



STREAMER AN APPLICATION FOR STREAMING

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Abstract — *Now a days data is consolidated with the Human's life in a inseparable way. But, however streaming of large data is still not very feasible. Also it is costly and time consuming to share data over the Internet. Devices carrying Bluetooth-enabled chips can be used to stream data, but streaming of data can be accomplished at very limited speed. Thus, with the help of Wi-Fi technology 'STREAMER' will be able to overcome the above limitations.*

With the application 'STREAMER' we can accomplish data sharing through streaming of data with the use of Wi-Fi technology, which yields the sharing of data without Internet connectivity. The 'STREAMER' application is able to stream the data in virtually-real-time, swiftly and in a memory conserving way from one device to other device(s). This application will also help us to prevent the copy of data from being stolen up to some extents. As well as the application can be used at any local surrounding because no external hardware and services are required.

Keywords- Streaming, Wi-Fi, Screen Mirroring, Screen Cast, WI-FI Streaming.

I. INTRODUCTION

1.1. Project Summary

"STREAMER" aims at providing all groups of people may it be corporate level or the entertainment level, the wireless and convenient way of displaying their work to other co-workers. This is a full-fledged Android based application which streams data content of any other kind.

This application extends the use of Wi-Fi that comes as an integrated part of Android Operating System to transfer the data to client's device without any hiccups. Through this application, we tried to bridge the gap between the ways we communicate with devices. With STREAMER we can now communicate with third party devices such as projector and music systems without the personal computing devices taking any control over it.

This application is designed to log the user in as the master or the slave. The slaves being the mobile devices have the overall control of his/her data. On the other side is the master, which may be a mobile device or any personal computing device. The slave selects the data that he has on his/her device and streams to the master, which will directly throw the content coming from the client to the third party devices, without storing them or making any changes to the original data.

Through this application, corporate companies can present their confidential data to other executives without handing over to them. This way confidential data stays truly confidential. In entertainment industry, where these days lots of piracy takes place, this app works as a boon to people. One can stream the data content over to large audience to view it without actually transferring the file to them.

1.2. Purpose

STREAMER aims at providing security to the confidential data and reducing the piracy that is taking place in this modern digital era. Also, this app introduces the concept to inter-acting the mobile device with other device in an untraditional way (i.e. without the receiver's computing device taking any control over the data that is being streamed).

1.3. Scope

The scope of our project is to create a secure environment, where-in the data that is being streamed can be presented as per the owner of the data wants to present it.

This projects leads to:

- Security of confidential data.
- Less crime resulting into piracy.
- Efficient streaming of contents between various devices.

1.4. Report Outline

In this report, **Chapter 1** is the general introduction to the project. This gives the summary of projects and its purpose and scope. **Chapter 2** captures the scope and technology is being used for implementing this project. **Chapter 3** captures models being followed by us to develop a project, Project evaluation and review technique Gantt chart which includes scheduling details of the project. **Chapter 4** introduces the user of the system and hardware and software required to implement the system. **Chapter 5** covers the system analysis made by the developer of the system. This chapter includes feasibility study made by the developer of the system. The chapter also covers the design analysis made by developer of the system which includes details of the use cases, ER Diagram, Dataflow diagram, class diagram, sequence, and activity diagram which shows the functional and behavioral aspect of the system, and also it includes deployment diagram of system as well. **Chapter 6** deals with the implementation details of the system. This chapter includes little percentage of coding for the system. **Chapter 7** includes the canvas representation which are AEIOU framework canvas, the IDEANAUT: Ideation canvas, product development canvas, empathy mapping canvas, and empathy summary canvas and finally **Chapter 8** includes the conclusion of the project and remaining future work that will done by developer in next implementation phase of the project.

II. LITERATURE REVIEW

2.1. Technology And Literature Review

2.1.1. Android Platform Literature Google maintains an open-source operating system named Android. It's got all the low-level "stuff" as well as the needed middleware to power and use an electronic device, and it is freely given away to anyone who wants to grab the code and build the operating system from it. There is even a full application framework included, so third-party apps can be built and installed, then made available for the user to run as they like.

Applications ("apps"), which extend the functionality of devices, are written using the Android software development kit (SDK) and, often, the Java programming language that has complete access to the Android APIs. Java may be combined with C/C++, together with a choice of non-default runtimes that allow better C++ support; the Go programming language is also supported since its version 1.4, which can also be used exclusively although with a restricted set of Android APIs. The SDK includes a comprehensive set of development tools, including a debugger, software libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials.

