Things I've learnt from my Hacker News web app

Hello, I'm Chee Aun.

- Hardcore web developer.

- Created quite a bunch of fun little side projects.

- Tweet a lot of interesting stuff at [@cheeaun](#)

- Occasionally read Hacker News.

What is
Hacker News?

1. ▲ **1/13 noon at MIT: Protest wrongful prosecution of Aaron Swartz** (maps.google.com)
   210 points by hendler 4 hours ago | 31 comments

2. ▲ **Jonathan James** (wikipedia.org)
   232 points by will_brown 7 hours ago | 87 comments

3. ▲ **Official Statement from the family and partner of Aaron Swartz** (rememberaaronsw.tumblr.com)
   540 points by mxfh 11 hours ago | 121 comments

4. ▲ **Prosecutor as bully** (lessig.tumblr.com)
   986 points by guan 17 hours ago | 239 comments

5. ▲ **The Truth About Aaron Swartz's "Crime"** (unhandled.com)
   643 points by secalex 13 hours ago | 68 comments

6. ▲ **A typical programmers toolbox** (jeremymorgan.com)
   11 points by celticbadboy 48 minutes ago | 7 comments

7. ▲ **Aaron Swartz commits suicide** (mit.edu)
   1848 points by bfaviero 1 day ago | 524 comments

8. ▲ **Petition the Whitehouse to remove Carmen Ortiz from office** (whitehouse.gov)
   613 points by olefoo 14 hours ago | 159 comments

9. ▲ **Facebook Has Something Mysterious to Show Everyone** (wired.com)
   9 points by marcieoum 41 minutes ago | 1 comment

10. ▲ **Aaron Swartz, American hero** (washingtonpost.com)
    158 points by binarybits 7 hours ago | 10 comments

11. ▲ **Three Felonies A Day - How The Feds Target The Innocent** (harveysilverglate.com)
    91 points by jakewalker 5 hours ago | 25 comments

12. ▲ **Aaron is dead. From: Tim Berners-Lee** (w3.org)
    511 points by edsu 16 hours ago | 29 comments

13. ▲ **If I get hit by a truck...** (aaronsw.com)
    581 points by artursapek 18 hours ago | 45 comments

14. ▲ **My Aaron Swartz, whom I loved** (quinnnorton.com)
    355 points by rufo 14 hours ago | 32 comments

15. ▲ **$10,000: The Aaron Swartz Memo** news.ycombinator.com
    21 points by thinkcomp 2 hours ago | discuss

16. ▲ **JSTOR Statement on Aaron Swartz** (jstor.org)
    198 points by darrellsilver 11 hours ago | 38 comments

I built HackerWeb.

HackerWeb

- A simple read-only web app client for Hacker News.

- Mobile-optimized, iOS-optimized.

- Works on all modern browsers, *hopefully*.

- Check it out at hackerwebapp.com

1. **The Next Big Language, Again?**
   indiegogo.com
   46 points by fredwu
   1 hour ago · 14 comments ❯

2. **On 81st birthday, Oregon man gives company to employees**
   seattletimes.com
   55 points by cfontes
   2 hours ago · 7 comments ❯

3. **Inside Google Spanner, the Largest Single Database on Earth**
   wired.com
   52 points by Libertatea
   2 hours ago · 21 comments ❯

4. **The Founder's Lie About Comfort Zones**
   klinger.io
   62 points by andreasklinger
   3 hours ago · 18 comments ❯

5. Arduino creator raises doubts

Inside Google Spanner, the Largest Single Database on Earth
wired.com
54 points by Libertatea
2 hours ago · 21 comments
↱ news.ycombinator.com/item?id=4831566

flyinglizard   1 hour ago

What kind of accuracy exists between servers inside the same data center? I assume there are some internal delays (OS stacks, switches, etc) when synchronizing time inside a server group.

I mean, even if you had a picosecond accurate clock available for use inside a server farm, you would still need a way to query it with a known (not necessarily zero; just known) latency to synchronize several machines. Servers are not known latency machines (unless specialized hardware is involved).

