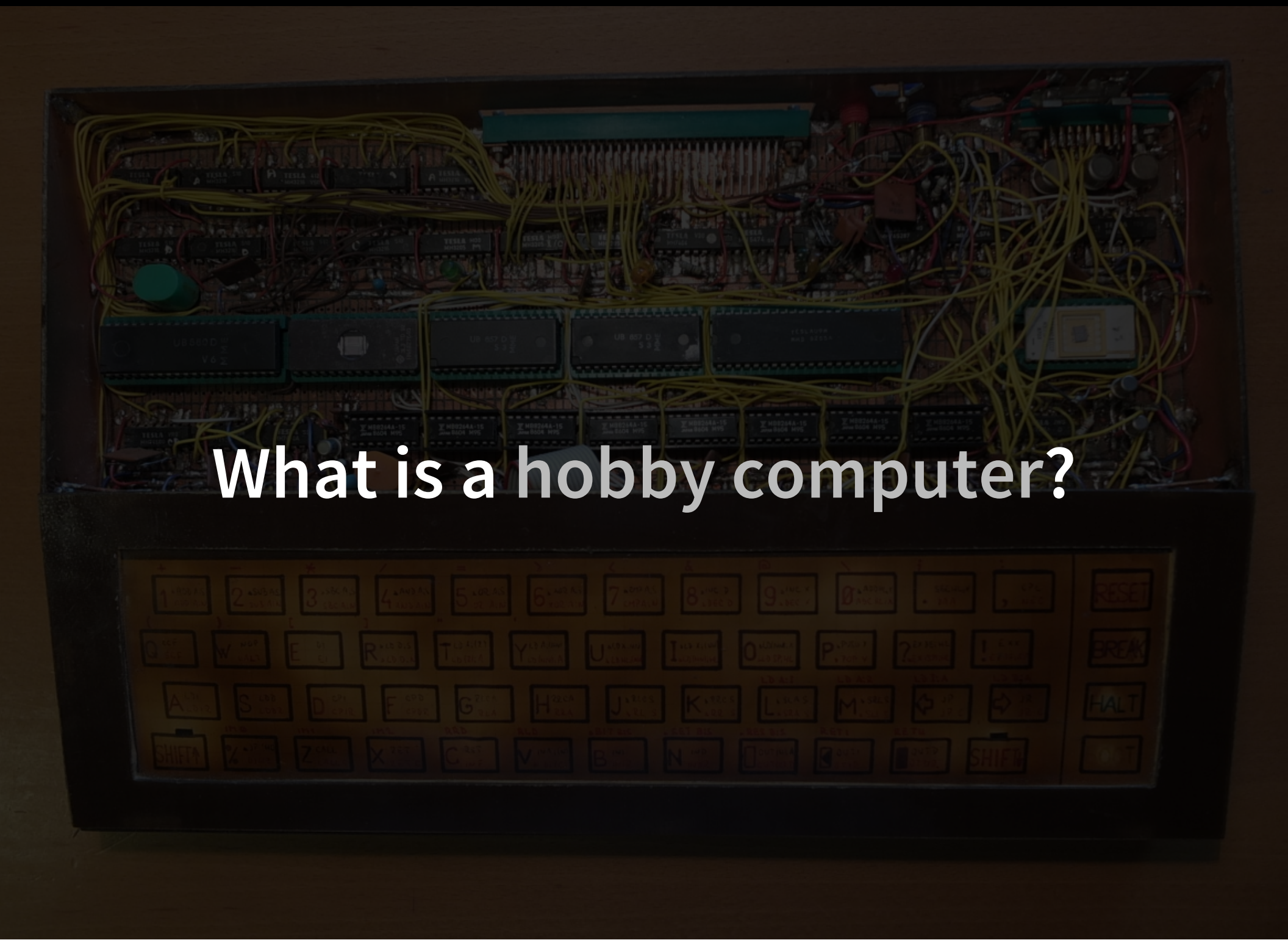
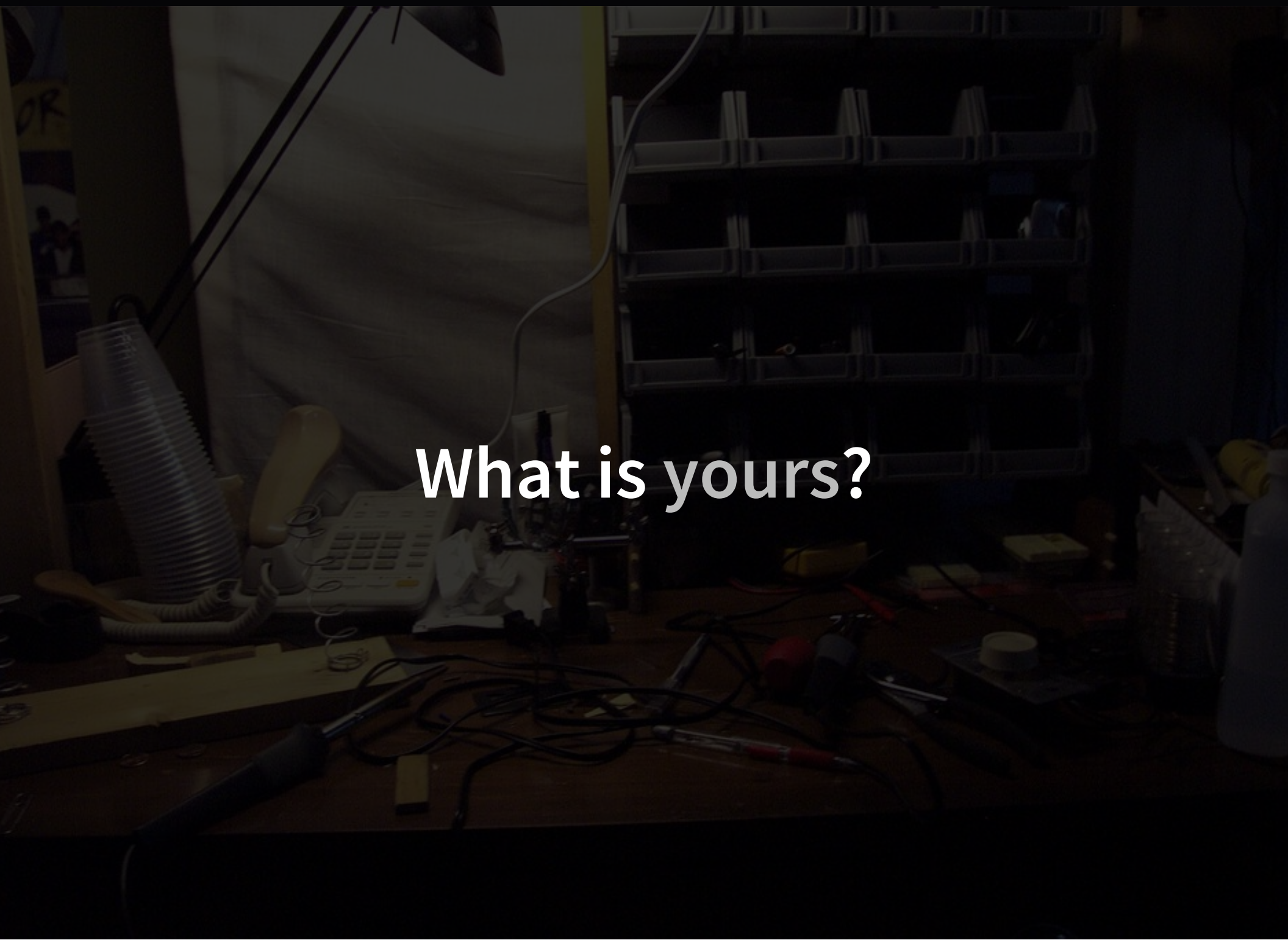
The Cloud is Your Free Hobby Computer

