

How to improve the web

A presentation on web technologies

Stuart Langridge, @media Ajax 2007

How to
DESTROY
the Web

How to
DESTROY
the Web

ADVANCED COURSE



hey! this is

Generator

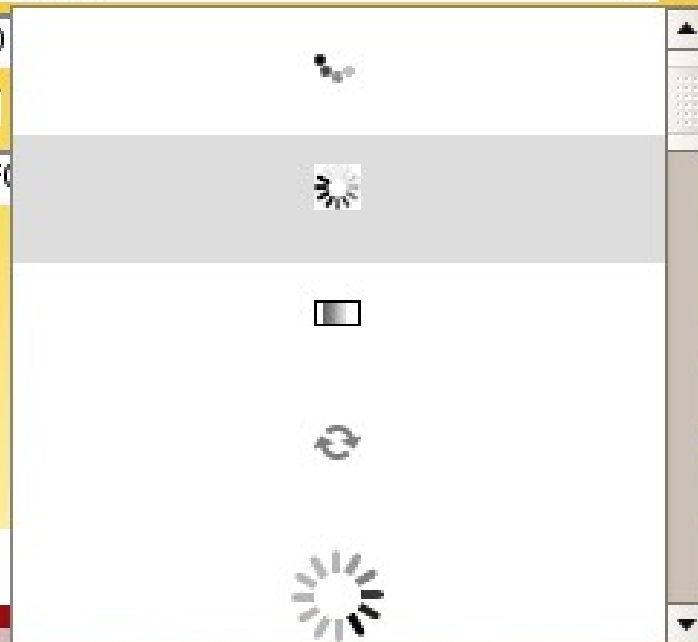
Indicator type :

Background color #

:

Foreground color #

:



Preview





```
<script type="text/javascript">
function ajaxLoader(url,id) {
  if (document.getElementById) {
    var x = (window.ActiveXObject) ?
      new ActiveXObject("Microsoft.XMLHTTP") : new XMLHttpRequest();
  }
  if (x) {
    showLoadingIndicator(); x.onreadystatechange = function() {
      if (x.readyState == 4 && x.status == 200) {
        el = document.getElementById(id);
        el.innerHTML = x.responseText; hideLoadingIndicator();
      }
    }
    x.open("GET", url, true);
    x.send(null);
  }
}
</script>
<span class="look_like_a_link"
onclick="ajaxLoader('page2.html','contentLYR')">go to page 2</span>
```

```
<a href="p2.html">go to page 2</a>
```

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All items

Show: **12 new items** - [all items](#)

Ubuntu Scores First Major Pre-installed Server Win 6:48 PM (34 minutes ago)

from [eWEEK Linux](#)

Early next year, Dell is expected to announce that Ubuntu Server will be certified on Dell server lines.

```
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        el = document.getElementById(id);
        el.innerHTML = x.responseText;
      }
    }
    x.open("GET", url, true);
    x.send(null);
  }
}
</script>
<span class="look_like_a_button"
onclick="ajaxLoader('thispage.html','contentLYR')">refresh</span>
```



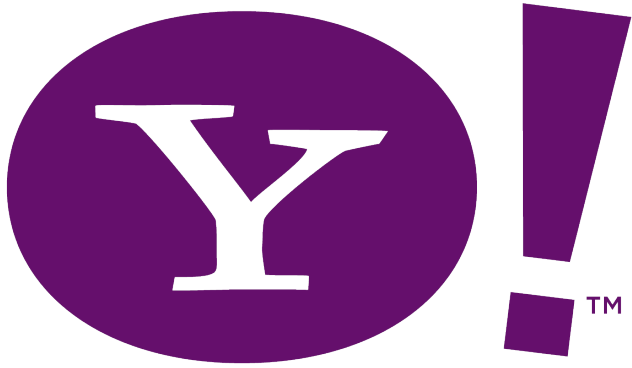

The Pirate Bay

```
mod_gzip_item_include mime ^text/.*
```





compressor



jsmin



packer



compressor



jsmin



packer

conditional GET

`If-Modified-Since` header vs. your last-modified date

`If-None-Match` header vs. your ETag

return status 304 and no content



No, you can't have ADSL



NOT YOURS



polling

comet

low-latency event-driven connection

push data out to the client

only when something happens

döjō

Articles & News



Android and Comet

by [Dylan Schiemann](#) *November 12th, 2007*

Google has released the first version of their SDK for [Android](#), an open development platform for mobile devices. Given the critical necessity of low latency data transit with mobile devices, I wanted to find out what initial support is available for Comet on the gPhone platform.

