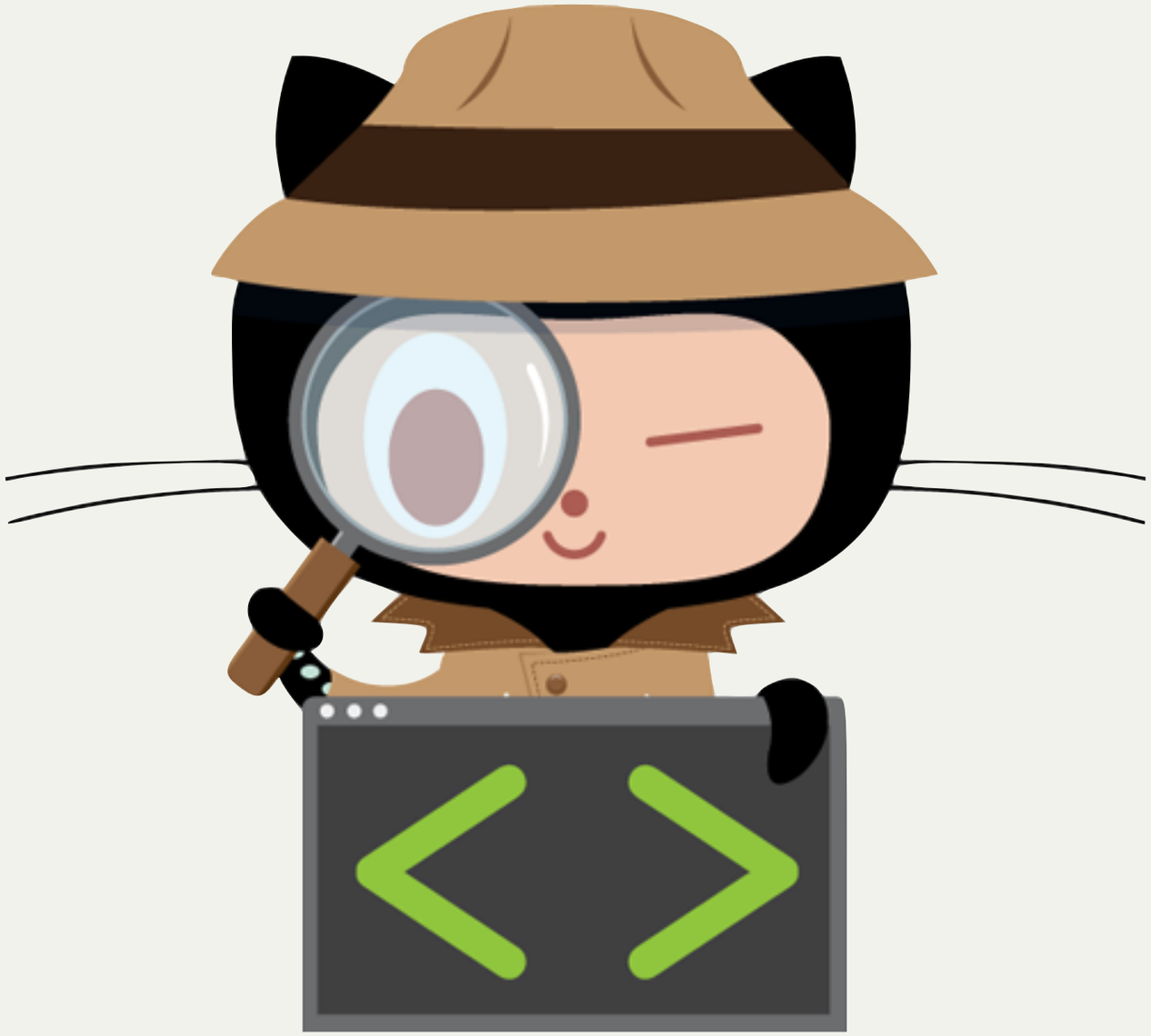
INTERNAL APPS

collectd graphs

continuous integration

internal twitter

arbitrary data store



Outsiders are not welcome.