by Les Orchard / @lmorchard

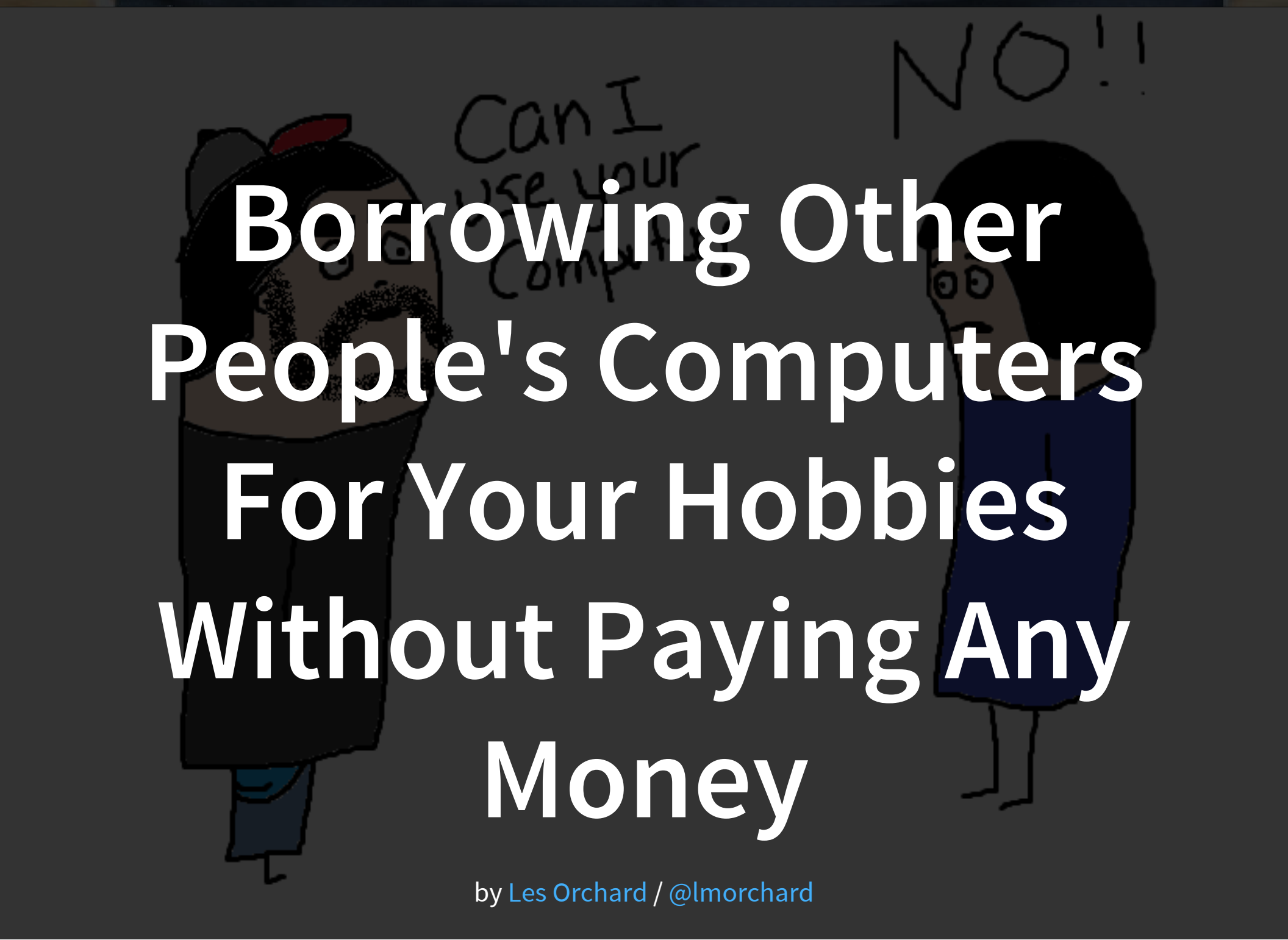

What is a hobby computer?

What is free?

free beer*


What is yours?

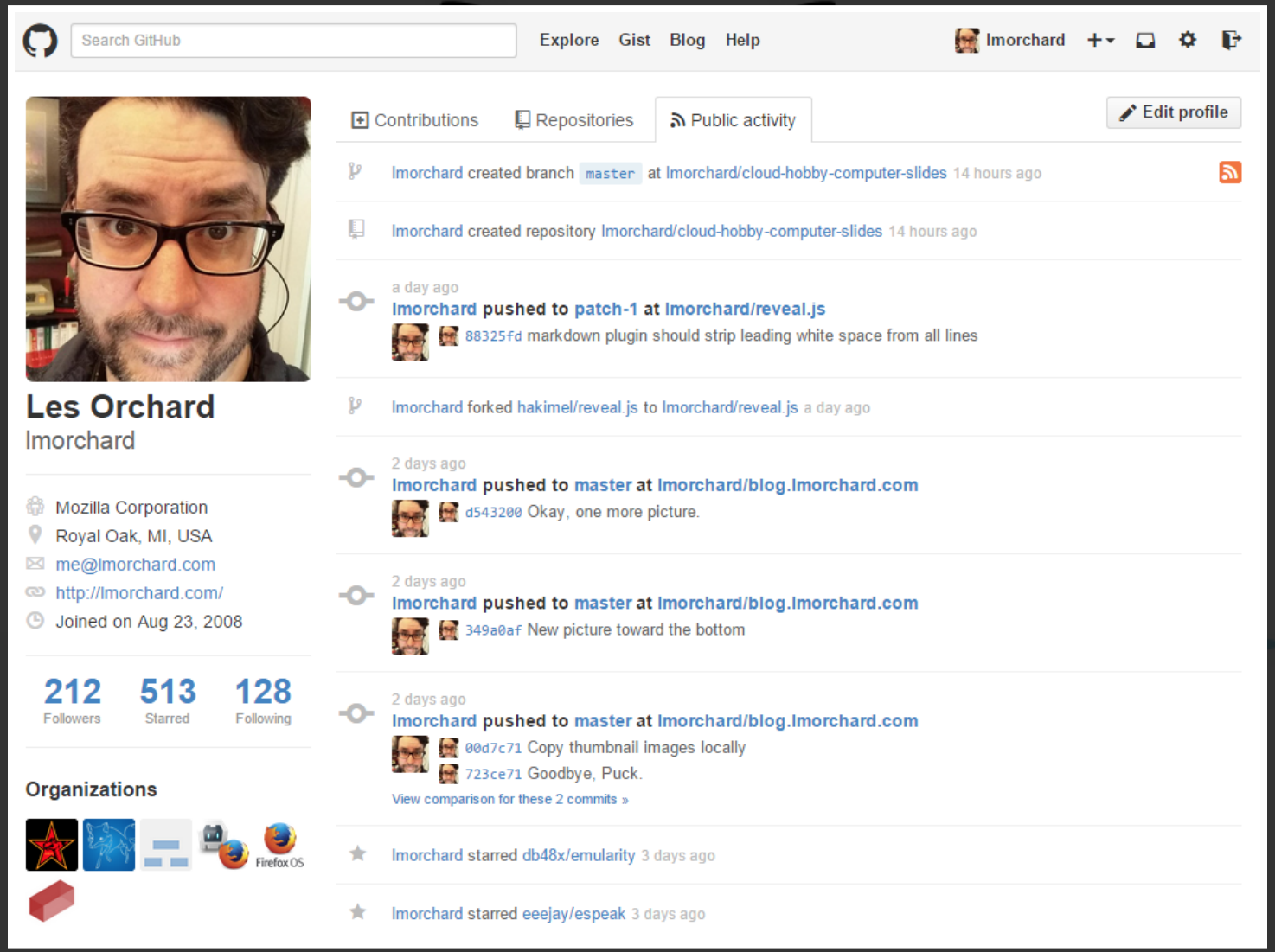
What is the cloud?



Borrowing Other People's Computers For Your Hobbies Without Paying Any Money

by Les Orchard / @lmorchard

GitHub


Search GitHub
Explore
Gist
Blog
Help
lmorchard
Contributions
Repositories
Public activity
Edit profile
lmorchard created branch master at lmorchard/cloud-hobby-computer-slides 14 hours ago
lmorchard created repository lmorchard/cloud-hobby-computer-slides 14 hours ago
a day ago
lmorchard pushed to patch-1 at lmorchard/reveal.js
88325fd markdown plugin should strip leading white space from all lines
lmorchard forked hakimel/reveal.js to lmorchard/reveal.js a day ago
2 days ago
lmorchard pushed to master at lmorchard/blog.lmorchard.com
d543200 Okay, one more picture.
2 days ago
lmorchard pushed to master at lmorchard/blog.lmorchard.com
349a0af New picture toward the bottom
2 days ago
lmorchard pushed to master at lmorchard/blog.lmorchard.com
00d7c71 Copy thumbnail images locally
723ce71 Goodbye, Puck.
View comparison for these 2 commits »
lmorchard starred db48x/emularity 3 days ago
lmorchard starred eeejay/espeak 3 days ago
Les Orchard
lmorchard
Mozilla Corporation
Royal Oak, MI, USA
me@lmorchard.com
http://lmorchard.com/
Joined on Aug 23, 2008
212
Followers
513
Starred
128
Following
Organizations
Firefox OS

