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### **RESEARCH ARTICLE**



# ADVANCED WEB BROWSER WITH EFFECTIVE TOOLS

<sup>1</sup>M.Loganathan, <sup>2</sup>K.E.Dharani

<sup>1</sup>MTech Scholar, Department of Information and Technology  
Hindustan University, Chennai, TamilNadu, India  
Santhosh.software2010@gmail.com

<sup>2</sup>Assistant Professor, Department of Information and Technology  
Hindustan University, Chennai, TamilNadu, India

## ABSTRACT

This paper proposes an advanced browser with useful tools, Today's browsers are fully functional software suites that can interpret and display Web pages, applications, JavaScript, and other content hosted on Web servers. Many browsers offer plugin which extend the capabilities of a browser so it can display multimedia information. This paper adds some features in the web browser, like internet indication, attractive browser GUI. Night mode option. The existing system will not give any sort of indication about the current internet connection status. This paper proposes an easy and exact way to indicate the internet connection status in browser with low data consumption. Night mode option that is already available in mobile is also implemented into system browsers which are very helpful to the end-users who use browser for a long time.

**Index Terms** -- Internet indication, GUI, Night mode application

## 1. INTRODUCTION

The web browser is a one of the most important tools on WWW. A web browser act as an interface among the user and web servers. Software application that resides on a computer and used to find and show web pages. Web user right to use information from web servers, through a client program called browsers. A web browser is a software application for retrieve, present, and traversing information

resources on the world wide web an information resource is identified by a uniform resource Identifier (URI) and may be web page, image ,video, or other part of content. Hyperlinks there in resources allow users to easily navigate their browsers to related resources.

Today most of what we use the web for isn't just web page, they are applications. Users upload download videos, play online games, chat and listening songs and use many other web services. Web browser is attractive more and more important as an application used to conduct billions of dollars of Internet-enabled export each year. It has evolved considerably over the past fifteen years. Web browsers run on different types of hardware, from mobile phones and tablet PCs to desktop computers. Thus an accurate design becomes very essential. Suggestion architecture for web browsers can help implementers to understand trade-offs when designing new systems, and can help maintainers in appreciative legacy code.

A web browser is client side application program that contacts remote servers and retrieves documents from it and displays them on display, either within the browser window itself or by passing the document to an external helper application. It allows particular resources to be requested openly by URI, or absolutely by following embedded hyperlinks. Many other features are provided by browser which increases the formlessness of use. For example, most browsers keep track of recently visited web pages and give a mechanism for "book-marking" pages of interest. They may also store usually entered from values as well as usernames and passwords.

## **2. PROBLEM STATEMENT**

### **2.1 CONNECTION INDICATION**

Each and every operating system has an indication about internet connection, whereas no web browser has an indication about internet connection, whether internet is being connected or not. While using a proxy server, indication about an internet connection is shown as an error, but connection exists and web accessing is allowed.

### **2.2 NIGHT MODE APPLICATION**

The web users should be of different people such as scholars, workers, children and etc, because their surfing time may be from a minute to more a day. Use of the system, and the internet surfing for over a hour may cause predictable affects with eye and health.

## **3. RELATED WORK**

### **3.1 PRIVATE BROWSING**

In a study on private browsing modes in modern browsers [1], the researchers presented a list of inconsistencies between private browsing goals and browser implementations. They also defined private

browsing modes to have two primary goals: privacy against the web and privacy against local machines. Meaning, the user's identity should not be identified over the Internet (web), and the user's activity should not be recorded on the machine (local). One example is that Mozilla Firefox and Google Chrome both take steps to remain private against websites during private mode. Apple Safari on the other hand only protects against local machines. The researchers [1] also found that all tested web browsers failed in one way or another, in regards to private browsing policies. One research article [2] argues that browser vendors deliver exactly what they claim but consumers have limited knowledge as to what private browsing modes can actually do. In regards to another study focused on portable web browsers [3]. There are clearly private policy inconsistencies within the four major browsers.

#### **4. MAJOR BROWSERS AND PRIVATE BROWSING**

In this section, we discuss four major web browsers that are tested in this research and their private browsing implementations.

##### **4.1 MICROSOFT INTERNET EXPLORER**

Microsoft IE offers users a private browsing feature called In Private Browsing. According to Microsoft [8], In Private Browsing enables users to surf the Internet without leaving a trace on their computer. However, while using In Private Browsing, some information such as cookies and temporary files are temporarily stored so that WebPages will work correctly. Once the browsing session is ended, all of that data is discarded. In regards to browser extensions, IE disables all toolbars and extensions during In Private Browsing sessions to ensure better privacy. IE also does not clear anything regarding toolbars and extensions after a private session is ended.

##### **4.2 GOOGLE CHROME**

Google Chrome offers something called Incognito mode for users to browse the Internet in a private session. According to Google [7], Incognito mode does not record any browsing or download histories and any created cookies will be removed upon exiting a session completely. Additionally, Google states that if users are working in Chrome OS, surfing the Internet using guest browsing essentially does the same thing. Once the guest session is closed, all browsing information is completely erased.

