GOOGLE'S MOTION TO COMPEL COMPLIANCE WITH PATENT RULE 3-1

Exhibit 9

Chromium Developer Documentation

Google Chrome is built with open source code from Chromium.

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Search Site

Getting Involved > Early Access Release Channels >

Release Notes

Release Notes 0.4.154.22
posted Nov 17, 2008 11:16 PM by Mark Larson   **[updated Nov 17, 2008 11:36 PM]**

Google Chrome 0.4.154.22 has been released to the Dev channel ONLY. This is a bugfix-only release. There are no new features.

See http://dev.chromium.org/getting-involved/dev-channel for information about subscribing to the Google Chrome Dev channel.

Reminder: please file (or update existing) issues at http://code.google.com/p/chromium/issues.

Bugs Fixed

[no id] Fixed horizontal scrolling with the mouse tilt-wheel.

49 Attempted fix for the Options dialog crashing Google Chrome on Windows XP 64-bit. We cannot reproduce the issue, so this might not fix all the crashes people are experiencing.

766 Folders you add to the bookmarks bar do not show up in the New bookmark folder list.

843 Invalid Content-Type in GET request to follow a 302 redirect from a POST request

2033 Text cannot be entered in textareas enabled by script.

2835 Changing the Google Chrome language only applies if you click OK.

3685 It was possible to show to context menus at the same time.

3424 Truncated confirmation button in download shelf for dangerous files.

4029 The context menu key should display the menu near the focused element.

4136 The download confirmation dialog would appear if you type in a file:// URL while a download is in progress.

4158 Javascript won't open an alert box when run from within a popup window

4178 Fix http://people.mozilla.com/~vladimir/demos/photos.svg (new Image() returns an <img/>).

4216 QuickTime plugin may display in the wrong position.

4271 Cleanup spacing and layout in the bookmarks manager.

4273 Plugin windows may stop responding to keyboard events.

4287 Exporting bookmarks saves the file without the .html extension.

4302 An unwanted download confirmation could render Google Chrome unresponsive when using a proxy server.

4306 Clicking to the right of text in the bookmark manager starts a select instead of a drag and drop event.

4316 Sometimes you have to restart twice to get an upgrade (will affect the next update, from 154.22).

4346 Clicking the 'plugin not available' link to install the missing Adobe Flash plugin would do nothing.

4364 Fix a crash when clicking away while a bookmark bar context menu is open.

4365 Search boxes on the New Tab page were too wide in right-to-left languages.

[internal:1473850] Don't send unencrypted usernames and passwords unless the server explicitly specifies basic auth.
[internal:1474092] Google Chrome sometimes hangs when using a site with Gears offline data enabled.

Release Notes 0.4.154.18

posted Nov 11, 2008 4:11 PM by Mark Larson   **[updated Nov 12, 2008 1:52 PM]**

See http://dev.chromium.org/getting-involved/dev-channel for information about subscribing to the Google Chrome Dev channel.

Reminder: please file (or update existing) issues at http://code.google.com/p/chromium/issues.

New Features

- **Bookmark manager with import/export.**
  Use the 'Customize and control Google Chrome' (wrench) menu to open the Bookmark manager. You can search bookmarks, create folders, and drag and drop bookmarks to new locations. The Bookmark Manager's Tools menu lets you export or import bookmarks.
- **Cleaner Pop-up Blocker**.
  The pop-up blocker formerly just minimized pop-up windows to the lower right corner of the browser window, create one 'constrained' window for each pop-up. Now, Google Chrome displays one small notification in the corner that shows the number of blocked pop-ups. A menu on the notification lets you open a specific pop-up, if needed.

Known Issues

- Sites that use Gears to synchronize offline data may occasionally hang. You should disable offline access for sites until a fix is released. (We're working on it and hope to have the update later this week.)

Security Issues

- r4188 and r4827 Address an issue with downloaded HTML files being able to read other files on your computer and send them to sites on the Internet. We now prevent local files from connecting to the network using XMLHttpRequest() and also prompt you to confirm a download if it is an HTML file.
  Severity: Moderate. If a user could be enticed to open a downloaded HTML file, this flaw could be exploited to send arbitrary files to an attacker.

Component Updates

- r4551 Includes V8 version 0.3.8.3 (r692)
- r4966 Includes Gears version 0.5.3.0.

User-visible Changes

- r4400 Keeps closed tabs in the 'Recently Closed Tabs' list on the New Tab page until you close the browser (or re-open the tab). (Issue 2598)
- r4413 Removes the yellow background from the Recently Closed Tabs list on the New Tab page.

