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DexTool- A complete presenter smart phone based toolset for trainers and instructor

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Abstract— In the modern world, computerized presentations are used as powerful tool in order to present the ideas, to deliver the lectures, to address the audience etc. Many tools are available for this purpose in the past, but these tools require some equipment like key board, mouse, high lighter etc which is cumbersome to carry for the presenter. Thus in this paper need for a consolidated toolset in an application is proposed. Our application DexTool eliminates the equipment requirement, provides smart solution for teacher, trainers, professionals etc. DexTool provides all the facilities without carrying equipment in one app. It also provides unique feature of live polling that is not available in past applications. Furthermore we also propose the need of a viewer side solution that address the problems of remote viewers.

Index Terms— lecturers, trainers, business personnel, meetings, sessions, training workshops, distractions, issue, tools, equipment, students, computer

1. Introduction

In the present world, presenting your ideas, giving lectures or conducting training sessions or workshops through computer presentations has become a trend. Due to this trend, a few equipment have emerged to help the lecturers, trainers, business personnel and students while giving presentations and make it easy for them to give the presentation with fewer distractions. But the problem is that these people have to carry such equipment with them along with their laptops thus increasing the equipment they carry.

For this paper a thorough research was conducted to look for any similar applications or software. Three such applications were found which make it easier for the lecturers, trainers and business personnel to give their presentations. Swoosh is an android application which uses Wi-Fi/Bluetooth connectivity for connection, apple keynotes requires internet connectivity and presentain conducts session through its website. Table 1 shows the comparsion between Swoosh, apple keynotes and presentain. All the three applications do not have a mouse or keyboard. One end of swoosh application and apple keynotes application end should be installed on laptop. Swoosh works with hand gestures for changing slides while apple keynotes used screen swipe and presentain uses buttons for changing slides. Swoosh and apple keynotes do not have a question answer feature unlike presentain which provides a questioning feature as a live poll. Presentation is not viewable on both Swoosh and Apple keynotes while Presentain provides this feature of presentation viewable at user end too.

2. Proposed Solution

The solution that we propose keeping in mind the applications we researched on, is dexTool. dexTool is basically a tool that provides lecturers, trainers, public speakers, business personnel and students ease while delivering their presentations during a lecture, session or a meeting. It provides two ends, one for the presenter and another for the viewers or the audience. dexTool provides presenters all the necessary tools that they wish to use on a single device and platform. They don't need any extra hardware to carry with them except their mobile phone and laptop. Few functionalities provided by dexTool include slides navigation, laser, highlighter, whiteboard, etc. To the viewers or the audience, dexTool provides an option to ask questions through this end of application or answer any poll created by the presenter during that particular session. At the end of the session or lecture, the viewers or the audience can submit their request for a copy of the session too.

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TABLE 1
COMPARISON BETWEEN APPLICATIONS [1],[2],[3]

Swoosh	Apple Keynotes	Presentain
Wi-Fi/Bluetooth Connectivity	Internet Connectivity	Session through Website
No Mouse	No Mouse	No Mouse
No Keyboard	No Keyboard	No Keyboard
Limited to same network	Limited to apple devices	Users from anywhere in the world can connect
Should be installed on Laptop too	Should be installed on Laptop too	Accessed via Web
Works on hand gesture – limited to certain distance	Works on screen swipe	Buttons for moving to next or previous slide
No central server	ICloud	Central Server
No questions asking feature	Same as Swoosh	User can question
Presentation not viewable	Same as Swoosh	Presentation viewable on user end

3. METHODOLOGY

After connecting with server, the presenter can then navigate to next or previous slide from the mobile application. The commands are sent from the client (presenter) which the server interprets to either move to next or previous slide. The presenter can also use the tools such as highlighter, laser, whiteboard, polling, etc. provided to him in the application. The presenter will need to select tools which he want to use during presentation from the dashboard which will then be made available to him on his mobile application. From there, he can use his desired tool and can see the output on the screen of laptop. The viewer end can ask question to the presenter through the application and answer the questions that the presenter has asked or participate in the poll created by the presenter. The live polling feature will enable a quick analysis of any question. The viewers will be connected to the cloud server SessionID provided by the presenter. They'll be viewing the slides at their

