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Android Based Media Player

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Abstract—Media Player forms an integral part of today's Smartphone. It is generally used by users to view media files of various formats. Many users like to watch video by a mobile phone, but the media player has many limitations. With a rapid development of communication and network, multimedia based technology is adopted in media player. Android is an open-source and has powerful APIs which has attracted large number of developers. The papers discuss about the study of the media player with the help of the existing media players which are available in the Android Market and proposed system for the media player which will provide the uninterrupted enjoyment for the user

Index Terms— Android media player, VLC player, MX player

I. INTRODUCTION

With the continuous development in Science and Technology, mobile is no longer just a device used for communication but a multimedia platform that provides the ability to play the media. Playing the audio and video is just a basic thing, due the limitations it has, there are limited formats etc.

Present scenario for media players provide support for some media format and recently facilities for providing the subtitles is included in the existing system. This paper demonstrates about proposed system which will provide the rich features with the help of existing features.

The section of the paper is as follows: Section II discusses about the existing system with the help of best media player available on app store. Section III discusses about the proposed system. Section IV shows working, Section V discusses advantages and Section VI conclude the paper.

II. EXISTING SYSTEM

Media player is one of the important features of the mobile. Currently for maximum number of the available media players it does not support all media format while audio effects are not available to some of the best current media players. While playing any video file if we want to perform some work like checking the emails or sending some messages we cannot minimize it we have to pause/stop the playing file and perform the work. Also current media players have limitations in subtitle support and dual audio. In current media player all subtitle formats are not supported. In current player one of the major drawbacks is that it has some limitations related to video quality compatibility as well as format support. High quality HD videos face some problem during video streaming. Performance of the media player is enhanced in this case by using software encoding facility. Currently VLC player's beta version is released while MX player is a player with only video streaming feature.

III PROPOSED SYSTEM

After considering all the above problems, we have decided to implement desktop like media player by using software development and media framework approach.

A. User Interface

Proposed system will provide improved user interface along with single station for both audio and video. Single station audio and video gives direct audio and video tabs which leads to separate options for both audio and video. The switching of audio to video and vice versa is carried out using just one selection operation like swapping window or clicking button. [3]

B. Multiple Format Support

Proposed system will support multiple formats like 3gp, mp4, avi, flv.[4]

C. Subtitle Support

In current media player there are limitations related to subtitle format compatibility. Also few media players do not support manual subtitle upload. So proposed system will provide multiple format subtitle support. It will also provide manual upload of subtitle on media player.. [3]



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D .Sound Effects

Current media player do not provide any type of sound effects which does not allow user to enrich multimedia experience. The proposed system eliminate above problem by using audio effects like equalizer, FX booster which will give more entertaining music experience.[3]

E. Dual Audio Support

Dual audio facility allow user to select playback audio language during video streaming. This feature eliminate the language understanding barrier

F. Run In Background

The most unique feature which we will be going to provide is the video running in background which makes the video playable in the widget. This feature allows user to do important works like email checking or sending message or data without minimizing or closing our video. Table I. shows the comparison between the VLC player and MX player.

TABLE I. COMPARISON OF VLC PLAYER AND MX PLAYER

Features	VLC player	MX player
User Interface	Provides both audio & video Sometimes UI may hang	It only supports video, it's UI is very simple and provide good performance
Subtitles Support	Yes, but cannot upload manually	Yes, but do not support all formats, also manually we can upload it
Sound Effects	No	No
Audio & Video support	Yes	Only video
Dual-Audio support	Yes	Yes
Stable version	No. Beta Version	Stable
Video running in background	No	No
Screen lock feature	Even though player screen is locked, rest of the screen operations are on like you can minimize or you can press the home menu.	It supports the said feature and screen operations are withheld.

IV .WORKING

When we want to play any media file (video or audio) on our media player, at first player may be idle or there may be previous files which is either running or stopped or completed. When we click on the media file which we want to play then previously loaded file is retrieved to its starting point and then new file is initialized on player. After initialization of the file it is ready for preparing. In preparing file's current state is checked. Then file will play on media player only if format is compatible with player. Otherwise corresponding codec are loaded and file get played. Fig.1 shows the working of the format compatibly.



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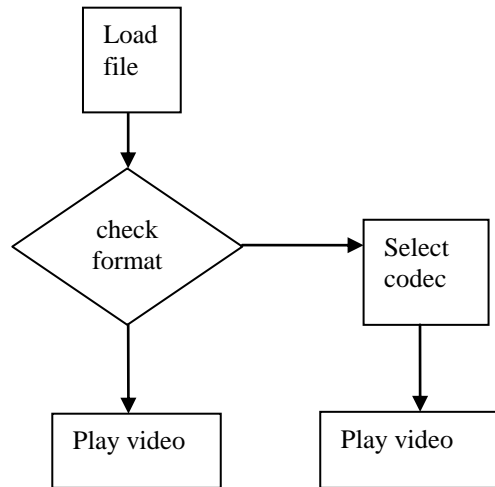


Fig.1 Basic working of media player related to format compatibility

A. Hardware Requirements

- The absolute minimum requirements for Android were originally a 200 MHz processor, 32 MB of RAM, and 32 MB of storage.
- Out of the box, Android is incompatible with ARMv4 or lower; ARMv5 or higher is needed to run native code without modifications.
- Android 4.0 or greater requires an ARMv7 processor. Custom versions of Android 4.0 have been made for ARMv6 however.

B. Software Requirements

- 1) Eclipse Indigo SDK
- 2) Android SDK(ADT bundle)
- 3) JDK 6 or greater
- 4) Minimum API:8
- 5) Target API:18
- 6) Operating System:
 - a. Windows XP/7/8
 - b. Linux

V. ADVANTAGES

- 1) Improved GUI.
- 2) No need of converter
- 3) Multiple format support.
- 4) High quality video streaming support
- 5) Subtitle support facility.
- 6) Sound effects

VI. CONCLUSION

The media player consider about improving functionality in terms of user interface, format support through the inclusion of codec. Improvement in user experience through video running in background, dual-audio support, subtitle support for all format.

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