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by [Andrew Betts](#) *November 7th, 2007*

When the Financial Times came to us for a new kind of Markets commentary blog, they had in mind something to really break the mould of the daily market report you'll find on the back of a typical business newspaper. A blog is



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Comet develo

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[Read more](#)



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by

A recent disc
always better
2-connection
and its enfor

Guaranteed Clean!
Great Value!



AJAX

CLEANSER

WITH BLEACH

Easy Rinse

No Scratch Formula!



CAUTION:
EYE IRRITANT
SEE BACK PANEL
FOR PRECAUTIONS

NET WT 14 OZ (396g)



libraries



a javascript expert
(multiprototypius quirksmodii)



fire and motion









jQuery hacker



pointless celeb

CSRF

```

```

CSRF

POST is no barrier

Add a user-specific token to form posts

or

Grab the cookie value with JS
and put the value in the body
of the request

standardisation

The great thing about standards is...

hang on, there are no great things about standards

-- me (not Andrew Tanenbaum)

If you want a picture of the future, Winston,
imagine a boot taking forever

-- George Orwell

Thanks to the following Flickrites:


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How to improve the web
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Stuart Langridge, @media Ajax 2007

1

Today we're going to talk about how to improve the web.

NO!



DESTROY

HOW TO DESTROY THE WEB

Me and Satan, manifests as unicorn mouse cursor

Spent years evangelising to destroy

Developers already working hard: flashing text,
banner ads, effects, DHTML popups, IE-only sites

You aren't like that. You're professionals.



You're ready for the advanced course.

We're going to destroy the web together.

there are some easy tricks we can try. One of the best is the

---> AJAX LOADING INDICATOR.



It looked for a while like the internet would be hugely improved when everyone got broadband – we worked out ways to make users not have to wait

Some unsung genius invented the Ajax loading icon! It's just like the web in 1997! When you click a link, don't watch the

