

## Browser 'so mittens'

IE, Firefox, Chrome, Safari and Opera: which browser is the fastest, safest and has the most powerful web tools?

**IE, Firefox, Chrome, Safari and Opera: which browser is the fastest, safest and has the most powerful web tools?**



Of all the software on your computer, web browsing can be the most important tool you use every day - but you may not think much about it. However, the difference between a good browser and an excellent browser can be huge. Browsers are best viewed by your review: When you choose the right browser, feel like your own browser page. The browser loads pages fast, error-free and cleverly handles any website you visit without requiring further action.

Currently there are many web browsers for you to choose from. However, in order to meet the demand for users who regularly 'surf', the browser must support a large number of add-ons, extensions, and must support customization. turn. To protect users from accessing the web, the browser needs to do a good job of detecting and preventing potential security threats - such as network scams, code insertion attacks (cross-site scripting) - as well as being able to resist malware (malware).

Through testing and evaluation, compare aspects of user interface, security, extensions and speed. The PC World test team released a list of the top 5 web browsers in 2010 including: Internet Explorer (IE), Firefox, Chrome, Safari and Opera.

### 1. User interface

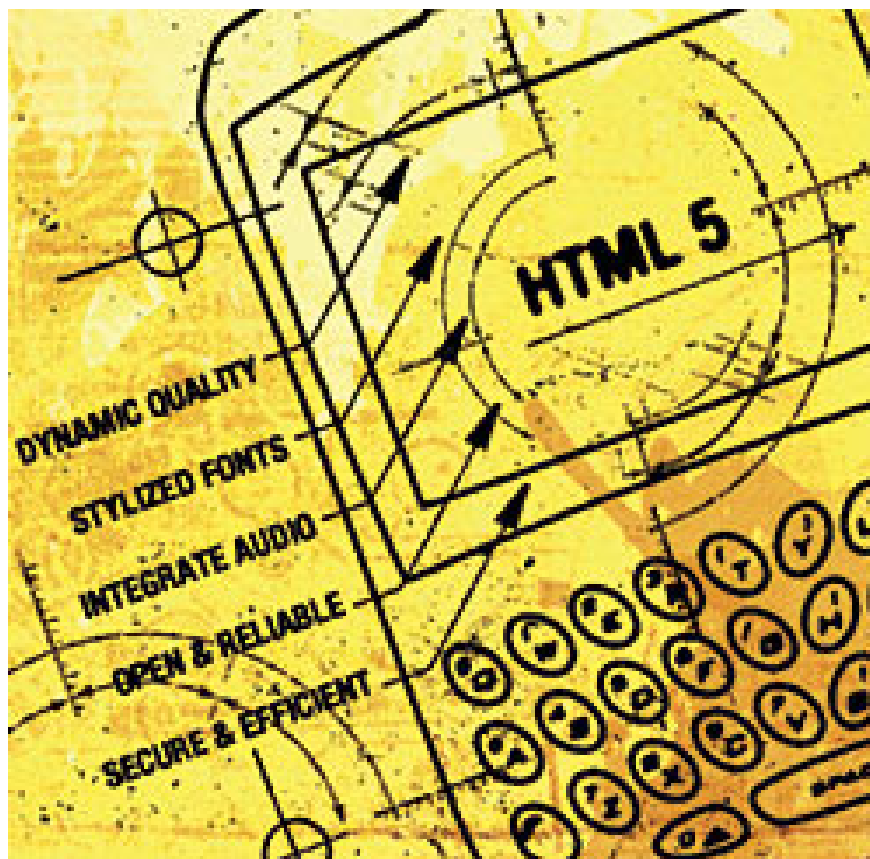
While all browser interfaces have the same basic design, they still have some differences.

First of all, you can understand what part of a company approach to user-based product development. For example, Apple's Safari has a fairly consistent and complete interface. Google Chrome is simple and not adorned. Mozilla's Firefox interface is somewhat outdated compared to its competitors.

Most browsers now look compact, " *attractive* ", the toolbar is streamlined and space is more narrow than before - and in many cases on Windows, there's even no menu bar. Arranging this layout makes using more efficient, because on the toolbar there are often drop-down menus that make it easy to access browser features.

