

ANDROID APPLICATION BASED ADVANCED MOBILE JAMMER FOR SMART PHONES

Prof. Sharad B. Gholap, Harshal R. Patil

Abstract — Now day's smart phones are widely used by people all over the world. It is becoming integral part of our life. In classroom students do not pay attention on lectures but busy in playing games or watching videos. In restricted areas also people uses phones and disturbs others. Traditional Mobile jammers available in the market, only blocks receiving and transmitting signals of cell phones. The person didn't even get the notification of a call or message when he is in the jammer coverage area. The person cannot be contacted for some urgent information also. This Paper mainly focuses on the advanced mobile jammer which blocks the communication with enabling notification to the user. An android application is designed to jam the communication without user intrusion. The application is designed in such a way that the user mobiles block it and unblock itself without any notification or intrusion of user. With this user can easily get the notification of incoming call and messages. This new system makes it easy for implementing and managing mobile phones smartly.

Index Terms — Android Application, Mobile Jammer, Smart Phones, Security Applications.

I. INTRODUCTION

Now day's smart phones are widely used by people all over the world. It is becoming integral part of our life. Use of smart phone is not limited only for communication but it also for entertainment. Many times user using smart phone irritate other people. In classroom students do not pay attention on lectures but busy in playing games or watching videos. In restricted areas also people uses phones and disturbs others.

Jamming devices generates a signal on the frequency that overpowers the cell phone frequency. That frequency is having that much power to cancel out both signals when collide. Jammers disrupt either signal travelling from phone to tower or signal travelling from tower to phone. Small jammer generates signal which blocks bands from 800 MHz to 1900 MHz its range is 9 meters.

Mobile jammers available in the market only blocks receiving and transmitting signals of cell phones. The person didn't even get the notification of a call or message when he is in the jammer coverage area. The person cannot be contacted for some urgent information also. Nearly the mobile phone will be in Switch Off state. There will not be any notification that the user mobile has been jammed. It cannot prohibit users to use smart phones for entertainment. Hardware required to

design such jammer are complicated and costly.

In this project we designed transmitter jammer application (Tx-Application) and receiver blocking application (Rx-Application) for android smart phones. Android smart phone containing Tx file is used as jammer unit and users containing Rx file will automatically blocked while come under Bluetooth range of that jammer unit.

When user wants to block the other smart phones which are present in Bluetooth range then user has to run Tx file which automatically turn on Bluetooth of jammer cell phone. Bluetooth of Smart phone containing Rx file is continuously in on state. Hence when it come under Bluetooth range of jammer cell phone its Rx file run automatically and disable touch pad and speaker of its own unit. Due to this even though smart phone receives signal from cellular network it could not attempt any call or could not use any multimedia application as touch and speaker are disabled. Hence this jammer strictly prohibits use of smart phone.

II. SYSTEM MODEL

A. System Architecture

The system model of the Android consists of blocks as Linux kernel, libraries, android runtime, application framework, applications. The Linux kernel works at multitasking environment so it provides multiple processes to execute concurrently. All the applications run on Linux kernel. The kernel consists of all drivers as display driver, audio drivers, Wi-Fi driver, Bluetooth driver etc.

It is an environment in which android applications run and managed. Consist of a set of services. The applications of android are constructed and designed from interchangeable, reusable and replaceable components. It also has an extension that the applications data can be searched and reused by other applications. Framework provides the following services as activity manager, resource manager, package manager, location manager. Applications are at the top layer of the system. Application included is native type and third party applications.

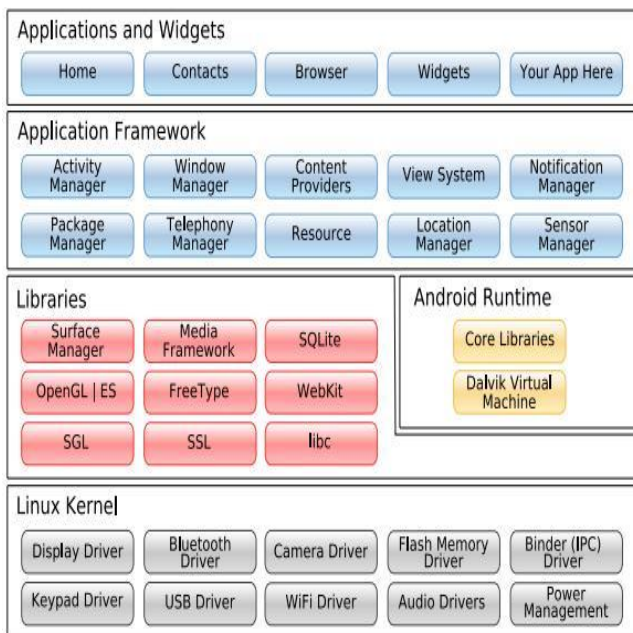


Fig. 1 Android Operating System Architecture.

B. Software Framework

This Android runtime includes the core libraries and Dalvik Virtual machine. There are many advantages of using Dalvik virtual machine such as the applications cannot interfere with other applications or operating system. Also there is no provision of direct access with the device hardware. Android libraries are java based and are specific to android applications. There are following libraries included-

- 1) Android. App – using this we can access the application model.
- 2) Android. Content – provides access to contents, messaging between components of application.
- 3) Android. Database – data published by content providers can be accessed. Also does database management.
- 4) Android. Hardware – used to access hardware as light sensor, meter etc.
- 5) Android. OS – related to standard operating system services as system services and messages.

There are other libraries too as android. Media, android. Provider, android. View and android. Webkit.