--> INTERNET EXPLORER LOGO



or the

--> NETSCAPE N LOGO

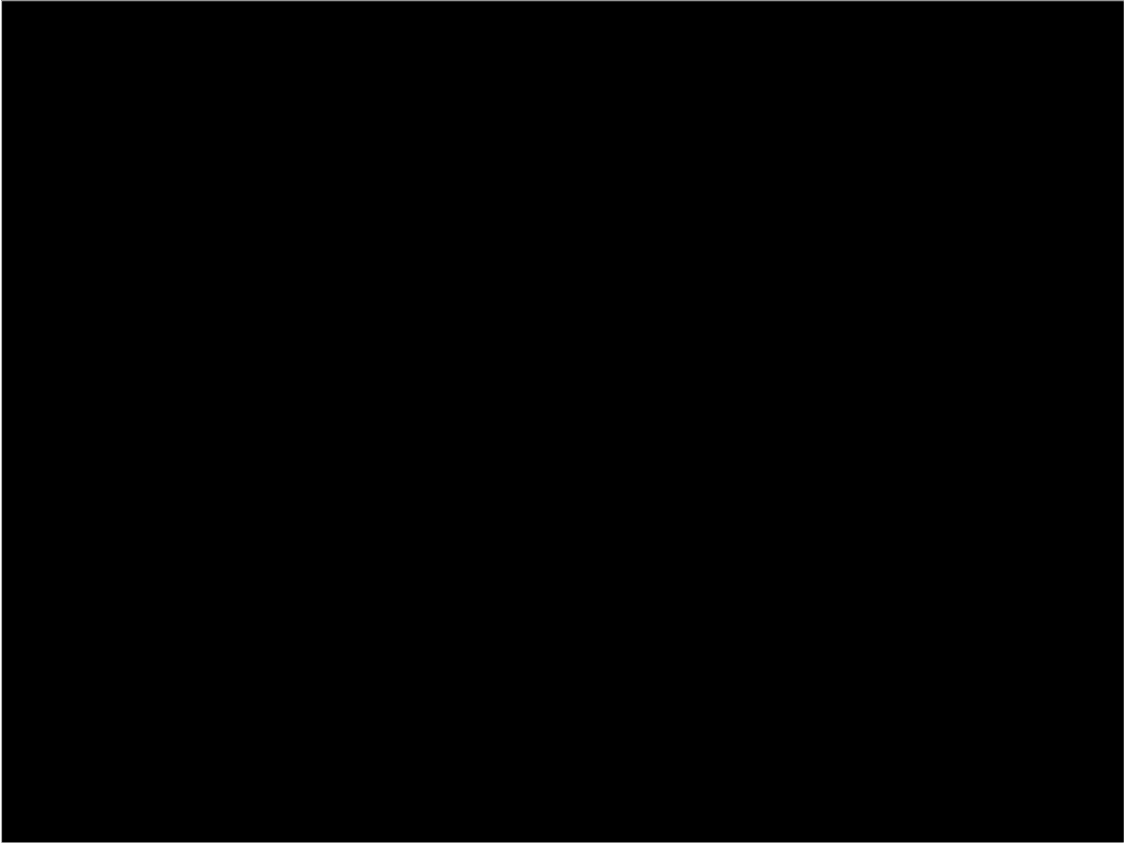


6

spin around all the time, you can watch a little rotating circle instead! Fantastic effort whoever thought of that!

