

## 1. Introduction

When you have completed the business of the working week and want to have a rest on the weekend, but you have also promised to play all day with your child, then this game, "Fishing Time", can help you to thoroughly relax. As long as you have the special fishing rod and an ordinary personal computer, you and your child will experience the unlimited fun and enjoyment of fishing at the seaside while in the comfort of your own home.

## 2. System Description

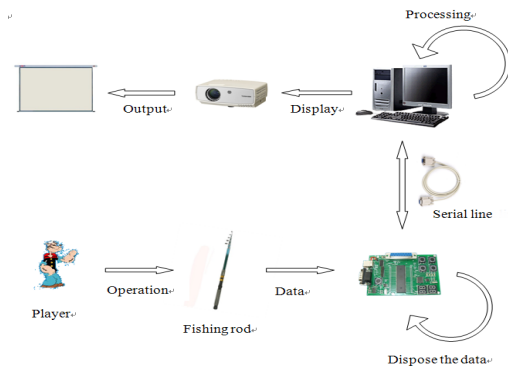


Figure 1: system structure.

A. There are modules on the fishing rod. In the casting module, two sensors, which measure the angle of tilt, are used to record the player's motion of casting the fishing rod. In the fishing reel module, a rotating knob is adopted to test the speed of the player rod when reeling in a fish. A buzzer is also installed which can make sounds to alert the player. Furthermore, there are several vibrators on the fishing rod to achieve the real effect of fishing.

B. The system is composed of two parts. A sub device is designed to collect and handle the data collected from the fishing rod or from the PC. The PC handles the foreground application. The sub device and PC communicate via a serial line.

C. VirTools is the developing tool that is used to implement virtual reality into the PC.

## 3. Introduction for Use

A. Ensure the rod is held in the given orientation and position which has already been set.

B. A certain speed must be reached in order to cast the rod. The angle of the rod can be seen on the screen.

C. After casting the rod, you should wait for fish to take the bait. During this time, you can move the fishing rod which moves the fishing hook up or down in order to abnegate some fish that swim along the "Death Curve".

D. When a fish takes the bait, the buzzer alerts the player by making sounds and the vibrators begin to shake. The fishing reel must be rotated at a normal speed (which is shown in "Fishing-line Tension") for several seconds in order to successfully hook the fish; otherwise the fish will escape from the hook.

E. In spite of your success or failure, you can decide to "CONTINUE" or "GO HOME".

## 4. Object Applicable

"Fishing Time" has no age restrictions. As long as you love fishing, can operate a PC, and have enough might to cast a rod, this is an activity the whole family can enjoy!

## 5. System Requirements

### Hardware

- Desktop PC (CPU>2.0 GHz, RAM>1GB, at least one serial port)
- C51 Single Chip
- One Serial Line
- Two Tilt Sensors, One Rotating Knob, One Small Magnet, One Speaker
- One Fishing Rod

### Software

- Windows XP
- VirTools4.0
- Microsoft Visual Studio .NET 2003
- Keil uVision2.0
- 3ds Max 8.0
- DirectX9.0

## 6. Conclusion

All players can experience the thrill of virtual reality with "Fishing Time", and spend their leisure time enjoying fishing. We expect "Fishing Time" will improve their quality of life and bring fun and happiness to every player.