### **HTML5: web future (\*)**

Web designers once said that a website can display and work well on all web browsers is ' *unimaginable* '. This means users must accept this fact. Fortunately, some new web technologies can help change: HTML5 (see also ID: A1001\_88) and new CSS3 that promise to provide more flexible designs.



Many parts of HTML5 still require additional editing, as predicted, the HTML5 specification may take a long time to complete, 12 years or more. Including the format used for web video (see also ID: A1007\_90). Apple supports the H.264 standard, but the free license for the web is only available until 2016. Other browser vendors like Mozilla, support for Ogg Theora video as an open source, but others are concerned. about the quality of this format.

Meanwhile, Google recently announced WebM ([find.pcworld.com/70318](http://find.pcworld.com/70318)), rival in the battle of web video format. And Microsoft said that the upcoming IE 9 will support all three formats.

That shows, HTML5 is ready to put on websites. Most web browsers today offer some HTML5 support, and both IE 9 and Firefox 4 will improve HTML5 compatibility.

If you want to try HTML5, you can access the information on Apple, Google and Microsoft websites. You try HTML5 with Apple at [www.apple.com/html5](http://www.apple.com/html5), Google at [www.html5rocks.com](http://www.html5rocks.com), Microsoft at [ie.microsoft.com/testdrive](http://ie.microsoft.com/testdrive); More information about HTML5 and CSS3 at find out more article ' *Browser in the next 5 years* ' page 10.

Firefox, Chrome and Opera both allow you to easily change the toolbar interface. For example, Google has an online repository that allows browsing and changing theme themes for Chrome. Mozilla has a similar page for Firefox. A useful interface feature of Firefox is Personas, which allows you to 'try' any interface just by moving the mouse pointer over the thumbnail images in the Personas page. Meanwhile, with Opera, you can browse the topics from within the control panel on the browser application; While it works well, this control panel is not as easy to browse as the Chrome and Firefox interface libraries.

Each browser interface is evaluated by the testing team (NTN) based on ease of use, sophistication, flexibility and layout. In addition, NTN also looks at an interface based on factors that meet the user's diverse requirements, or the browser allows 'turning' the site into a demonstration center.

## IE 8

IE is the leading browser on the market, version 8 has an elegant interface, but the layout looks a bit messy compared to the new browsers on the market. IE 8 has two useful tabbed browsing features: First, IE 8 groups related tags together by color code. For example, if you open a link on [peworld.com.vn](http://peworld.com.vn) with a new card, IE 8 will open the new card next to the original card and these cards will be the same color. You can move cards from one group to another, but if you open 3 unrelated pages it will not be possible to form groups.



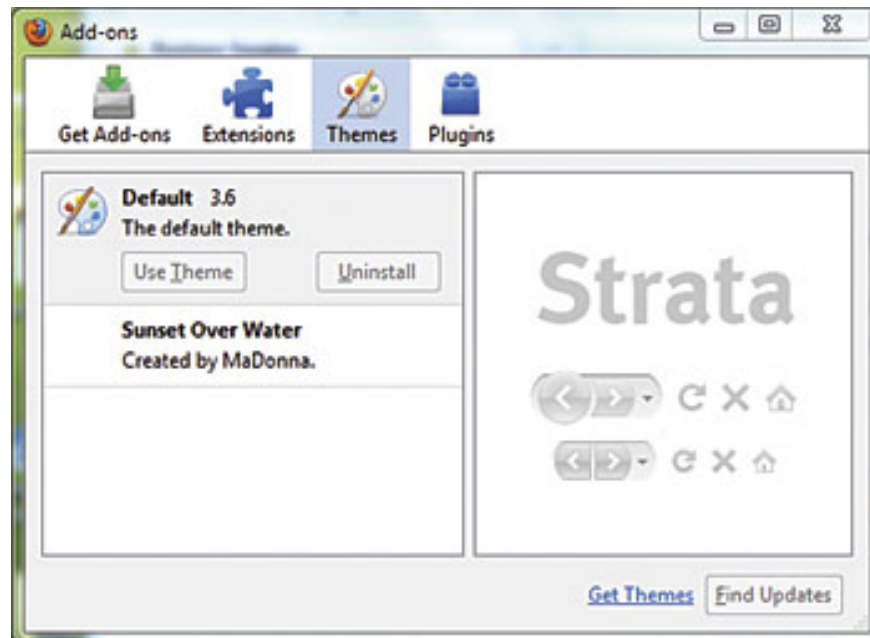
Best feature of IE 8: group of cards. IE 8 groups related tags together by color code; You open a link from [QuanTriMang.com](http://QuanTriMang.com) page on the new card, this card will be the same color as [QuanTriMang.com](http://QuanTriMang.com) card page.