Experience is now the same as ten years ago, but

--> NOW THE CODE TO LOAD A PAGE LOOKS LIKE THIS

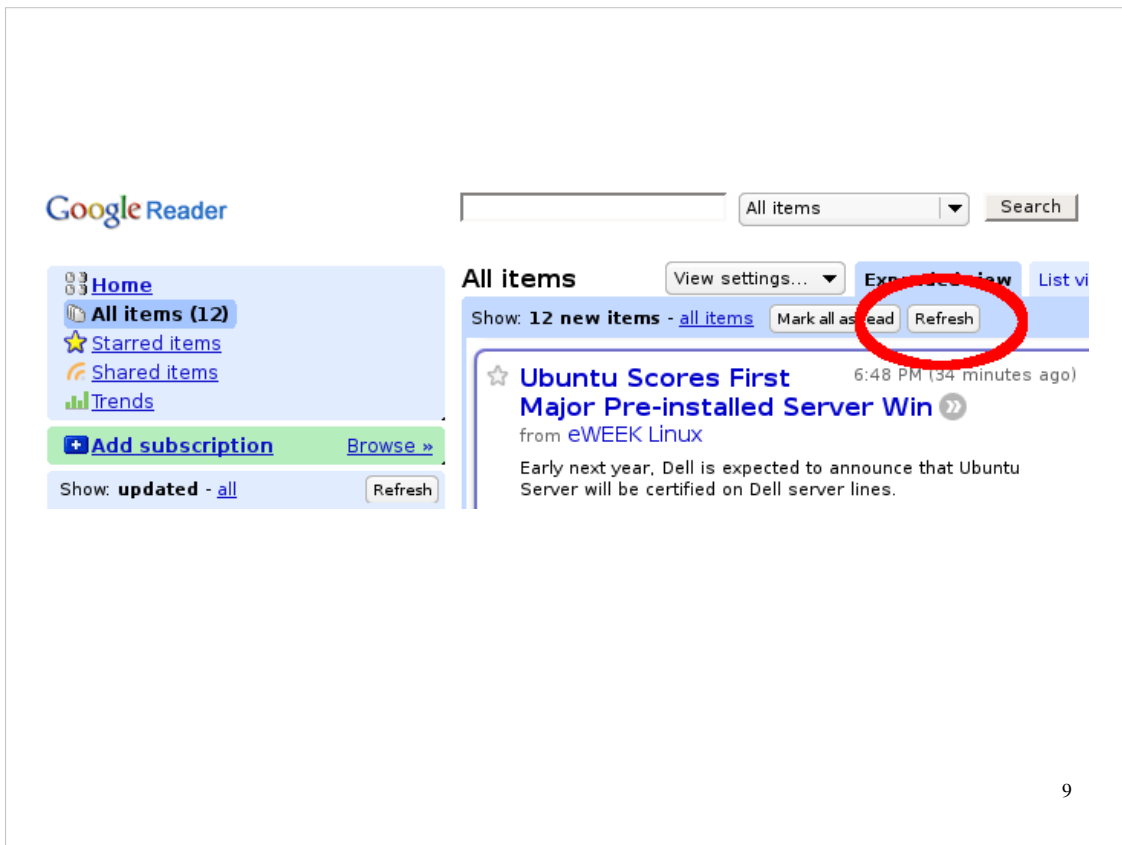


--> AND IT USED TO LOOK LIKE THIS

```
<a href="p2.html">go to page 2</a>
```

genius

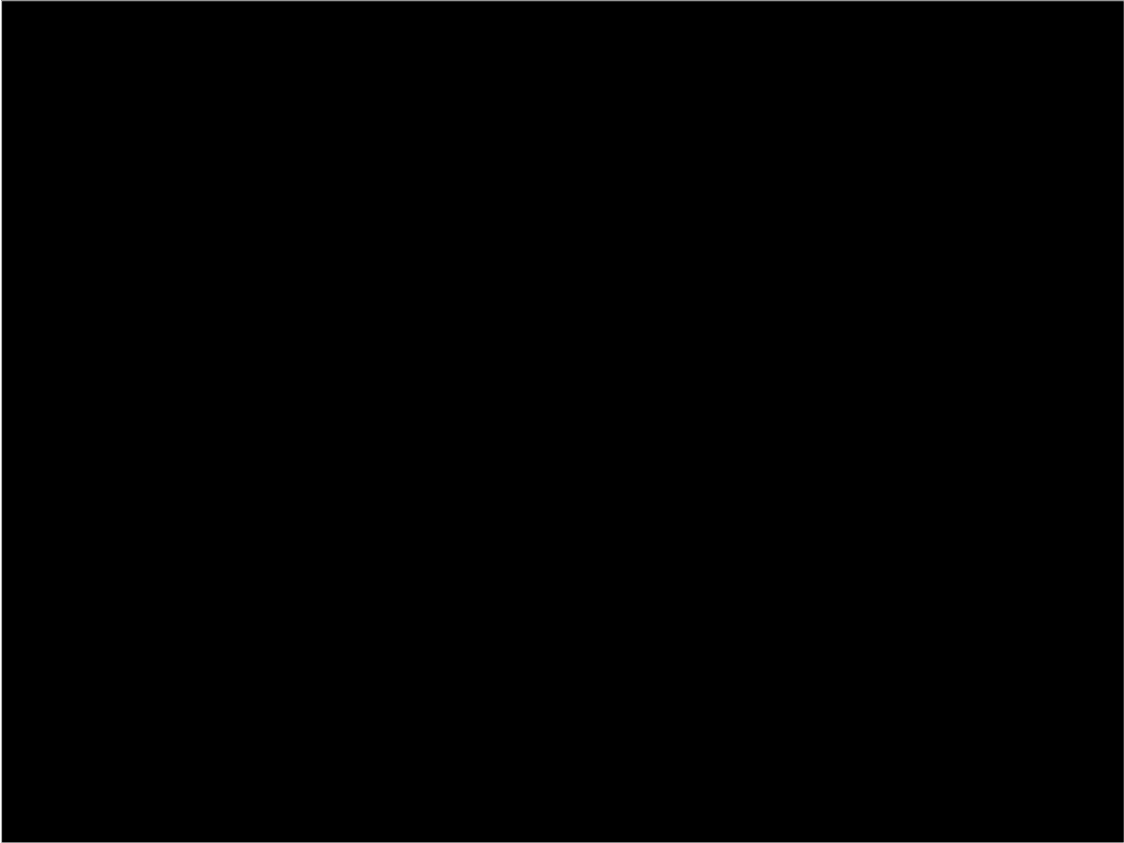
Code from javascript.internet.com – special gold
award for web destruction