GitHub + Raspberry PI = <3

This repository Search Explore Gist Blog Help lmorchard

lmorchard / raspiriments

Unwatch 2 Star 1 Fork 0

A dumping ground for my Raspberry Pi experiments — Edit

8 commits 1 branch 0 releases 1 contributor

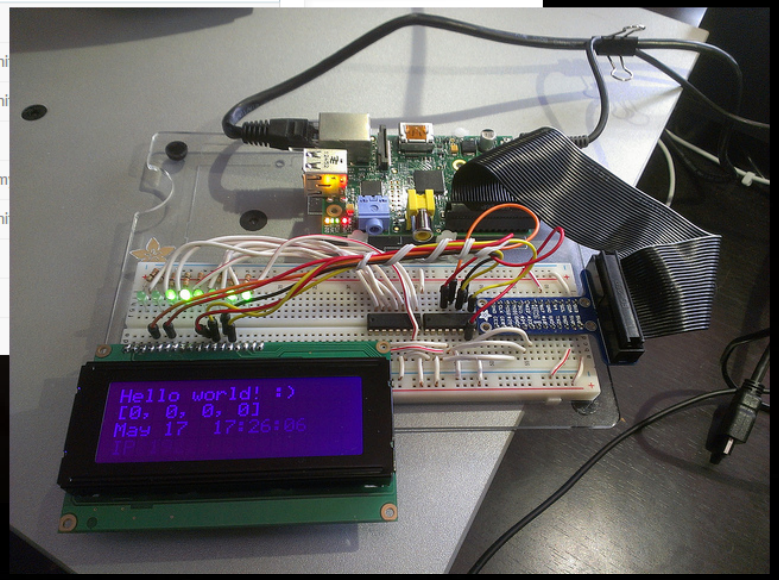
branch: master raspiriments / +

Playing with using SPI rather than bit-banging on the shift registers

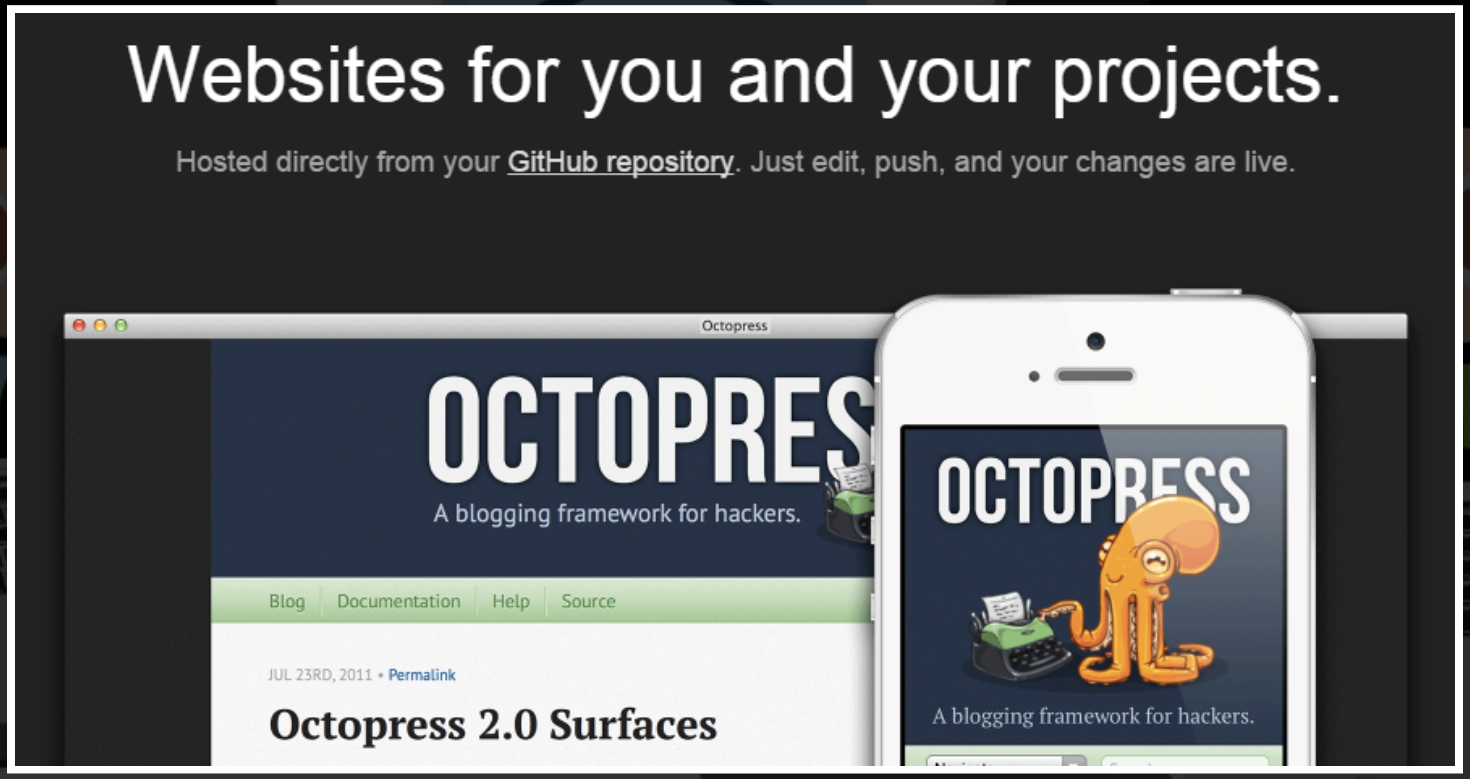
lmorchard authored on May 18, 2013 latest commit 8713c6005a

.gitignore	Initial commit
Adafruit_CharLCD.py	Playing with using SPI rather than bit-banging on the shi
Adafruit_CharLCD_IPclock_ex...	Playing with using SPI rather than bit-banging on the shi
README.md	Initial commit
ShiftOutputGPIO.py	First ugly hacks to make Adafruit_CharLCD work with m
ShiftOutputSPI.py	Playing with using SPI rather than bit-banging on the shi
button_led.py	First dump of tinkerings
lcd_shift_play.py	Further tinkerings
shift_play.py	Further tinkerings

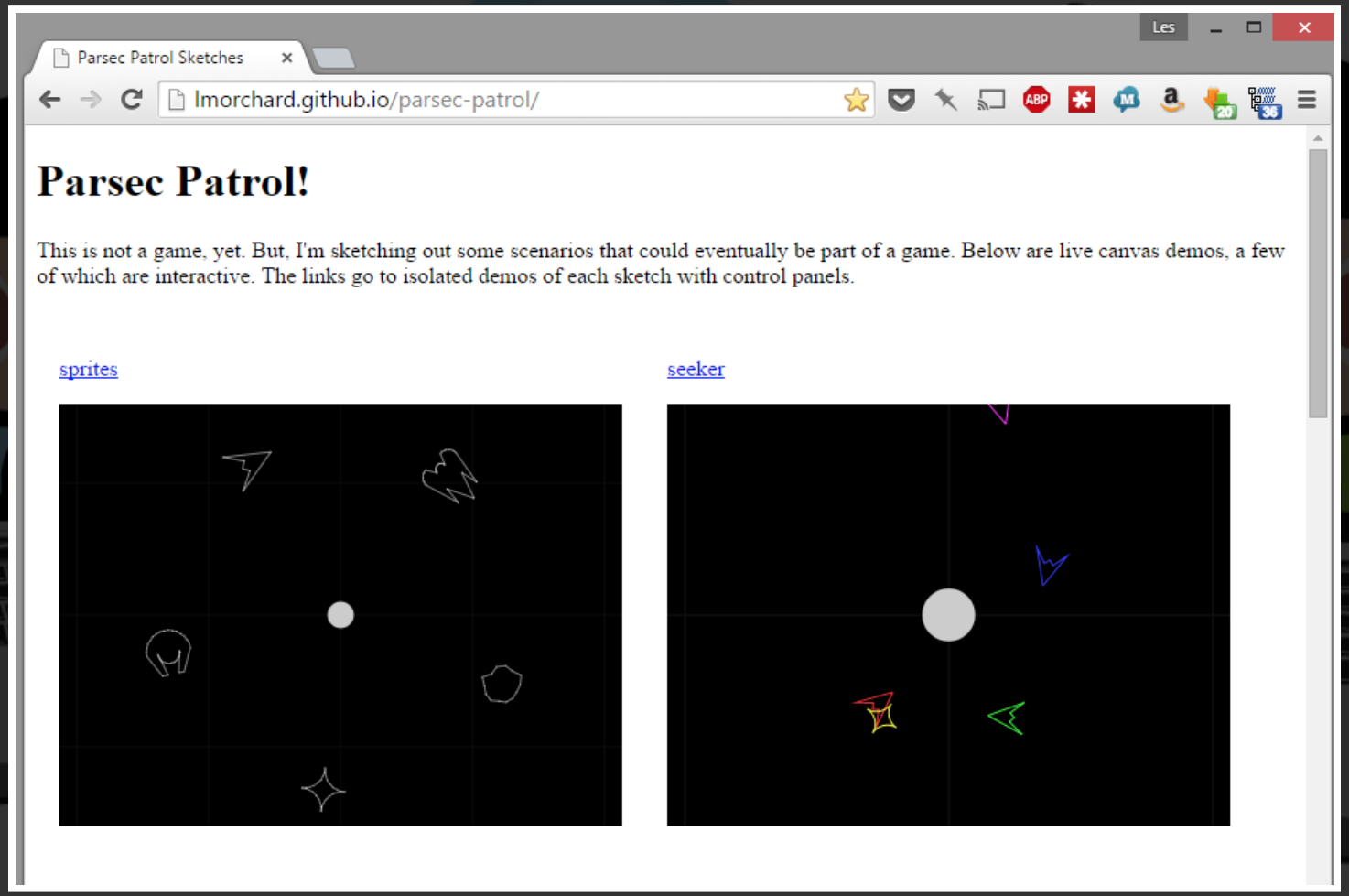
Code
Issues 0
Pull requests 0
Wiki



GitHub Pages

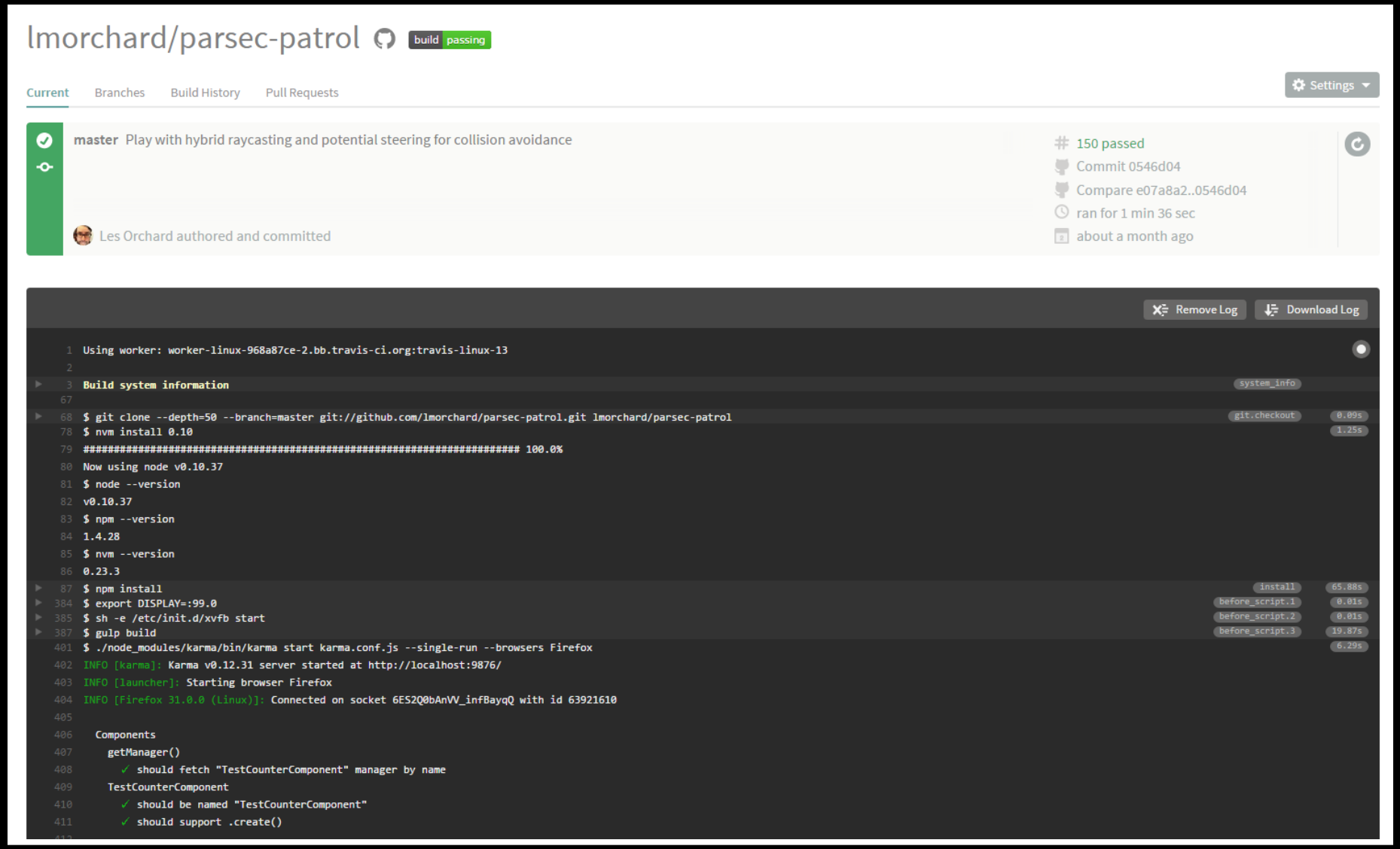


GitHub Pages



GitHub
Git is free as in speech
GitHub is free as in beer
Your stuff stays yours
GitHub is very hackable
Git is hard

