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CS 352: Introduction to Usability Engineering

Homework 1: Design Principles

For my software of choice, I will be using a video game I play a lot, Guild Wars 2. It is a fantasy genre MMORPG that I play with other people. I figure that games have lots of user interface, so can work as good examples. Also I can't draw so I need to do screenshots for now. As I continued to do the assignment, I saw that various levels of design principles sort of blend into each other, so each example may count for multiple categories.

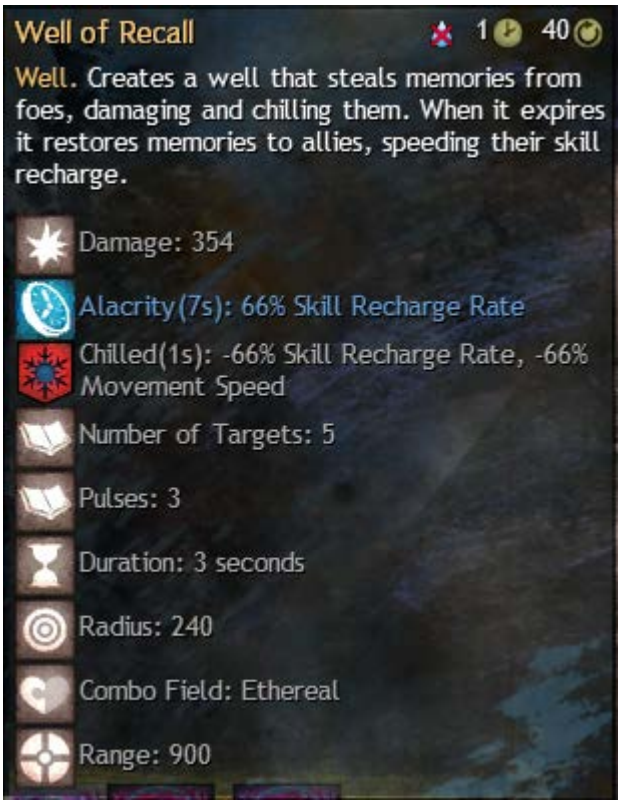
Supporting Design Principles

Visibility:

Visibility is one of the games stronger suits when it comes to the design principles.

We can see visibility supported here, in my opinion by the way things are organized. Various skills that can be used are at the bottom of the screen. Numbers below the skills show what button on the computer you press to use them, and clicking the skills also work. Mousing over the skills gives a good description of what each skill does. On the bottom right, there is a minimap that visually shows your position in relation to nearby surroundings and the direction you are looking, with markings for points of interest.

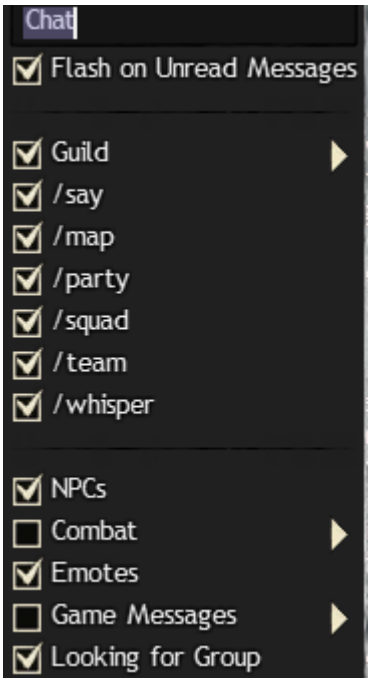
Mousing over these markings further reveals their meaning. In the top right, there are icons that can be clicked on that lead to other UI elements. This game does a good job of providing tooltips when its various elements are moused over, which is also an example of providing feedback.



Pressing M gives a larger map of the area, which can be zoomed and scrolled, and also shows through dots the path you have walked.

The chat on the bottom left is resizable and customizable in numerous ways, to accommodate people will disabilities, or people with differing preferences for what text based information they see. I can set it to show various elements, and name each customized combination of elements.