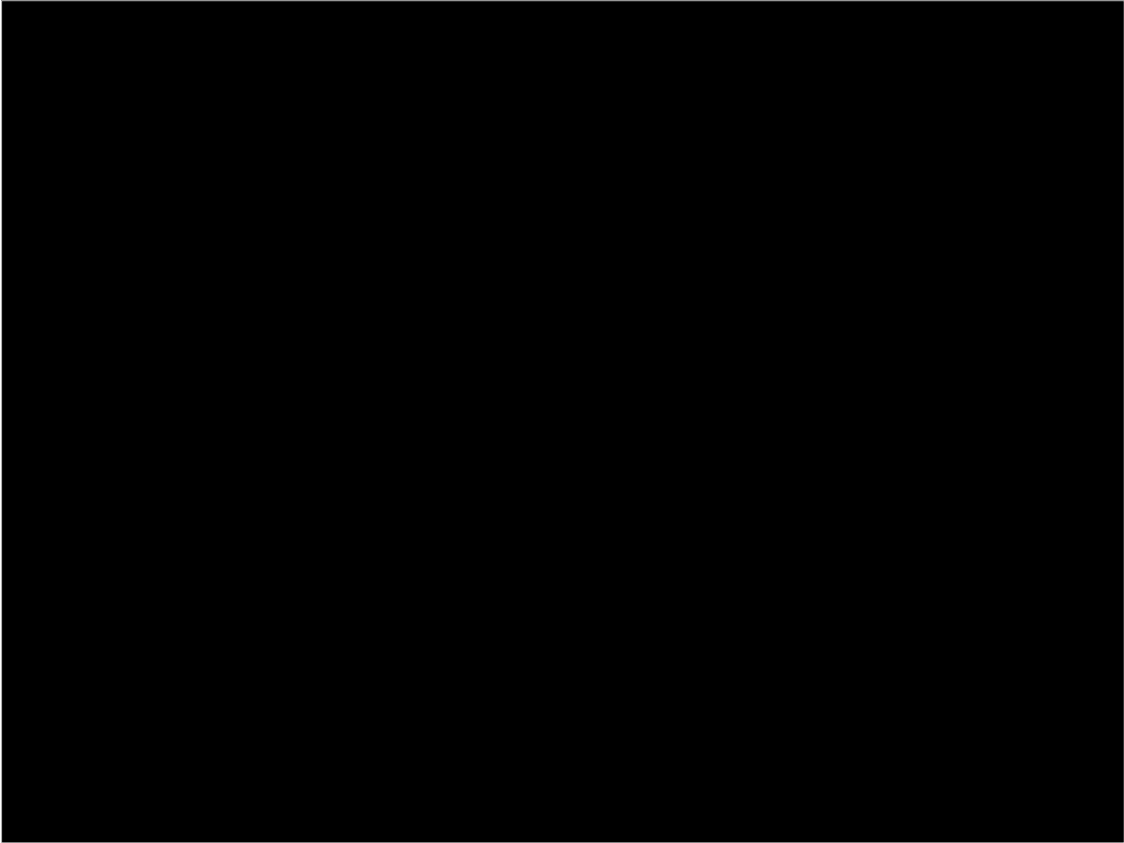
Want a refresh button like this one in Google Reader

with new Ajax the code

--> LOOKS LIKE THIS



--> AND IT USED TO LOOK LIKE THIS



nothing! Browser did it for you!

Free bonus: text that looks like a link but isn't – bad accessibility!

Lots of code leads into making people download lots of stuff.

Parkinson's Law – works for bandwidth

All get faster connections – net responds by creating stuff that looks like critical technology but isn't, like