With Android operating system (OS) Marshmallow version 6.0 rolling out to mobile devices across the globe, Google is on to something—Android is now more popular than iOS or the Windows phone. The OS tends to garner rave reviews for its ease of use and open source.

2.1.2. Microsoft VisualStudio Literature Visual Basic is a third-generation event-driven programming language and integrated development environment (IDE) from Microsoft for its COM programming model first released in 1991 and declared legacy in 2008. It is based on the .Net framework, which consists of two major components: the Language Runtime (CLR) and an extensive set of framework class libraries (FCL). The CLR is define a common programming model and standard type system for cross platform, multiple language development.

Forms are created using drag-and-drop techniques. A tool is used to place controls (e.g., text boxes, buttons, etc.) on the form (window). Controls have attributes and event handlers associated with them. Default values are provided when the control is created, but may be changed by the programmer. Many attribute values can be modified during run time based on user actions or changes in the environment, providing a dynamic application. For example, code can be inserted into the form resize event handler to reposition a control so that it remains centered on the form, expands to fill up the form, etc. By inserting code into the event handler for a key press in a text box, the program can automatically translate the case of the text being entered, or even prevent certain characters from being inserted.

2.2 Market Applications And Literature Review

There are many free and fast Android apps that allows to access Android phone/tablet from computer remotely and securely. Manage SMS, files, photos and videos, WhatsApp, Line, WeChat and more on computer. Also there are apps that can share and send data from one device to another device over a Wi-Fi network which can be used to transfer data between devices.

In the current Scenario, when giving a presentation or conducting a seminar, the orator or the presenter has to always download his/her presentation material to each and every terminal where he/she presents. Thus unwontedly giving away all his/her work material. Also when the presenter changes in a session the new person also has to do the same from time to time. This using Flash Drive to transfer data or downloading it from the network is a very time consuming and hectic task and needs to done every time.

But no Android application exists which allows to stream data form one device to another device over the secure Wi-Fi (wireless network). Thus keeping this in mind we create an app called “STREAMER”.

III. FEATURES OF PROPOSED SYSTEM

With the application “STREAMER” we can accomplish data sharing through streaming of data with the use of Wi-Fi technology, which yields the sharing of data without Internet connectivity.

This application is able to stream the data in virtually-real-time, swiftly and in a memory conserving way from one device to other device(s).

This application will also help us to prevent the copy of data from being stolen up to some extents. As well as the application can be used at any local surrounding because no external hardware is required.

