Where is the chink in Google Chrome's armor?

Asked 16 years, 3 months ago   Modified 7 years, 8 months ago

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While browsing with Chrome, I noticed that it responds extremely fast (in comparison with IE and Firefox on my laptop) in terms of rendering pages, including JavaScript heavy sites like gmail.

This is what googlebook on Chrome has to say

1. tabs are hosted in process rather than thread.

2. compile javascript using V8 engine as opposed to interpreting.

3. Introduce new virtual machine to support javascript heavy apps

4. introduce "hidden class transitions" and apply dynamic optimization to speed up things.

5. Replace inefficient "Conservative garbage colllection" scheme with more precise garbage collection scheme.

6. Introduce their own task scheduler and memory manager to manage the browser environment.

All this sounds so familiar, and Microsoft has been doing such things for long time.. Windows os, C++, C# etc

compilers, CLR, and so on.

So why isn't Microsoft or any other browser vendor taking Chrome's approach? Is there a flaw in Chrome's approach? If not, is the rest of browser vendor community caught unaware with Google's approach?
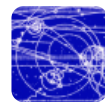
`google-chrome`

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to be quite honest I don't know why Chrome has mentioned any of their approaches as they all seem to be pretty unique and I think they should've kept that a secrect to make it easier to dominate the web with their browser ;) – jay_t55 Aug 22, 2009 at 4:48

6   @baeltazor - My guess: they don't care if they dominate the web. They want people to have better, faster, browsers so that they will use the web more (especially web apps). Whether that's Chrome or the competition is irrelevant, and the more they tell how they did it, the more people will clamor for other browsers to adopt the same techniques. It's already spurred a big speed-up in Javascript performance across the board. – Nathan Long Sep 3, 2009 at 9:43

Agree on the speed. With the release of 3.0, Chrome is blazing. – JasCav Sep 17, 2009 at 15:22

5   Chrome is also released as the opensource Chromium, so it doesn't really matter as people would undoubtedly find out how it works anyway. – SeanJA Sep 28, 2009 at 4:17

@Nathan Long: Here's a picture that is worth a thousand words to back up your point that chrome is meant to move the web forward, not to overtake it. google.com/googlebooks/chrome/images/big/38.jpg – Ruan Mendes Jun 14, 2011 at 23:16

13 Answers

Sorted by: Highest score (default) ⇕

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Chrome's approach is difficult to write, and requires forethought from the developers. IE and Firefox are both attempting to move to a process-per-tab model, but due to backwards compatibility are not able to transition quickly. Chrome, being an entirely new browser build on a clean rendering engine (WebKit), was easier to write in this way.

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answered Sep 4, 2008 at 0:30

John Millikin
201k 🟡 41 ⚫ 215 🟤 227

11   In other words, Chrome started with a "blank slate", whereas other browsers are struggling to adapt existing codebases to new concepts without breaking them. – Ben Blank May 7, 2009 at 18:15

3   Actually, IE8 was the *first* browser to use a process-per-tab model. The compatibility point is generally correct, however.

–

18 IE8 was released 2009-03-19, Chrome was released 2008-12-11. – John Millikin Sep 17, 2009 at 16:36

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They have crossed over from a web browser as a tool to view web pages, to a tool optimized to work for web applications. There may be some flaws in this initial release, but they are changing the game.

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edited Apr 14, 2017 at 22:38

Web_Designer
74.4k ● 93 ● 208 ● 266

answered Sep 4, 2008 at 0:31

ryw
9,635 ● 5 ● 29 ● 34

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IE8 uses a similar individual process per tab module, though they do not use a single process per tab, but instead spread all tabs across a process pool.

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answered Sep 4, 2008 at 1:38

FlySwat
175k ● 75 ● 248 ● 314

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so that's why it takes ages to open a new blank tab in IE8! Never had that problem with any other browser... – jay_t55 Aug 22, 2009 at 4:50

3

@pix0r but they added a little thing in the bottom right corner so you can expand the text box any direction you want, which I love because I use a wide display and prefer to type in a wider screen.

Thats actually a WebKit feature, Chrome just inherited it.

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answered Sep 4, 2008 at 3:44

FlySwat
175k ● 75 ● 248 ● 314

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Virtually all of these features existed in other browsers before Chrome. IE8 had process isolation for tabs. Firefox / Safari had most of the JavaScript stuff. Most browsers do their own memory management.

