

UNIVERSITI TEKNOLOGI MARA
FACULTY SPORT SCIENCE AND RECREATION
ENT600- TECHNOLOGY
ENTREPRENEURSHIP

TITLE :-

TENNIS WALL PERFORMANCE

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CHAPTER 1

INTRODUCTION

The product that will be developed by the team is going to help the tennis player to improve and to guide the player during practice. Before this they do not know how their level of performance if just they are playing with the null wall or opponent. Either their technique is improving or not it is not certain to tell. So “Tennis Wall Performance” that will be developed to overcome this issue. With this product the tennis player can help to improve their performance during practice without a coach in attendance.

PURPOSE DEVELOPMENT

- Increase level of performance of the player
- Develop skill during training session
- To create new ways in training for tennis
- To get direct feedback from the training session
- To decrease error from the training session and adapt it toward the game match
- Allow specific indoor training

PRODUCT CONCEPT

- To avoid tennis players improve their game performance.

APPLICATION

- To fix any error during practice when the player hit the ball towards the wall with the calculation that have been set
- To practice skill to help the player to accurately improve their smash skill or services to gain point.
- The athlete can measure the momentum of the ball when it hits the wall

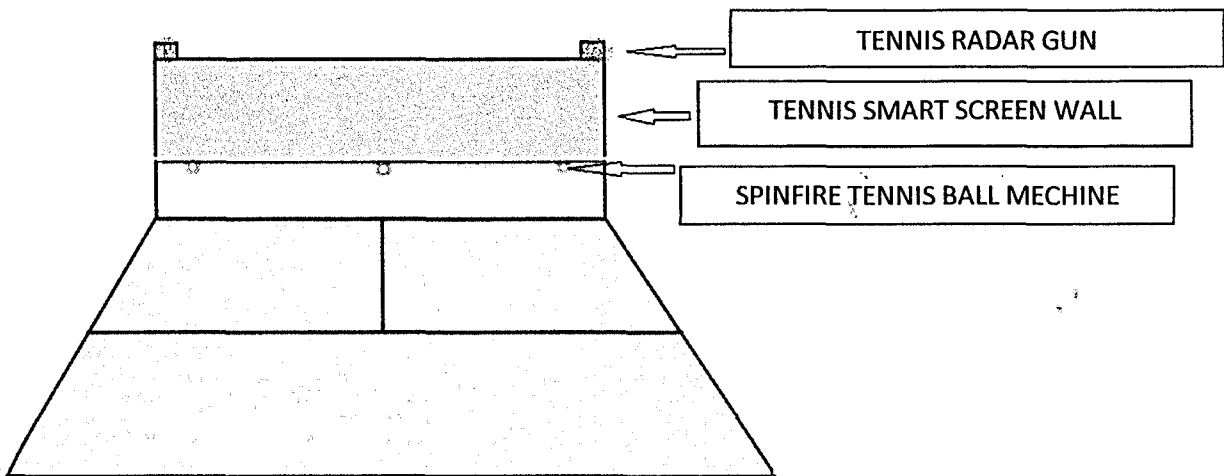
FUNCTION

- Spinfire tennis ball machine – Auto throwing tennis ball machine throws ball to the player with consistently
- Screen capacitance – To detect accuracy of the target area of the ball
- Tennis radar gun – measure the speed the speed of the player tennis stroke
- Air pressure sensor screen – detect momentum the momentum of the ball

UNIQUE FEATURE

- Allow indoor training
- Can training alone because an practice is interactive.

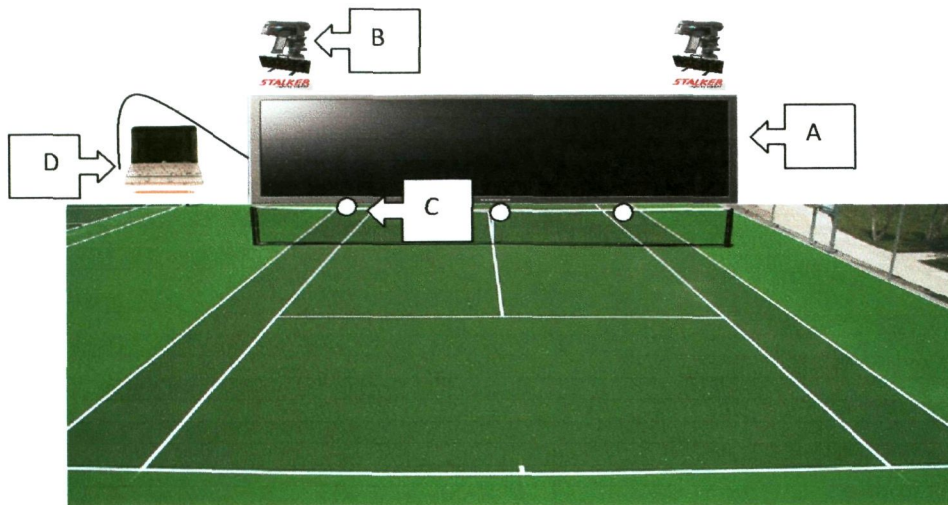
DIAGRAM



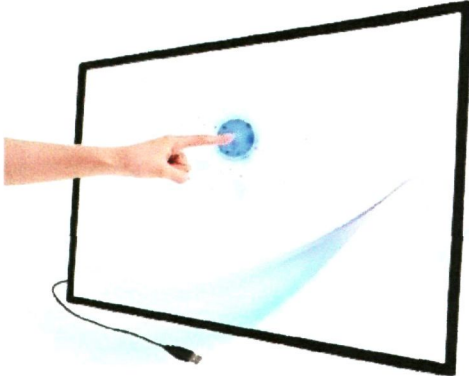
CHAPTER 2

2.0 TECHNOLOGY DESCRIPTION

2.1 Overview of product prototype



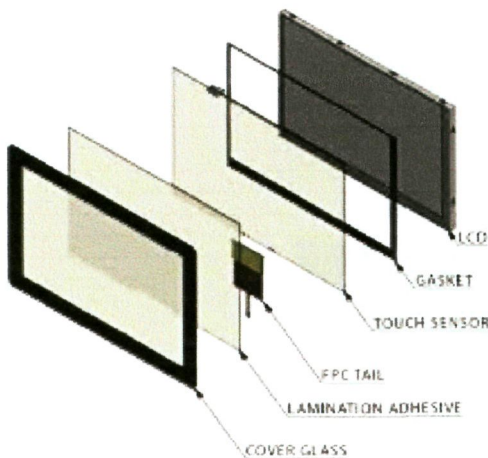
2.2 (A) CAPACITANCE SCREEN



Capacitance screen with device wire

- This capacitance screen sensitive with pressure.
- The pressure tennis ball during hit face of the screen can be the screen systems calculate the momentum and accuracy target.
- The wire devices can connect to the computer to setting all data and setting accuracy or difficulties of training.

Layer of capacitance screen



- ✓ Each layer of screen have a own function.
- ✓ Cover glass can cover the another layer to become broken during get pressure.
- ✓ FPC tail receive all data and transfer to apps that have in this system.
- ✓ Touch sensor to detect the pressure and accuracy the tennis ball.