3.1. Screenshots of Mobile Application of Streamer

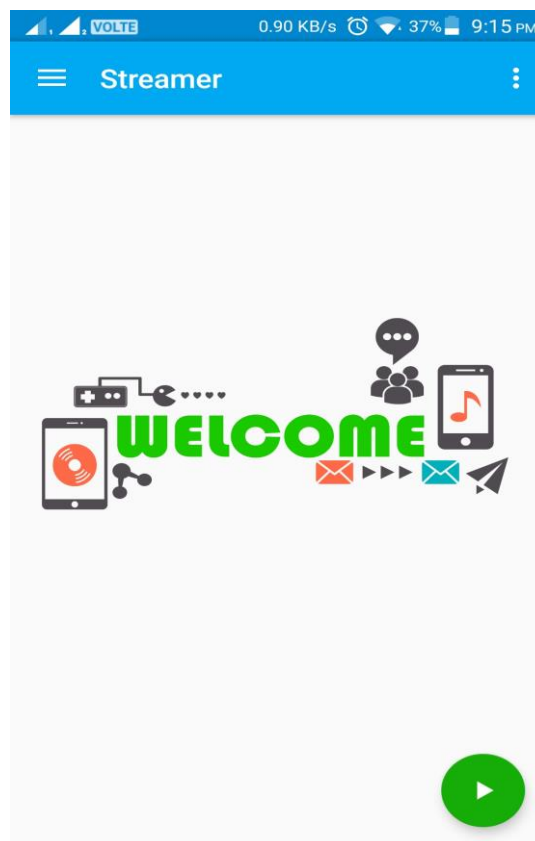


Fig- 3.1.1 HomeScreen

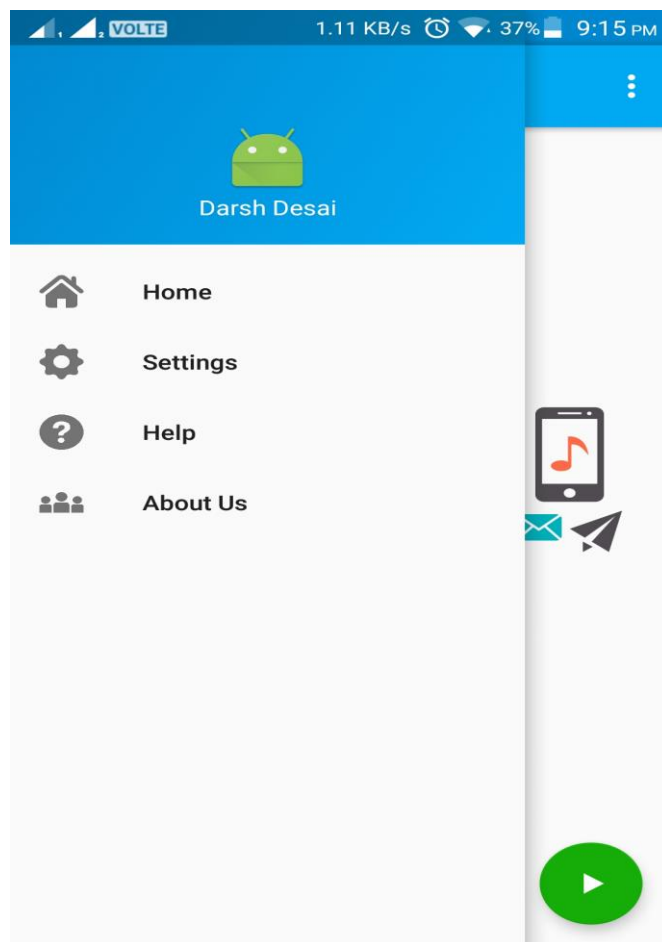


Fig.3.1.2. Menu

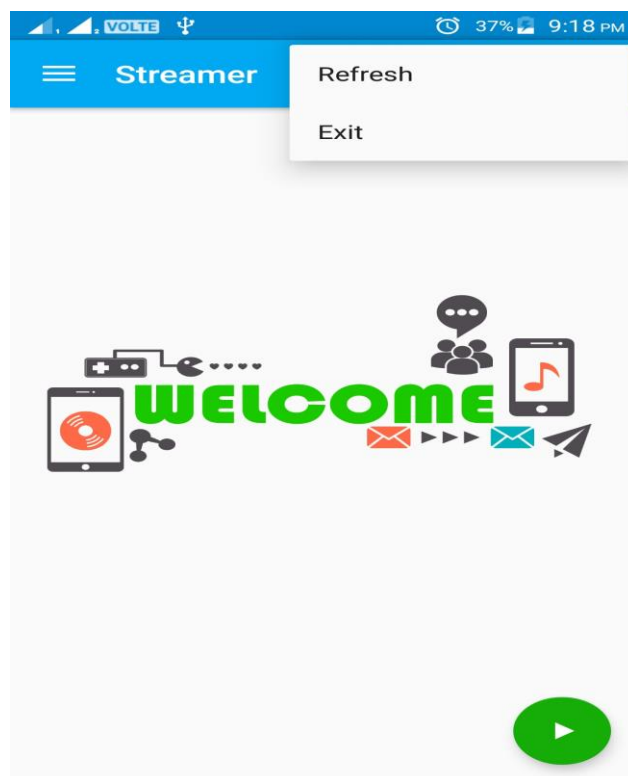


Fig-3.1.3 Exit & Refresh

3.2. Screenshots of Desktop Application

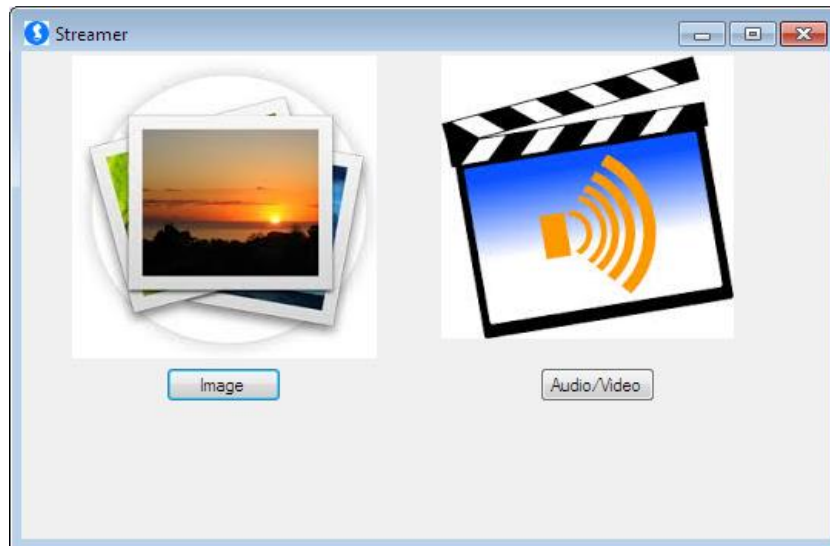


Fig-3.2.1. Options

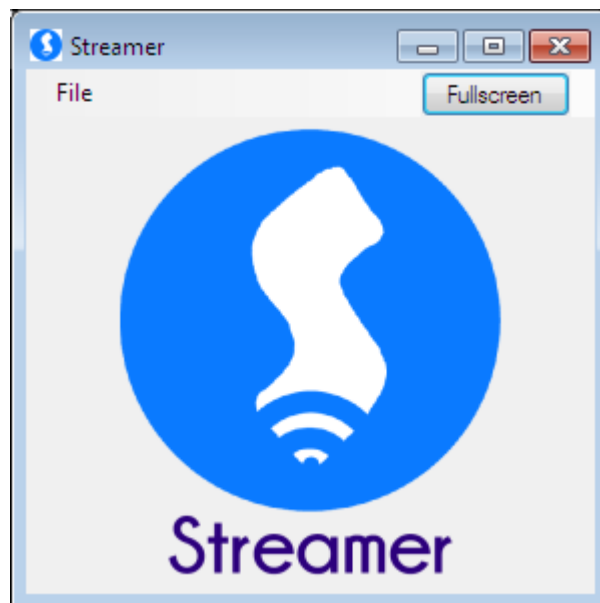


Fig-3.2.2. Image Streaming

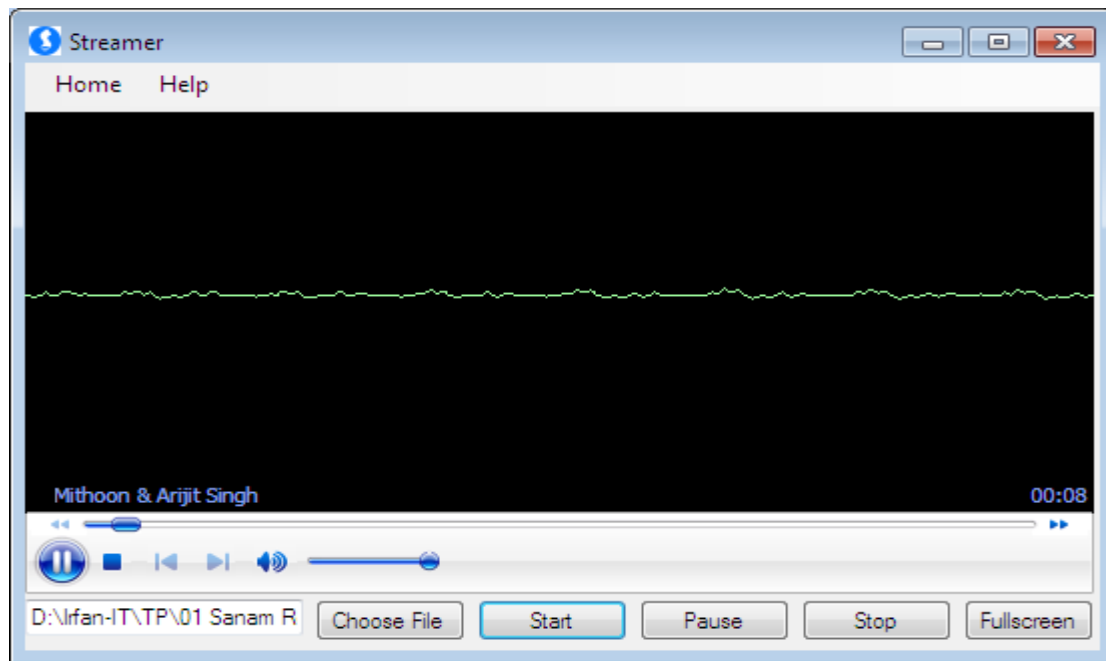


Fig-3.2.3. Desktop View

IV. CONCLUSION & FUTURE ENHANCEMENT

4.1. Conclusion

The working on the project was a great learning experience. I came across a number of new concepts and also enhanced our knowledge. I was facing certain problems in our designing and the implementation part. For this project I was following all the rules that have been taught in Software Engineering and standards for Android App development as well. Also I was learning many techniques while finding solution for problems faced during the project designing.

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