CIS 443/543 User Interfaces

Exercise #3  Direct Manipulation & Menus Interaction

This exercise continues the design problem of Exercise #2. Please turn in your work and keep a copy for discussion in class. I will grade this with either (submitted and did a reasonable job) or (not-submitted or a lousy job).

Again, we will conduct the class as a studio presentation/design critique.

Due Monday, January 30, 10am.

Problem: Design a command language to operate a remote digital camera. Assumptions: 1) the remote camera is now available for any usage where a remote camera might be used (surveillance, extreme environment, etc.) 2) the users are ordinary people who are only familiar with the Windows or Mac GUI environment and basic digital camera operation. 3) There is visual feedback from the camera image as seen through the camera lens when the camera is on. 4) The interface is a GUI interface (for either Windows or Mac) using standard conventions.

1. Design a direct manipulation interface to control the image that the camera presents to the user. (Note: Direct manipulation here means visual representations such as icons, button, etc. and pointing as covered in Chapter 6. No textual interaction such as menus, dialog boxes, etc. as covered in Chapter 7 allowed.) The functions covered are: moving the camera in x, y, z directions and zooming. Sketch out your design with enough detail so that we can understand how the user would work with it. If you use icons, give enough detail so that we can see it.

2. Justify with usability arguments why you chose this particular design.

3. Using the same functions as question 1, design a menu-based control interface. You may use any elements of textual pointing interaction covered in Chapter 7 (menus, dialog boxes, form fillin, etc.) No graphical interaction as covered in Chapter 6 allowed. Sketch out your design with enough detail so that we can understand how the user would work with it.

4. Justify with usability arguments why you chose this particular design.

5. Try to combine the best elements of both question 1 and question 3.

6. Justify with usability arguments why you chose this particular design.