

Remote Control by mouse and keyboard to PC/Laptop using Android Smartphone

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ABSTRACT

From some years there has been a significant evolution in mobile or smartphone computing and communication devices like mobile phones, media players and many more. This project is proposed to be able to perform most of the actions a normal computer keyboard and mouse can accomplish. Wireless presentation controller ensures good freedom of movement. but, most of such devices do not allow user full operation on the computer, like running the program, moving or closing an application window, etc. This project proposed the design and implementation of converting smartphones into computer remote controllers by which user can wirelessly operate a computer. We proposed the system which can reduce the strain of sore moment with the use of computer. It enables the user to move cursor, click operation and applications, play with media such like forward, rewind, pause, run, and increase or reduce the volume of a media file, multi-touch scrolling, pinch gesture for zoom in and out. This could be achieved by using the proposed application that occurs to the computer network via Wi-Fi which can connect both system with each other, then command from the mobile phone that remotely controls the computer.

Keywords:-android, mouse, keyboard, remote control, smartphone.

1. INTRODUCTION

There are a few several situations where we want to wirelessly and comfortably operate a computer, where the computer screen is design onto a big screen through a projector or big-screen television, such as classrooms, conference/meeting rooms, mobile, workgroup project environments and modern office environments, and even living rooms. Several specifically designed devices are available on the market for the goal of operating computers remotely and wirelessly. Wireless keyboard, as shown in Fig. 1a, uses each of two Bluetooth or wireless USB mini-receiver plugged into the USB port of computer for the communication among the keyboard and the computer. Some wireless keyboards have a touchpad for controlling the mouse pointer. Wireless presentation controller, as shown in Fig. 1b, allows user to operate his/her computer remotely for PowerPoint presentation over Bluetooth connection. It usually has several buttons, including mouse-left, mouse-right, next slide and previous slide buttons (for PowerPoint presentation), and even a small size rectangle touchpad for moving mouse cursor.

2. LITERATURE SURVEY

In earlier for all software's you need for that is to have an Internet access. Not any application works without internet. So that type of software requires more cost. This is the biggest disadvantage of earlier software's.

In our application we remove the disadvantage of earlier software. And we are developing this wireless application which works without internet, Or we can control our PC/Laptop remotely without internet & without using any browser.

Gmote: This is an Android remote application that is used to control a VideoLan Client (also known as VLC) media player, with basic choices such as play, pause, stop, forward track and backward track. Its advanced feature is the file browser that allows it is user to pick and choose what to play and also a recently added feature of being able to play some of the media files directly on the phone as facing to watching it on the computer. However, this remote application has its limitation in controlling one program.

myRemote: This application is very simple and easy to use, easy to set up, and it is an good control for Home Theater PC (also known as HTPC). This has been rated the best Remote control for Windows Media Center, as compared to other related application of its kind. The only limitation for this application is the poor skin design.

3. PROPOSED SYSTEM

The design of this application is to address the stress of an uncomfortable moment with the use of computer. It facilitate the user to search for files, click on the desktop applications, play with media such as forward, reverse, pause, run, increase or decrease the volume of a media file. It also allows the user to do multi-touch scrolling and pinch action for zoom in and out. This could be achieved by installing the proposed application that show to the computer network via Wi-Fi which then connects both system together, then comes with the command from the mobile phone that remotely controls the computer.

4.SYSTEM ARCHITECTURE

The systemarchitecture is shown in the Fig. 1 below.