1. **The Next Big Language, Again?**
indiegogo.com
50 points by fredwu 1 hour ago · 17 comments

2. **On 81st birthday, Oregon man gives company to employees**
seattletimes.com
58 points by cfontes 2 hours ago · 7 comments

3. **Inside Google Spanner, the Largest Single Database on Earth**
wired.com
54 points by Libertatea
2 hours ago · 21 comments

4. **The Founder's Lie About Comfort Zones**
klinger.io
63 points by andreasklinger
4 hours ago · 18 comments

5. **Arduino creator raises doubts about Kickstarter, Trademarks and Lies**
arduino.cc
47 points by lucatironi
3 hours ago · 11 comments

6. **CIA's guide on how to completely sabotage your communication (p. 28)**
cia.gov
68 points by EiZei 4 hours ago · 24 comments

7. **60% of Successful Entrepreneurs are Married with Children**

Inside Google Spanner, the Largest Single Database on Earth

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→ news.ycombinator.com/item?id=4831566

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How is that accomplished?

And what happens when two transactions happen below the system accuracy limit? (like two transactions pertaining to the same data, 20ns apart, in different servers; impossible to order).

Surely they have solved this, I just wonder how.

↳ **dhotson**   1 hour ago

Looking at the paper it looks like instead of dealing with exact moments in time (eg timestamps) they have ranges (they call them intervals).

From the Spanner paper: "TrueTime explicitly represents time as a TTinterval, which is an interval with bounded time uncertainty (unlike standard time interfaces that give clients no notion of uncertainty)"

By representing time as intervals you can tell if one interval is definitely before or after another interval. If the intervals overlap however, then it means there's some uncertainty. I haven't quite got through the paper far enough to undersand how this kind of thing is handled. :-)

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Cutting-edge web tech

-webkit-overflow-scrolling: touch, localStorage, sessionStorage, CORS, Application Cache, CSS Animation, CSS Media Queries, Flexible Box Layout (old spec), requestAnimationFrame, Web Workers, and more...

Must-reads

- How I built the Hacker News mobile web app
- How I built the Hacker News mobile web app, Part 2
- Introducing HackerWeb

Focus on 3 things

1. -webkit-overflow-scrolling: touch (Momentum scrolling)
2. CORS (Cross-Origin Resource Sharing)
3. Application Cache

1

Momentum scrolling

-webkit-overflow-scrolling: touch

- iOS-specific, for now. No official spec.

- Introduced since iOS5 (October 2011).

- For `overflow:scroll` elements.

Before iOS5

- Two fingers to scroll `overflow:scroll` elements.

- Unintuitive and undiscoverable.

- Scrolling libs to the rescue: iScroll, Scrollability, TouchScroll, FTScroller, etc

Starting from iOS5

- One finger to scroll `overflow:scroll` elements.
- `-webkit-overflow-scrolling: touch` adds momentum to it.
- Scrolling libs are still in used due to bugs/quirks.
- Bug: [Can't scroll to top when tapping status bar](#)

Demo time

- Normal scrolling: jsbin.com/uhiyac/1
- Momentum scrolling: jsbin.com/uhiyac/2

Resources

- [Overthrow](#) – `overflow:auto` polyfill
- [jQuery Mobile: touchOverflow](#)
- [Nested divs with overflow:touch](#)

2

CORS

Before CORS

- Use JSONP.
- Request data from a server in a different domain.
- Example: json-head.appspot.com/?url=http://www.google.com/&callback=test
- A "hack".

CORS

- A [W3C Working Draft](#).

- Allow JavaScript to make cross-domain requests.

- An interplay between the server and the client.

```
Access-Control-Allow-Origin: *
```

Use CORS today!

Who implements CORS?

- Google APIs
- Amazon S3
- YouTube API
- Dropbox API
- GitHub v3 API
- ...and more

Resources

- Enable CORS
- CORS isn't just for XHR
- Can I use CORS?
- Using CORS - HTML5 Rocks
- CORS Proxy

3

Application Cache

AppCache

- *Easily* make your web site/app offline.

- A working draft.

- A douchebag.

