

# Remote Desktop Handling by using Android Mobile Phone

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**Abstract-** In this paper, we will establish the process to access the desktops of remote computer systems with the use of a android mobile phone. This process will be successfully carried out by using Virtual Network Computing based architecture. A user will be able to access as well as manipulate the desktops of remote computers through a VNC viewer that will be provided on the user's android-phone. Conditions that must be followed that a VNC server must be installed on the personal computer which will be monitored and it must be connected to a internet connection.

**Keywords-** Android mobile phone, laptop, Internet, VNC

## I. INTRODUCTION

VNC represents for Virtual Network Computing. It is a remote display system which allows you to view a computing 'desktop' is not on the machine where it is management but from anywhere on the Internet and as of a wide variety of machine architectures. The introduction of android phones has brought a big change in the technical field related to cellular phones. Now a, smart phones are used worldwide and provide much better facilities than previously available cellular phones. These android phones provide features which were previously provided by computer system architecture. In this paper ,we remote computer system within the internet and provide features like desktop access, panning and zooming, over viewing ,etc.

This system will be implemented on Android software stack. Android software stack access various packages for networking and it also supply high performance for android cellular phones. The security is maintained by providing verification at the server side.VNC architecture and protocols are used for client and server transactions. In the range of remote control there are various projects and initiatives designed to allow remote control between two devices. Although most of the architectures have the impartial of control remotely PCs, there are several enterprise that aim to control mobile devices. The remote control architectures powered by manufacturers cover only a part of the features required for an effective use and usually are implemented as internal solutions. Other aspect to be

considered is the remote mechanisms that are beneficial for achieve a remote display other devices. The most popular system developed to perform remote devices is Virtual Networking Computing .

## II. PROPOSED ARCHITECTURE

Cellular mobile phones have shown a dramatic improvement in their functionality to a point where it is now possible to have cellular mobile phones execute Java programs. As a result, cellular users in world are now able to read as well as write the e-mail, browse the Web pages, and play Java games using their cellular phones. This trend has prompted us to propose the use of a cellular mobile phone as a device for remotely controlling computers. Virtual Network Computing is a graphically desktop sharing system providing remote control via internet. It supports a controlling functionality by usage the updating of a graphical screen from a controlled device and capturing image. VNC system is based on RFB (Remote Frame Buffer) protocol and transmit all information between connected devices. Transmission is running on one port from range 5900 that is the VNC protocol .

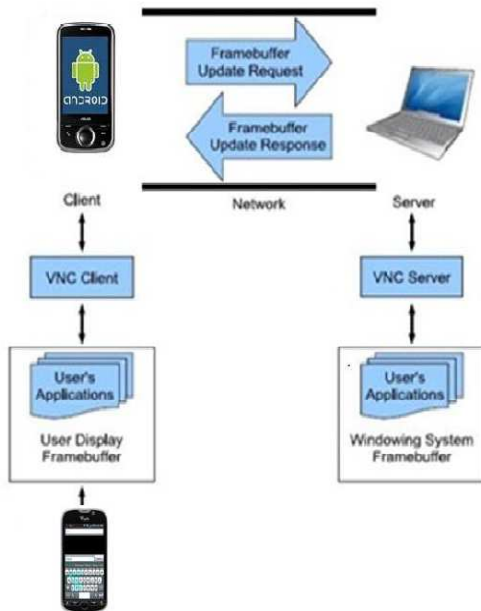


Fig 1: VNC architecture based mobile access computers

### A. Mobile VNC Architecture

The goal of our system is to supply the services needed to perform remote connection between android mobile device and desktops. It consumes the existing VNC system in our application. Enhanced encoding technique (RFB) are used to improve system performance.

User can be able to transmit the files between mobile device and Desktops. User can able to debug the android phone. User can able to see processes, status and services of android device. User can execute the services provided by the server. The remote VNC application can be used to perform remote control of mobile devices with the help of thin client i.e. desktop.