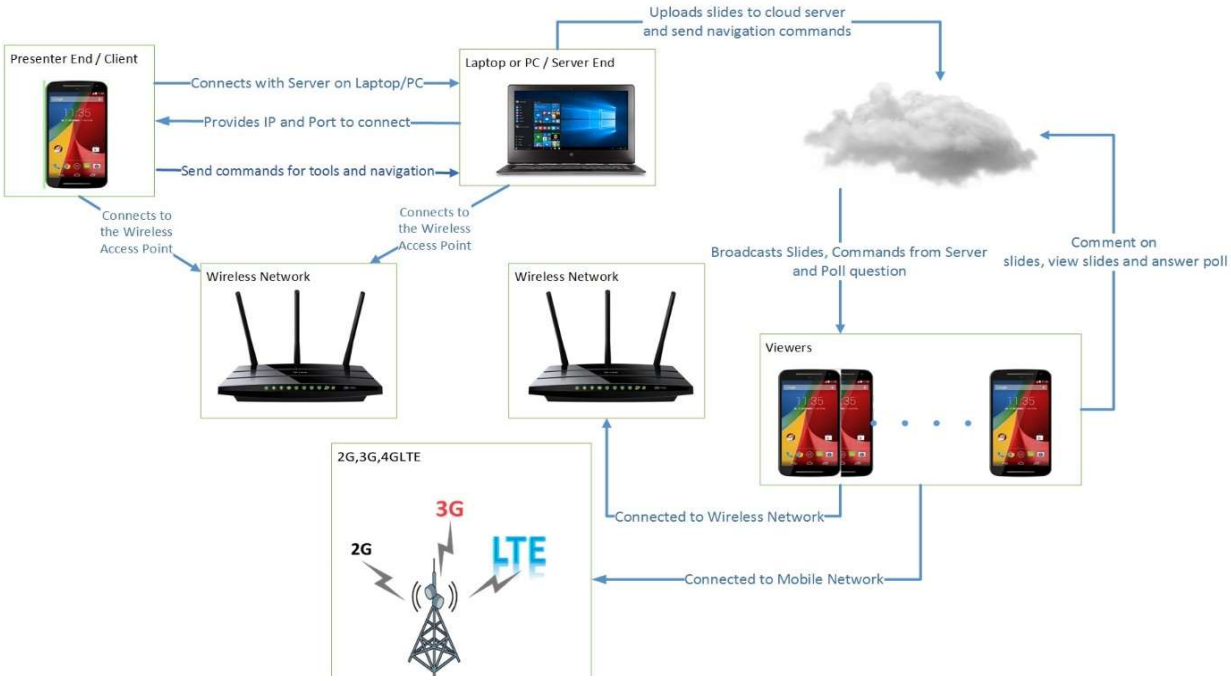

Figure 1: System Diagram

International Journal of Scientific & Engineering Research, Volume 8, Issue 9, September-2017
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end of application through the [4] cloud server database.

4. THREADING

Threading will be used in the application on both the desktop application and the mobile application. Threading will basically be used to maintain the connection between the desktop application and the mobile application. This will ensure the mobile application is connected to the desktop application without any link breakdown apart from any odd situation such as Wi-Fi losing its connection. Threading will be used for the continuous communication between the mobile application and the desktop application. By communication we mean during navigation of slides to next or previous, using the different tools chosen by the presenter such as laser, pen, highlighter, etc. This will ensure that all the features work effectively and without any break in communication link.