- [r4388](#) Makes the Open... options in the bookmarks bar right-click menu match the options when you right-click a link on a page (Open in new tab, Open in new window, Open in incognito window). (Issue 144)
- [r4374](#) Allows you to change the spell-check language without restarting Google Chrome.
- [r4405](#) Adds a confirmation dialog when a site tries to download more than one file. (Issue 3422)
- [r4423](#) Adds a focus indicator for buttons when you use Windows Claassic theme. (Issue 135)
- [r4428](#) Adds Reload to the page context (right-click) menu. (Issue 204)
- [r4498](#) Remembers the selections you make on the Clear browsing data... dialog.
- [r4508](#) Adds a Privacy section to the Options > Under the Hood dialog. This groups all of the privacy-related settings into one section to help you find them more easily.
- [r4575](#) Adds an option to disable spell checking to Options > Minor Tweaks > Fonts and Languages > Languages. (Issue 120)
- [r4588](#) Fixes the Fonts and Languages options dialog to only show a restart warning once. (Issue 2835)
- [r4593](#) Adds a new bookmarks manager (wrench menu > Bookmark manager or Ctrl+Shift+B). The manager lets you easily edit bookmarks, move them to folders, search, and import or export them. (Issue 674)
- [r4747](#) Allows spacebar to 'click' the default button on dialog boxes opened by web pages. (Issue 98)
- [r4853](#) Improves pop-up blocking. Instead of displaying each blocked pop-up in a minimized window with the title 'Blocked Pop-up', Google Chrome now displays a single information bar in the bottom corner of the page. This bar shows how many pop-ups were blocked and provides a menu to choose any pop-up you want to open (there's also an X you can click to dismiss the notification).
- [r4964](#) Fixes several issues when you're using Japanese input. (Issue 2770, 2771, 2775)

Plugin Fixes

- [r4350](#) Allows input method editor (IME) input to work with Adobe Flash plugins. (Issue 2673)
- [r4358](#) Implements an iframe shim behavior for plugins, allowing HTML elements to appear on top of plugin content. (Issue 1788)
- [r4792](#) Prevents some plugins from being able to make the entire browser unresponsive. (Issue 3383)
- [r5070](#) Fixes a Google Chrome hang when you open large PDF files and you're using a proxy server. (Issue 4076)

Other Fixes

- [r4392](#) Fixes a problem with drag-and-drop corrupting images. (Issue 2414)
- [r4399](#) Fixes problems with some iGoogle gadgets not displaying. (Issue 3521)
- [r4434](#) Fixes a problem with plugins, images, and some other content dislplaying 'Loading' or 'Untitled' as the tab title. (Issue 2529)
- [r4699](#) Fixes the issue with form re-submission if you reload a page with a form. Previously, clicking Continue would do nothing; now the form is resubmitted. (Issue 2616)
- [r4739](#) Prevents enabling IME on password fields. (Issue 3234)

Issues Fixed

20, 98, 100, 120, 135, 146, 204, 205, 552, 613, 674, 984, 998, 1142, 1208, 1428, 1520, 1542, 1677, 1723, 1788, 1883, 2388, 2414, 2445, 2458, 2529, 2598, 2616, 2632, 2673, 2712, 2742, 2751, 2768, 2770, 2771, 2775, 2792, 2804, 2830, 2835,

2855, 2906, 2918, 2929, 2988, 3013, 3017, 3097, 3109, 3198, 3219, 3224, 3234, 3382, 3383, 3418, 3422, 3424, 3431, 3432, 3457, 3459, 3470, 3471, 3487, 3493, 3498, 3509, 3516, 3521, 3585, 3602, 3631, 3684, 3723, 3769, 3770, 3774, 3784, 3795, 3804, 3808, 3809, 3814, 3816, 3824, 3835, 3836, 3851, 3907, 3961, 4007, 4034, 4038, 4044, 4048, 4067, 4076, 4112, 4132, 4134, 4137, 4175, 4186, 4211

Release Notes 0.3.154.3

posted Oct 15, 2008 8:04 PM by Mark Larson   **[updated Oct 15, 2008 8:38 PM]**

Reminder: please file (or update existing) issues at http://code.google.com/p/chromium/issues.

The release contains mostly bug fixes for 0.3.154.0, but it also introduces a new behavior for downloading files that could be executable content:

- r3285 Changes the download behavior for files that could execute code (exe, dll, bat, etc.). These files are now downloaded to unconfirmed_*.download files. In the browser, you're asked if you want to accept the download. Only after you click Save is the unconfirmed_*.download file converted to the real file name. Unconfirmed downloads are deleted when Google Chrome exits.

