

PARENTAL CONTROL WITH WIFI MANAGEMENT

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Abstract

Due to the rapid development in the field of the Automation industry, human life is becoming more advanced and better in all aspects. Home automation system increases the comfort and quality of life. In the present scenario, Automated systems are being preferred over the nonautomated system. With the rapid growth in the number of consumers using the internet over the past years, the Internet has become an important part of life. This project aims to create a design and prototype implementation of new home automation system that uses Wi-Fi technology as a network infrastructure connecting its parts. The proposed system consists of two main components; the first part is the server (web server), which presents system core that manages, controls, and monitors users' home. Users and system administrator can locally (LAN) or remotely (internet) manage and control system code. Second part is hardware interface module, which provides appropriate interface to sensors and actuator of home automation system. Unlike most of available home automation system in the market the proposed system is scalable that one server can manage many hardware interface modules as long as it exists on WiFi network coverage. System supports a wide range of home automation devices like power management components, and security components. The proposed system is better from the scalability and flexibility point of view than the commercially available home automation systems.

1. INTRODUCTION

Parents are raising a new generation of techie kids. Toddlers use tablets and teens text to communicate. Also, most schools have integrated computers and tablets into their curriculum. Parents allow their children and teens to have a cell phone because it's a great way to stay in touch

with them. Parents face a challenge: weighing the pros and cons of giving their children digital freedom and defining the boundaries of that freedom. Most parents understand that limiting children's access to the internet could affect their ability to learn and develop. But this also means exposing children to online threats and

content that may go beyond their capacity to handle. That's why installing robust security software with parental controls on all devices can help parents and their kids to navigate the digital world around them. This project aims at developing an efficient solution for parental control using WIFI management which can block harmful websites, and the websites which we want to specifically block, even providing a module which can hide ones important files, hence enhancing overall security.

2. RELATED WORK

There are several different kinds of software tools available to families to restrict their children's computer and Internet use. "Time-Limiting" software allows parents to set limits on how much time or at what time a child can use the computer or Internet. "Filtering and Blocking" software limits access to some sites, words, and/or images. "Outgoing Content Blocking" regulates the content leaving the computer to prevent children from revealing personal information, such as names, addresses and telephone numbers, to people they do not know. "Kid-Oriented Search Engines" work like regular search engines but also provide special features to screen out inappropriate material. Finally, "Monitoring Tool" software informs adults about children's online activity by recording the addresses of visited websites or displaying

warning messages to children if they visit inappropriate websites, without necessarily limiting access. Some software incorporates several of these features. Internet content filters make two kinds of errors: 1) blocking a page that should not be blocked, called overblocking, and 2) failing to block a page that should be blocked, called underblocking.

3. IMPLEMENTATION

Computer usage for online and offline activities opens new risks for predators, information disclosure, and easy access to inappropriate content in websites, messages, file downloads, and game and audio/video multimedia. The problem posed is thus is used to create a solution to implement efficient parental control management for internet. To use this project we need a laptop and this is created with the help of python it is a simple application with provided gui and with the few modules that are available in python like pynput and scrapy however the applications created by these modules require space less than 30 mb in apc to make this script work platform independently we need a module called pyinstaller this makes the python work across different platforms without python idle. To block the websites we need to go to `c:/windows/system32/drivers/etc/hosts` this location and enter the website name

like 127.0.0.1 websitename .com which makes the computer to stop its services in many of the websites but most of the people do not have any idea about it so this application goes to that location and blocks the websites we want and another tool sniffs the data sent from our computer through through wifi and stores it in a pcap file we need to open that pcap file with pcapfile opener and another tool records the keystrokes in our computer and store them in a text file with time and date. Parental controls are features which may be included in digital television services, computers and video games, mobile devices and software that allow parents to restrict the access of content to their children. These controls were created to assist parents in their ability to restrict certain content viewable by their children. This may be content they deem inappropriate for their age; maturity level or feel is aimed more at an adult audience. The demand for parental control methods that restrict content has increased over the decades due to the rising availability of the Internet. Several techniques exist for creating parental controls for blocking websites. Add-on parental control software may monitor API in order to observe applications such as a web browser or Internet chat application and to intervene according to certain criteria, such as a match in a database of banned words.

Virtually all parental control software includes a password or other form of authentication to prevent unauthorized users from disabling it.

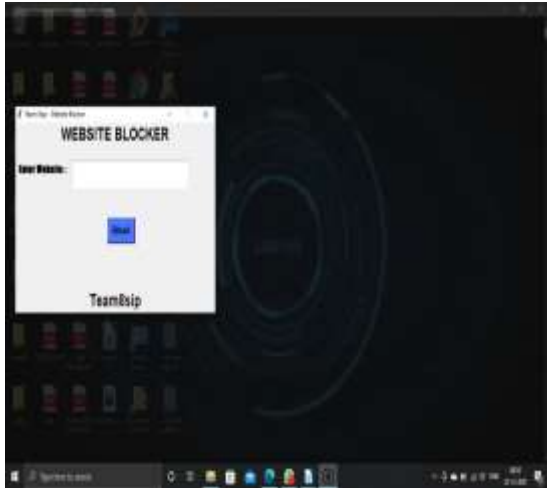
4. EXPERIMENTAL RESULTS

The proposed system consists of three applications which require less than 30mb of the space and they can be put in background. They work without the disturbance to the user and the first application provides a GUI to block the websites to a specified computer and the second application sniffs the data between our computer and the internet and stores that data in a pcap file that has to be put online and has to read the data and the third application consists of a key logger which records our keystrokes and stores it in our pc in a text file .



As shown in the above figure the keylogger displays a window that consists of few dialogues and it stores the text format of our keystrokes in our pc

similarly wifi sniffer works and it displays our wifi information but nothing will be understood it is stored in a pcap file and it has to be opened in an online opener. and another application provides a gui to block the websites in the specified pc. The codes used are:



5. CONCLUSION

Parental control with WIFI management has successfully blocked harmful and dangerous websites which we wanted to. It did not allow the selected websites to open on any system and on any type of internet connection. Even websites with

https link were blocked by using it, which are said to be tough to block. It had securely hidden the important files. It stored them safely in a folder created by it, which is shown only using authorization which requires a password. Hence this software parental control with WIFI management has successfully worked and is ready for working on a large scale.

6. REFERENCE

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