Travis CI


lmorchard/parsec-patrol
build passing
Current
Branches
Build History
Pull Requests
Settings
master Play with hybrid raycasting and potential steering for collision avoidance
Les Orchard authored and committed
150 passed
Commit 0546d04
Compare e07a8a2..0546d04
ran for 1 min 36 sec
about a month ago
Remove Log
Download Log
Using worker: worker-linux-968a87ce-2.bb.travis-ci.org:travis-linux-13
Build system information
system_info
$ git clone --depth=50 --branch=master git://github.com/lmorchard/parsec-patrol.git lmorchard/parsec-patrol
git.checkout
0.09s
$ nvm install 0.10
1.25s
100.0%
Now using node v0.10.37
$ node --version
v0.10.37
$ npm --version
1.4.28
$ nvm --version
0.23.3
$ npm install
install
65.88s
$ export DISPLAY=:99.0
before_script.1
0.01s
$ sh -e /etc/init.d/xvfb start
before_script.2
0.01s
$ gulp build
before_script.3
19.87s
$ ./node_modules/karma/bin/karma start karma.conf.js --single-run --browsers Firefox
6.29s
INFO [karma]: Karma v0.12.31 server started at http://localhost:9876/
INFO [launcher]: Starting browser Firefox
INFO [Firefox 31.0.0 (Linux)]: Connected on socket 6ES2Q0bAnVV_infBayqQ with id 63921610
Components
getManager()
should fetch "TestCounterComponent" manager by name
TestCounterComponent
should be named "TestCounterComponent"
should support .create()

Travis CI + GitHub Pages = <3

31 lines (30 sloc) | 1.009 kb

Raw Blame History

```
language: node_js
env:
  global:
  - secure: "iiAWfVJ90ogzcgl46acbQYzVth25a0++87OlXbV0/fR6gkRU535FcLb8jIoFpOdDMAwyXWw/qlZkxJKknrXW7vPRrYmQo3ijsAbV23piv71eOtOXzd9S1
  - GH_OWNER: lmorchard
  - GH_PROJECT_NAME: parsec-patrol
node_js:
- 0.8
branches:
  only:
  - master
before_script:
- npm install -g grunt-cli bower
after_success:
- git submodule add -b gh-pages https://${GH_OAUTH_TOKEN}@github.com/${GH_OWNER}/${GH_PROJECT_NAME} site > /dev/null 2>&1
- cd site
- node ../app/scripts/util/cleanup.js ../dist/index.html
- if git checkout gh-pages; then git checkout -b gh-pages; fi
- git rm -r .
- cp -R ../dist/* .
- cp ../dist/.* .
- git add -f .
- git config user.email "me@lmorchard.com"
- git config user.name "Les Orchard"
- git commit -am "adding the yeoman build files to gh-pages"
- git push https://${GH_OAUTH_TOKEN}@github.com/${GH_OWNER}/${GH_PROJECT_NAME} HEAD:gh-pages > /dev/null 2>&1
script:
- npm install
- bower install
- grunt
```

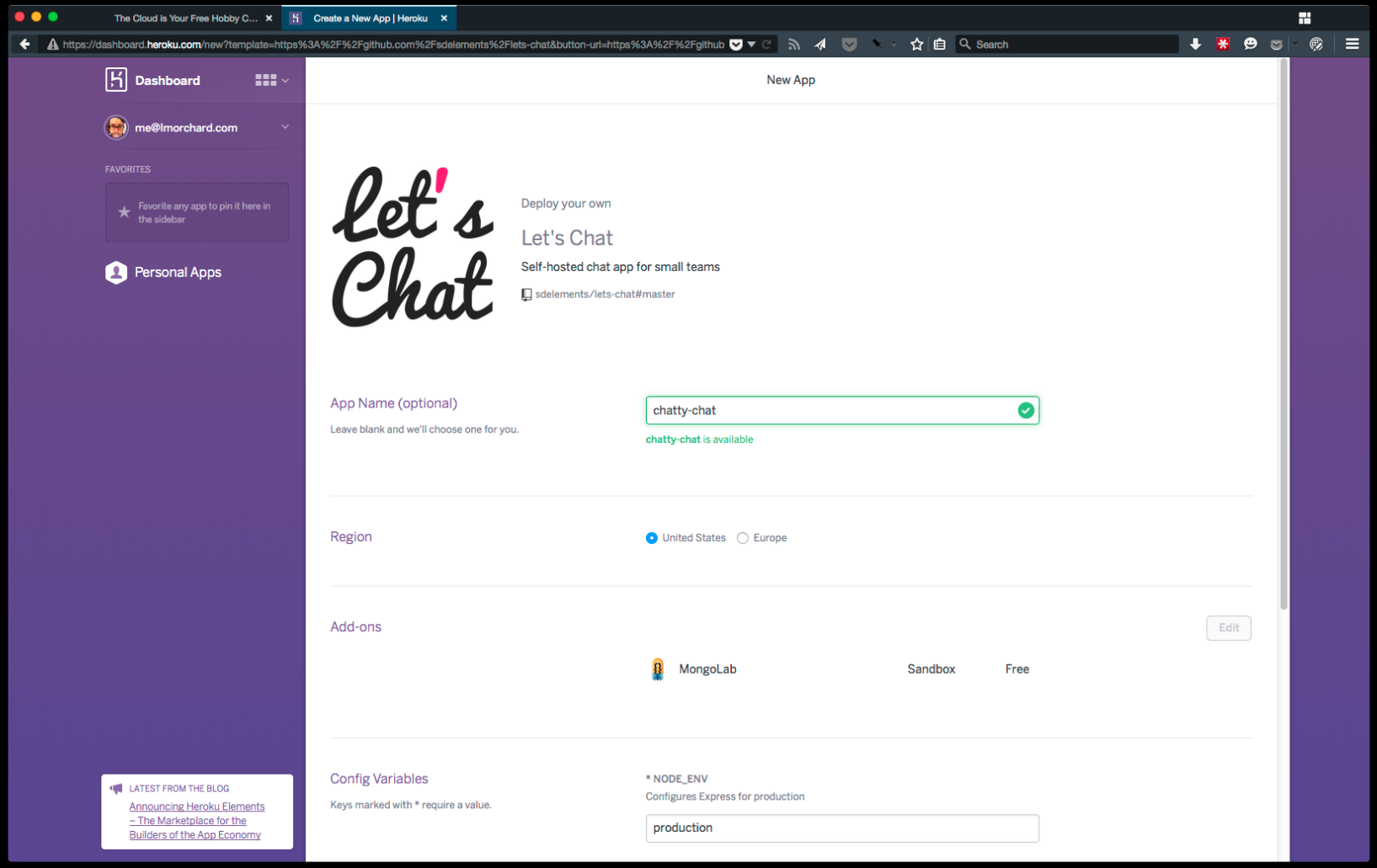
Travis CI

Free as in beer
Works with GitHub
Runs your tests (& other code) on demand
Slow during peak usage hours

