



Geolocation Events Based Auto Theme Changer for Browsers

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Abstract: People around the world frequently use browser for accessing internet through the World Wide Web. Web browsers are the only source through which useful information can be extracted. In this paper we propose Geolocation events based auto theme changer for browsers as browsers are the applications generally used by masses to access the Internet. In the world of events and lively festivals people have hard time remembering each and every historic event that occurred in past. Honorable mentioning of events is a Google concept. This particular paper extends similar concept but stressing on country specific events through different means.

Keywords: Geolocation, Themes, Browsers, Events, Automation, Plug-in.

I. INTRODUCTION

Most of the information available online is viewed using a web browser, it's like the most accessed web application. A web browser is a software application for retrieving, presenting, and traversing information resources on the World Wide Web [1]. Browsers such as Chrome, Firefox, and Internet Explorer are the popular browsers widely in use. This software is used widely by billions of users to access internet. Every day new features are being introduced in browsers to improve browsing experience of users. So why not change its look and feel? Browser themes are exactly which will enhance user experience. Browser Themes are skins that allow you to change the look and feel of the browser and personalize it. Themes are popular add-ons and most browsers have a gallery of themes where users can search and select themes according to their preferences. Mozilla Firefox and Chrome allows users to download themes and apply them. 'Personas' for Firefox is a feature in the browser Mozilla Firefox that allows a user to select simple-to-use themes, known as "Personas", more easily than normal themes. Although at first only available as an extension, the feature was built-in to Mozilla Firefox 3.6. Persona themes differ from normal themes over the fact that Personas are more basic, easier to create, and easier to install, but are limited to changing the header and the status bar of the browser. They cannot alter the shape or appearance of toolbar items or tabs in the way those normal themes can. There are more than 220,000 themes available online [2].

Personas Rotator is a new companion for Personas Firefox add-on to change over 65000+ skins periodically

on Firefox. Personas Rotator will automatically rotate the Personas skins you have. If you logged in GetPersonas.com and have favorites in the system, the add-on will try to rotate your My Favorites personas. If you did not log in the system and have no My Favorites personas the rotation is completely random through different collections. The rotation interval time is set to 1 minute as default and you can change this value through settings [3]. In this system the users have to choose themes manually. Themes available are categorically random, and have no relation to current events, events of historical significance and festivals. Events and festivals are country specific.

Humans tend to forget historical events of significant importance. For Commemorating holidays and events Google introduced a new concept named 'Google Doodle'. A 'Doodle' is used to represent major world events and festivals where the Google logo is modified. This same concept can be applied in changing the appearance of browsers. Themes can be made to reflect each country's respective events. If the themes are decided according to events then user need not manually select themes each time, this results in automation.

Since browsers are used by people all over the world and each country has its own events, themes should reflect a particular event. First task must be to find the users location. This can be done by Geolocation services. Geolocation is closely related to positioning but can be distinguished from it by a greater emphasis on determining a meaningful location (e.g. a street address) rather than just a set of geographic coordinates. Internet and computer Geolocation can be performed by associating a geographic location with the Internet Protocol (IP) address, MAC address, RFID, hardware

embedded article/production number, embedded software number (such as UUID, Exif/IPTC/XMP or modern steganography), invoice, Wi-Fi positioning system, or device GPS coordinates, or other, perhaps self-disclosed information [4].

II. RELATED WORK

In computing, a **plug-in** (or plugin) is a set of software components that adds specific abilities to a larger software application. If supported, plug-ins enables customizing the functionality of an application. For example, plug-in is commonly used in web browsers to play video, scan for viruses, and display new file types. Well-known plug-ins examples include Adobe Flash Player, QuickTime, and Java Applets. Add-on (or add-on) in computing is often considered the general term comprising snap-ins, plug-ins, extensions, and themes for software applications [5].

Till now automation has not been introduced in changing themes. So it is inconvenient for the user to select the theme every time according to his needs. Persona has introduced limited automation by allowing the user to select multiple themes at one go. Then the plug-in rotates these selected themes in a manner that a new theme is displayed every day. If the user can't decide which Firefox persona is his favorite and he wants to rotate them like one rotates desktop wallpaper, Personas Rotator swaps out your Firefox Personas just like a wallpaper changer. User can set the categories he wants—favorites, abstract, nature, etc.—and how frequently user wants Personas Rotator to swap them out [6].

Mozilla the most popular browser has its own gallery of themes available. With the help of web crawlers themes can be searched and downloaded automatically. A Web crawler is a computer program that browses the World Wide Web in a methodical, automated manner or in an orderly fashion [7]. This process is called Web crawling or 'spidering'. Many sites, in particular search engines, use 'spidering' as a means of providing up-to-date data. Web crawlers are mainly used to create a copy of all the visited pages for later processing by a search engine that will index the downloaded pages to provide fast searches. Crawlers can also be used for automating maintenance tasks on a Web site, such as checking links or validating HTML code. Also, crawlers can be used to gather specific types of information from Web pages [8].

In the current system users location is not taken into consideration. For changing the theme according to country specific event users location should be taken into account. By including Geolocation services users' location can be traced. Hence, Geolocation services should be integrated in the proposed system.

III. METHODOLOGY

In the proposed system location of the users will be traced with the help of another party. There are a number of free and paid subscription geolocation databases, ranging from country level to state or city - including ZIP/post code

level - each with varying claims of accuracy (generally higher at the country level). These databases typically contain IP address data which may be used in firewalls, ad servers, routing, mail systems, web sites, and other automated systems where geolocation may be useful. An alternative to hosting and querying a database is to obtain the country code for a given IP address through a DNSBL-style lookup from a remote server [9].

The primary source for IP address data is the regional Internet registries which allocate and distribute IP addresses amongst organizations located in their respective service regions. Secondary sources include:

- Data mining or user-submitted geographic location data. For example, a weather web site might ask visitors for a city name to find their local forecast. Another example would be to pair a user's IP address with the address information in his/her account profile.
- Data contributed by internet service providers.
- Merging databases from different suppliers.
- Guesstimates from adjacent Class C range and/or gleaned from network hops [10].

A. Events:

Maintaining events list and updating them every month so that events which are known need to have associated theme. Event such as the Olympics, Google logo is changed to Olympic theme with some animation. Even when great historians have their birthdays Google logo is being changed. Some events, festivals, may be world level and not country specific such as the Christmas in the month of December.



Figure 1: Working of the Add-on.

Figure 1 shows the working of proposed system in which client (user) downloads the plugin and is installed into the browser. Plugin begins to trace user's location using geolocation services. Once the user's location is known country specific events are searched in the events database which is a collection of events associated with countries.

Example of an events database associated with countries.

Table 1

Country	Date	Event
USA	January 1, 2012	New Year's Day 2012
USA	September 3, 2012	Labor Day 2012
USA	January 16, 2012	Martin Luther King Day 2012
USA	February 14, 2012	Valentine's Day 2012

Events can be anything about historical significance to festivals celebrated. Once the events are known associated themes are selected from the themes database and applied to suit appropriate event date. Like mentioned themes database can be updated every month. Perhaps some events may be common worldwide in this case same theme can be used all over. In the proposed system most of the process takes place automatically with no user interference. User can simply hit the "don't like" button which will set the theme to most recent.

IV. REFERENCES

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V. FUTURE SCOPE

In the near future when themes become animated same concept can be applied to bring in new kind of visual appearance.

Auto theme changer can also be implemented in cell phones with minor changes like automatically changing themes according to the user's selected mood