UI Assignment

Due March 14

1.0 Introduction

Instead of giving you a corny set up of why you should do this assignment, we'll get right down to business. You are to design a UI of your final project (don't worry, you don't need to use omt) and submit a hardcopy of your design. If you do not have a final project, simply make up a new game and write a UI for that game (if you are coming up with a new game, check with the mentors about your game first). Note that everyone in the class is required to do their own design. We hope that this will:

1. encourage the class to deal with some of the fine details of UI design and anticipate the problems associated with it when you actually work on your game
2. work on something that can be used in the final project
3. encourage all the groups to brainstorm over many possible variations of dealing with the UI
4. free you from programming so that you can be more "creative"

We want you to be creative, so we will keep restrictions minimal. However, you will be required to have your writeup conform to the format we describe below. This is to ensure that you deal with the important topics of UI design in constructive and organized manner. Also we would like you to be realistic in your UI design. The design you submit should be possible to implement with the equipment and the software we have here at Brown. Saying things like, "we will make our holo emitters create the opponent and you will feel their attack through fully sensored body suit" is discouraged. However, do keep in mind that the graphics group has a lot of cutting edge technology (Fakespace BOOM, 6D polhemous tracker, Virtual Glove, Virtual Tricorder, and etc.), and if you have any questions about these feel free to ask Tim, Steve, Bob or any members of the UI group.

To give you a general idea of how to approach this assignment, the members of the ui-group have already done example assignments for your viewing pleasure. Feel free to browse them in:

/course/gs007/asgn/ui/

This assignment is not as easy as it looks. There are a lot of issues in UI design that are not trivial. Moreover, all the decision you make will be challenged by mentors during the interactive grading session. If anything, plan to spend more time on this assignment than on a normal programming assignment.

2.0 Specification

While you can be as creative as you want with the game design, there is a strict standard format that you must conform to in your proposal. We expect to see the following break up of sections in your document:

2.1 A clear description of the game

This section is very important because in explaining why you have decided to design certain ways, you will have to cite reasons from this description.

2.2 A clear description of the tasks the player in the game will perform

This is the list that you will eventually have turn into the UI design. All actions that you can perform in the game, as well as what will happen as a result should be described in detail here

2.3 Similar games that you have considered using as an example

Consider all the tasks you have in the game. Think about what other games out there already have similar UI. Remember that this doesn't have to be computer game. Perhaps your game is a board game and you will want to get ideas from real life board games.

2.4 An explanation of how you dealt with important UI issues

For each of the things you have listed in the tasks section, explain which aspects of UI design we have gone over in class are relevant to that task, and describe how you will implement them. You will need to support your decision with solid reasoning. For some tasks, you may not have an obvious solution. In this case, you will need to write all your options and describe how you will arrive at a final decision, i.e. a pilot study.

3.0 Description of the Game

In the description of the game, you need to explain the basic story line and structure of the game. After reading the description, the reader should be able to visualize the game and understand what will happen. The description you make here is the only source of defense you will have in defending your decision in UI design. Give us detailed story line, mood, players involved, how to win, etc.

4.0 Tasks in the Game

Here you must describe in gory detail all the tasks that the player performs in the game, e.g. moving a piece, navigation, etc. Eventually, you need to deal with everything you list here in the topics in UI design section. If a player can do something, it should be in this section.

5.0 Comparison to Existing Games

How well you handle yourself here could reduce your work load in the next section. Describe the games that you considered and state your reasoning behind it, then describe which UI components of the game you will copy and state your reason. If the game you are describing has a similar set of tasks to deal with as your game, and you are not going to adopt their UI implementation, then you should state your reasoning behind it. Basically, come up with a list of things that you are going to use in your games that you derived from other games and support your reason behind them.

6.0 Topics to Consider in UI Design for the Game

For this section, you must consider each of the tasks you have listed in section 4.0. For each of the tasks in your game, you are required to consider all applicable design issues that we went over in class, and state how you will deal with each of them. We have come up with a partial list of issues you may want to consider for your tasks. This list is in no ways exhaustive, but to get a reasonable grade, you must deal with all that are applicable to your task, and give reasons. Note that not considering certain topic is a valid option as long as you can give good reason for it.

6.1 Perspective

Perspective deals with things like: From which person will the game be played? Why? Where will the eyepoint be?

6.2 State of the player

What kind of states can a player be in? How can the player move from one state to another? How will the player know what kind of state that they are in?

6.3 Environment

What is the setting of the game? Will the user be navigating through lot of obstacles or will they just need to maneuver in open areas. How will the player interact with the environment?

6.4 Mood

Is it going to an action game, mystery, or simulation? Why? Is this the best way to present your game plot?

6.5 Colors

What kind of color scheme will be used to distinguish the player from others, and why? Will color be used as a means of feed back?

6.6 Sound

Will there be sound in the game? Will sound be used as a means of feedback, and if so to what extent? How will this figure into the general schema of the game?

6.7 Input Devices

What kind of input device will the player need to use, and why? Is there advantage to using certain kind of input? How could you be sure?

6.8 Output Devices

From what kind of output device will the game be played? TV, computer monitor, large screen, BOOM, or small 12” screen are choices you may consider. Also, you need to figure out whether your game should occupy the entire screen or just a window.

6.9 Realism

How real is the game going to feel? What kind of frame rate are we going to get with this kind of realism, and how would you implement this? Is frame rate more important or realism?

6.10 Affordances

Are we going to make things be intuitive in the game, or do we want to make it tricky? Do we want players brooding over what they can and can not do, or do we want them to not think at all, and just kill kill kill? How can we make objects demonstrate to the player how to use them?

6.11 Modality

Are you going to have different modes of input? Why?

6.12 Visibility

What can you see in the game environment? Why?

6.13 Conceptual model

What is the story of the game? What goes on inside of the game that user doesn't know about? Why are these things necessary?

6.14 Mapping

How will each action of the game be mapped to specific things (i.e. input device)? Why? How could you be sure that this is the best way of getting input from the user.

6.15 Feedback

What kind of feed back will a player get when they make an input to the game? How will this feedback happen?

6.16 Interaction technique used in the game

What kind of interaction will take place with the game, and how will your UI handle this? This is probably the most important question to answer. You must cover all the interaction that take place, and explain how you will handle them. Here are some sub topics in interaction techniques that you are required to deal with:

6.16.1 Navigation

6.16.2 Action committed by the player

6.16.3 Camera view change

7.0 Grading

Grading will be based on how well you have completed following criterion:

7.1 Completeness : You must have dealt with at least all the topics above, and possibly more depending on the type of your game

7.2 Thoroughness : You must explain why you chose to deal with the topics in the way you describe, and be able to defend it

7.3 Practicality : The design you have must be practical

7.4 Creativity : We expect you to think your problems over and come up with creative ways of dealing with them.

8.0 Hints

8.1 Spend time THINKING! If you start this assignment the night before and are struggling to finish it on time, you will not come up with a very good design

8.2 Look over the design examples we give you. Try to attack it, and find its shortcomings, and make sure that your document is better.

8.3 Think about all the stuff we went over during the lecture, and make use of it. To do a good design, you will have to have dealt with all the topics we went over. Trust us on this one.

9.0 Handin

The programs are due at the beginning of the class on March 14, Thursday. To handin your design, simple bring a printed hard copy to class. Otherwise if you are eager to finish it early and get it out of your way, give it to Steve Dollins (aka scd).