Secondly, IE 8 provides a minimized web page view: Clicking on the thumbnail button (the four-square icon) on the tab bar will immediately appear a screen with the contents of the web page on the open tabs. will be minimized. This is an effective way to view all open cards at the same time; This feature of IE 8 is better than Opera - moving the mouse cursor over the open tab to see the miniature site - otherwise there is still much

debate.

## Firefox 3.6

Feeling like you're using a recent version of Firefox, version 3.6 seems obsolete. Firefox 3.6 has more toolbars, menus, and title bars than the latest version of Chrome or Safari. Since this is a cross-platform version, it is difficult to feel through its appearance, even on Windows.



Best feature of Firefox: extensions. Firefox has a large library of extensions and add-ons, classified by categories: to-do lists, secure ad-on, themes (themes), Twitter support. Other browsers also began to form libraries, but Firefox still took the lead with the most add-ons

The Firefox interface has nothing to complain about, and has an interesting sharing feature. Finding a specific word or phrase on the search bar is easy. And although it is not the only browser that has an auto-fill feature, Firefox does this better than other browsers.

Mozilla has now released a version of Firefox 4 beta. Among Firefox 4's new features, the interface is largely "*revamped*" to keep up with competitors like Chrome and Opera.

Chrome nhanh hơn các đối thủ.										
Trình duyệt	Tính năng							Tốc độ (1)		
	Hỗ trợ Theme	Hỗ trợ add-on	Hỗ trợ đồng bộ dữ liệu/Bookmark	Tính năng tăng cường bảo mật	Ngăn Plug-in xâm nhập	Ngăn trang web xâm nhập	Đọc RSS	Thời gian tải trung bình, trang trực tiếp (giây)	Thời gian tải trung bình, mạng nội bộ (giây)	SunSpider Javascript benchmark (mili giây)
Internet Explorer 8	Không	Accelerators, thanh công cụ, Web Slices	Không	Nổi bật địa chỉ miền	Không	Có	Có	1,91	0,37	3903,2
Firefox 3.6	Có	Các phần mở rộng, thanh công cụ	Không	Kiểm tra cập nhật plug-in	Có (2)	Không	Có	1,92	0,47	902,5
Chrome 5	Có	Các phần mở rộng	Đồng bộ Bookmark Google	Sandboxing, nổi bật địa chỉ miền	Có	Có	Không	1,75	0,46	301,1
Safari 5	Không	Các phần mở rộng	Đồng bộ Bookmark MobileMe	Không	Có	Không	Có	1,89	1,33	597,7
Opera 10.53	Có	Widget	Opera Link	Không	Không	Không	Có	2,19	0,57	575,4

Ghi chú: (1) Thời gian càng nhỏ càng tốt. (2) Ngăn xâm nhập, được giới thiệu trong Firefox 3.6.4

## Chrome 5

With Chrome, Google has adopted its characteristic minimalist style in the browser. The main window has only a few basic features (tab, address, back / forward / reload buttons, and two drop-down menus), which allow the maximum display of the web content. You will not find the status bar; Information about page loading will appear when needed at the bottom of the window. Overall results, Chrome is a neat, fast and well-handled browser.

Tabbed browsing is quite effective. The tags are placed above the page, making it convenient to view information in one screen. When you open multiple pages, the tags will automatically shrink to fit the display space; when you close the cards, the other cards relax themselves.

## Safari 5

Safari offers all standard options but also a little Apple style. For example, the address bar is about twice the size of the page loading bar. The default home page displays thumbnails of webpages you often visit in a glossy black background. The bookmark manager is well-organized and allows you to view bookmark pages in thumbnail format when you click.

## Best interface: Chrome

Chrome has a clear and practical interface, but NTN also likes the sleek interface of Opera and Safari. Evaluating the best interface can be subjective, so this belongs to each user's personal preferences.