I feel like I'm starting to stray into customizability. I don't know exactly what principle that falls under, but I feel that giving people the ability to customize the UI into the most visible manner for the individual enhances the visibility and shows support for the principle.



Feedback:

One good thing about this game is that when you perform an action, for the most part, you get immediate feedback. For example, when I click something in my inventory, there are different sound effects for equipping or equipping something, consuming a food, salvaging a material, or using an item. These sound effects help confirm that my clicks are having the intended effects more than just incrementing the numbers or visibly updating various aspects.

When I use a skill, there are various cues that provide useful feedback. First, the skill starts to glow and pulse. I heard sound effects such as sword swings and magic being performed, and see white damage numbers immediately with each hit. Skills have a bar that fills up when being cast to illustrate casting time, and disappears when the skill is done casting so you know you can perform another one.


444
Target Golem - Heavy
M5
17,172
1
2
3
4
5
6
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8
9
0

This also provides an example of visibility. I am using a skill called blurred frenzy and my character is blurred while slicing my enemy rapidly. Because the skill provides invulnerability while I am slicing, the blurriness provides a cue so I know how long I am safe for before I need to start actively dodging enemy attacks again.

When I target an enemy in the game, I get immediate feedback. A bouncing arrow points to them, their name glows brighter, a health bar and icon of them appears at the top of the screen, and a circle appears under their feet. These visual cues also serve as a visibility example.

Constraints:

When I try to perform actions that are not allowed, the game typically provides red warnings, while also preventing the action. Besides one skill on each weapon, all others have a cooldown after being cast before they can be used again. As another example of visibility, the skills on cooldown start completely black, and fill in clockwise to look normal again proportional to how much of the cool down has finished. The amount of the icon that is still black represents how much recharging the skill has to do, with the skills also showing their cool down in seconds.

When I try to use a skill before it comes off cooldown, the game reminds me that the skill is recharging.

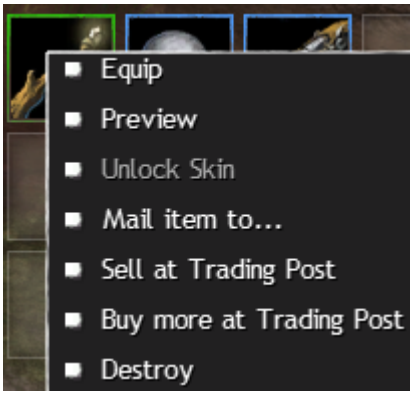
Skills 1-5 come through weapons. This can either be a combination of a main hand and off hand, or a two handed weapon. Most classes get to swap between two sets of weapons in combat, but going into your inventory to switch weapons besides these two allotted sets is not allowed, and brings up this message.

For example, if my current loadout is Sword / Focus and a Greatsword, I need to wait until I am out of combat to switch to Sword / Shield and Staff as my two weapon sets.

A particularly useful example of constraints is with salvaging. Using salvaging kits, one can salvage weapons and armors that aren't as useful to extract various materials from them. However there are many things in my inventory that are not weapons and armor, and thus not open to being salvaged. The game colors every unsalvageable thing red, leaving only what I can salvage in its normal colors.

Consistency:

The game is pretty consistent with its user interactions. Every icon for skills, items, weapons, UI elements, etc provides information when moused over. Actions are generally performed in relation to these icons by double left clicking. This will consume items and equip weapons / armor in place of what is currently equipped. Additional options, whether it be for equipping, consuming, or selling, are consistently provided by right clicking the icon.