##### **4.3 MOZILLA FIREFOX**

Mozilla Firefox offers a discreet browsing mode called Private Browsing. According to Mozilla [9], Private Browsing allows users to surf the Internet without saving any information about visited sites or pages. Mozilla does make it clear as some of the other web browsers do that private browsing modes do not make users anonymous from web sites, ISP's, and networks. In other words, Private Browsing is merely affected in the Application Layer recognized in the OS. Aside from other privacy features, there is an option to enable the Do-Not-Track feature in Firefox, which requests that websites do not track user browsing behavior. This request is honored voluntarily and Apple Safari offers the same. In the experimental phase of our research, these types of features will be optimized for full privacy.

#### **4.4 APPLE SAFARI**

The Apple Safari web browser is primarily used on Apple OS machines but is also available for Windows. Apple's latest version of the Safari web browser for Windows is Safari 5.1.7 [11]. When Safari launched 6.0, they did not update the Windows versions. Most people have assumed that Apple is going to move away from Windows compatibility. According to Apple, when using Private Browsing mode in Safari, WebPages are not added to the history list, cookie changes are discarded, searches are not added to the search fields, and websites cannot modify information stored on the computer.

#### **5. COMPONENTS OF A WEB BROWSER**

Components of a web browser the user interface- this includes the address bar, back/forward buttons, book markings menu etc. Every part of browser display except the main windows where you see the requested page. The browser engine-the interface for querying and manipulating the description engine. The rendering engine-responsible for display the requested content. Parsed content on the screen, Networking-used for network calls, like HTTP needs. It has platform independent interface and underneath implementation for each platform. UI backend-used for representation basic widgets like combo boxes and windows. It exposes a basic interface that is not platform specific. JavaScript interpreter-Used to parse and execute the JavaScript code. Data storage this is a perseverance layer. The browser needs to save all sorts of data on the hard disk, like cookies.

#### **6. USER INTERFACE**

User interface most major web browsers have these user interface elements in common back and forward buttons to go back to the previous resource and forward again. A refresh button to reload the current source. A stop button to cancel loading the source and show it. A search bar to input conditions into a search engine a status bar to display progress in loading the resource and also the URI of links when the cursor hover over them, and page zooming capacity.

In this browser having as usual other browser options like Home Page Settings(Address bar, Use Blank Page, Use Current Page) View Settings(Images on/off, Animation on/off, JavaScript on/off, Flash on/off, Conserve Memory on/off) Connection Settings(Auto-Select, Select Manually) Proxy Server Settings(Use Settings for Each Connection Use/ Do Not Use) Cookie Settings(Allow All, Block All, Prompt for Confirmation) Cache Settings(Do Not Use/ 512 KB/1024 KB/2048 KB) Connection Settings Dialog(No proxy, Auto-detect proxy settings for this network, Use system proxy settings, Manual proxy configuration, repeated proxy configuration URL)Bookmarks, History. In this browser have some extra futures like Internet indication, Night mode browser

#### **7. INTERNET INDICATION**

Many of the users use Google search engine homepage to check whether they connected with the internet connection or not. Whereas loading a Google webpage consume 150 kb of internet data and this means an unwanted data usage only for the internet connection checking. The internet connection indication reduce the loss of data usage that is being wasted on checking whether the user has internet connection.

The disconnected indication turn on in to a glowing connected sign by checking with whether IP address and LAN settings connections are available and ready to send and receive data through the connection..This IP connection checked with system and LAN setting is checked for connection at server and if any failure occurs here the bulb will be showing the disconnected mode.

When the connection with the IP and LAN are connected and the connection is checked continuously for the sign of the internet connection. Then the glowing bulb is indicated for the connected internet connection. When the browser opened it will be displaying the non glowing bulb indication. Then from the next moment it will start checking for the availability of internet connection the application will fetch the code to display the glowing bulb indication. Once the internet is suddenly disconnected the image will be refreshed and the non glowing bulb image will be displayed.



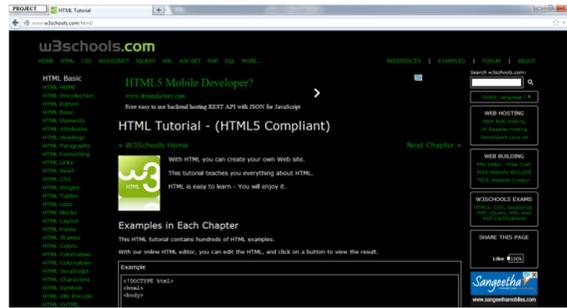
(fig-1) connected indication



(fig-2) disconnected indication

## 8. NIGHT MODE BROWSER

The web users of different people such as scholars, workers, children and etc, because their surfing time may be from a minute to more a day. Use of the system, and the internet surfing for over a hour may cause predictable affects with eye and health. To avoid such effects, a night mode application at browser, that changes the background and text color of a web page to a night mode effect has been introduced. The background of the web page in any color is transformed to black and text is made be visible in gray. This conversion is performed with the color change transforming techniques. The night mode application would be available as an in-built within browser, that can be turned on or off whenever needed. The working module of the night mode application is explained with a simple figures stated below.



(Fig-1)Night mode browser



(Fig-2)Without night mode

## 9. CONCLUSIONS

The existing system will not give any sign about the current internet connection status. This paper proposes a easy and exact way to show the internet connection status in browser with low data consumption..night mode option that is already available in mobile is also implemented into system browsers.

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