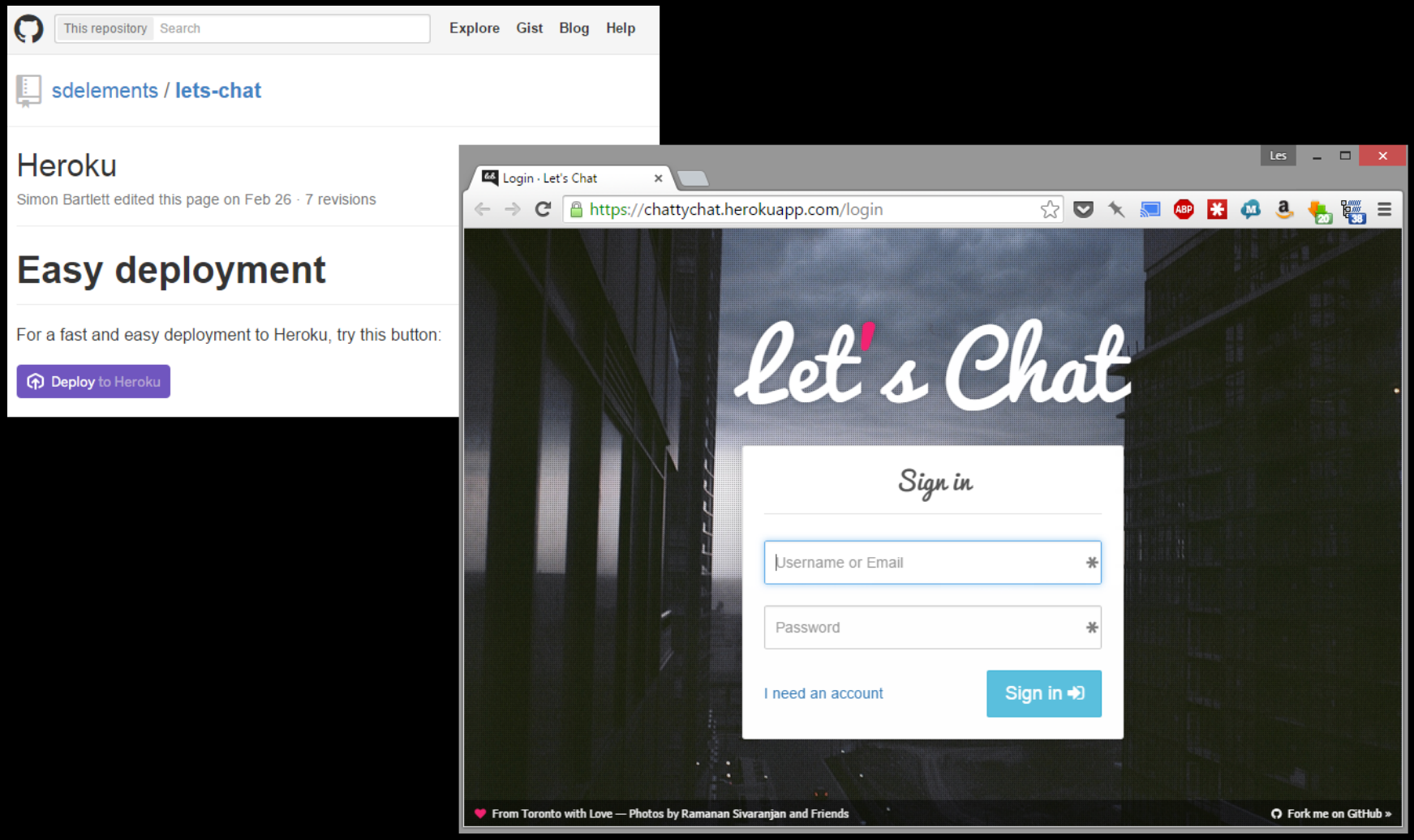
Heroku

Heroku + GitHub = <3

Heroku + GitHub = <3



Heroku + GitHub = <3



Heroku + GitHub + Travis CI = <3<3<3

Travis CI Blog Documentation

Heroku Deployment

Travis CI can automatically deploy your Heroku application after a successful build.

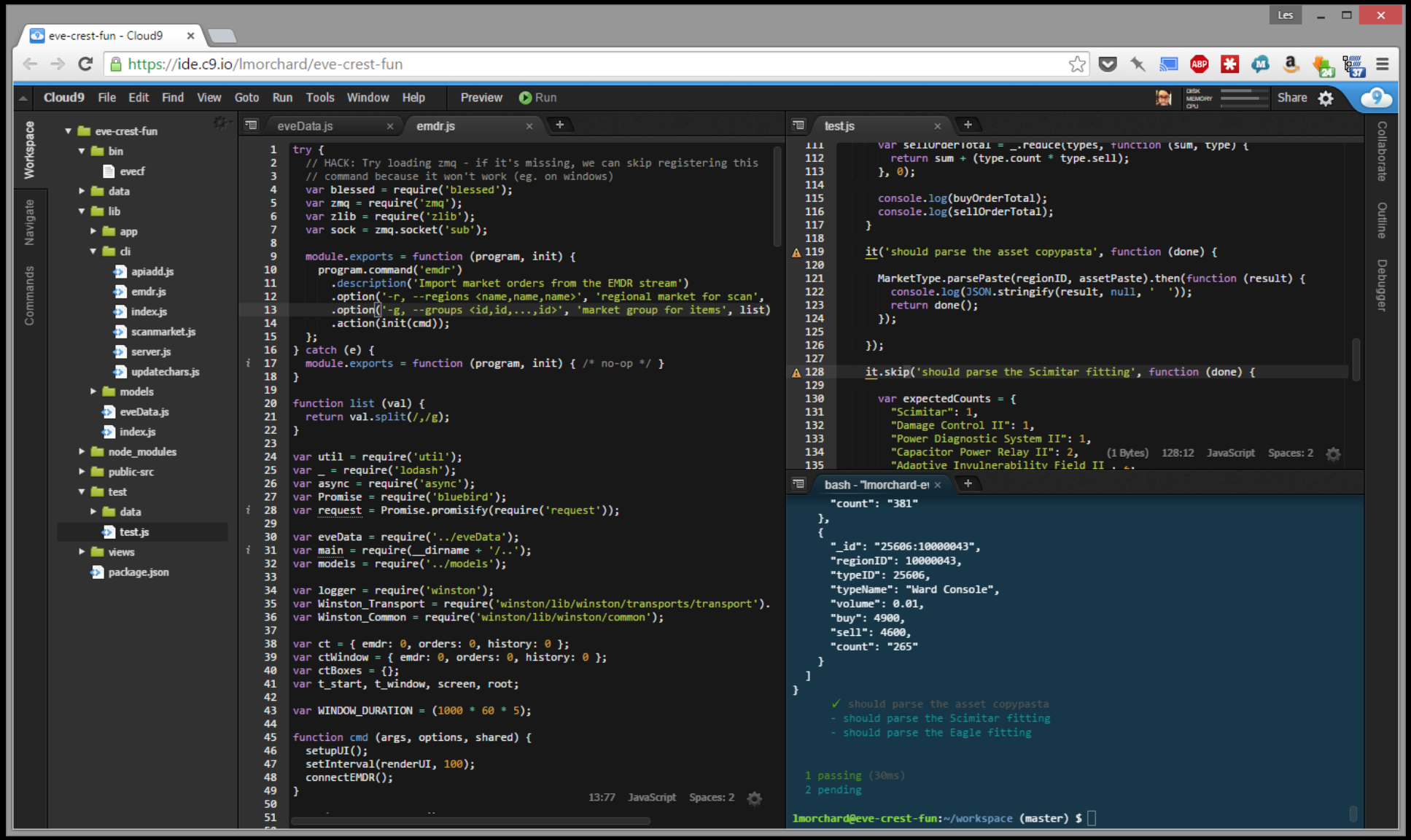
For a minimal configuration, all you need to do is add the following to your `.travis.yml`:

```
deploy:
  provider: heroku
  api_key: "YOUR API KEY"
```

Heroku

Free as in beer
Works with GitHub & Travis CI
Your code works elsewhere
Free apps shut down after inactivity

Cloud9


eve-crest-fun - Cloud9
https://ide.c9.io/lmorchard/eve-crest-fun
Cloud9 File Edit Find View Goto Run Tools Window Help
Preview
Run
Share
Workspace
Navigate
Commands
Collaborate
Outline
Debugger
eve-crest-fun
bin
evecf
data
lib
app
cli
apiadd.js
emdr.js
index.js
scanmarket.js
server.js
updatechars.js
models
eveData.js
index.js
node_modules
public-src
test
data
test.js
views
package.json
eveData.js
emdr.js
test.js
bash - "lmorchard-e
13:77 JavaScript Spaces: 2
(1 Bytes) 128:12 JavaScript Spaces: 2
"count": "381"
"_id": "25606:10000043",
"regionID": 10000043,
"typeID": 25606,
"typeName": "Ward Console",
"volume": 0.01,
"buy": 4900,
"sell": 4600,
"count": "265"
✓ should parse the asset copypasta
- should parse the Scimitar fitting
- should parse the Eagle fitting
1 passing (30ms)
2 pending
lmorchard@eve-crest-fun:~/workspace (master) $

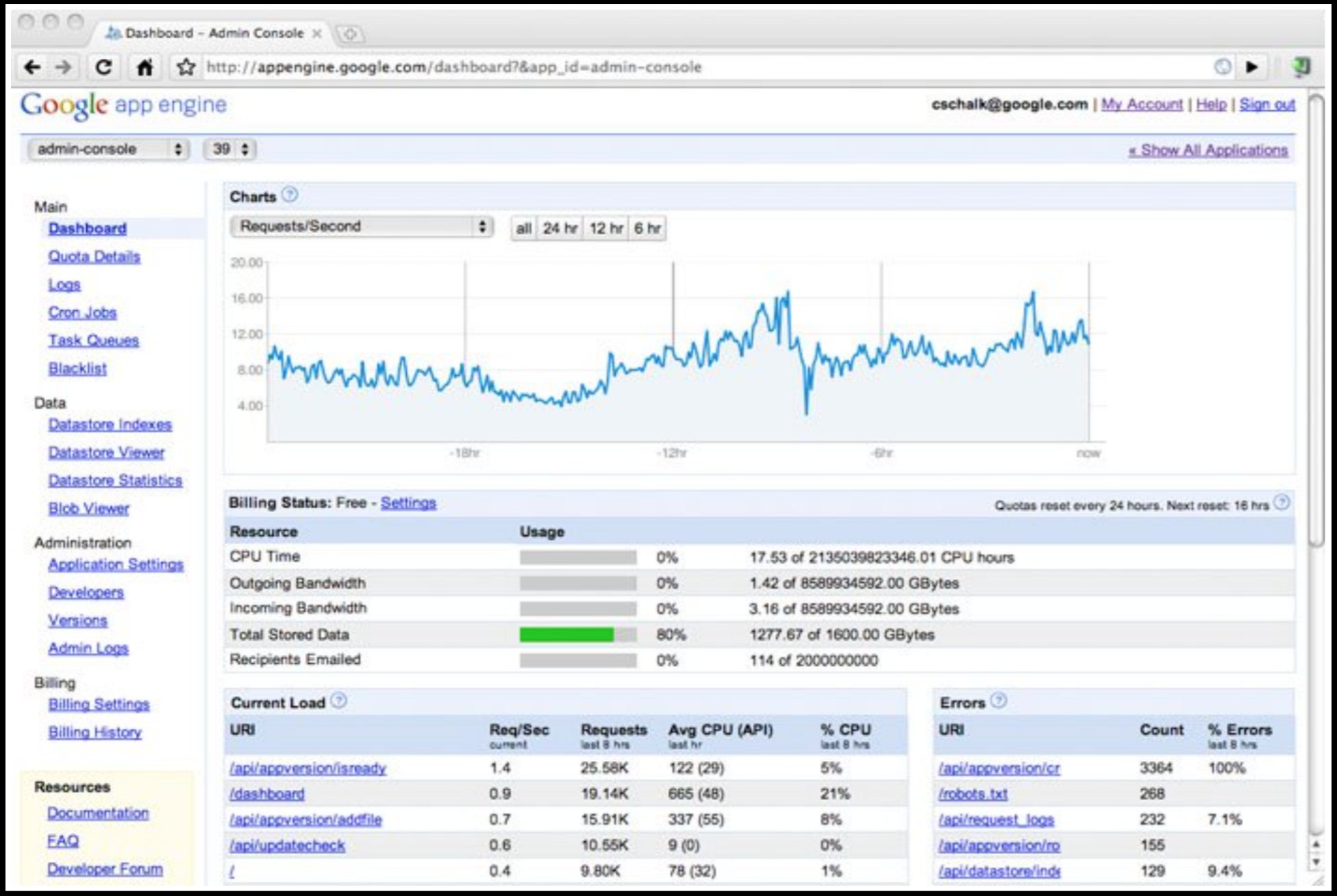
Cloud9

Free as in beer
Works with GitHub & Travis CI & Heroku
Your code works elsewhere
Free Linux machine is very tiny

The story so far...

