Web Session Monitoring System

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Abstract- *This paper presents the development of a Parental Control System which possesses capabilities like remote monitoring and controlling of internet access on computer. Parental Control Internet Access (PCIA) continuously monitors the internet usage on a computer and on monitoring it checks the URL entered further send URL entered to the database. In the database we have a list of URLs which are restricted on our computer. If the entered URL is found in our list then it will send the details of that URL to the admin's email with the help of the SMTP server. On email, we will send the photo of the user and the details of the URL, so the admin will get an idea about the sites being surfed on his computer from anywhere and as a result he will block the user with the help of which he will close the running browser. This system allows the parents to monitor the internet access of their child from anywhere and hence makes it easier for parent to monitor the actions on computer.*

Keywords- Remote Access, URL, SMTP server, Client-Server network

I. INTRODUCTION

Web tracking is the practice by which operators of websites collect, store and share information about a particular user's activity on the World Wide Web. Analysis of an individual user's behavior may be used to provide content that relates to their implied preferences and may be of interest to various parties.[1] To track sessions, a web session ID is stored in a visitor's browser. This session ID is passed along with any HTTP requests that the visitor makes while on the site (e.g., clicking a link). "Session" is the term used to refer to a visitor's time browsing a web site. It's meant to represent the time between a visitor's first arrival at a page on the site and the time they stop using the site. A cookie is a small piece of data from a web site that is stored on a visitor's browser to help the website track the visitor's activity on the web site.
At present, most of the systems in network (client-server network) have the traditional method of proxy server to access data on internet[6]. Proxy server requires a user information which may turn harmful sometimes so a new technology named as Parental Control Internet Access (PCIA) is discussed to overcome it. Apart from being a boom, PCIA wipes out all the cons of conventional systems. Parental Control Internet Access (PCIA) is a sophisticated system which allows parent to collect the information of the websites accessed by his/her children. Parental Control Internet Access (PCIA) includes various things such as a computer at home, database of sites.

II. LITERATURE

The purpose of Internet Access Control Protocol scheme is to allow controlled access to the internal resources of the network, and only trusted systems can gain access to external networks. This scheme is a variant of the original scheme of Iqbal and Poon (1992) which required two levels of authentication. [2] However, it is possible to simplify the scheme and retain the security features with only the packet level authentication. The scheme uses the RSA and the DES security algorithms to enforce access controls on Internet communication requests

The simplified access control scheme does not require session initiation authentication, hence eliminating the overheads of the RSA encryption and decryption process at the hosts and network access control gateways. The overheads incurred due to the extra access control procedures are found to be smaller in comparison with the original Internet access control scheme and the visa scheme.

This paper describes the functionality and the architecture of the MPI system, which was developed for Web information monitoring[3].

This paper analyses the current technical limitations in the monitoring Web services which mainly focus on the lower layers rather than application layer in TCP/IP stacks. So, the paper puts forward an indicator and model system, proposes some technologies to monitor Web services[4].

In this paper, CARENA, a client-side browser-embedded tool to capture and replay user navigation sessions. Like some commercial software packages our tool captures information about the user session, which can be used later to replay or mimic the gathered user navigation.[5]

III. ARCHITECTURE

User Module:

The term client machine refers to a user's computer that is connected to a network and accesses another computer, called a server, to request various kinds of resources, to save data or to run certain programs or perform certain functions. In our proposed work the client machine is computer at home. This client machine at home contain database of restricted sites. Our module will search the URL entered and will cross check it with URLs in our database. If the URL is not present at database then our module will give access to that URL. And if URL is found in database then it will send email to the admin.

Admin Module:

The admin can login to his application and can check the status of the user. Admin can receive the email when the user tries to access the blocked website. Further the admin can block the particular user so that he cannot browse the website.

IV. PROPOSED SYSTEM

The web browser market is dominated by Microsoft's Internet Explorer (MSIE), which holds a 95% share. It is therefore the de facto standard for web clients, and web authors frequently write HTML and DTHML code targeted at MSIE. Using MSIE and a screen reader or magnifier guarantees that a maximum of websites will work for the user, in the sense that the functionality intended by the author will be available to the sighted user, and that the user interface will be common to sighted people – such as those providing technical support – with the obvious exception of the use of the assistive technology.