GitHub as Authentication

TEAMS, ORGANIZATIONS, AND USERS

GitHub as Authentication

USE OAUTH TO AUTHENTICATE USERS

App Authorization

Authorize Super Secret Internal App?

This app would like to be able to do the following:

- **Read your public information.**
- **Update your public and private repository info.**

Allow **Deny**

github.com/atmos/sinatra_auth_github

```
github_organization_access?('github')
# => true
```

GitHub as Authentication

SECURITY • CONSISTENCY • COOLICTY

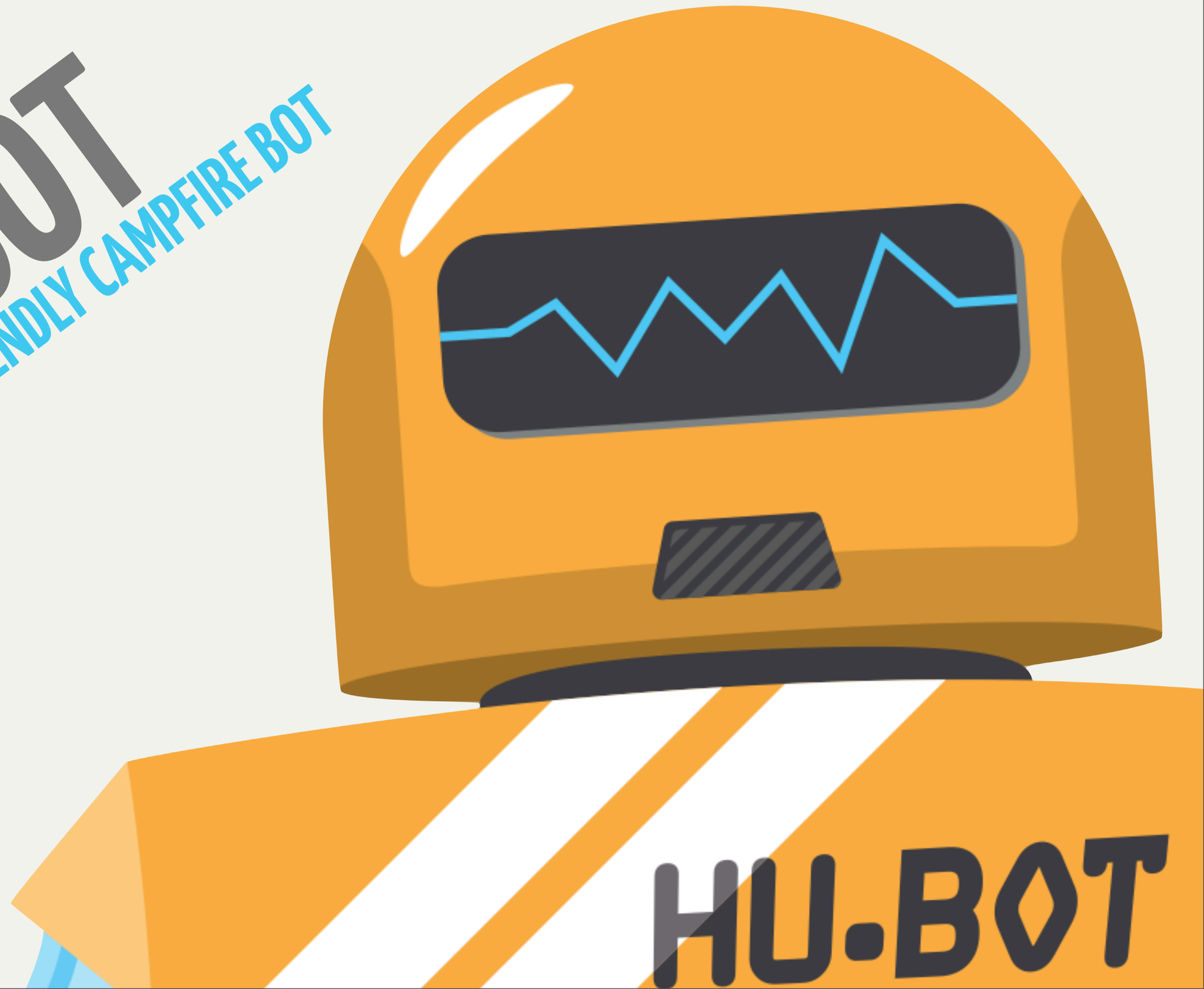
DON'T REINVENT THE WHEEL

YOUR AUTHENTICATION CAN BE FREE

hooks & hubot

HUBOT

OUR FRIENDLY CAMPFIRE BOT



OVER 300 COMMANDS, LIKE...

- deploy every GitHub app
- run branch-level tests
- play music in the office
- tell us who is in the office
- dynamically build usage graphs
- send and receive text messages
- mustache every image posted in chat
- track who swears each day
- rank by twitter followers
- ...and way, way more

LOL JK

Hubot is not open source.

github.com/github/hubot

bots ♥ github: know your branch status

Zach

hubot what hasn't been deployed?

Hubot

Zach: Here's what hasn't been deployed on master yet:
https://github.com/github/github/compare/{sha}...master

bots ♥ github: know your branch status

Zach

hubot what hasn't been deployed on **issues2**?

Hubot

Zach: Here's what hasn't been deployed on **issues2** yet:
https://github.com/github/github/compare/{sha}...**issues2**

bots ♥ github: know your branch status

Zach

hubot what hasn't been deployed on **issues2**?

Hubot

Zach: Here's what hasn't been deployed on **issues2** yet:
https://github.com/github/github/compare/{sha}...**issues2**

bots ♥ github: know your branch status

Zach

hubot what hasn't been deployed on **issues2**?

Hubot

Zach: Here's what hasn't been deployed on **issues2** yet:
https://github.com/github/github/compare/{sha}...**issues2**

bots ♥ github: know your branch status

https://github.com/site/sha

```
#=> 2c8c2e9932d0caceecd3ed8ee2adcda0ece3e564
```

bots ♥ github: using the API

Zach

hubot what are the pulls on holman/boom?

Hubot

HTTParty should only be a soft dependency (master...jimmycuadra:soft-dependency) by jimmycuadra
https://github.com/holman/boom/pull/46

boom roulette (master...culvr:master) by culvr
https://github.com/holman/boom/pull/43

bots ♥ github: using the API

Zach

hubot how many issues did we close today for github/github?

Hubot

13 issues closed on github/github in the past 24 hours.

bots ❤ github

What does your company do over and over again?

Can you automate that?

HUBOT KNOWS WHERE YOU LIVE

DO NOT TRUST HIM

everyone has secrets

WE TUCK STUFF AWAY SOMETIMES. OOPS.

EMOJI

WORDS ARE FOR ACADEMICS, BRO

:heart:

:+1:

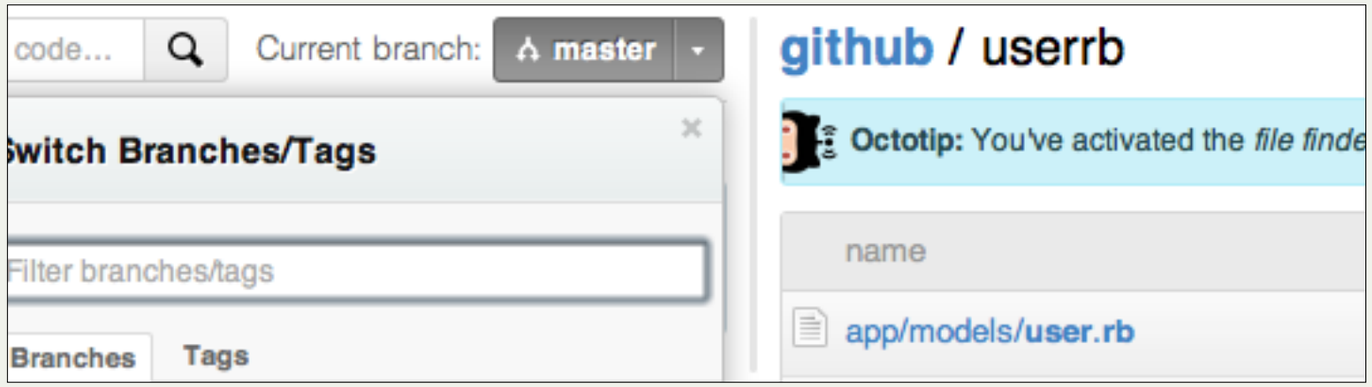
:shipit:

...and so much more: http://git.io/dmWZWg

SHORTCUTS

QUIT MAKING ME DO THINGS ALL SLOW-LIKE

w



t

?

IMAGES

EVERYTHING IS BETTER WITH PIXELS

!\[title\](url)

DIFF+PATCH

GOD I HATE PIXELS JUST GIVE ME TEXT

```
From 91fcda0ecb27aa6146dac8e9f1d0a3d674b3cc04 Mon Sep 17 00:00:00 2001
From: Zach Holman <github.com@zachholman.com>
Date: Wed, 2 Nov 2011 16:05:47 -0700
Subject: [PATCH] test_*.rb => *_test.rb

@technoweenie is always right
---
 Rakefile                |    2 +-
 test/album_test.rb      |   35 ++++++++++++
 test/api_test.rb        |  149 +++++++++++++++++++++++++++++++++++++++++++++++++++
 test/app_test.rb        |   66 +++++++++++++++++++++++
 test/artist_test.rb     |   15 +++++
 test/client_test.rb     |   16 +++++
 test/library_test.rb    |   18 ++++++
 test/office_test.rb     |   26 +++++++++
 test/play_test.rb       |   17 ++++++
 test/song_test.rb       |   89 ++++++++++++++++++++++++++++++
 test/test_album.rb      |   35 ------------
 test/test_api.rb        |  149 -------------------------------------------------------
 test/test_app.rb        |   66 ----------------------
 test/test_artist.rb     |   15 -----
 test/test_client.rb     |   16 -----
 test/test_library.rb    |   18 ------
 test/test_office.rb     |   26 ---------
 test/test_play.rb       |   17 ------
```

.diff + .patch

after most URLs

FENCED CODE

IT'S LIKE CODE BUT WITH MORE FENCES

```
require 'redcarpet'
markdown = Redcarpet.new("Hello World!")
puts markdown.to_html
```

FENCED CODE

IT'S LIKE CODE BUT WITH MORE FENCES

```ruby
require 'redcarpet'
markdown = Redcarpet.new("Hello World!")
puts markdown.to_html
```

