



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## PC Operator

<sup>1</sup>Agraa Rege, <sup>2</sup>Aakanksha Bawaner, <sup>3</sup>Shivani Sabale, <sup>4</sup>Arathi Kamble

<sup>1</sup>Student, <sup>2</sup>Student, <sup>3</sup>Student, <sup>4</sup>Guide

<sup>1</sup>Computer,

<sup>1</sup>New Horizon Institute of Technology and Management, Thane, India

**Abstract:** Operating a laptop or a pc remotely can be possible with this application. We can easily control all the mouse operations, keyboard operations from our mobile phone. Even file sharing, playing media on pc and controlling power point presentation can be done. User can see the live screen of pc on their mobile phone and even can control it. Remote power off and restart can be done by the user.

### I. INTRODUCTION

We have many times controlled our television and A.C with our smart phones. Also, there are applications available for controlling one PC with another PC. Hence, we thought of taking this technology ahead and we came up with an idea of controlling a PC with a smart phone. As both the devices can have wireless connectivity, we can have a portable controller for our pc using an android application [1]. We implemented different features like controlling the mouse cursor with our android phone and even operate left click and right click operations of mouse. Also, we can easily operate the keyboard operations like typing text and using the shortcut operations of keyboard. This project also allows user to transfer their file from pc to mobile and mobile to pc easily. User can even play media files located in mobile on pc. User can play songs which are on mobile phone on pc's speaker. Also, we often tend to control a power point presentation remotely hence; we have added this feature of controlling the presentation operations like starting of presentation and changing the slides on the android application. Even user can view the screen of the laptop or pc remotely and can even control it using live screen feature. Also, user can remotely shut down and restart the pc using an android phone. Hence to use all this features, user has to just install our desktop application on pc or laptop and install android application on their android phone.

### II Literature review

There exist many situations where we wish to wirelessly and comfortably operate a pc, where the pc screen is projected onto a big screen through a projector, such as classrooms, conference/meeting rooms, mobile, workgroup project environments and modern office environments, and even living rooms. There are many specifically designed devices available on the marketplace for the aim of operating pcs remotely and wirelessly. Wireless keyboard, uses either Bluetooth or wireless USB mini-receiver plugged into the USB port of pc for the communication between the keyboard and the pc. Some wireless keyboards have a touchpad for controlling the mouse pointer. Wireless presentation controller, permits user to operate his/her pc remotely for PowerPoint presentation through Bluetooth connection.

However, all those devices have certain drawbacks. Wireless keyboard has restricted flexibility and isn't convenient for a presenter to carry it around in the room during the presentation. Presenters usually like to walk around within the space throughout the presentation. Carrying a wireless keyboard is definitely not convenient. Wireless presentation controller does not have good mobility. However, most of such devices don't permit user to have full operation on the pc, such as running a program, moving or closing an application window, etc. Even it has a small touchpad for moving mouse pointer, however it is little troublesome for the presenter to use it to move the mouse cursor while he/she is walking around.

The widely used and very popular smart devices, such as iPads, smartphones, PDAs, and smart game controllers, can be the superb alternatives as pc remote controllers if we tend to develop appropriate apps for them. This motivated us to develop an app for most popular mobile OS android to control action on PC

### III ARCHITECTURE

This system consists of two application. One is the desktop application and other is android application. Both the applications are developed using java. Hence, we used TCP Socket connection to connect both the applications with each other [2]. The pre-requirement of this system is that both the devices should be in same local network. Once both devices are in same network, user has to open both the applications simultaneously and enter the IP address to pc (displayed on pc screen) in the android application to establish a connection [3]

Now, user is free to operate the laptop or pc remotely.

Workflow: -

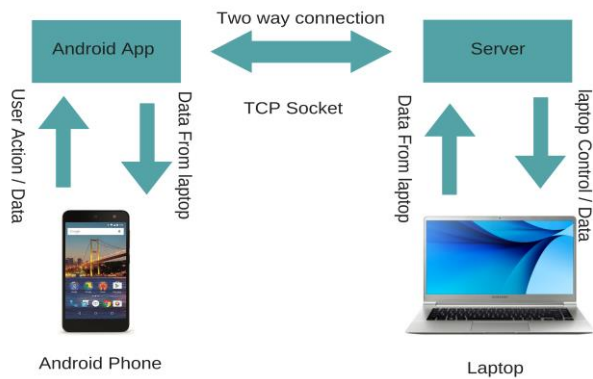


Fig 1 WorkFlow

This is the work flow of our system. In which there is an android application and a desktop application. Both the devices are connected with TCP Socket connection [2]. Hence, data will be transferred from mobile to pc and pc to mobile using this Socket connection.