5. CONNECTION PROTOCOLS

UDP protocol will be used in order to establish the connection between the desktop application and the mobile application. UDP, in comparison to TCP/IP [5], [6] protocol is faster in transferring data from one end to the other end due to the fact that it is a connectionless protocol and on the other hand, TCP/IP [7], [8] is connection oriented protocol which requires handshake before the data transfer. Another reason to use UDP is that it also provides port numbers which help in distinguishing the different user requests. UDP also provides operations such as broadcast and multicast.

6. DISCUSSION

The desktop application is started by the user and he needs to enter his user credentials, the login name and password. If he is a new user, he needs to sign up for the application. After login, the dashboard is presented to the user where he'll be able to access a few of the features provided on the dashboard. From dashboard he'll be able to start the presentation session. At the start of session, IP and PORT will be provided to the presenter which will be used to connect the mobile application to the desktop application. Presenter will then start the mobile application and will be required to provide the application with IP and PORT. Once the IP and PORT is verified, the mobile application receives the notes of the presentation and the tools selected by the presenter from the dashboard and then the session

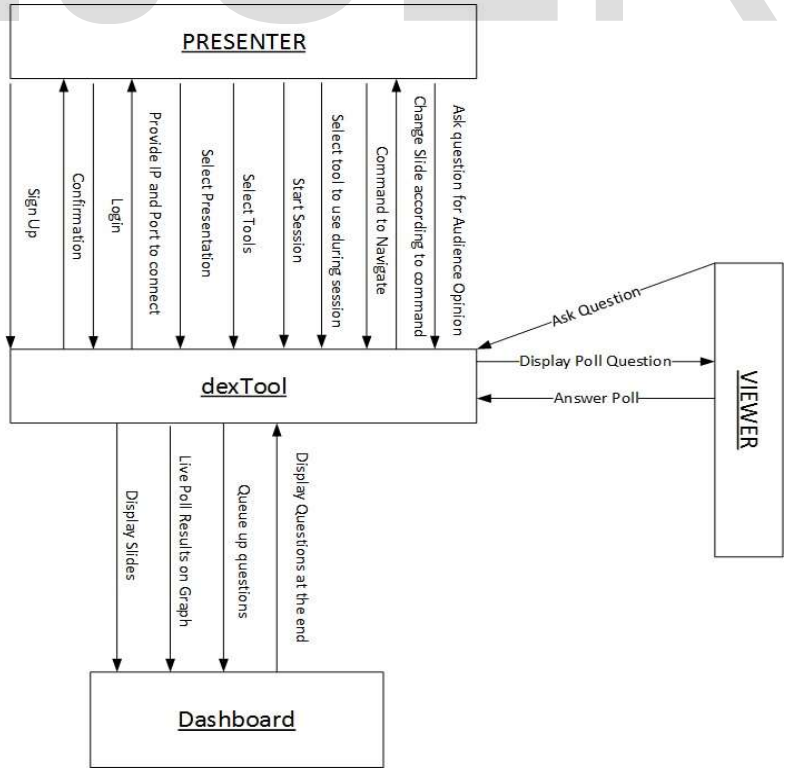

Figure 2 Figure 2: Context Diagram of the DexTool

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starts allowing the presenter to use the tools and navigate the slides.

For the viewer end, which will be a future enhancement of this application, the viewer will start the application on his mobile and enter the sessionID that will be provided by the presenter to all the viewers of the session. After the verification of sessionID, the viewer application will receive the slides from the server and can be viewed on their mobile application. Polling, another future enhancement in this application will be available to the presenter who will be 0able to create a poll to take audiences' opinion on any matter. The poll will be broadcasted to the viewers who will then participate in the poll. Last but not the least, another future enhancement which will be available to the viewer application is commenting or questioning on any particular slide which will then be answered by the presenter at the end of the session.

7. CONCLUSION

In a nutshell, dexTool is aiming to transform the whole trend of presentations and workshops in an interactive and much more active session for the both the presenter and the audience. If the research is successful and implemented as discussed in the paper, it will set a new dimension in the technology world and will make the lives of presenters much easier. The features of the application will give the presenter a wide range of tools to use during the presentation.

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