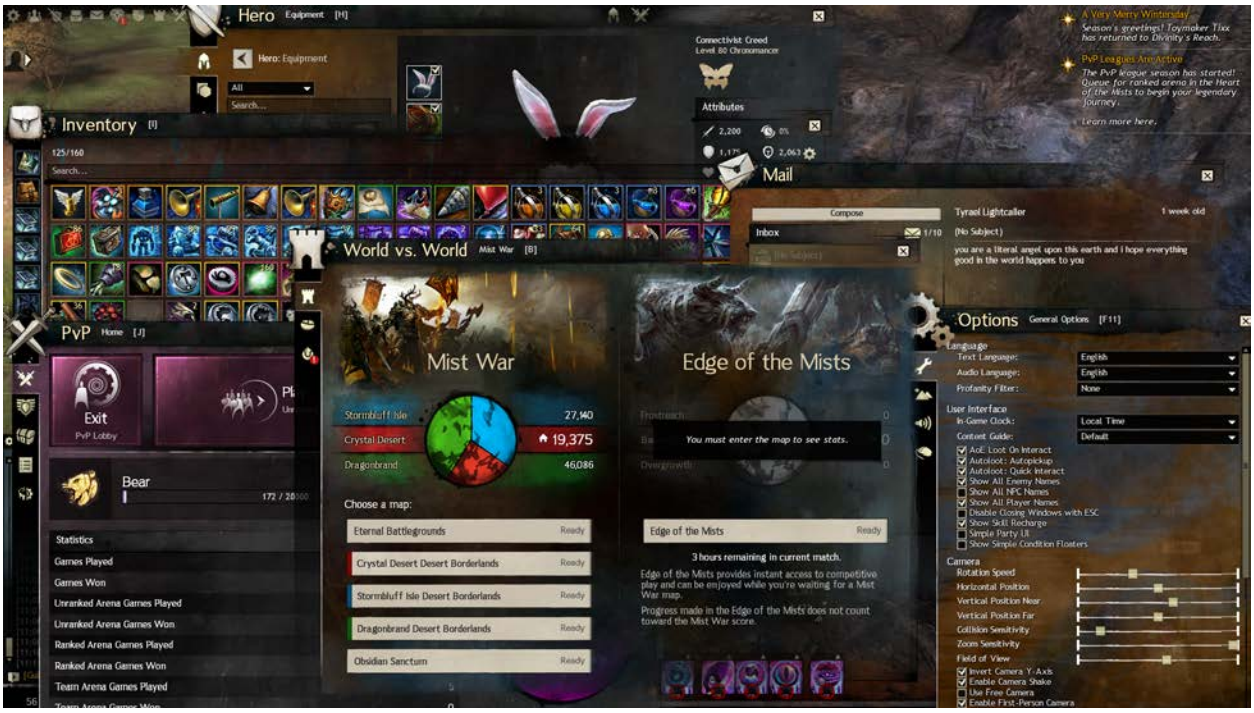
Affordance:

This is probably one of the weaker points of the game, at least in terms of UI. To its credit, the UI does provide a lot of information when its various elements are moused over. As a character levels up, big glowing boxes explain various elements of the UI as they become relevant, and it is spaced out so as to not be overwhelming. I will explain more about the shortcomings in the violating section.

Violating Design Principles

Visibility:

The game is pretty good in terms of visibility , but there is one violation that comes to mind. The game partitions the UI into many tabs, but they must be called up manually. In a way, this is good, so that it doesn't clutter up the screen.



The thing is, not much of the UI is visible unless it is called up specifically. There are some tabs on the upper left corner, but these only represent a portion of the tabs that can be called up. The rest must be assigned a key combination in the options. This isn't so much of a sore point for me, because I know all the combinations I have assigned by heart, but for a new player, it may be hard to access the information in the UI that they are looking for at first.

Feedback:

