Weekly Report

Team Physion

Week 7 (02-22-2010)

Things we did

1. IR sensor bar

If we put sensor below or above the screen, aiming point on the screen is not well matched with what my Wiimote gun actually aim. In shooting game, aiming is basic and crucial part. To solve aiming, we tried

1) Using two Wiimotes
Block each side of Wiimote and put middle end of the screen. It works in small screen not in big one because Wiimote has limited horizontal range.

· Use duct tape to block IR
· Put two Wiimotes at each side of screen
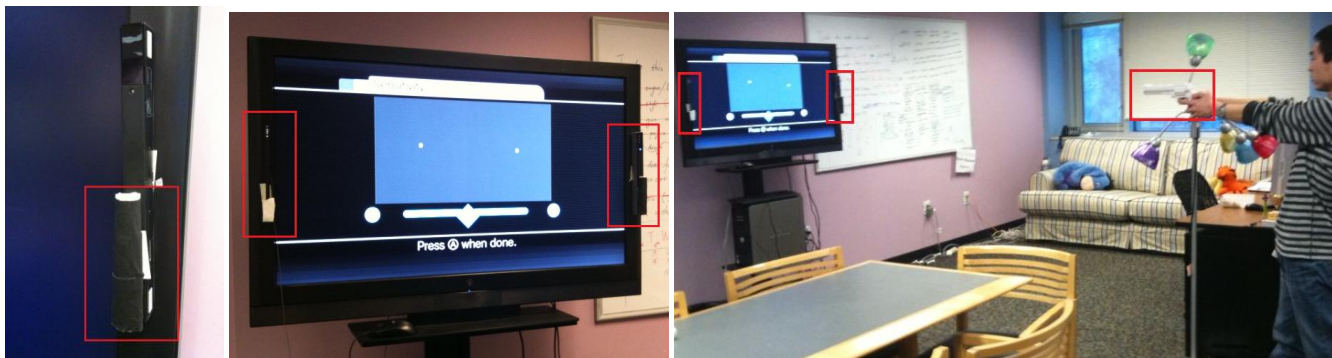
· Player need to stay in certain distance to play

2) Using IR LED and attach on the screen
Using IR LED and attach on the screen
It might work well, but the LED would look distracted. We can take the light from the glasses and attach screen. According to Steve, ETC had the glasses before but not currently he doesn't have it. We think buy new glasses or make our own LED light.

3) Put sensor bar between screen and player
Put sensor bar between screen and player
It's very easy way and works in acceptably. However, it is a little distracting that sensor bar is in front of player and blocks the screen.
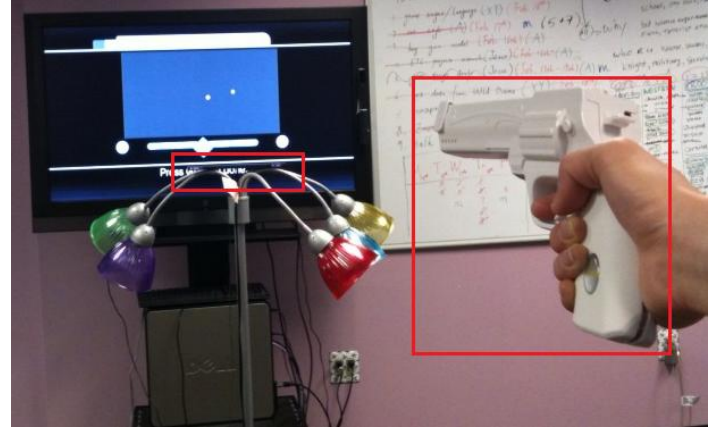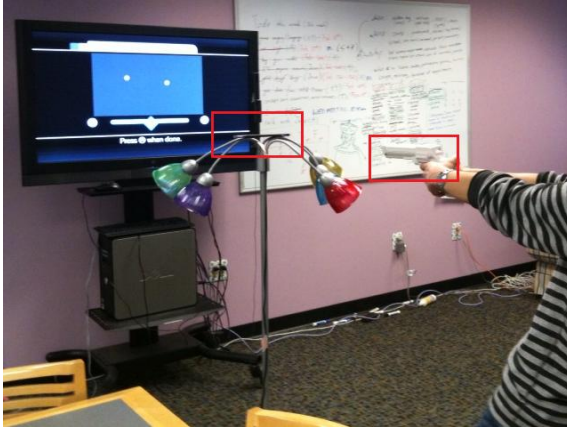
2. Game Programming

We will try to make a very simple prototype such as shooting boxes as early as   possible.

1) Study Unity 3D engine
We studied Unity 3D engine and make FPS game following tutorial.

2) Integrating Unity 3D with IOM (GSR and heartbeat sensor)
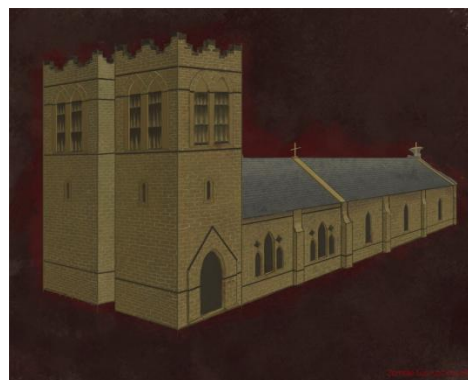We succeeded in reading data from Wild Divine in Unity 3D

3) Get data from Mindset and Wiimote in C#
We succeeded in reading data from Mindset and Wiimote in C# program for Unity 3D

3. Art Work

We will develop concept art and modeling.
1) Concept art of game stage – church
2) Prototype zombie model

4. Cave System

We talked with Ruth again about the CAVE and the Swiss Ranger sensor (SR). It is really cool to have a better view, but there are also many challenges. We would develop with normal monitor first. If we have time later, we would consider using CAVE.

1) SR sensor and projects are not high enough, 7 feet above the floor.

Currently the SR locates lower position,   which means the player cannot move freely since SR has only limited view field. If the player leaves the center point of CAVE a little far away,   SR cannot find the player. In current situation,   the valid area is really small,   less than 1 square meter.

In addition,   the position of projectors is also low. If a player with 6.5 feet tall is standing at the center of the CAVE system,   his/her head may block some parts of the screen.

To change the position of SR and projector,   we have to build a new frame to support them, which is time consuming,   and we need to discuss with ETC.

2) Detecting Aim is hard in CAVE

If we use SR instead of Wiimote to aim, it is hard to detect the gun from the player. In addition, detecting aim point at three screens will be very complicated. We need to check schedule with Ruth and i3 team to go to the CAVE room.

5. Purchase New device

Emotiv. It's faster and gives more data than our current device, Mindset.
We ordered the new device but it would come next week. We got the serial number, however, we can't download the SDK yet due to manufacture's technical problem.
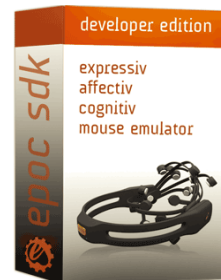
6. Get Unity 3D License

To integrate devices in Unity 3D,   we received unity 3D pro license from ETC.

7. Wiimote gun controller test

We received two gun controllers and tested. , The rifle is a little heavy and a little hard to aim.,
An overkill hand cannon has better aim.
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8 Perforce Setup

We setup Perforce server which enables us faster development.

Things we will do

1. Game Programming

We will make a very simple prototype to show in half presentation.

2. Art Work

We will work on modeling and texturing.

3. Game Design

We will design our game. A meeting with Jesse on Friday will help us to develop our idea.

4. IR sensor bar

- Using IR LED and attach on the screen
We will get LED light and test this method.