Other Notable Changes

User Interface

- r3177, r3207 Enables sorting columns in the password manager, the list of URLs to load at startup, and the Google Chrome task manager.
  (Issue 2949, 95)
- r3180 Adds a command line switch to start the browser in incognito mode. Thanks to Yarin.Kaul@gmail.com for the contribution. (Issue 1790, 2012)
- r3189 Fixes the new bookmark bubble so that pressing enter with focus on the Edit button actually opens the editor. Thanks to developer0420@gmail.com for the fix. (Issue 2863)
- r3209 Changes the text in the About dialog to link to credits for other open source software used in Google Chrome and to the Terms of Service.
- r3264 Adds support for extended validation (EV) certificates issued ssued by Comodo using the AddTrust root. (Issue 2170)

Plugins

- r3211 Fixes a problem with videos stopping after 1 second (Issue 115)
- r3272 Allows plugins to post forms (for example, Adobe Reader forms).
  (Issue 629)
- r3276 Adds better support for Windows Media player, specifically improving detection for that plugin at bloomberg.com. (Issue 2846)
- r3327 Runs plugins at a normal priority so that they do not cause the browser to become unresponsive.

JavaScript/Web API

- r3198 Optimizes the content-type detector ('MIME sniffer') to do fewer, more reliable checks based on data collected during the Google Chrome Beta.
- r3231 Fixes a problem with page content disappearing behind plugin windows. For example, when you type a search on a page playing a YouTube video, the

search suggestions stay visible instead of going behind the video window. (Issue 1788)
- r3269 Change the minimum timer resolution for setTimeout() to 4 milliseconds (up from 1ms). At 1ms, some pages would spin in tight loops and consume 100% of CPU.

Crashes in 154.0

- r3172 Fixes a crash when using the spell check Add to dictionary... fucntion. (Issue 3039)
- r3278 Fixes a browser crash on tablet PCs running Microsoft Windows Vista.

Release Notes: 0.3.154.0

posted Oct 3, 2008 1:55 PM by Mark Larson   **[updated Oct 3, 2008 1:57 PM]**

Google Chrome 0.3.154.0 has been released to the Dev channel ONLY.

See http://dev.chromium.org/getting-involved/dev-channel for information about subscribing to the Google Chrome Dev channel.

Reminder: please file (or update existing) issues at http://code.google.com/p/chromium/issues.

Highlights: Plugin Fixes

This release includes several changes that improve the performance of plugins, especially Adobe Flash video.

- r2459, r2744 Improve the performance and scrolling of plugins. This especially improves pages with multiple plugins playing video. Note to developers: this affects windowless plugins only. (Issue 93)
- r2539 Fixes plugins not playing when embedded in a third-party frame on a page (Issue 1533)
- r2740 Fixes a problem where using Flash plugins could lock up Google Chrome and cause 100% CPU usage (Issue 387, Issue 772)

New Network Layer: Testers Wanted

We're just about ready to turn on the new HTTP networking code by default. There are a few remaining bugs, mostly in handling SSL edge cases and HTTP authentication.

To use the new HTTP code, you can add a command line flag to the shortcut you use to launch Google Chrome. To add a command line flag, right click the Google Chrome shortcut, choose Properties, and edit the Target field. You can just add the new flags at the end of the Target line.

The new command line flag is:

```
--new-http
```

Enables the new network layer. Please put [new-http] in the description for any bugs you file.

Other Notable Changes

User Interface

- r2474 'Duplicate' (right click on a tab > Duplicate) opens a new tab instead of a new window.
- r2631, r2678 Adds the ability to sort table views in the user interface and turns it on for the keyword editor (Options > Basics > Default search: Manage) and cookie manager (Options > Under the hood > Show cookies).
- r2643 Makes the link in the About box clickable. The link opens a page acknowledging the authors and license terms of third party code and software used in Google Chrome.
- r2645 Keeps focus on the last match after the Find in page box is closed. (Issue 455)
- r2704 Ctrl+S now brings up a Save Page dialog. (Issue 1653)

Search Engines and Suggest Services

- r2564, r2623 Fixes search results when the default search provider is voila.fr (or orange.fr) and enables search suggestions for voila.fr (French) and daum.net (Korean).
- r2630 Fixes a problem with importing Windows Live Search as the default search engine.

