

# THE BROWSER IS DEAD...

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# ...LONG LIVE THE BROWSER!

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# The gangs

1990: Tim Berners-Lee - (WorldWideWeb)

1993: NCSA – Mosaic

1994: Netscape - Navigator

1995: Microsoft - Internet Explorer

1996: Opera – Opera

1997: Netscape - Communicator

...

2004: Mozilla - Firefox

2008: Google - Chrome

# The tech

1991-1995: HTTP, HTML, cookies, SSL, JavaScript

1996: Java applets, Flash, XML

1997: HTML 4, CSS

1999: AJAX (XMLHttpRequest)

2001-2006: SVG, Canvas

*<http://www.evolutionoftheweb.com>*

# The tech

2008-now – *Everything else!*

- Graphics: 2D and 3D transforms, WebGL, CSS3
- Client-side storage: localStorage and indexedDB
- Server-sent I/O: WebSockets and EventSource
- ECMAScript: fast JavaScript and DOM manipulation

<http://www.evolutionoftheweb.com>

# Your humble narrator

1987-1991 – Pyramid OS/x: elm, telnet, ftp

1991-1993 – Usenet

1992 – First time I saw the worldwide web

Me: meh!

*oops*

1997 – First time I saw Enterprise Java

Me: meh!

*just saying...*

# What is a browser for?

Rendering J2EE servlet output

Displaying `<blink>`brochure web sites`<marquee>`

Then suddenly...

- Google Maps disrupts streetmap.co.uk
- GMail disrupts HotMail and Yahoo!
- Google Docs disrupts Microsoft Office

*For an ad company, Google really knows its tech!*

# Rule 1: Everything is asynchronous

Request-response is just selfish programming

– “You can

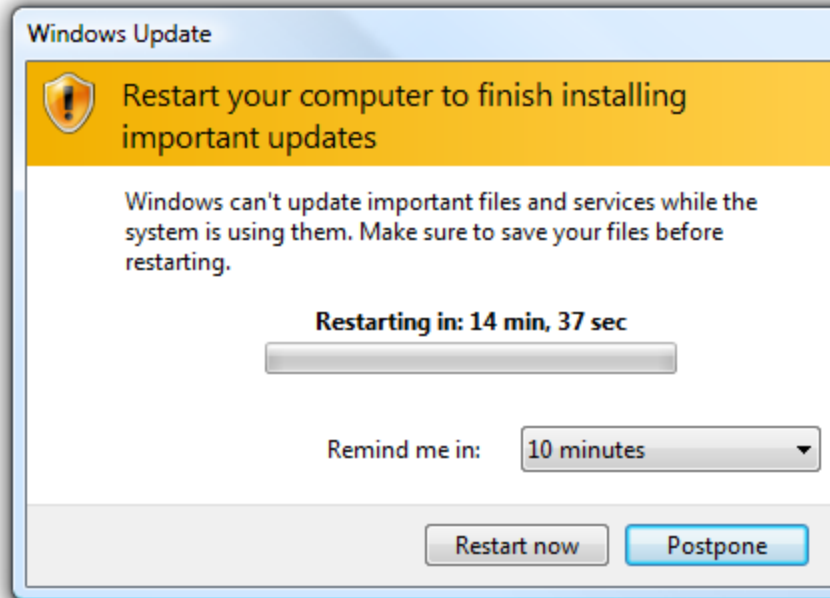
tant”

Corollary:

- Modal d
- Surprise

Wild-assed t

- That’s why people like node.js (plus RINSWAN)



*Assume you're not the most important thing*



# Let's look at that response

The server sends it to you

- maybe you asked for it
- maybe it just cares about you 😊

It's no use unless you can see it

So the browser renders it for you

```
<!DOCTYPE html>
<html>
<head>
<title>GOTO Aarhus venue guide</title>
<script src="/jquery/jquery-1.8.2.js"></script>
<script src="/summary.js"></script>
<script>
$(function fetchSummaries() {
    $.getJSON('/summaries', setSummaries);
});
</script>
</head>
<body>
<h1>Local Area Guide <small>GOTO Aarhus</small></h1>
<section id="summary">
    <ul>
        <li><a href="http://bobscafe.dk">Bob's Cafe</a></li>
    </ul>
</section>
<section id="templates" style="display: none !important;">
    <li class="summary-item"><a class="url"><span
class="description"></span></a></li>
</section>
</body>
</html>
```

# Ceci n'est pas un page

# A brief history of templating

J2EE had JSP, then velocity, stringtemplate

- compile into a function that emits HTML

Rails had ERB, moustache, partials

- compile into a function that emits HTML

Django has the Django template system

- compiles into a function that emits HTML

# We try to get better at templating

*We're combining the template and the data  
on the server*

## Separation of concerns 101

# Rule 2: The DOM *is* the template

Let's have an example

*jQuery knows about DOMs so you don't have to!*

# So where does that leave the server?

*Serving data!*

And a new generation of app servers is born:

- sinatra
- flask
- webbit
- express, connect

# Rule 3: the server serves data

Not objects

Certainly not “transfer objects”

Let's have an example

*JSON = JavaScript **Object** Notation?*

# Rule 3: the server serves data

Not objects

Certainly not “transfer objects”

Let’s have an example

*JavaScript Structured Data Notation*



But it still *looks* a bit 1999...

Remember I said I was rubbish at design?

Let's have an example

*Bootstrap knows about styling so you don't have to!*

# Rule 4: Someone already solved it

## The DOM

- jQuery, sizzle, zepto
- knockout, backbone, angular

## JavaScript

- underscore

## CSS

- bootstrap, skeleton, 960grid

# I didn't talk about...

URLs and history

The browser as IDE

The community

Ubiquitous JavaScript

# So what have I learned?

The DOM is a template – learn to use it!

Everything is an event

You can work truly outside-in

It pays to be late to the party 😊

# Go code web apps!

@tastapod

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