Free as in beer
You can pay for better support
Works well with others
Your can take your stuff with you

Google App Engine

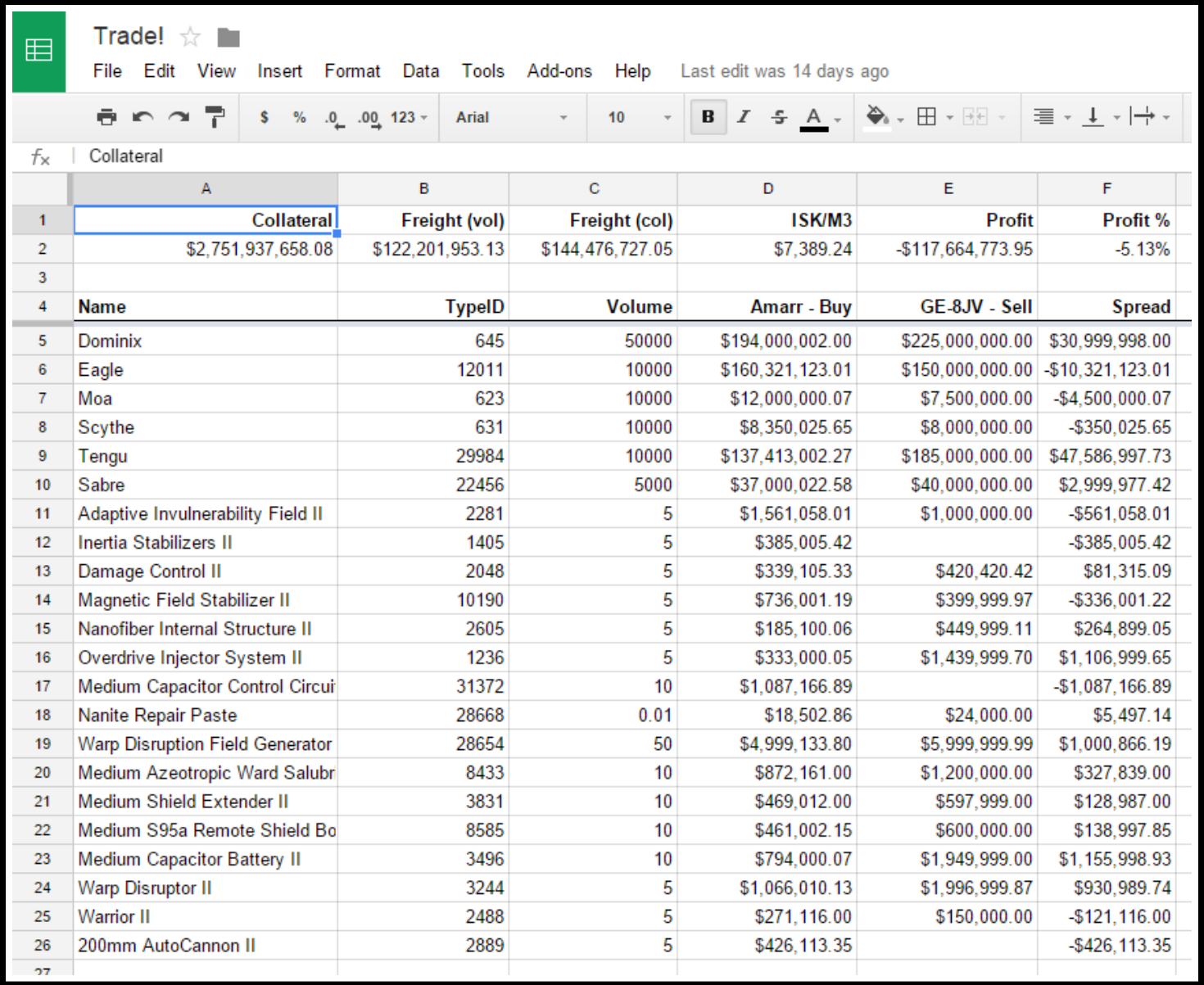

Dashboard - Admin Console
http://appengine.google.com/dashboard?&app_id=admin-console
Google app engine
cschalk@google.com | My Account | Help | Sign out
admin-console
39
« Show All Applications
Main
Dashboard
Quota Details
Logs
Cron Jobs
Task Queues
Blacklist
Data
Datastore Indexes
Datastore Viewer
Datastore Statistics
Blob Viewer
Administration
Application Settings
Developers
Versions
Admin Logs
Billing
Billing Settings
Billing History
Resources
Documentation
FAQ
Developer Forum
Charts
Requests/Second
all
24 hr
12 hr
6 hr
20.00
16.00
12.00
8.00
4.00
-18hr
-12hr
-6hr
now
Billing Status: Free - Settings
Quotas reset every 24 hours. Next reset: 16 hrs
Resource
Usage
CPU Time
0%
17.53 of 2135039823346.01 CPU hours
Outgoing Bandwidth
0%
1.42 of 8589934592.00 GBytes
Incoming Bandwidth
0%
3.16 of 8589934592.00 GBytes
Total Stored Data
80%
1277.67 of 1600.00 GBytes
Recipients Emailed
0%
114 of 2000000000
Current Load
URI
Req/Sec
current
Requests
last 8 hrs
Avg CPU (API)
last hr
% CPU
last 8 hrs
/api/appversion/isready
1.4
25.58K
122 (29)
5%
/dashboard
0.9
19.14K
665 (48)
21%
/api/appversion/addfile
0.7
15.91K
337 (55)
8%
/api/updatecheck
0.6
10.55K
9 (0)
0%
/
0.4
9.80K
78 (32)
1%
Errors
URI
Count
% Errors
last 8 hrs
/api/appversion/cr
3364
100%
/robots.txt
268
/api/request_logs
232
7.1%
/api/appversion/ro
155
/api/datastore/inde
129
9.4%

Google App Engine

Free as in beer
Self-contained silo of services
Your code only works on GAE
There are a few open source alternatives
There are only a few open source alternatives

Google Docs

```
=ImportXML("http://api.eve-marketdata.com/api/price_type_solarsystem_buy_max.xml?
type_id="&JOIN(",",$B5:$B30)&"&solarsystem_id=30002187", "/emd/val")
```



Trade!