--> BITTORRENT



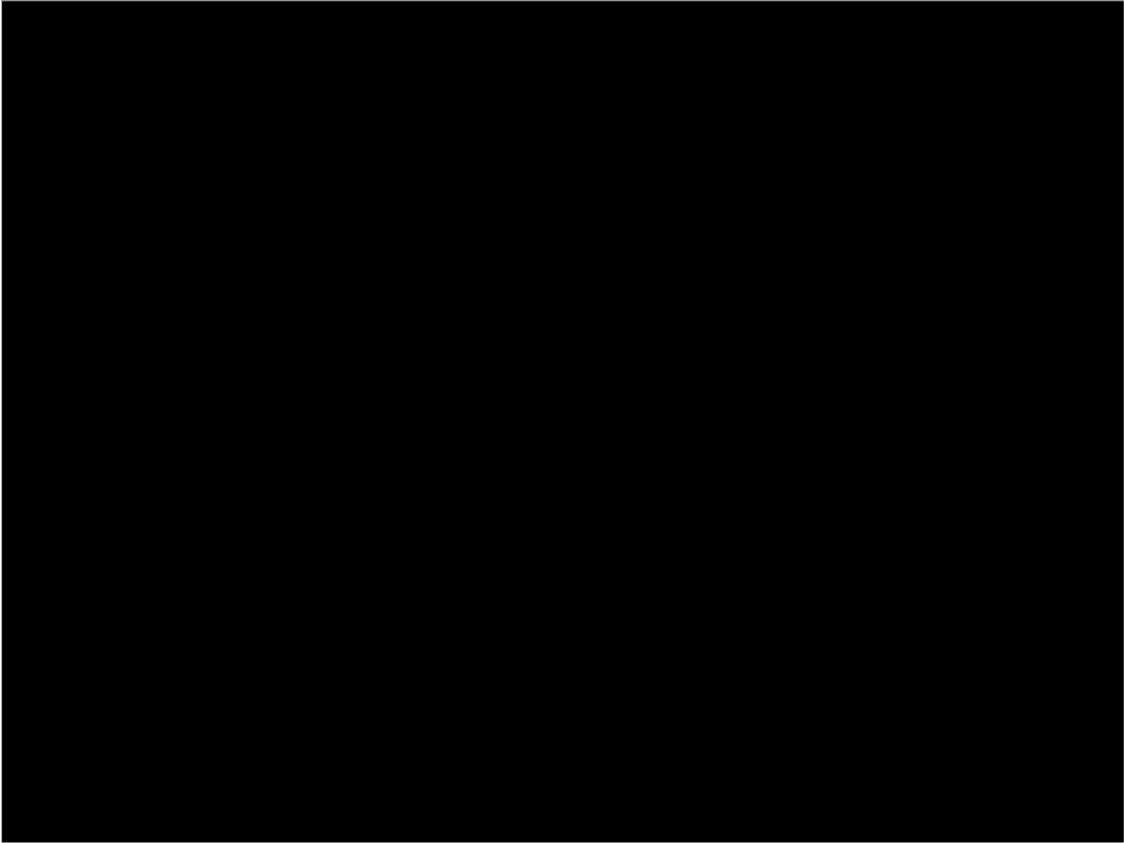
12

and Ajax!

Bandwidth & disc space sitting idle: use it up!

You might think: aha! I'm

-->GZIPPING ALL MY CONTENT



it's really easy! just install mod_gzip and suddenly I'm using one fifth of the bandwidth!

but no! resist! what else would they be doing?

Downloading **horse porn** or wasting their lives on youtube! You're not here to **help** people. Destroy the web!

Special bonus points to people who *pretend* to understand gzipped content but actually *don't*, like

--> THE FLASH PLUGIN IN IE 6



Good work Microsoft and Adobe!

The quest to fill bandwidth doesn't stop there. There's

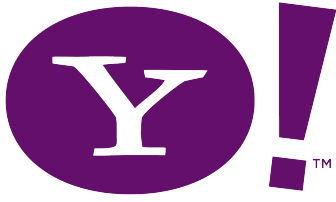
-->THE YUI COMPRESSOR



compressor

15

--> DOUGLAS CROCKFORD'S JSMIN



jsmin

16

--> DEAN EDWARDS'S PACKER




packer

17


--> ALL OF WHICH SHRINK YOUR JAVASCRIPT



compressor



jsmin



packer

18

but who has time to add one line to their deployment script?

Remember, if their bandwidth isn't going on your code, it's going on **horse porn** or Second Life or something.

YUI compressor even compresses CSS! Insidious attempt to sneak bandwidth reductions in behind our back – don't fall for it!

People will tell you to implement
--> CONDITIONAL GET

conditional GET

`If-Modified-Since` header vs. your last-modified date

`If-None-Match` header vs. your ETag

return status 304 and no content

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I mean, they say it's easy: they say that you just check the `If-Modified-Since` header against your last-modified date, and check the `If-None-Match` header against your ETag, and if nothing's changed then just return a status code of 304 and don't return any content.

But just think how much effort that takes on the server, in your server code! that's, what, three, four lines? Instead of writing those lines, you could be across the road at Starbucks ordering a mockacockalockachino with extra cinnamon.

