

CHAPTER 1

INTRODUCTION

1.1 Background

In today world, consumption of entertainment media is ubiquitous. Music and movies are regularly bought or downloaded from the Internet for personal use.

However people are relatively uninterested in improving their home entertainment system. Many people think that such an endeavor will costs a lot of money and expensive to maintain. It is true that many home entertainment systems is expensive and are usually in the houses of enthusiasts who truly wanted to build their own entertainment experience. These people are able to play high definition media by making full use of television which is capable to show HD quality pictures and surround sound.

While excellent home systems are impressive, less budgeted people are more interested in having a device that integrate and manage their personal media such as music and movies instead of having different devices to do the job. A Home Theater PC (HTPC) is an essential device for such needs. The very basic definition of a HTPC is a computer that runs media player applications for home use.

The arrival of the Raspberry Pi provides an alternative to current choices. Small, cheap, and low power, it is a small computer capable of many things. Ever since the release of the Raspberry Pi in February 2012 it has garnered praises and found itself in many projects such as weather recording, robotics and observation camera. The author believed that given the benefits and strength of the Raspberry Pi, it is capable as viable alternative to create a HTPC.

1.2 Scope

This research will test the capability of the Raspberry Pi to play media files (audio and video) in particular current high definition media. Two different Raspberry Pi distros called Raspbmc and OpenELEC will be used and compared to determine which is better and easier to implement.

End result of this project is a working HTPC capable of playing high definition media in the 1080p range. The HTPC will be able to be controlled through a remote (standard CEC remote or smartphone remote).

1.3 Aims and Benefits

Aim

The main aim of this project is to determine the viability of Raspberry Pi as a HTPC to enhance the home entertainment experience. By using the Raspberry Pi, individuals will be able to have a cheap system that is also low on power usage for their needs. A comparison of Raspbian and OpenELEC would help users in determining which distro is best to be used as an HTPC for the Raspberry Pi.

Benefit

The benefit of this project is to:

- Generate more interest in the Raspberry Pi.

Currently there is little interest of the Raspberry Pi in Indonesia since its existence is only known to DIY computing enthusiasts. Implementing an HTPC will be an introductory Raspberry Pi project for many people therefore increasing interest in the small computer.

1.4 Structures

- Chapter 1

This chapter presents an introduction about the background, scope of the project, aims and benefits.

- Chapter 2

This chapter provides the theoretical foundation used to support the project.

- Chapter 3

This chapter present the problem analysis and existing solutions.

- Chapter 4

This chapter presents the system design which includes how to setup the Raspberry Pi, and testing methods.

- Chapter 5

This chapter presents the results of the testing and implementation based on chapter 4.

- Chapter 6

This chapter discusses the result based on information from chapter 5.

- Chapter 7

This chapter presents the conclusion of the results of the previous chapters.