CHAPTER 1

INTRODUCTION

1.1 PROJECT SYNOPSIS

This project contains of designing and fabrication of portable tower for TV Arial. There have many differences between this portable tower with current design in marketplace. In this project we have to develop and improving it performance as well so that there has no doubt about the design and concept. This design much more portable because it easy to carry together when using and more user friendly. In this project, it needs lot of skills, information and also knowledge such as Computer Aided Design software (AutoCAD), Solidworks 2005 software, using CNC Shearing Machine, cutting process, welding process, rivet process and fastening process. This design obviously would help people and the most important thing is get improving their activities much better. So, this design would through many processes before it get into prototype term in order to achieve the objective and off course customer need.

1.2 PROJECT PROBLEM STATEMENT

Usually we install the Arial TV at a height place. Such as top of the roof and corridor. This method is very dangerous because can produce injure, but nowadays many can tower for Arial TV was produce. But most of the current product was attached at the wall. So the current product is not portable. Then the current products are troublesome and difficult use because it make user feel not suitable as well. Beside that, most of products also not quality for low place Arial and receives signal not clear. Then material
used in current design difficult to get compare this design which is more material availability because it using sheet metal in difference thickness and using aluminum pipes.

1.3 PROJECT OBJECTIVES

1.3.1 General Objective

Diploma final year project objectives is to practices the knowledge and skill of the student that have been gathered before solving problem using academic research, to born an assistant engineer that have enough knowledge and skill.

This project is part of the subject that must be complete on this semester. Student also can explore the advanced machine before involves with industries.

Otherwise, the project will be produce and train student to capable of doing a work with minimal supervisory and more independent in searching, detailing and expanding the knowledge and experiences.

The project also will generate student that have capability to make a good research report in thesis form technical writing.

1.3.2 Specific Project Objective

i. To design and fabricate the portable tower for Aerial TV based on mechanical design method.

ii. Can storage the tools easily and practically.

iii. Know to solve the problem that might be occurred

iv. To modified the mechanism of current product and try improving its functionality.

v. Upgrade skill
1.4 PROJECT SCOPE

In order to finish this project require precise scope of work and proper plan need to be followed because this project must through various process before it would be done. Beside that this project title is new idea which is come from literature review about it articles and current design in market and the most important thing is the knowledge isn’t entirely covered in classes or lab. So it give an advantages to learn new process to produce this product and absolutely could find a lot of advantages neither in realized or not. These are scope of work in this project,

i. Literature review about the design from any possible resource
ii. Design the model of tower for Arial TV
iii. Fabricate the design using material that been selected
iv. Test the design in demonstration

1.4.1 Project Planning

This project begin by meet the supervisor to collect some information and then search via internet, books and survey at market. This literature review takes about two week. The finding of information not will be stop on a week but continues along the way of this project done to get more valuable information.

Gantt chart (time management) and flow chart (process management) will be developing on second week. This is done using Microsoft Excel programmer.

The second and third week, have to make some sketching. These sketching based on the advantages and disadvantage product in marketing nowadays.