Chrome has a few unique features (hyperrestricted render processes, etc) which are difficult to put into other browsers due to add-on/application compatibility concerns.

The primary thing Chrome has going for it is an extremely hardcore focus on minimalism and high-performance. By focusing on these as their competitive advantages, they

can appeal to users who find this area of focus compelling.

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As time passes, I'm sure you will see the homogenization of features as the browsers attempt to one-up each other.

In the meanwhile, I still stick with Firefox over Chrome for the simple reason that Firefox is (i) non-profit and has a (ii) huge addon community. Addons such as NoScript and AdBlockPlus are almost essential for me.

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Add-ons were more important to me than I would have thought. I tried Chrome when it first came out and instantly noticed annoying Flash adverts that FlashBlock had been hiding from me for ages. That was enough for me to give up Chrome. I haven't yet looked again to see if the feature has been added since. – Paul Stephenson May 7, 2009 at 19:08

Add-on support is now in the developer release of Chrome. I suspect that it will soon be brought to the community at large which will quickly spur the development of good add-ons. – JasCav Sep 17, 2009 at 15:22

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One chink in Chrome's armor is the fact that it renders these darned textareas on StackOverflow are so small that it's making my eyes bleed!

answered Sep 4, 2008 at 0:32

pix0r
31.3k ● 18 ● 87 ● 102

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1

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> One chink in Chrome's armor is the fact that it renders these darned textareas on StackOverflow are so small that it's making my eyes bleed!

Yeah. I mentioned this on uservoice and got declined because the current size is evidently the default under webkit. Every other site I've tried with Chrome that uses textboxes to compose content manages to have a decent sized font. The default definitely doesn't work, but there's obviously some way to override it. Jeff needs to fix this!

Edit: Jeff was nice enough to point out how to fix this problem yourself.

edited May 23, 2017 at 11:54

Community Bot
1 ● 1

answered Sep 4, 2008 at 0:46

maybe he did; but your link has died! :) any chance you can repeat the explanation here? – Colin Pickard Jan 20, 2009 at 10:34

That's what yo get, you should never post a link without some explanation of the content – Ruan Mendes Jun 14, 2011 at 20:13
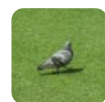

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@pix0r but they added a little thing in the bottom right corner so you can expand the text box any direction you want, which I love because I use a wide display and prefer to type in a wider screen.

I also wanted to point out that Google completely built Chrome from the ground up, with the exception of using webkit, so they have some of the advantages of not having to not deal with old-code. And of course there is the INSANLELY cool/smart developers.

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answered Sep 4, 2008 at 3:34

UnkwnTech
90.7k ● 65 ● 191 ● 234

"completely from the ground up with the exception of the things that weren't completely from the ground up" – nnnnnn Aug 3, 2011 at 6:18

The biggest chink I've found is its lousy proxy support compared to IE, FF and Opera. So it's pretty much useless at work, render pages at random, and requesting authentication for the proxy, where the others pass it seamlessly.

That said on my home machine it works great, if it wasn't for the OTT EULA I'd use it now.

thing2k

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answered Sep 4, 2008 at 5:36

thing2k
608 ● 1 ● 7 ● 16

One "flaw" about Chrome is that it uses more memory upfront than all of the other browsers. I'm just guessing that this is due to the overhead associated with all the separate tab management.

After it's been open for some time, however, it doesn't use more memory than other browsers.

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answered Mar 10, 2009 at 22:51

TM.
111k ● 34 ● 124 ● 128

Many companies play a game of "What's the least we can do to get the leg up?" Marketing creates a laundry list of features needed to be better than the competitors. Project

0

management ensures engineers stick to those features for fear that the project will exceed the time allocated... which of course it will. There's not a whole lot of room in such a system for a big picture leap-ahead. The incremental improvements you see in products, and browsers, is a consequence.

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answered Mar 10, 2009 at 23:11

Paul
1,503 ● 8 ● 8

-1

You have to keep in mind that Microsoft primary business is Rich environement (GUI) Application. Web tool is a threat to them as it is platform independant (not promoting they main product).

Of course the IE team probably had figured something like that but... Microsoft definetly won't invest a lot of money in IE if what they are selling is a Rich application platform.

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answered Sep 4, 2008 at 1:07

Frederic Morin
8,913 ● 5 ● 29 ● 27

1   Untrue. Microsoft sells TONS of HTML/CSS/JS development tools. – EricLaw Sep 17, 2009 at 15:00