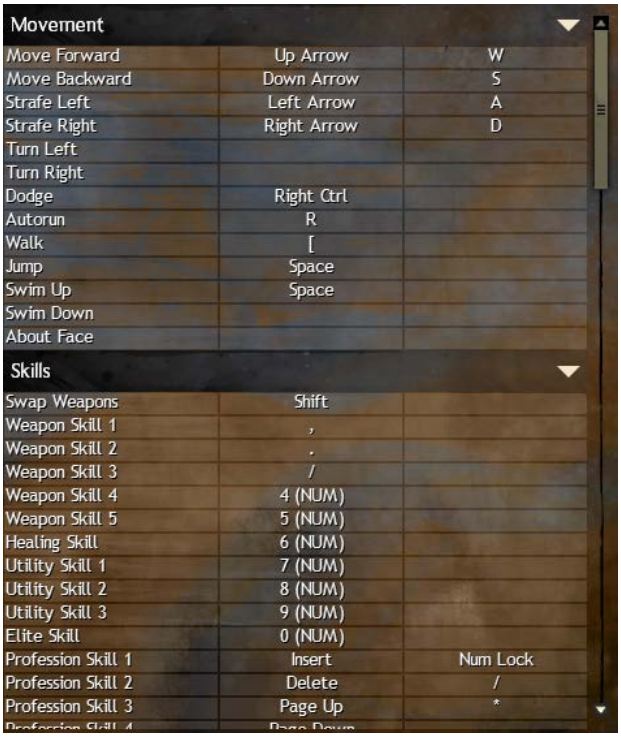
In general, the game is very responsive, with one main exception, the trading post. The trading post allows players to exchange materials. Not only does it take a long time to load, but when you buy things, it doesn't provide immediate feedback all the time. Sometimes it does, but other times, it may take 10 or more seconds to buy something. More than once, I have clicked the buy button again, thinking I misclicked, or the order didn't go through, only to find out the first order DID go through. This would leave me with multiple copies of an item, making this a costly violation.

Constraints:

The game can often be vague in its constraints. Skill recharging seems straightforward enough, but what if you have multiple skills on cooldown? (Hint: you will) While it is assumed that it is the most recent skill, saying which skill is recharging, which skill you tried to use but can't would be very useful. In the heat of combat, it is not always easy to remember which skill on cooldown you most recently tried to use. "You cannot perform that action in combat" is also rather vague (refer to previous screenshot in the other constraints section). Can't perform WHAT action in combat? While I provided the example of try to swap weapon loadouts in combat, there are many actions that are not allowed. Similar to cooldowns, they expect you to realize it is the most recent action that you cannot perform, but it can be hard to remember exactly that is. It is even worse in this case, because this would expect you to have a knowledge of prohibited actions, and if you did, then the notice wouldn't be as necessary. As in the case of cooldowns, this could be cured with some specificity.

Consistency:

For the most part, the game remains very consistent. However, sometimes there are updates to the game that restore all keybinds to their default values. This is very frustrating to many people, but especially me because there are many keybinds that I need to switch back to my custom values, so for a while, the keybinds that I have consistently pressed to the same effect do nothing. I am a left handed gamer who plays with a custom left hand mouse, so my keys are very different than the default values. This was the main thing I could think of, because the developers must have taken a lot of time in ensuring consistent input methods across its various elements. Even when my keys are reset, the mouse still works as before in regards to left and right clicking, and they manage to extend the hotbar elements to many different activities in the game.



Affordance:

In this game, it is hard to derive knowledge from the UI itself. While the UI elements do provide a decent amount of information, it is hard to make sense of the information without other knowledge.

Acquiring knowledge in the game is acquired through other methods than the UI. People learn to play the game through fighting things and learning through trial and error, action and effect. Newer players learn from the experience of veteran guildmates and friends. There are also brief in game tutorials as you level up, and scaling difficulty so that things gradually get harder in higher level zones and content. Perhaps the tutorials could be considered part of the user interface. The book brought up an interesting point about how some violations of principle can actually make things better, like how games make things harder so people have the satisfaction of beating a challenge. Perhaps the designers intended for people to learn through trial and error so people could be proud of the knowledge they earn. Or learn from the experiences of others to encourage socialization. Or maybe, the UI is simply inadequate at providing intuitive knowledge to newer players, and could be improved.

I wonder how much a video games UI is supposed to provide affordance, and in what ways it would if it does compared to the contributions of in game events and interactions with other players. I suppose at this point, I am starting to ramble philosophically, but as I am considering possibly going into game design down the line, it is a decent point to consider.