Figure.1.Architecture of system

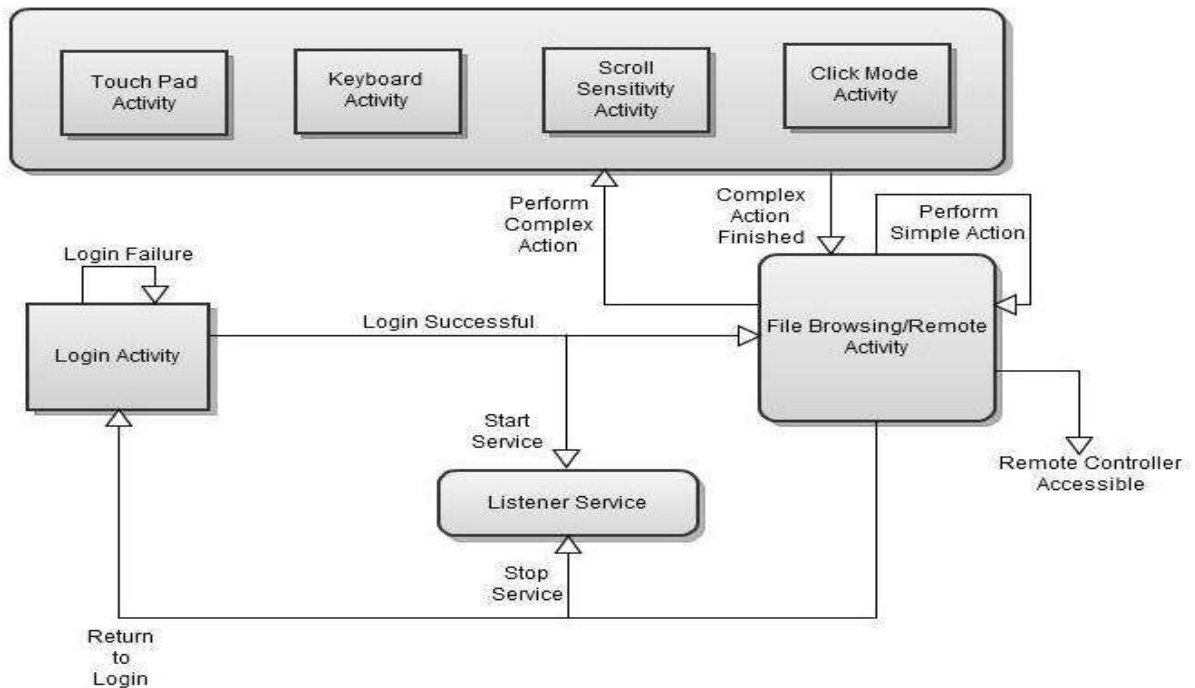


Fig. 2: Client application flow diagram

This section represents two important factors of the prototype: the client and server applications. Furthermore, the major components for proposed application and some of the important algorithms are elaborated.

4.1 The Client Application

There are specially two ways to deliver an application on Android: as a client-side application developed. By using the Android SDK and installed on user devices as an .apk or as a web application developed using web standards and accessed through a web browser. Here in this project the client application was implemented. By based on the platform using Android Software Development Kit, this application is written using the Java Programming Language and is designed to run on a customized Linux-based virtual machine called Dalvik. The developed client application is an .apk extension the interested users can download from the developer and installed directly to their mobile phone device. Fig. 2 shows the program flow diagram of the client application.

First, the application program starts and check the Wi-Fi connection. The embedded web server is runs in parallel once the application starts. The application pick the xml file from the .apk file and generate the main screen and moves ahead to generate also the application Graphical User Interface. The application GUI awaits an input from the user and when the action has been performed, it sends a command to the Web Server which can processes the action sent from the GUI. Then the Web Server resends back the action and that has been processed to the Application GUI which then updates the input back to the user as expected.

4.2 The Server Application

Now a day mobile phones are having more computing power, running a server on mobile phones can do a lot of more help in running the device. In the project the server works as a pair to the client. For without the server and that transmits the message to the listener, the application itself would not be able to function. To create a typical web server, and one has to create a server socket and listen to the desired port. Then accept the connection and finally process the request and send the response to the client.

For the server side of this application, a java server application which is required for listening to client activities. In this project the server is a private java application server is hosted by the application’s machine. The application’s machine can also be any machine where Java Runtime Environment (JRE) is installed. Fig. 3 shows the program flow diagram of the server application.

