How to improve the web
A presentation on web technologies
Stuart Langridge, @media Ajax 2007
How to
DESTROY
the Web

Stuart Langridge, @media Ajax 2007
How to DESTROY the Web
Generator

Indicator type: 
Background color #: 000

Foreground color #: 000

Preview
<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>
Ubuntu Scores First
Major Pre-installed Server Win
from eWEEK Linux

Early next year, Dell is expected to announce that Ubuntu Server will be certified on Dell server lines.
function ajaxLoader(url,id) {
    if (document.getElementById) {
        var x = (window.ActiveXObject) ? new ActiveXObject("Microsoft.XMLHTTP") : new XMLHttpRequest();
    }
    if (x) {
        x.onreadystatechange = function() {
            if (x.readyState == 4 && x.status == 200) {
                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>
mod_gzip_item_include mime ^text/.*
jsmin
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
polling
comet

low-latency event-driven connection

push data out to the client

only *when something happens*
dojo
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.

Continue Reading | 1 Comment

Developing Markets Live for the FT
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
libraries
a javascript expert
(multiprototypiius quirksmodii)
fire and motion
jQuery hacker   pointless celeb
CSRF
<img src="http://somewebsite/delete.php?id=54">
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
How to improve the web
A presentation on web technologies
Stuart Langridge, @media Ajax 2007

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

NO!
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
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
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

--> DOUGLAS CROCKFORD'S JSMIN
---> DEAN EDWARDS'S PACKER
--> ALL OF WHICH SHRINK YOUR JAVASCRIPT
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

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
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
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
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
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

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
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
Don't listen to him.

There are so many ways to destroy the web.

--> CSRF
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

--> FINAL TOOL IS STANDARDISATION
standardisation

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

-- me (not Andrew Tanenbaum)

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 hoyasmsg Rodrigo.Esper jodieandlarry