### B. Hierarchical Region Detection Algorithm

In the first step of the modified region coding, a screen image data is segmented into unit rectangles which are fixed size blocks. Then, difference in detection between current and previous screen images is performed for each unit rectangle. If all values of pixels are identical, the unit rectangle is regarded as a skip block, which does not need to be transmitted. If any

difference is detected to the unit rectangle is encoded and is transferred to the client as usual.

## III. DESIGN OF THE PROPOSED SYSTEM

### A. Desktop Sharing:

In this module, the screen of remote desktop will be shared to android phone. This can be done with the help of the VNC protocol. The working of VNC protocol is based on the concept of a remote frame buffer (RFB). The X-vnc server program acts as an X server. It accepts connections as well as X11 protocol messages from graphical applications just as any other X server. The difference is that a "real" X server has a real frame buffer behind it (i.e., a real graphics display), whereas X vnc has only an in-memory frame buffer. It accepts the connections from the VNC viewers and tells the VNC viewer about any changes to its in frame buffer memory.

### B. Panning and zooming:

The user can move the viewport horizontally as well as vertically. The viewport can be extended (zoom out) to browse its contents and contract (zoom in) to see the display in greater detail.

### C. Pointing and clicking:

The user can change the place of pointer on the remote desktop display vertically and horizontally by pressing keys. By pressing a key, dragging can be executed to specify the start of the dragging operation, then moving the pointer and finally pressing the same key to denote the end of the dragging operation. When the pointer approaches, the edge of the view port is alternatively panned to follow the pointer. Clicking mouse buttons can be performed by pressing the integrated keys on the cellular phone. Double-clicking can be executed by pressing a specific key as a prefix.

### D. Tight :

Tight encoding is a combination of the JPEG and the Zlib compression mechanisms. It preprocesses the data to maximize the compression ratio as well as minimize CPU consumption. This method is also effective for slow network.

### E. Representation of Pixel Data:

Pixel format indicates to the representation of individual colours by pixel principles. The majority of pixel formats are 24-bit or 16-bit "true color", where bit-ends within the pixel value translate straight to red, green and blue intensities and 8-bit "color map" where an

arbitrary mapping can be used to translate from pixel values to the RGB intensities. A rectangle of pixel data will be sent on the lead. Every quadrangle of pixel data is prefixed

by a header generous the X,Y location of the rectangle on the monitor, the breadth and elevation of the rectangle, and an encoding type which specifies the encoding of the pixel information.

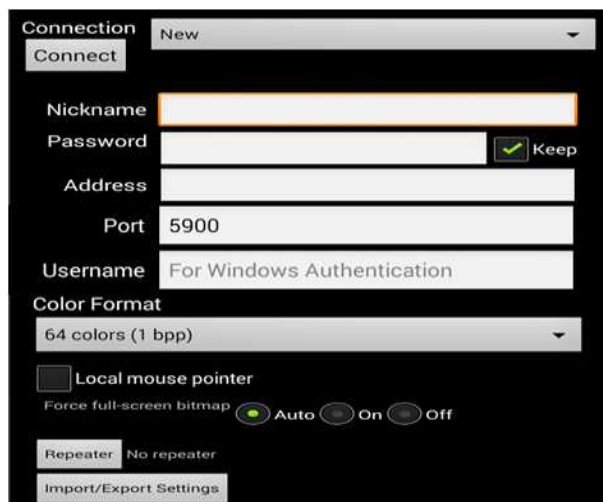
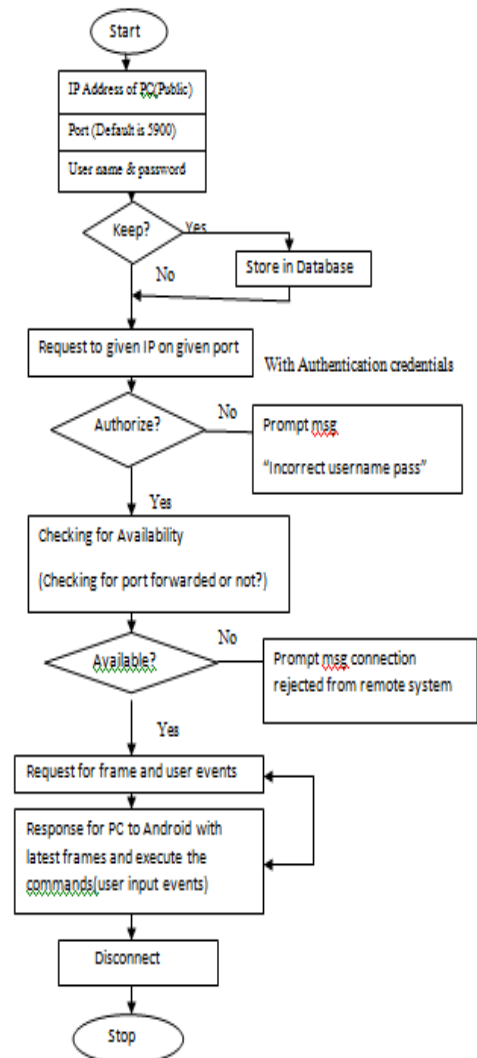