File Edit View Insert Format Data Tools Add-ons Help Last edit was 14 days ago

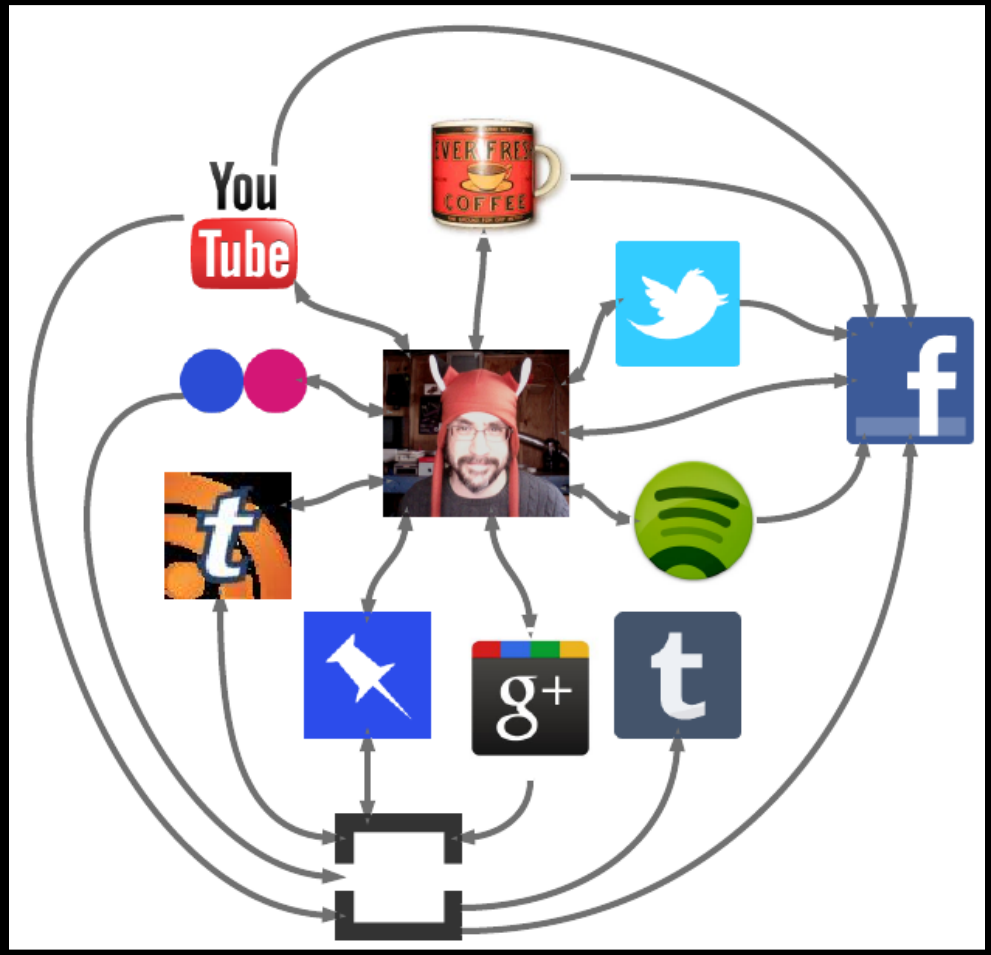
Collateral

	A	B	C	D	E	F
1	**Collateral**	**Freight (vol)**	**Freight (col)**	**ISK/M3**	**Profit**	**Profit %**
2	$2,751,937,658.08	$122,201,953.13	$144,476,727.05	$7,389.24	-$117,664,773.95	-5.13%
3						
4	**Name**	**TypeID**	**Volume**	**Amarr - Buy**	**GE-8JV - Sell**	**Spread**
5	Dominix	645	50000	$194,000,002.00	$225,000,000.00	$30,999,998.00
6	Eagle	12011	10000	$160,321,123.01	$150,000,000.00	-$10,321,123.01
7	Moa	623	10000	$12,000,000.07	$7,500,000.00	-$4,500,000.07
8	Scythe	631	10000	$8,350,025.65	$8,000,000.00	-$350,025.65
9	Tengu	29984	10000	$137,413,002.27	$185,000,000.00	$47,586,997.73
10	Sabre	22456	5000	$37,000,022.58	$40,000,000.00	$2,999,977.42
11	Adaptive Invulnerability Field II	2281	5	$1,561,058.01	$1,000,000.00	-$561,058.01
12	Inertia Stabilizers II	1405	5	$385,005.42		-$385,005.42
13	Damage Control II	2048	5	$339,105.33	$420,420.42	$81,315.09
14	Magnetic Field Stabilizer II	10190	5	$736,001.19	$399,999.97	-$336,001.22
15	Nanofiber Internal Structure II	2605	5	$185,100.06	$449,999.11	$264,899.05
16	Overdrive Injector System II	1236	5	$333,000.05	$1,439,999.70	$1,106,999.65
17	Medium Capacitor Control Circui	31372	10	$1,087,166.89		-$1,087,166.89
18	Nanite Repair Paste	28668	0.01	$18,502.86	$24,000.00	$5,497.14
19	Warp Disruption Field Generator	28654	50	$4,999,133.80	$5,999,999.99	$1,000,866.19
20	Medium Azeotropic Ward Salubr	8433	10	$872,161.00	$1,200,000.00	$327,839.00
21	Medium Shield Extender II	3831	10	$469,012.00	$597,999.00	$128,987.00
22	Medium S95a Remote Shield Bo	8585	10	$461,002.15	$600,000.00	$138,997.85
23	Medium Capacitor Battery II	3496	10	$794,000.07	$1,949,999.00	$1,155,998.93
24	Warp Disruptor II	3244	5	$1,066,010.13	$1,996,999.87	$930,989.74
25	Warrior II	2488	5	$271,116.00	$150,000.00	-$121,116.00
26	200mm AutoCannon II	2889	5	$426,113.35		-$426,113.35

Google Docs

Free as in beer
Works with almost any web service
My spreadsheets are locked-in
Ad supported
Paid "Apps for Work" option available

IFTTT



IFTTT

IFTTT

My Recipes | Browse | Channels | lmorchard

My Recipes

IF | Do | Published | Favorites

IF Recipes run automatically in the background.

Create a Recipe

Filter

created February 10, 2015
last run April 09, 2015
run 5 times

If new feed item from https://medium.com /feed/@lmorchard/has-recommended, then add a public bookmark to deusx

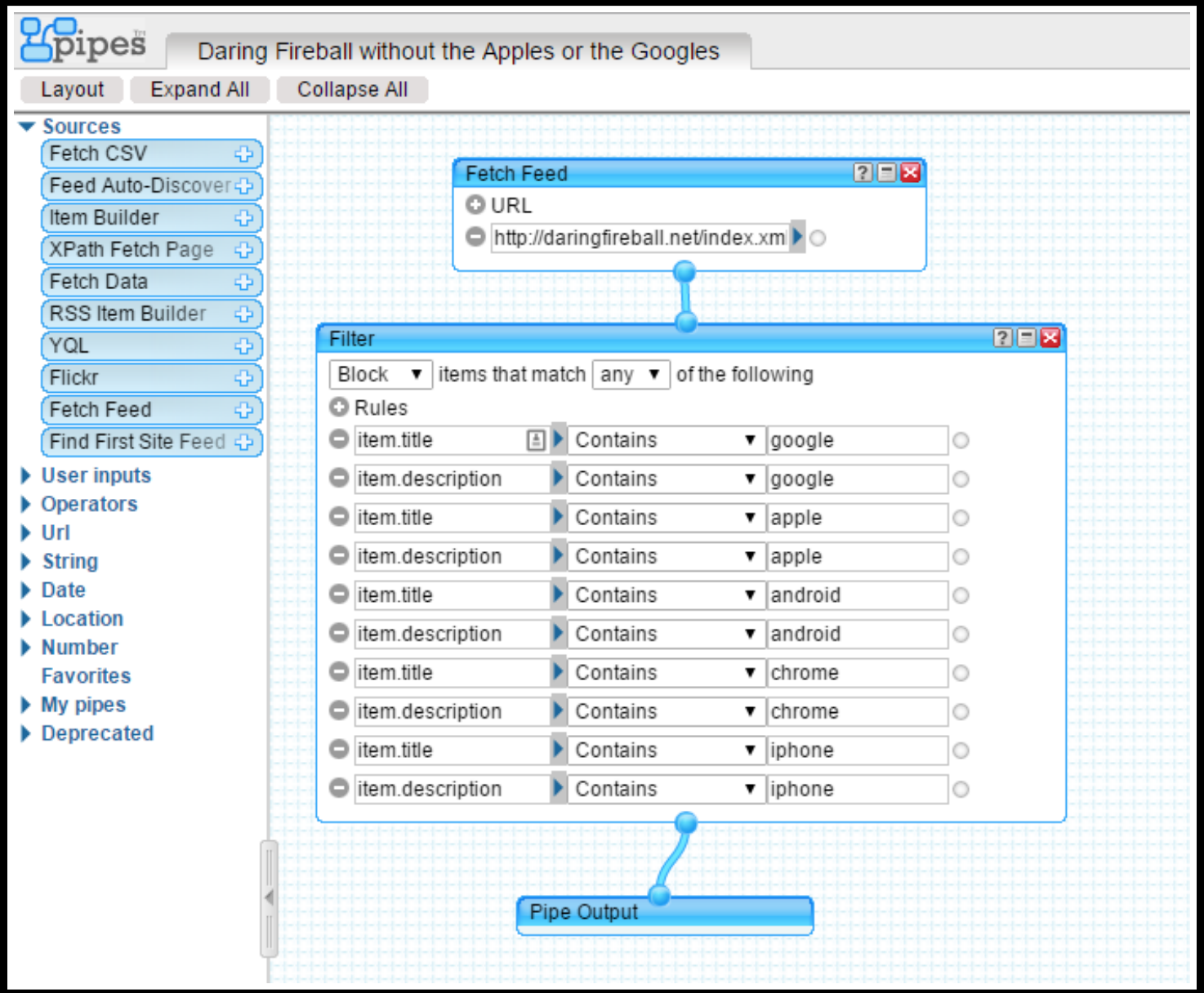
created April 03, 2014
last run October 18, 2014
run 51 times

tt-rss starred to pocket read later

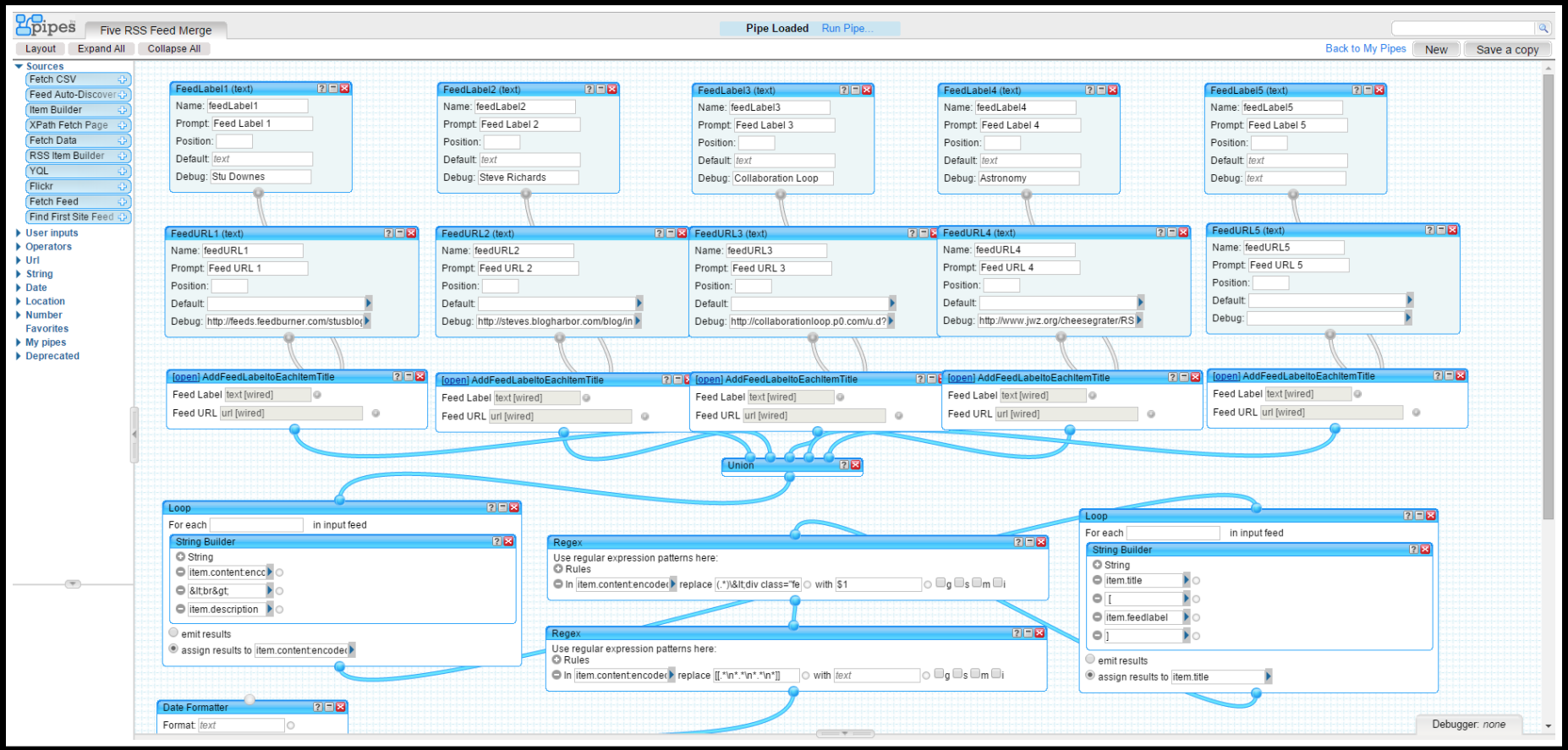
IFTTT

Free as in beer
Works with 150+ services
My recipes are locked-in
No paid support option