Safari 5 has a new feature: Safari Reader. When you read an article in Safari 5, you can press the Reader button in the address bar, this time the article will display in full screen. This feature has caused some controversy in advertising activities on the website, but it is useful for readers of online newspapers. On the other hand, Safari has nested some Mac interfaces into the Windows user interface, so Safari may not be for everyone.

## Opera 10.6

All menu elements in Opera are placed in one section, a small drop-down menu button, and if you hide the tab bar, this menu button will disappear (pressing the key will reappear).

Partly because of the aesthetics, the Opera interface is clear, polished and attractive, and it is also very flexible with lots of toolbars for you to choose from. One of these toolbars, like the favorite bar, Opera called Personal Bar, takes up a lot of screen space. Opera also gives you the option to display the thumbnails on the tab bar; This is a great way to distinguish it from another card.

- 2. Security**
  - 3. Extensions and Add-Ons**
  - 4. JavaScript performance**
  - 5. Download the website**
  - 6. Which web browser should I use?**
- 

## **2. Security**

Although some browsers are better than others in terms of security, all browsers have at least some security features, for example, quite common phishing filters (phishing). These filters often connect to a database that identifies online phishing sites; When you access a phishing site, you will receive a warning. The downside of this type of phishing filter is that it doesn't keep up with the new phishing pages on the list, so you still have to use your judgment.

Typically, browsers will also warn you before you open a downloaded application, which helps to avoid disguising malware, such as fake image files. But this feature does not distinguish good software or bad software, so you still need anti-virus software.

For each browser, NTN also checks some private browsing modes. Although this feature is useful in preventing others from using the computer when they get your access information, it does not prevent security threats from the Internet.

### **Is speed important?**

Browsing performance is not as important as the browser you choose to use.



According to the test results, NTN found that the current web browsers are fast enough for everyone, no matter what browser providers claim. In the tests, although there was a clear difference in processing Javascript (one of the factors that the browser provider rated itself quite high), NTN found that in testing the actual page load, the difference This difference is negligible. Unless you run two browsers side by side on two computers with the same configuration, otherwise you'll find it hard to tell the difference between a browser that loads the page in 1.5 seconds with the browser loading pages in 2, 5 seconds.

And in fact, other factors, such as computer hardware, operating system and connection speed, can affect your browsing speed.

Now speed has become the basic standard, so you should be more concerned with other elements of the browser such as interface, stability, security, ease of use and ability to add sections. extend. The good news is that all browsers are free (download and use). If you don't like this browser, you can switch to another browser until you like.

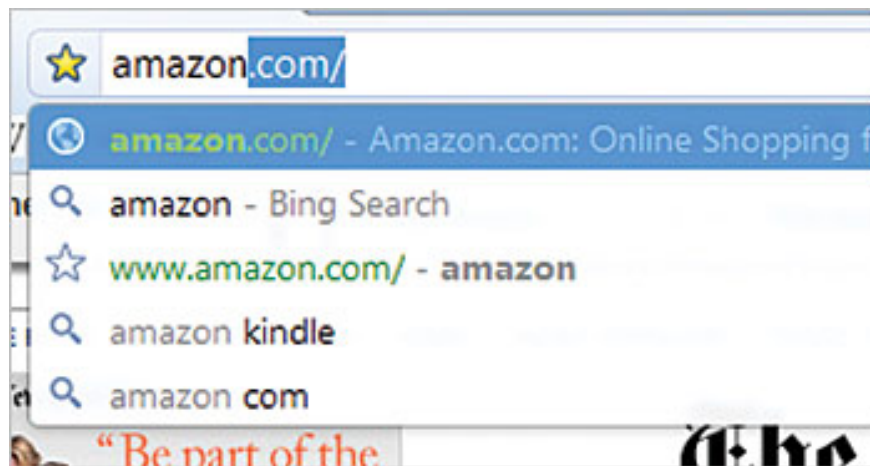
## **IE 8**

Historically, IE has had a bad reputation for security, but IE 8 also has good security features in its own right. IE 8 displays a domain name with a darker text color, so you can easily know you're visiting an official ebay.com site or fake eBay on a phishing site you've never known. Microsoft may still be more prominent on the domain name (for example, using different background colors), this feature is strongly supported, and Google Chrome has also chosen this way. In addition, IE 8 provides code insertion that can prevent some attacks on the computer (see [www.pcworld.com/70311](http://www.pcworld.com/70311)).