--> THINK WHAT YOU'RE SAVING THEM FROM



We're not just destroying the web, we're

--> SAVING THE CHILDREN



If the web is easy then the terrorists win.

Bandwidth and the best way to use it is even more important now that

--> EVERYONE'S GOT AN IPHONE



People will get the idea that the internet can work well on something that fits in their pocket. They'll get the idea that it works well when you're in a field. We can't have that. I'll have to sell my shares in eMachines then.

Enough about bandwidth. It's time to talk about

--> POLLING

polling

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To keep your applications unresponsive, there's no better way than polling. If you need to know if something's happened on the server, you should ask the server. Every 10 seconds, if possible. Keep that browser connection open! There's dangerous and seditious talk going on about

--> COMET

comet

low-latency event-driven connection

push data out to the client
only when something happens

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This is a critical problem for us, because it has the potential to make applications really properly responsive again. A while back it was sort of theoretical and shrouded in mystery, but now we're at the stage where people are actually building servers to make this sort of thing easy.

--> THE DOJO FOUNDATION have made it really easy



The Dojo foundation have made it ridiculously easy to use this technology through Dojo now; they've even got cometd, a server which does all the hard work for you. The Wikipedia article on Comet lists 26 implementations!

--> Dylan Schiemann's even set up CometDaily to give handy tips on what it all means

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Comet devel
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[Read more](#)



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by

A recent disc
always better
2-connection
and its enfor

This is a trying time. If the word about Comet gets out then everyone will stop using XMLHttpRequest to hit a server every 5 seconds, and people will get the idea that web apps can actually work decently! It's even got a decent name -- we got a really big win when Jesse James Garrett decided to build the internet revolution by

--> naming the core technology after bog cleaner



but Comet is a big step back, because

--> it's named after an electrical shop



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it's named after an electrical shop and they sell computers and everything, so it's relevant. Help me fight it.

Let's move on, to the subject of

--> JavaScript libraries

libraries

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It's now getting too easy for ordinary people to actually get their hands on all this Ajax power. A great way to stop people pulling together and dragging the web out of its current hole is to tell people that JavaScript libraries are bad.

If we can convince everyone that they need to be

--> JAVASCRIPT EXPERTS



If we can convince everyone that they need to be JavaScript experts to write web applications, then fewer people will write web apps, and the web will crumble into dust. Better still, those people will not use a library, and will spend all their time redoing all the cross-browser work that Sam Stephenson with Prototype and John Resig and the jQuery team and Alex Russell and the Dojo team have already done!

This trick is called
--> FIRE AND MOTION



you keep firing at the enemy, and keep moving, and all they can do is hide behind sandbags and not make any progress. I learned about this trick from

--> Joel Spolsky



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he learned about it from the

--> Israeli military



and they learned about it from

--> MICROSOFT



Microsoft are the past masters of this!

If we can convince people that they need to be JavaScript experts to use Ajax technologies, then people won't use them as much and the web as a whole will be degraded! yes! Remember, you want to use phrases like "the law of leaky abstractions" and "efficiency" and "understanding" and "guns in the hands of children" to make your point here. Let's convince the mass of web developers that they're not allowed to touch JavaScript unless they're PPK or Douglas Crockford, and then we'll stop the web getting any better!

--> DON'T TRUST LIBRARY WRITERS;
RESIG=KELLY



jQuery hacker

pointless celeb

35

Don't listen to him.

There are so many ways to destroy the web.