Fig: Screen shot of GUI

Each configuration you create can have a nickname which will make it easy to find in the list. If your VNC server is configured to require a password, enter that password here. Most configuration settings are stored in a simple database on your device. The password will only be stored if you check *Keep*; otherwise, you will have to re-enter it when you recall a configuration. Even if the password is not stored in the database, it will remain available on the page for as long as **android-vnc-viewer** runs on your device. Here you should enter the port number of the VNC server. This field will default to the first VNC port number, 5900. The client supports a number of color formats, which are specified by number of colors/number of bits per pixel. Formats with more bits per pixel provide greater fidelity to high color depth displays, but use more bandwidth (sometimes dramatically more because they don't compress as well) and more CPU on your Android device. Not all VNC servers support all color depths; OS/X Remote Desktop for example requires 24-bit color. If you are having trouble connecting, try another color depth.

#### IV WORKING



#### V. CONCLUSION

This application will provide assistance to the system administrator in monitoring the tasks. Currently the scope of this system is within Internet area. Next step will be implementing this system provide file transfer. The RFB protocol will be used for the data transfer. The VNC architecture will be used for implementation of this system. Due to wide use of android devices, this system will be developed for tablets as well as other handheld devices. This system will provide mobility for users for controlling their computer desktops through internet. More facilities and features for accessing applications running on remote desktop from mobile handheld devices will be provided.

Thus the extended scope of this system will prove to be helpful in providing mobility and accessing the remote desktop through the internet.

#### **REFERENCES**

- [1] Jaya Bharathichintalapati, Srinivasa Rao T.Y.S , “ Remote computer access through Android Mobiles” IJCSI International Journal of Computer Science Issues, Vol.9, Issue 5, No. 3, September 2012.
- [2] Rashmi A. Kalje, Prof.S.P.Kosbatwar, “Android Based Remote Control of Mobile Devices Using VNC system”2014,5089.
- [3] R.Manikandasamy, “Remote Desktop Connection Using Mobile Phone”,2013 IJSETR.
- [4] Sejal Patel, PriyadarshaniRaskar,PragatiBadhe, Prof.ArchanaLomte, “Remote Control of Android Phones Using VNC”,ISSN:2248-9622,Vol.4,Issue 1(Version3),January 2014 pp.141-144.
- [5] V.S.Pendyala and S.S.Y.Shim, “The Web as The Ubiquitous Computer,”(SEP-2009).
- [6] V. Rivoira and F.Pascali, “HSDPA:High –speed internet over your mobile phones,”IEC NEWSLETTER,(JUNE-2007).
- [7] B.obuliraj,R.vijayalakshmi,K.sudha. “Remote controlling PC with Smartphone Inputs from remote place with internet,”2015.
- [8] Jaya BharathiChintalapati,Srinivasa Rao T.Y.S. “Remote computer Access Through Android Mobiles,”International Journal of Computer Science Issues,2012vol 9issue 5 No.3.