## **Firefox 3.6**

Firefox does a good job of informing you about the security status. For example, when Firefox automatically installs an update, the browser will also check if plug-ins need a good update, and Firefox will issue appropriate warnings. You can run this test at any time in Firefox (see [find.pcworld.com/70312](http://find.pcworld.com/70312)). Plug-in testing also seems to be available on other browsers; But when I ran the plug-in test on different browsers and got the message that I was using an up-to-date version of Flash, it really wasn't. Other security features: Firefox displays the name of the website with "*identity information*" in the box next to the address bar. When you click this box, you will see details about the site.

## Chrome 5



Best feature of Chrome: address bar. The address bar is twice the size of the search box. In addition, for basic Google search, Chrome search can work with the search features of other sites you visit.

Google applies a new approach to Chrome's security problem: Each site is "*sandboxed*". That is, if the site you visit has been hijacked (hijack) by hackers, sandboxing can help prevent malware from being implanted on that site to access the files you have saved on your computer (see at [find.pcworld.com/70313](http://find.pcworld.com/70313))

## How to check browser performance

We use different approaches in checking and evaluating browsers. The group conducted the tests on the KHL9070 MicroExpress laptop running Windows 7 Home Premium OS.

First, NTN runs the SunSpider benchmark to know the Javascript processing capabilities of browsers, Javascript is an important programming language of web-based applications.

Next, NTN allows browsers to run 8 websites in turn: PCWorld.com, PC World's YouTube channel, PCWorld's Twitter page, English Wikipedia homepage, eBay, Amazon, New York Times homepage and Yahoo via Network connection at PC World office.

The group continues to check browsers on Web sites hosted on Apple MacBooks running Apache Web server software that connects directly to the test computer.

In both cases, the group uses each web browser on the test computer, checks the browser speed at a time, and starts the computer at each test. In the page load test, NTN deletes the cache (cache) before each test execution.

A final note: web browser performance can vary greatly depending on your computer hardware, OS, browser version in use, and website access. A browser works well on a system or on a specific website that we do not guarantee that the browser will work well on other computers or websites.

## **Safari 5**

Although Safari has a lot of standard security features like anti-phishing protection, private browsing, 'Reset' functionality, but one of Safari's useful features is cookie processing (small size files). save the information of the websites you have visited). Instead of merely enabling you to enable or disable cookies completely, Safari allows you to enable cookies on websites you visit but disable other cookies.

## **Best security: Chrome**

The ' *Sanbox* ' style access restriction feature is great.Chrome is the only remaining browser in this year's Pwn20wn unlocking contest (see: [www.worldworld.com/70314](http://www.worldworld.com/70314)).

on the same page. For example, if you visit a news site, Safari will only accept the site's cookies, and disable the advertising page cookies.

## **Opera 10.6**

Opera uses the color code in the address bar to indicate which pages are encrypted or which pages are suspected (based on AVG's database of phishing and malware sites). Like Safari, Opera allows you to choose to accept cookies only from websites you visit, but only on the start page. To change this setting for a specific site, right-click the page and select Edit Site Preferences.

- 1. User interface**
- 3. Extensions and Add-Ons**
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## **3. Extensions and Add-Ons**

Some of the best browser features are not implemented by browser developers. Instead, independent programmers have created useful add-ons that you can download and install for free. But not all web browsers support the same extension, only a few of them support it. When evaluating browsers, what kind of add-ons support NTN, finding, installing and removing add-ons is easy.

## **IE 8**

IE 8 allows you to install various browser toolbars, including the search toolbar you like or dislike. IE 8 also has Web Slice and Accelerator. Web Slice is an add-on that allows you to keep information tags from around the web without visiting the website. For example, eBay Web Slice allows you to monitor the auction status, while USA Today Entertainment Web Slice allows you to quickly see the top stories in the entertainment industry. Open pages directly in your favorite bar with just one click.