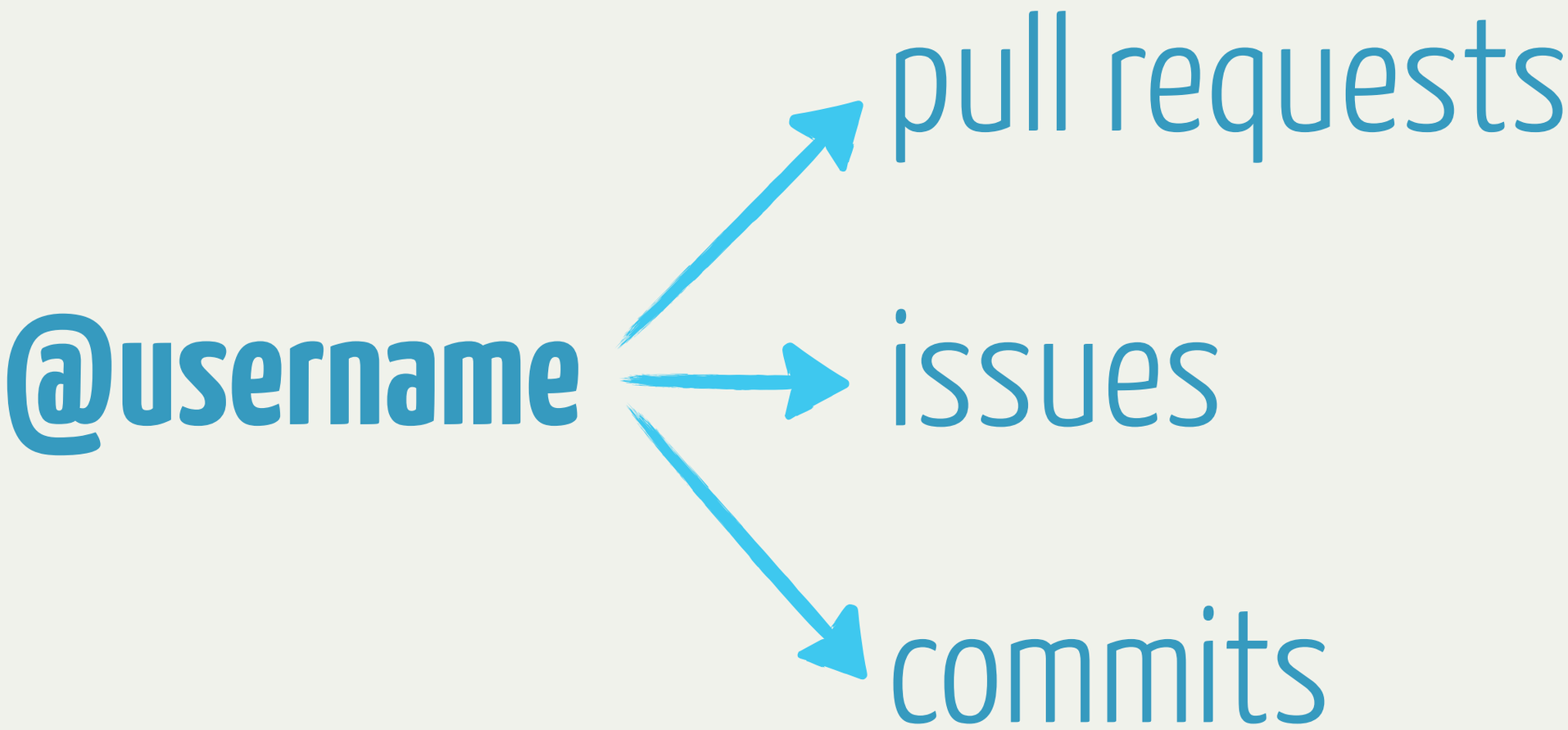
FENCED CODE

IT'S LIKE CODE BUT WITH MORE FENCES

```
require 'redcarpet'
markdown = Redcarpet.new("Hello World!")
puts markdown.to_html
```