--> CSRF

CSRF

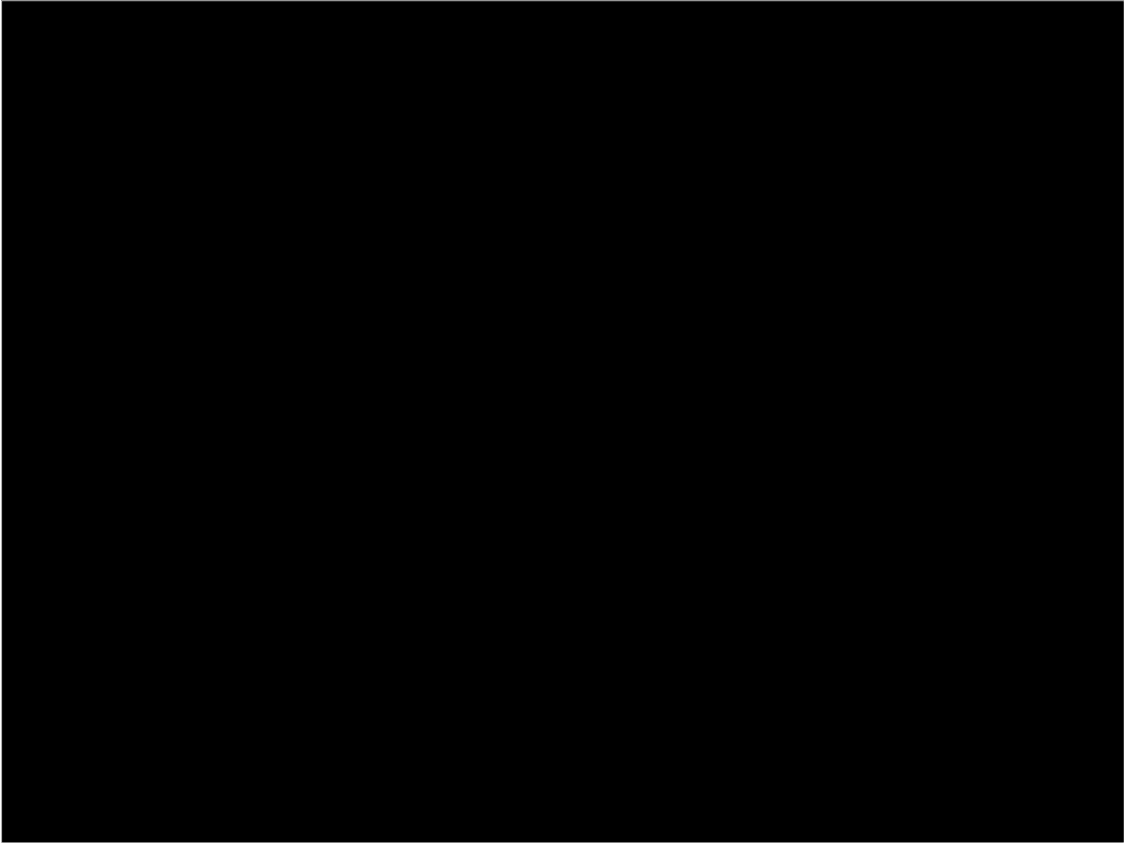
36

It sounds like a Cornish separatist organisation, but it means Cross Site Request Forgery, as you all know.

It's just so easy to do!

Just put

--> CODE



or similar on one of your pages and if the user's logged into that website, then it deletes one of their documents! All you have to do to integrate this great new CSRF technology into your web applications is make sure that you don't protect against it! We covered not doing dangerous stuff with GET requests in the Basic course, and Google gave the quest to destroy the web a big leg up when they made the Google Web Accelerator pre-fetch a load of URLs that actually deleted stuff -- nice one, Google, it's great to have you on the team.

-->The beauty of the CSRF trick is that it even works with POST!

CSRF

POST is no barrier

Add a user-specific token to form posts

or

Grab the cookie value with JS
and put the value in the body
of the request

38

--> FINAL TOOL IS STANDARDISATION

standardisation

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--> QUOTE

The great thing about standards is...
hang on, there are no great things about standards

-- me (not Andrew Tanenbaum)

40

most powerful tool: standardisation process. Get involved in it and derail it.

Make everyone discuss minutia, not fix problems.

Committees are where good ideas go to die

If HTML4, demand XHTML1-> XHTML1.1 -> XHTML2

Make JS like your fave language (Java/Python/Ruby)

Browser vendors: refuse other ppl standards,
demand yours

Build non-web things that pretend to be the web but actually require a plugin

More important to steal a 2 month bit of competitive advantage now than it is to build a world where everything works for everyone, because we're here to destroy the web.

If you want a picture of the future, Winston,
imagine a boot taking forever

-- George Orwell

Thanks to the following Flickrites:

adactio superfluity wka slashcrisis Eric adulau codepo8 hoyasmeg Rodrigo.Esper jodieandlarry 41