Super simple steps

Step 1.

```
<html manifest="manifest.appcache">
```

Step 2.

```
CACHE MANIFEST
index.html
stylesheet.css
…
```

Versioning

```
CACHE MANIFEST
# 2013-01-21:v1

index.html
stylesheet.css
…
```

28943405688850837%2Fstate%2Fcom.google%2Freading-l

An updated version of Google Reader is available. **Refresh**

Mark all as read ▾ Refresh View settings... ▾

Apple Rechargable Batteries Unboxing and Review - I com

Reeddit – Reddit web app client

frontPage

Reeddit updated. Click to reload

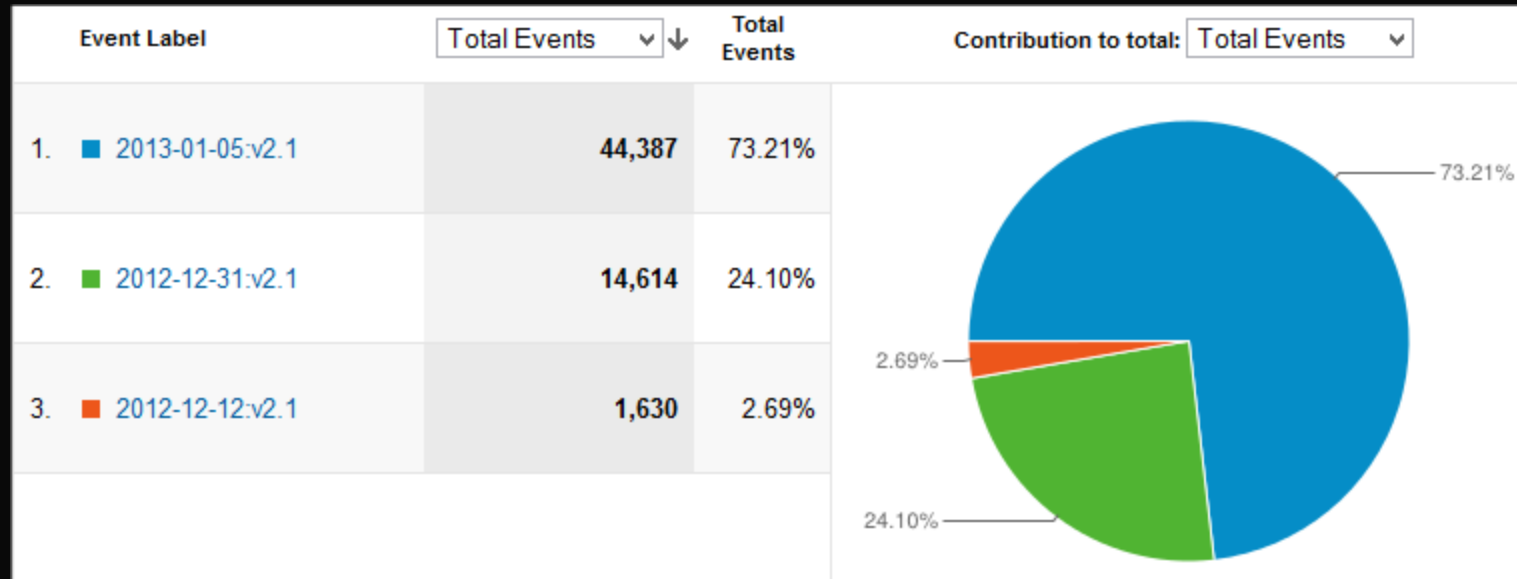I knew it had been too quiet...
imgur.com
funny

went to walmart and
noted the disgusting beta
fish containers. then i
cleaned them without

Track AppCache versions

Use Google Analytics' event tracking

Make local dev easier

- Serve 404 for .appcache files
- For HackerWeb, I use `node server.js -noappcache`

Resources

- A Beginner's Guide to Using the Application Cache
- Fixing Application Cache Community Group
- Appcache Facts

More resources

- Moobile – new mobile application framework built on MooTools
- Ratchet – Prototype iPhone apps with simple HTML, CSS and JS components
- HTML5 Rocks
- Can I use…

Thanks

- cheeaun.com

- twitter.com/cheeaun

- github.com/cheeaun

Images used in this presentation

- flickr.com/photos/diathesis/2262012694/