MENTIONS

GET SOMEONE ELSE TO DO YOUR WORK



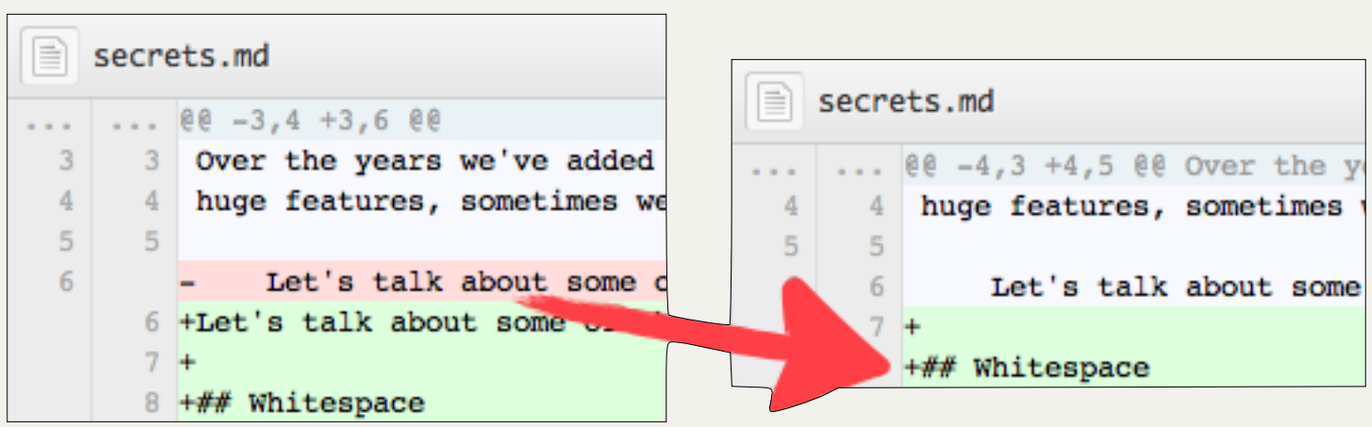
WHITESPACE

IT SUCKS

add

?w=1

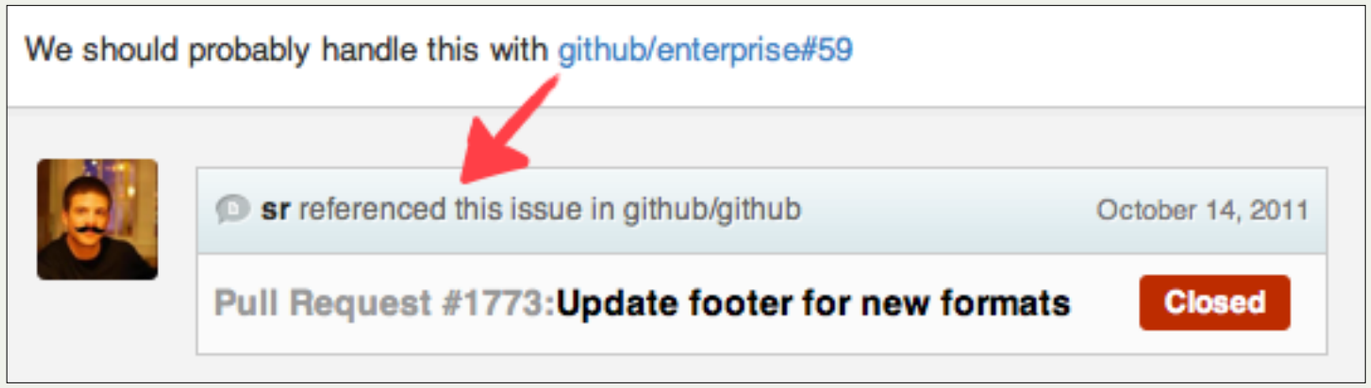
to URLs



REPO REFERENCES

AROUND THE REPO, AROUND THE REPO, AROUN

user/repo#issue



GIT.IO

OFFICIAL LAUNCH ANNOUNCEMENT

https://github.com/holman/really-fucking-long-url-wtf-is-u-doing

↓

git.io/url

GIT.IO

OFFICIAL LAUNCH ANNOUNCEMENT

```
curl -i http://git.io -F 'url=#{url}' #{code}
```

http://git.io/nxVVig

THE BIG RECAP

SIMPLE TOOLS + BETTER PROCESS = AWESOME PRODUCT

thanks!

zach holman

zachholman.com/talks

twitter+github: @holman