The problems with this approach are the inaccessibility of content displayed by the browser and the complexity of the user interface already described. WebbIE was developed to fulfil our design philosophy of allowing users to access standard applications, in this case Windows Internet Explorer, through an interface that simplifies and represents the content without losing information or being too complicated for non-expert users. WebbIE is not self-voicing, but rather provides support for partially-sighted people and allows screen reader users to continue to use their familiar environment.

Dataflow Diagram:
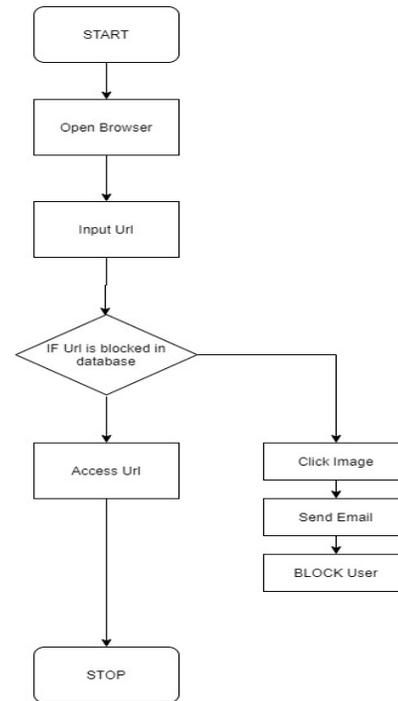
Software Algorithm:

Step 1: Start
Step 2: Open Browser
Step 3: Input URL
Step 4: If URL is present in database then it will perform following steps

- Camera starts and clicks the user image
- Send Email to the admin
- Admin can block the user
- Close the browser

Step 5: Else, grant access through URL
Step 6: Stop

The figure shown below is the simple block diagram of our project. It is a simple illustration of how we have to implement our project and the various parts involved in it. From the below representation firstly when a child open the browser and type the URL in address bar then PACS will check the URL in the database. Database contains the restricted addresses of the unwanted sites. If the URL is listed in database then PCAS instantly send the SMS with the URL. After receiving the email parent will reply back to PACS with suitable command. The command is predefined actions which have to perform PACS on home computer. And if the URL is not listed in database then it will allow the child to visit that URL.

V. SYSTEM DIAGRAM
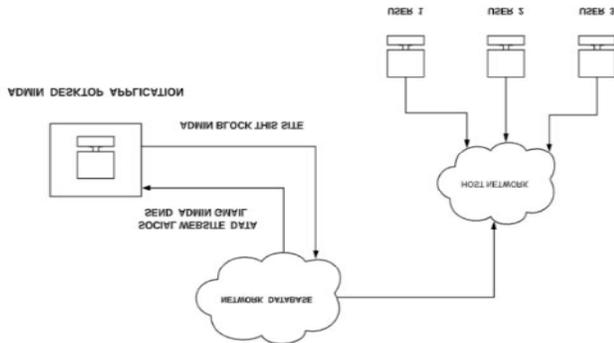
VI. SYSTEM REQUIREMENT

Hardware Requirements:

The software in itself is very light-weight and would require minimal disk space. Other mandatory requirements to make use of all features of the software would be:

1. 1 GB RAM.
2. 200 GB HDD.
3. Intel 1.66 GHz Processor Pentium

Software Requirements:

- Operating System: Microsoft Windows 7,8,10.
- Microsoft .Net Framework
- Visual Studio2013
- MS Sql2008

VII. RESULT

The user browser application takes 1 millisecond to click a picture of the user when a blocked site is visited. It takes 10 seconds to send the data collected regarding the visited sites and their duration, picture of the user. It takes one minute to convert the data into a report. When a blocked site is visited, it takes 10 seconds to notify the admin about it through email.

VIII. CONCLUSION

The development of Email based Parental Access Control demonstrates the concept and implementation of new monitoring system. Email -based PAC has low infrastructure cost, low operating costs, more data security, higher efficiency and less man power required. It not only solves the problem of manual monitoring but also provide additional feature such as

disconnect internet and close browser. So it saves a lot amount of time and energy.

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