CHILD PROTECTION APP – KEEP YOUR CHILDREN AWAY FROM INDECENT ARTICLES AND CVS DURING MOBILE DEVICE USAGE

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ABSTRACT

Mobile devices are now considered to be an essential tool for everyone in society, particular in urban communities. Parents frequently allow their children to use mobile devices in order to entertain the children and keep them quiet. Sometimes the child uses the device for an extended period of time. Perhaps they even use the mobile device to negotiate their behavior with their parent. For example, they may refuse to do their homework unless their parent allows them to play a game on their mobile device. Observers of this behavior have identified what are now termed mobile addiction, Internet addiction, and game addiction, and have been given the title Computer Vision Syndrome (CVS). Thus, the purpose of this study was to implement an Android application for filtering mobile access and limiting the time of mobile usage. The filtering feature allows parents to include any keyword that is considered obscene or otherwise dangerous or prohibited that may be used by a child. Also a time limit function provides the ability to monitor and restrict the amount of time the child spends using their mobile device. Therefore, the app provides protection for children against the now unfortunate extensive availability of pornography and other undesirable content that the child may access, intentionally or unwittingly.

KEYWORDS: *Android Application, Child Protection, Computer Vision Syndrome, Internet Addiction, Mobile Addiction*

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INTRODUCTION

Mobile devices are now considered to be an essential tool for everyone in society, particular in urban communities. Most people use mobile devices for their activities in everyday life. For example, people at work use chatting applications for communication. Facebook is used for updating people's activities. Searching via a web browser is used to find information of particular interest such as, perhaps, the specifications of your electronic appliances, or correct use of grammar in English. Parents allow their children to use mobile devices in order to entertain children and keep them quiet. Examples of these applications are Cartoon and Nursery songs on YouTube and online games [1]. Fig. 1 shows the use of mobile devices. Parents allow their children to use mobile devices in order to entertain children and keep them quiet. Examples of these applications are Cartoon and Nursery

songs on YouTube and online games [1]. Observations of the behavior of children using a mobile device have led to such terms as Internet Addiction, game addiction and sickness [2].

Fig. 1. Mobile devices

These are new terms in what is now known as Computer Vision Syndrome (CVS). Children spend many hours a day on their mobile devices. This often leads to poor behavior. For example,

they don't want to do their homework if they don't play games or watch some video clips from YouTube first. Their friendships are mostly virtual, which affects their social behavior. Their parents worry about this behavior. Internet addiction is a problem that is growing every day. This certainly includes Thai society where smartphone use is prevalent, and is increasing every year. In order to prevent and handle the previous issues, a Child Protection App has been implemented. The following sections are related research, conceptual framework, results and conclusions from our development activity.

RELATED RESEARCH

To support the current research, research in other associated areas was identified and is discussed below:

- Computer Vision Syndrome is a sickness related to overuse of the computer. Watching the screen of computer devices can cause visual problems such as painful and blurred vision, and headaches. Researchers have found that up to 80% of people using electronic devices have developed CVS [3].

- Pseudomyopia (Short Eye Sightedness) is caused by the contraction of the muscles in the eye when focusing on close objects. The shrinkage of the eye muscles results in temporary short sightedness [2,4]

Game Guard Program [5] is an application on PCs. It works as a timing function. Parent can limit the amount of time for users using the PC or accessing the Internet.
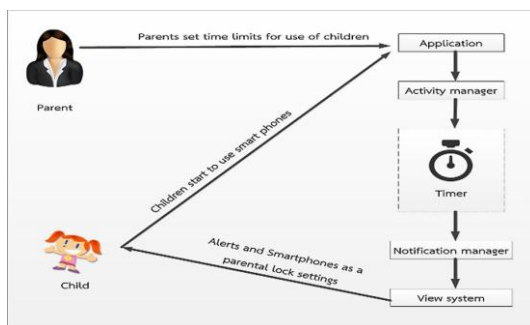
CONCEPTUAL FRAMEWORK

Fig. 2. Conceptual Framework

This mobile application is implemented under the Android operating system. There are three main functions: (1) to notify user, (2) to lock the screen and (3) to filter keywords from other applications. Users of this application are parents and children. As illustrated in Fig. 2, parents can set up a time and password for their child, who can start to use the smartphone at the time and under the conditions stipulated by the parents. At the finishing time stipulated in the set-up, the device will be alerted and lock itself according to the set up parameters.

RESULTS AND DISCUSSION

Fig. 3 – Fig. 4 are screens of this application. The Interface – Logon Screen (as shown in Fig. 3) allows parents to create their own passwords. A password is compulsory for accessing the setup mode. Fig. 4 shows the Interface Setting Screen. This is the main screen of the application. All setting functions; time, keyword and password, can be edited here. The screen for setting the Time is shown in Fig. 5. This allows parents to set the amount of time for using the mobile devices. Fig. 6 shows the Interface Setting Keyword Screen. Keywords can be set here. Fig. 7 is the Interface Setting Locking Screen. By enabling this function, the smartphone will be locked as soon as the time is reached (as setting in Fig. 5). Fig. 8 is the Interface Reset Password Screen. Filter keywords are set up in the screen as shown in Fig. 9. Access to any application showing or transmitting the keyword will not allowed.

Fig. 3. Interface - Logon Screen
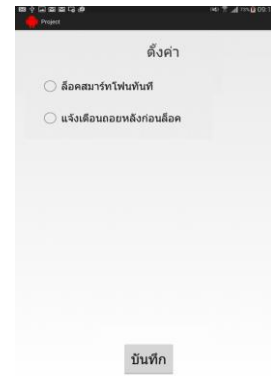
Fig. 4. Interface - Setting Screen

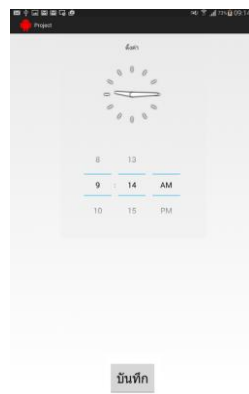**Fig. 7.** Interface - Setting Lock Screen

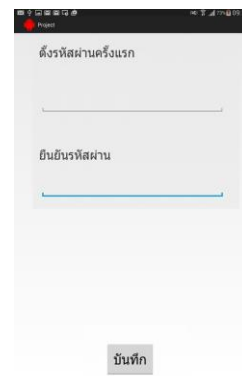**Fig. 5.** Interface - Setting Time Screen

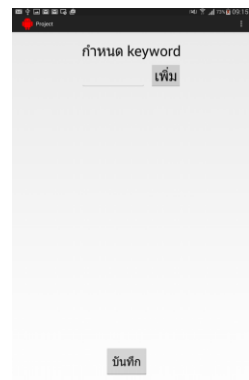**Fig. 8.** Interface - Reset Password Screen
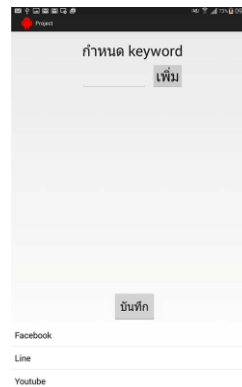

Fig. 6. Interface - Setting Keyword Screen

Fig. 9. Interface - Setup keyword Screen

CONCLUSION

Child Protection App is an Android application which offers three functions: notification, locking screen and open apps based on keywords. The primary purpose of this app is the ability for parental monitoring of Internet use on smart devices, and the protection of children from the negative effects of over-use of these devices, which can include actual illness, and the possibility of access to pornography, grooming for illicit purposes and other undesirable content.

ACKNOWLEDGEMENTS

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