Accelerator is a shortcut to the task you perform in the browser. For example, if you mark a block of text, the blue icon will appear next to it. If you click on the icon, you will see a menu that allows you to translate the selected text, search for the selected text, search on the map (if it's an address) . You can see The entire IE 8 add-on library is in the section called Microsoft's Add-One Gallery ([ieaddons.com](http://ieaddons.com)).

### **Firefox 3.6**

Firefox won the first championship title a few years ago, and although other browsers have caught up, Firefox still retains the title of add-ons. Mozilla has a library ([find.pcworld.com/70316](http://find.pcworld.com/70316)) with thousands of add-ons and extensions, from security add-ons to social networking tools. Go to Tools.Add-ons in Firefox, you can view and enable or disable extensions, themes (plugins), plug-ins, and browse for recommended add-ons.

According to NTN, a small flaw in Firefox is that updating the extension does not run in the background.

### **Chrome 5**

Chrome supports extensions at the end of last year, Google's extensive library ([find.pcworld.com/70316](http://find.pcworld.com/70316)) offers many useful options like toolbar icons, notifications, weather updates . Chrome Update extensions more often than Firefox, and extensions are better integrated into the browser. That said, Chrome's add-on options absolutely cannot match the width of Firefox.

### **Safari 5**

Extension support is the latest feature of this new Safari version. You can access the blog that addresses issues related to Safari extensions at <http://safariextensions.tumblr.com>. Currently, Apple has provided the library of extensions (Safari Extension Gallery) for Safari at <http://extensions.apple.com/>

### **Opera 10.6**

Opera has a completely different approach with their widgets. Like widgets on desktop computers in Windows 7 or on Dashboard in Mac OS X, these small applications can provide quick updates to newsletters, weather, sports results .



Best feature of Opera: preview the miniature web content. When you drag the mouse over a tab, Opera will display a pop-up to preview the minimized web content, which is quite useful if you open multiple websites with the same name.

One thing to note is that Opera Widgets are not add-ons in the classical sense - they don't run inside Opera browsers. Instead, they are standalone applications that run in parallel with your other software. This means that these small applications are still open right away

### **Best extension: Firefox**

Although NTN is also interested in other browsers' add-ons, Firefox is still the brightest, mostly because of its extensive library of extensions and support.

even when you close Opera, this can be useful, but these widgets only contribute to expanding the functionality of the browser.

### **Speed**

Browser developers are currently working on promoting page loading speed - because people like it the fastest. Although NTN found that the difference in page loading speed was negligible in the tests, and most of the browser speed was overstated.

- 1. User interface**
- 2. Security**
- 4. JavaScript performance**
- 5. Download the website**
- 6. Which web browser should I use?**

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## 4. JavaScript performance

According to SunSpider browser benchmark, Chrome has the best JavaScript performance, because the browser completes the tests in an average of 301.1ms (milliseconds). Next, Opera and Safari ranked second and third with 575.4 and 597.7ms respectively; Firefox ranked fourth, reaching 902.5ms. IE is behind Firefox, completing tests in 3903.2ms.

### **Best Javascript handling: Chrome**

Google's browser has surpassed its four major rival browsers with good indexes on this Javascript test

When this article came up, Opera Software released the Opera 10.6 browser. This version came out too late, so I couldn't take part in the live page test, but the test team had a chance to test the SunSpider benchmark. Despite Opera's announcement that the new browser version is 50% more efficient than version 10.5, the SunSpider test results are just the same as Opera 10.53.

Since becoming popular in web applications and even on regular websites, Javascript is a good indicator for testing. SunSpider is also a useful measurement to evaluate JavaScript processing capability. However, this result is not a comprehensive index to evaluate the overall speed of the browser, but also depends on many other factors.