Yahoo! Pipes


pipes
Daring Fireball without the Apples or the Googles
Layout
Expand All
Collapse All
Sources
Fetch CSV
Feed Auto-Discover
Item Builder
XPath Fetch Page
Fetch Data
RSS Item Builder
YQL
Flickr
Fetch Feed
Find First Site Feed
User inputs
Operators
Url
String
Date
Location
Number
Favorites
My pipes
Deprecated
Fetch Feed
URL
http://daringfireball.net/index.xm
Filter
Block
items that match
any
of the following
Rules
item.title Contains google
item.description Contains google
item.title Contains apple
item.description Contains apple
item.title Contains android
item.description Contains android
item.title Contains chrome
item.description Contains chrome
item.title Contains iphone
item.description Contains iphone
Pipe Output

Yahoo! Pipes


pipes
Five RSS Feed Merge
Pipe Loaded
Run Pipe...
Layout
Expand All
Collapse All
Back to My Pipes
New
Save a copy
Sources
Fetch CSV
Feed Auto-Discovery
Item Builder
XPath Fetch Page
Fetch Data
RSS Item Builder
YQL
Flickr
Fetch Feed
Find First Site Feed
User inputs
Operators
Url
String
Date
Location
Number
Favorites
My pipes
Deprecated
FeedLabel1 (text)
Name: feedLabel1
Prompt: Feed Label 1
Position:
Default: text
Debug: Stu Downes
FeedLabel2 (text)
Name: feedLabel2
Prompt: Feed Label 2
Position:
Default: text
Debug: Steve Richards
FeedLabel3 (text)
Name: feedLabel3
Prompt: Feed Label 3
Position:
Default: text
Debug: Collaboration Loop
FeedLabel4 (text)
Name: feedLabel4
Prompt: Feed Label 4
Position:
Default: text
Debug: Astronomy
FeedLabel5 (text)
Name: feedLabel5
Prompt: Feed Label 5
Position:
Default: text
Debug: text
FeedURL1 (text)
Name: feedURL1
Prompt: Feed URL 1
Position:
Default:
Debug: http://feeds.feedburner.com/stusblog
FeedURL2 (text)
Name: feedURL2
Prompt: Feed URL 2
Position:
Default:
Debug: http://steves.blogharbor.com/blog/in
FeedURL3 (text)
Name: feedURL3
Prompt: Feed URL 3
Position:
Default:
Debug: http://collaborationloop.p0.com/u.d?
FeedURL4 (text)
Name: feedURL4
Prompt: Feed URL 4
Position:
Default:
Debug: http://www.jwz.org/cheesegrater/RS
FeedURL5 (text)
Name: feedURL5
Prompt: Feed URL 5
Position:
Default:
Debug:
[open] AddFeedLabeltoEachItemTitle
Feed Label text [wired]
Feed URL url [wired]
Union
Loop
For each
in input feed
String Builder
String
item.content:encc

item.description
emit results
assign results to item.content:encoder
Regex
Use regular expression patterns here:
Rules
In item.content:encoder
replace (.*)\<div class="fe
with $1
Regex
Use regular expression patterns here:
Rules
In item.content:encoder
replace [[.*\n*.*\n*.*\n*]]
with text
Loop
For each
in input feed
String Builder
String
item.title
[
item.feedlabel
]
emit results
assign results to item.title
Date Formatter
Format: text
Debugger: none

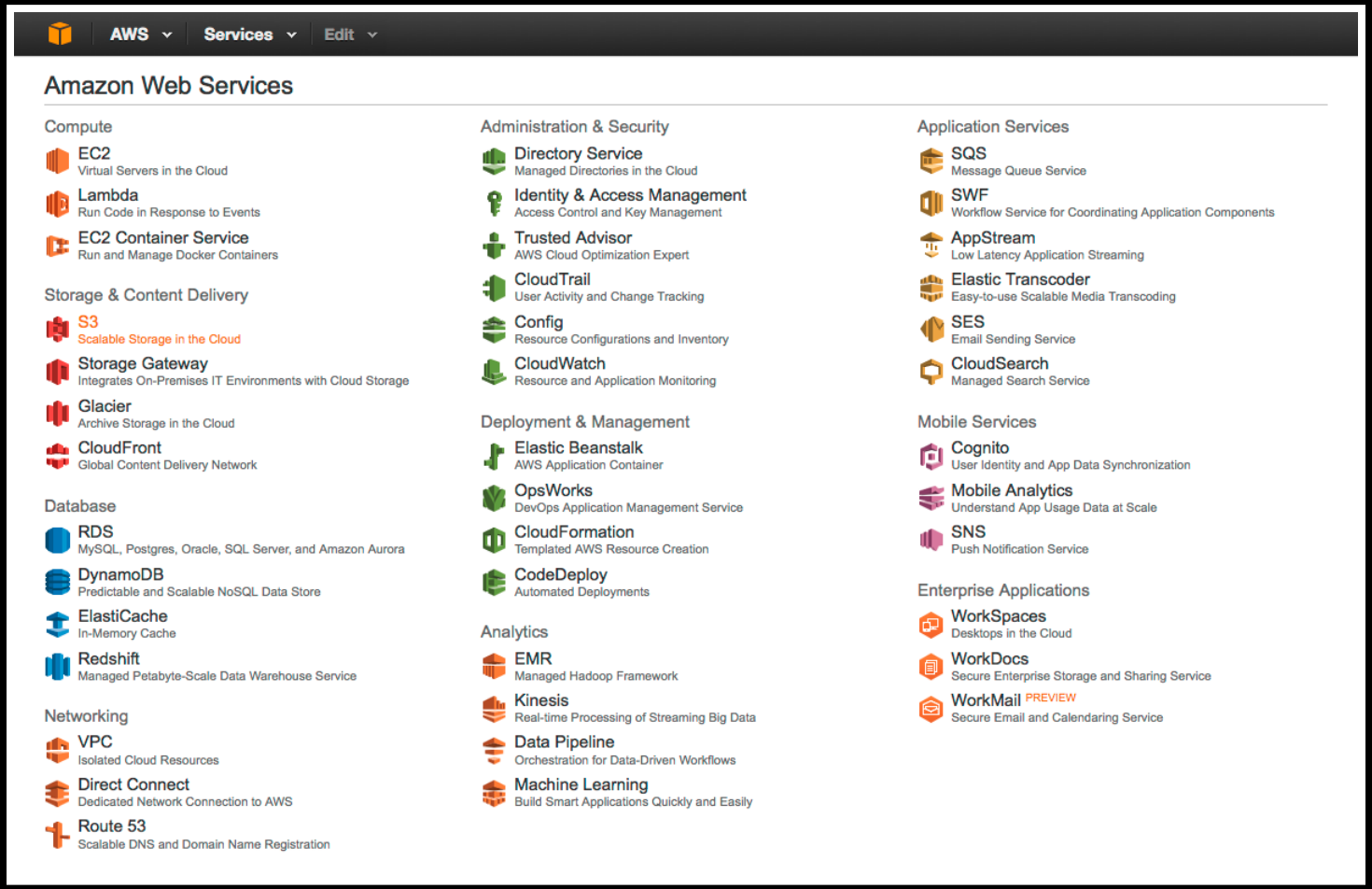
Yahoo! Pipes

Les Orchard
@lmorchard
How is Yahoo! Pipes still in operation? I mean, I'm still using it, but how is it still there?
RETWEETS
5
FAVORITES
3
8:33 PM - 21 Apr 2015
Reply to @lmorchard
Daniel Raffel @danielraffel · 2h
@lmorchard shhhhh
1
2
sungo @sungo · 2h
@lmorchard Quiet! They'll notice that VM is still online.
1
Dave Townsend @EnglishMossop · 2h
@lmorchard they built them pipes to last back then
1

Yahoo! Pipes

Free as in beer
Works with RSS feeds everywhere
Pipes are locked-in
No paid support option
Does Yahoo! even know it still exists?

Amazon Web Services



Amazon Web Services

Amazon Web Services

blog.lmorchard.com It's all spinning wheels and self-doubt until the first pot of coffee.

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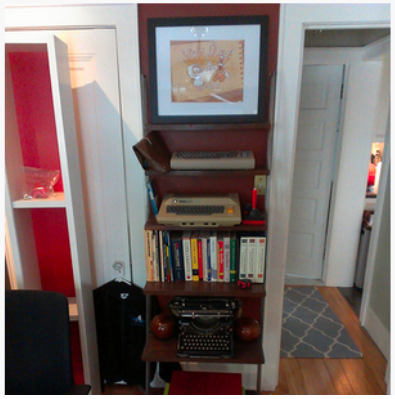
Parsec Patrol Diaries: Why a Game?

html5, parsecpatrol, webdev

I decided to start writing a retro space game for the web, because I thought it might be a good way to exercise a lot of interesting technologies and have fun to boot. You know, like how sending rockets into space yields astronaut ice cream & anti-shock trousers back down on Earth. But, I've also wanted to make games all the way back to my Atari 2600, Commodore 64, and Apple][days – because Warren Robinett is my hero.



About me

Hi there! My name is Les Orchard. I'm a {web,mad,computer} scientist; home{brew,roast}er; and {tech,scifi} writer with a habit of serial enthusiasm working for the Mozilla Corporation living near Detroit, Michigan, USA.

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Wrapping up