JavaScript/Web API

- r2571 Adds a command line switch to set the user agent string for testing: --user-agent="some string". We'll be making changes to the user agent string before we exit Beta, and this will help in testing site compatibility. This isn't really Web API, but seems mostly of interest to web developers.

Release Notes: 0.2.153.1

posted Sep 25, 2008 4:37 PM by Mark Larson   [updated Sep 25, 2008 5:16 PM]

Google Chrome 0.2.153.0 has been released to the Dev channel ONLY.

See http://dev.chromium.org/getting-involved/dev-channel for information about subscribing to the Google Chrome Dev channel.

Reminder: please file (or update existing) issues at http://code.google.com/p/chromium/issues.

Highlights

- r2266 Fix scrolling (cannot scroll up) with touchpads on most laptops. Issue 4.
- r2334 Fix the problem in 152.1 with the About box spinning forever to check for updates and leaving behind an orphaned chrome.exe process. Issue 2362
- r2282 and r2320 Remove the separate installer for the Gears component. It is now installed as a versioned component alongside chrome.dll. When 0.2.153.0 (or later) is installed successfully, the previous version of Gears is uninstalled.

New Network and Window Managers: Testers Wanted

To use the new backend features, you can add a command line flag to the shortcut you use to launch Google Chrome. You can have multiple flags, so you can test both features if you

want. To add a command line flag, right click the Google Chrome shortcut, choose Properties, and edit the Target field. You can just add the new flags at the end of the Target line.

The new command line flags are:

```
--new-http
```

Enables the new network layer. This is nearly complete, but there are still be some things that don't work. Areas that need more attention: SSL and SSL-EV sites, proxies (especially requiring authentication), very large downloads (>2GB).

Please put [new-http] in the description for any bugs you file.

```
--magic_browzR
```

Enables the new tab and window manager code. The code has been refactored to help make it more portable, easier to add new features, and make it more Windows-friendly. Things like ' Tile windows horizontally' or extensions that manage multiple desktops/monitors should work, the full Google Chrome window menu is available when you right click a pop-up or application window title bar, and pop-up address bars looks nicer.

A couple of known issues on Vista (already fixed, but not in time for this release): the new tab button does not work and you cannot resize windows. :(

Please put [magic_browzR] in the description for any bugs you file.

Other Notable Changes

User Interface

- r2026 Double-clicking a tab's entry in Google Chrome's task manager (Shift+Esc) brings that tab to the foreground.

- r2222 Your choices for Clear browsing data... are saved so the same boxes are checked the next time you open the dialog.

- r2322 Add an "Add to dictionary..." option to the right-click menu for misspelled words. Use this to add a word so that Google Chrome does not highlight it as misspelled.

- r2412 Fix an issue that could prevent users from saving bookmarks. Issue 1946.

- r2413 Allow mutiple bookmarks to refer to the same URL (which can be useful if you want a bookmark on the bookmarks bar and also saved under Other bookmarks). To get a new bookmark for a URL, either drop a link on the bookmarks bar (not by dragging the star) or right-click the Bookmarks bar and choose Add page...

- r2504 Adds a Page info option to the context menu (right click). This brings up the same information as double clicking the lock or warning icon in the address bar of an SSL page.

Plugins

- r2400 Add support for Adobe Reader's fast web view, which fixes a performance problem loading PDF files. Issue 206.

Javascript/Web API

- r2061 Add anti-aliasing support for SVG shape-rendering="crispEdges".

- r2250 Make navigator.language reflect the current UI language for Google Chrome instead of the operating system. Issue 1862.

SSL and SafeBrowsing

- r1998 Fix a problem with links or redirects to pages containing malware. The warning page now correctly identifies the new page as the malware host, rather than the previous page.

- r2098 Add support for Extended Validation (EV) certificates from GlobalSign.

- r2363 Add support for Extended Validation (EV) certificates from CyberTrust.

Tab Model Rewrite (--magic_browzR)

- r1996 Fix several issues on Vista, most notably that tabs were not selectable with the mouse.

- r2205 Allow windows to be resized on Vista

- r2406 Fix an issue with tooltips showing up in the wrong location.

Other

- r2223 Turn off making a request to determine the local URL for Google (google.co.uk, google.co.in, etc) when Google is not your default search provider.

- r2323 (related to r2223) Don't set a cookie when making a request to determine the local URL for Google.

- r2287 Fix a problem that prevented Google Chrome from being uninstalled immediately. Issue 2321

- r2457 Fix the Open dialog (Ctrl+O) so that it does not lock the directory from which you open a file. Issue 2617.

- r2466 Fix proxy exceptions that include upper-case characters. Issue 541.