Use Case Diagram: -

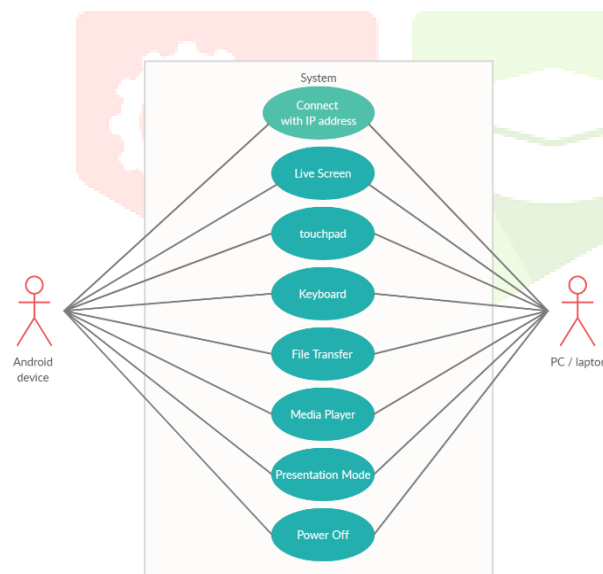


Fig 2 Use case

These are the different features of our project. We have features like Touchpad (to control mouse), Keyboard (to control keyboard), File Transfer (mobile to pc and vice versa), Media Player (to display media from phone to pc), Presentation (to control ppt), Live Screen (display pc’s live screen on mobile) and PowerOff (shutdown, restart and sleep)

#### IV. PERFORMANCE EVALUATION

The proposed system provides user flexibility to control their laptop or pc remotely. The performance check of implemented models is done as follows

##### A. Performance

Expected: There must be no delay between the command given by the android application and the operations performed by the system.

Observation: A small amount of delay appeared in process

Solution and result: The solution we came up with was to split the features in different menu tab and using them one by one. This solution eliminated the delay and also provided a user-friendly interface for the user.

##### B. Test Case

Table 1 TEST CASE

<i>Function name</i>	<i>Expected output</i>	<i>Actual output</i>	<i>Pass / Fail</i>
Connect model	Desktop application should display IP address and available port number of the system. If user enters correct IP and port number on mobile phone, connect the application	The system detects the Ip address and port number and if user enters correct details applications connect with each other	Pass
Touchpad	When user drags finger on the touchpad screen the mouse pointer of pc should move. Left click and right click operation should be performed without any delay	The mouse pointer moves when user drags the finger on screen. Even left click and right click operations get performed without any delay	pass
Keyboard	Alphabets pressed in mobile phone should be typed automatically on desktop. Shortcut keys should be performed when clicked on mobile phone.	Text is typed only when cursor is enabled on pc. If cursor is not enabled, text is not displayed. Shortcut operations are performed when clicked on mobile.	pass
Media Player	All the media file on mobile phone should be displayed on app. If user clicks on any media the media should be played on pc.	Media files on phone are only displayed when the app is given access to storage. When clicked on any media, the file is played on pc.	pass
Live Screen	When user clicks on Live Screen button, desktop screen should be displayed on mobile phone.	When Live Screen button is clicked, desktop screen is visible on mobile phone.	pass
Presentation	When user clicks on start button, presentation mode should be enabled. Slides should be changed according to buttons pressed (previous or next).	All functions work only if a power point presentation is open on pc. Slides go to presentation mode and slides change when button is clicked.	pass
Power Off	Shutdown, restart and sleep operations should be performed when associated buttons are clicked.	Pc gets shutdown, restart and go on sleep mode when their associated buttons are clicked on mobile phone	pass

#### V. CONCLUSION AND FUTURE SCOPE

In this paper, we propose a remote-control system to control PC applications by using mobile phones. This method does not require additional equipment because the proposed PC control system uses general mobile phones to control PC applications. Thus, users can simply control PC applications without additional devices. However, this system can be improvised by adding new features like adding voice commands to control pc, features for adjusting brightness and another setting on pc. We are also exploring possibilities for developing app for desktop which will control mobile functionalities and apps.

## VI. ACKNOWLEDGMENT

I am using this opportunity to express my gratitude to everyone who supported me throughout the course of research project report. I am thankful for their aspiring guidance, invaluable constructive criticism and friendly advice during the project work. I am sincerely grateful to them for sharing their truthful and illuminating views on a number of issues related to the project.

I am also thankful to principal **Dr. Prashant Deshmukh** and management of NHITM for their support and encouragement. I am highly indebted to my Head of Department **Dr. Sanjay Sharma** and guide **Ms. Arathi Kamble** for their guidance and constant supervision as well as for providing necessary information regarding the project & also for their support in completing the project. I am thankful to the review committee for their valuable suggestion and feedback. I also thank laboratory staff for their valuable support. Last but not the least, I sincerely thank to those from teaching and non-teaching staff from NHITM who were somehow attached with my endeavor.

## VII. REFERENCES

- [1] [https://en.wikipedia.org/wiki/Android\\_\(operating\\_system\)](https://en.wikipedia.org/wiki/Android_(operating_system))
- [2] <http://www.cs.rutgers.edu/~pxk/rutgers/notes/sockets/>
- [3] Haeil Hyun; Jonghyun Park; Yunchan Cho; Jae Wook Jeon , “ PC application remote control via mobile phone “ , ICCAS 2010 , 27-30 Oct. 2010  
<https://ieeexplore.ieee.org/document/5669816/authors#authors>
- [4] Y. Yang and L. Li, “Turn Smartphones into Computer Remote Controllers” International Journal of Computer Theory and Engineering, Vol. 4, No. 4, Page No 561 – 564 <http://www.ijcte.org/papers/532-A172.pdf>