III. ANDROID APPLICATION FLOW

Now When Android application is launched pre-defined functions are invoked by default. After application opened, the first

- OnCreate() function call. It indicates what screen has to show in graphical module. Second
- Init() function checks whether device is having Bluetooth Adapter Installed or not. It shows on application screen.
- BluetoothAdapter() function will turn on Bluetooth

without interrogating with user.

- SearchForNewDevice() function run a service which starts search for new Bluetooth enabled devices present.

- RegisterIntoList() is used for mapping those devices into our list. All the devices searched by SearchForNewDevice() function are listed in register.

- Checkdevicename() Bluetooth device having name Block is checked in register list with the help of this function.

There are two possibilities; first is no device found which is having name Block. For this condition device run

- NonJammingMode() function. This mode will start SystemTouch(), SystemSound(), SystemNotification(), MediaSound() and set brightness of screen to “full” (on).

This mode will continuously check device name Block in list.

Another possibility is that device found having name Block. For this condition device enter into jamming mode by running

- Block() function. This will stop all SystemTouch(), SystemSound(), SystemNotification(), MediaSound() and set brightness of screen to “zero” (off). This function continuously check device name Block into register list with help of CheckDeviceName() function.

- OnDestroy() function is provided to interrupt the application and to stop it.

IV. SYSTEM IMPLEMENTATION

Now Jamming unit device must contain Tx file. When Tx application runs screen will show two options:

- 1) Start Bluetooth Transmission
- 2) Stop Bluetooth Transmission

When user touches “Start” option it will turn on Bluetooth of a device and name of a Bluetooth is set as “Block”.

Rx file turn on Bluetooth of a device using function Bluetooth adapter() and continuously search for new Bluetooth devices using function Search for new device(). All searched devices are listed into register using function Register into list(). If Bluetooth device named as Block found in list then Block() function run and put device into Jamming mode which stops all system touch, System Sound, System Notifications, System Media Sound and also set brightness of screen to “zero”. Thus smart phone device is in block state. If any call arrived then also user could not attend that call because touch is disabled. User couldn't use even any multimedia applications, as system sound and media sound also disabled, user could not be disturbed to surrounding area. Thus use of a smart phone is strictly blocked. During jamming mode if any user restarts his handset or reenter into jamming region then it will put again into jamming mode because system continuously check registered list of devices.

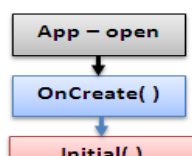


Fig. 2 Android Application Flow Chart

If user goes outside the jamming range then there is no Block named Bluetooth device in register list and hence No device found () function runs and it will start system touch, system sound, notifications, media sound and also set brightness of screen to full. During jamming mode if any call or message arrived then its notification will displayed on screen in regular manner.

Thus with the help of such smart jammer we can strictly prohibit user to use their android smart phone in jamming area without disturbing network signals

V. DESIGN TESTING AND RESULTS

Android application is successfully implemented and tested under normal conditions of class having 50 students, by blocking each and every smart phones using the same application and also successfully unblocking it.

Figure 3 shows the screen shot of smart phone in the jamming range, this screen continuous displayed on the screen but yet not seen due to screen brightness is set to "Off",

hence user is not able to operate it by any way.

Figure 4 shows the screen shot of smart phone in the non-jamming range, now in this range all the application of smart phone will automatically restored it to its default state and phone works normally.

VI. CONCLUSION

Traditional mobile jammer required additional hardware which is costly. But in this proposed solution jammer transmitter smart phone is used as a jammer device. So there is no requirement of transmitting hardware. No license is required to install this jammer. With the help of this jammer any particular multimedia application can be also disabled.

This android application is totally services based so easy to embed with any other android application as an additional services if that application. Very easy to handled and there is no escape door for students to switch off this service except moving to unblock mode.



Fig. 3 Android Screen Shot in Block Mode.

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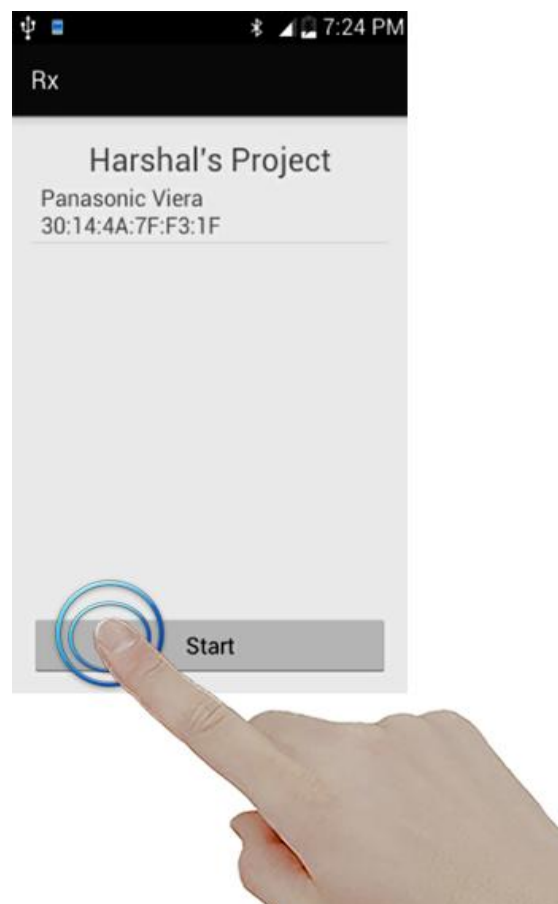


Fig. 4 Android Screen Shot in Non-Block Mode.

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