Crashes

- r2028 Fix a crash when using Find next (F3). Issue 1669, <b/1341577>

- r2090 Fix a crash when using View Source on an https page. Issue 1951.

- r2131 Fix a crash when copying data to the clipboard. Issue <b/1374632>

- r2261 Fix a crash when saving a page. Issue 2206

[Release Notes: 0.2.152.1](#)

posted Sep 16, 2008 2:47 AM by Mark Larson **[updated Sep 16, 2008 2:51 AM]**

Google Chrome 0.2.152.1 has been released to the Dev channel ONLY. Learn more about the [Google Chrome Dev channel](#).

Reminder: please file (or update existing) issues at [http://code.google.com/p/chromium/issues.](#)

Most of the changes in this release are behind-the-scenes changes to support the Mac OS X and Linux versions of Google Chrome. We're re-writing the HTTP network layer and the browser's tab/window manager to make these features more portable across operating systems. In addition, there have been quite a few bugs fixed since the Beta release (0.2.149.29) was built.

New Network and Window Managers: Testers Wanted

To use the new backend features, you can add a command line flag to the shortcut you use to launch Google Chrome. You can have multiple flags, so you can test both features if you want. To add a command line flag, right click the Google Chrome shortcut, choose Properties, and edit the Target field. You can just add the new flags at the end of the Target line.

The new command line flags are:

> `--new-http`
> Enables the new network layer. This is nearly complete, but there are still be some things that don't work. Areas that need more attention: SSL and SSL-EV sites, proxies (especially requiring authentication), very large downloads (>2GB).
>
> Please put [new-http] in the description for any bugs you file.
>
> `--magic_browzR`
> Enables the new tab and window manager code. The code has been refactored to help make it more portable, easier to add new features, and make it more Windows-friendly. Things like ' Tile windows horizontally' or extensions that manage multiple desktops/monitors should work, the full Google Chrome window menu is available when you right click a pop-up or application window title bar, and pop-up address bars looks nicer.
>
> A couple of known issues on Vista (already fixed, but not in time for this release): the new tab button does not work and you cannot resize windows. :(
>
> Please put [magic_browzR] in the description for any bugs you file.

Notable Changes

Javascript/Web API

- [r1180](#) Fix hit-test detection in SVG (b/1251296)
- [r1299](#) Ensure contextmenu event is dispatched _after_ mouseup. (Fixes context menu on spreadsheets.google.com, for example. b/1330688)

User Interface/Behavior

- [r1927](#) Stop creating full-text index data for https: pages.

- r142 Changes the behavior of 'New incognito window' to always open a new window and 'New window' to always open a new normal window.
- r1903 Move the New tab, New window, and New incognito window options to the wrench menu (from the page menu). Thanks to Szymon Piechowicz for the patch.
- r523 When you right-click a tab and hover on Close other tabs, Close tabs to the right, or Close tabs opened by this tab, the tabs that would get closed pulse briefly so you can see what tabs will be affected.
- r465, r578 The about:version page has been rearranged to show the versions of Google Chrome, WebKit, and V8. The About dialog no longer shows the user agent string (it's still available in about:version).
- r1292 Tables in dialogs like the task manager and keyword editor do not flicker on resize.
- r1495, r1538 Fix errors with tabs sometimes showing the wrong title or favicon.
- r1838 Allows chrome menu items and bookmarks bar menu items to be selected with right-click. Thans to Andrew Brampton for the fix. (Issue 718)
- r1845 Update the New Tab page properly when bookmarks change (bug 1861)

Plugins

- r1735 Fixes bugs with Silverlight plugin not displaying correctly (issues 248, 666)
- r1859 Fix YouTube (and other Flash videos) halting if the time-advance slider is used.
- r1958 Fixes a problem with Shockwave/Flash games not loading (issue 643)

Application Shortcuts and Pop-up Windows

- r1293 Makes sure that application windows (and popups from applications) show the application icon and do not have an address bar.
- r1496 Fixes the "Create application shortcut" window being too short on Windows Vista.

Network/Proxy

- r1890 Better handling of proxy settings, fixing a corruption reading the config file. Thanks to griffinz@ for the fix.
- r1924 Fix performance problems with using proxies (Bug 1684). Thanks to griffinz@ for the patch.
- r1919 Fix a problem accessing some SSL sites that return an illegal message (bug 1891).

Crashes

- r1662 Fix occasional crash when trying to make Google Chrome the default browser (b/1355679)
- r1708 Fix crash in history view when deleting a day of history (b/1358107)