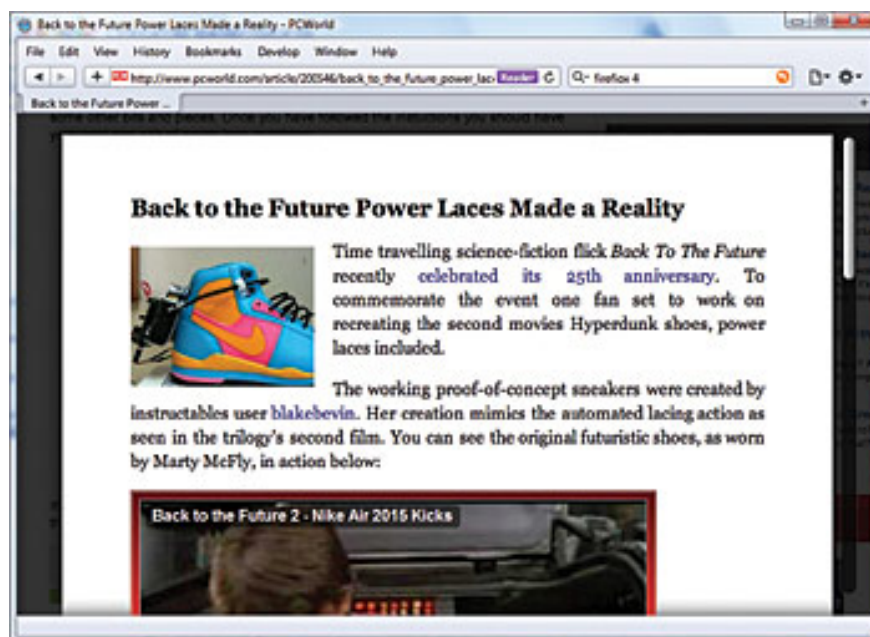
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## 5. Download the website

Although Chrome is the fastest in page load tests, the speed difference between browsers is negligible.

IE 8 has the top ranking overall and is the fastest browser among the 5 browsers participating in this test, the average page load time of Chrome is 1.75 seconds, the fastest of 5 browsers. Safari 5 came in second with a speed of 1.89 seconds.



Best feature of Safari: read news. When you read the news, you can click the Reader button on Safari's address bar. The browser will display the entire newsletter on the screen, making it easy to follow.

In many cases, the loading speed of the page controls each other. For example, NTN checks on ebay.com, 4 of 5 browsers download pages within 8/10 or 9/10 seconds; Only Opera has more than 1 second (1.09 seconds), the page loading time is too slow.

That said, Opera is the slowest browser of 3 out of 8 test sites. And 2 of the 3 websites tested (pcworld.com and en.wikipedia.org), Opera 'dropped' behind quite a distance, downloading pages took more than 1 second. In real time, a second is not much different, but according to the percentage is quite significant. On the other hand, on the intranet test, Opera took the lead with 2 of the 3 test sites that we performed. This makes it impossible to explain why this difference is possible - page load tests are done directly with repeating results - but it is possible that other browsers handle network latency better than Opera.

## Download the best page: Chrome

In the speed test, Chrome loads pages faster than the four browsers that the team tested.

In actual use, the published browser speed seems a bit overwhelming. Dù k?t qu? có s? khác nhau tùy thu?c vào máy tính, h? ?i?u hành (H?H), trang web mà b?n truy c?p, và nhi?u y?u t? khác, r?t có th? b?n không nh?n th?y s? khác bi?t gi?a các trình duy?t khi 'l??t' web tr? khi b?n th?c hi?n các bài ki?m tra t??ng t? nh? NTN. Cu?i cùng, b?t k? trình duy?t web nào mà b?n ch?n ??u ?? nhanh. Ngoài t?c ??, các y?u t? khác b?n c?n quan tâm là tính n?ng, m?c ?? b?o m?t, giao di?n và các ph?n m? r?ng, do ?ó, b?n nên ch?n trình duy?t theo s? thích và nhu c?u c?a mình.

## 6. Nên dùng trình duy?t web nào?

T?t c? 5 trình duy?t web th? nghi?m ??u mi?n phí. Nh?ng vi?c chuy?n t? trình duy?t này sang trình duy?t khác s? làm b?n m?t nhi?u th?i gian, ch?ng h?n cài ??t trình duy?t và tùy bi?n trình duy?t l?i theo ý mình.

NTN đánh giá cao Chrome vì trình duyệt này có giao diện thân thiện, dễ dùng, hiệu suất hoạt động nhanh, bảo mật mạnh mẽ. Trình duyệt này đáp ứng các yêu cầu cần thiết cho hầu hết mọi người dùng, và còn cung cấp nhiều tính năng tùy biến khác nữa.

1. Giao diện người dùng
2. Bảo mật
3. Các mở rộng và Add-On
4. Hiệu suất JavaScript

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