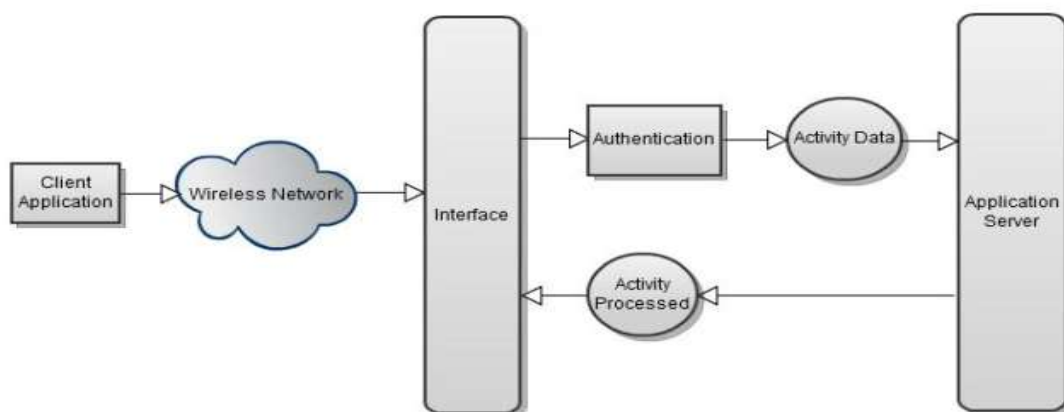


Fig. 3: Server application flow diagram

4.3 The Prototype Program Flow

Fig. 4 shows the overall program flow for this application. When the remote control is run, and it follows the path shown on the figure below. After application starts, the embedded java application server is runs in parallel. Sound notification is implemented in the proposed application so as to let users being aware that their IP address. so it has been validated and the user can proceed with the application.

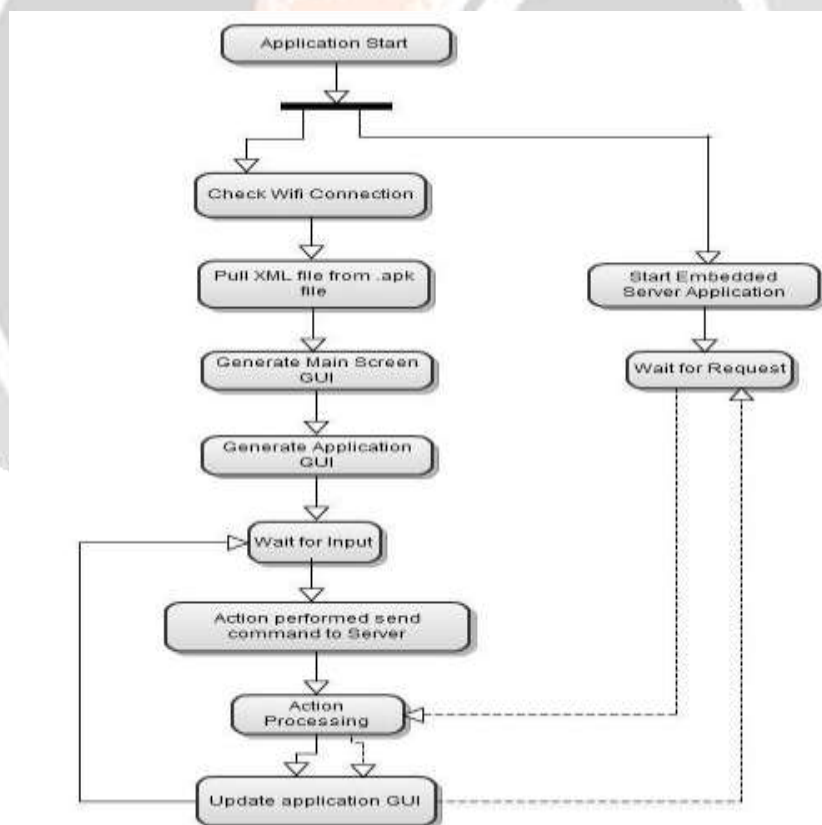


Fig. 4: Prototype program flow d

6. CONCLUSION

This project explores the possibility of controlling the computer remotely using an Android phone device. The proposed prototype is able to control a lot of operations a normal computer keyboard and mouse would perform. It practically turns a mobile phone into a wireless keyboard and mouse using a wireless network via a portable mobile device running under an Android Platform Operating System. It helps mobile phone users on facilitating their work in study life, home life or working life, where the use of the prototype helps in easing the device control.

It is proven that this project would relieve a pain in the neck and also the normal back ache due to constantly sitting at a particular place. With the help of this prototype, these stressful moments will be minimized as users will be having a very relaxed position as intended. This is a convenient application for simple operations and for manipulating such computer without the keyboard and mouse been connected.

7. REFERENCES

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