Study on Cross platform live-streaming using live-sync

Nihar Kulal M[1], Dr Gobi N[2]

Student, School of Computer Science and IT, Jain (Deemed-to-be) University, Bengaluru, India[1]

Professor, School of Computer Science and IT, Jain (Deemed-to-be) University, Bengaluru, India[2]

Abstract: live streaming is the process where an individual would usually broadcast the content using an external application. And that application is call live streaming application or software. In this application the streaming could be conducted both on mobile application as well as the desktop application. The Goal of this application is to make sure that every individual being able to provide a high quality stream even if one has a low end desktop or a smartphone device.

Keywords: Live Streaming, Cross-Platform Streaming, Live Sync.

I. INTRODUCTION

Video games is being grown rapidly in India and all over the world. And Indian government has also recognized E-sports officially in India as a proper sport. Making all of Indian youngster love to play video games and being eager to achieve something through that field.

Apart from E-Sports there is also live streaming and content creation. Where an individual person would go live or upload videos on platform like youtube, twitch, facebook etc. For which they would the live streamer or the content creator would later get paid by the live streaming platform.

Coming to talk about live streaming. It is the process where an individual would usually broadcast the content using an external application. And that application is call live streaming application or software.

A live streaming application is usually being managed and streamed from only one device and mostly it's a high end PC or Desktop computer. Where as in India popularly known for it popularity in mobile gaming. And they don't have a high end PCs.

There are very few live streaming mobile application and yet those application don't really meet the user satisfaction. Because the user has to manage the layout of the stream entirely on an android devices making it too difficult to handle on a small screen.

So on this application if you have either of the device good enough to live stream especially mobile device. You can do the entire live streaming process on your android device and manage your stream layout and edits on your PC which could be established even on low end device. And vice versa.

II. EXISTING APPLICATION REVIEW

2.1 OBSStudio-

OBS studio is free open source software used to stream videos on

Youtube. It is one o most popular streaming software built for PC streamers. It has high layout customizable features available in it. On the Downside it is only available for pc user and your system must be of higher end. For streaming on pc it sis still fine but in order to stream something that is available on smart-phone you might have to end up getting a video capture card to mirror your smart-phone display on your pc which ends up putting even more load on your system.
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2.2 Stream labs-

Stream labs is one of the most used live streaming applications.Having most streamers to use this application. This software is popular for its pc application but it still has an android version of it. This is also an open source application completely base on OBS. It is use more than OBS for it some of the in built features. And now we have stream labs mobile application thought it is not popular for stream through phone but its know to manage your pc stream on your mobile.

2.3 Omlet Arcade-

Omlet Arcade is another one of the streaming application but made for android as well as PC. But it is more popular on the android version. It is an free android application having lot of built-in layout options, it even has its premium subscription which lets ou stream in multiple platforms at the same time.

2.4 Turnip-Talk, Chat and Stream-

Turnip is a live streaming smart phone application, it is a free android application which provides high quality streams with good performance even on low end smart phone devices. Turnip lets you stream on multiple platforms at the same time for free. On the other hand turnip does not have a windows application. So everything has to be managed on the smart phone itself.

III. PAGE STYLE

Live Stream has grown it popularity drastically since post covid and lot of live streamers are being emerged and are still the streamer count is growing. And not all streamers can invest a lot of money into their streaming deck. And the price required to get the high end pc and smart phones are expensive. Making it really difficult for the new streamers. So they can rather invest on only one high end stream hosting device and the other be decent low end device to manage your stream.

The development method goes by building a standard android application and windows application. And both synchronized by the authentication details (Email and password). Through live sync the user gets to mange the stream deck easily through the UI.

It shall be having simple DB just enough for the user registration and authentication only.

Both android and windows application can be developed using Java.

Live streaming SDK shall be used here.

IV. EXPECTED OUTCOME

i.   Helps user to not be bound to purchase a high Desktop to get a good streaming experience on your smart phone.
ii.   Giving user the chance to grow his/her streaming career with minimal effort.
iii.   To get bug free high secure streaming experience to all users using the application.
iv.   Achieving simple user friendly interface making it easier to use.
v.   To establish live sync between the android and windows application.

V. CONCLUSION

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