Project Assignment 2

Online Battlemat

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Summary

Though we live in a connected age, many popular pastimes have not migrated into the digital realm. One of these pastimes is Dungeons & Dragons (D&D), a traditionally "pencil and paper" game played with specific tools like the battlemat and miniatures. A lack of digital versions of these tools leaves no way to play D&D with people who aren't in the same city.

Problem Analysis

Many friends get together on evenings or weekends to play Dungeons & Dragons, but young adults find themselves separated from friends as people move to different states for college or jobs. These friends already communicate with existing instant messaging or voice chat software and even play multiplayer computer games over the internet but there is no software that supports the freeform and imaginative play of pencil and paper D&D.

A very important tool for most pencil and paper play is the battlemat. This half-inch grid is drawn upon to simulate the environments of a fantasy dungeon and model miniatures are moved about to represent character locations. This allows an interactive knowledge of tactical capabilities accurate to the players' imaginations as well as the game's rules. Functionality like this is so important to playing D&D, but it's not reproduced easily or accurately in any existing networking software.

What remote players need is an easy networking interface simulating the D&D battlemat. Combined with existing communication software, friends will be able to play D&D even when everyone's in a different state, or even a different country.

User Analysis

Demographics

Considering user demographics, we expect our users to primarily be Dungeons & Dragons players aged 16 to 35 with a gender breakdown of 65% male and 35% female users. Players will have varying levels of education, but most will be high school or college students. There would also be some college graduates in this set. Since the vast majority of users will be younger people, we expect most to be in fairly good health without disabilities.

Skills and Experience

Our set of users is composed of people who are typically computer savvy and technically inclined. These individuals are moderately to highly proficient at typing, reading, using the Internet, and working with simple photo editing software. Concerning domain knowledge, users will have varying ranges of Dungeons & Dragons experience. Some users will be avid players

who appreciate the convenience of a Web application to replace a traditional battlemat. Other users may be beginners who are using the on-line battlemat system as a learning aid for the game. Since our proposed solution will be offered for free on a Web-site, the on-line battlemat system will allow beginners to play Dungeons & Dragons more cheaply since they will not be forced to buy a physical battlemat or miniatures.

In our product space, no applications currently exist with an electronic battlemat system, so this will be new for our users. One solution has been proposed which will be similar to our system, but it won't be released until the summer and will involve a thick client, not a Web application. Users should find the system easy to learn since the interface will just be an electronic reproduction of the physical battle mat and miniatures that players typically use. It would also replicate drawing and simulation programs to an extent. We expect that an individual who is experienced with Microsoft Paint will be able to easily use the battle mat system.

Environment and Communication

We expect users to use the system in one of two ways:

1. Using the battlemat system as a substitute for a physical battlemat and miniatures. Players would still play the game in the same room together and communicate verbally and use paper character sheets.

2. Using the battlemat system for remote Dungeons & Dragons sessions. Players in remote locations could connect to a single battle mat game and play with their friends on a LAN or the Internet. We expect that users would use an external voice or instant messaging client for communication with other players.

Primary Persona

Tobias is a 20 year old male college student. He enjoys playing Dungeons & Dragons casually in his spare time with friends and is a moderately experienced player since he has been playing for about a year. He is currently acting as Dungeon Master for a campaign with his friends, but unfortunately one of his friends in the D&D party transferred to another college. Tobias wanted to find a good way to continue playing D&D with his remote friend (named Justin) and found the on-line battlemat system using a Google search. Now he and Justin can play D&D together on-line using the battlemat system in conjunction with AOL Instant Messenger to communicate. Tobias typically places enemies and monsters on the battlemat for Justin to fight during sessions of D&D. Then Justin moves his character to fight these enemies. Tobias also likes to draw out the landscape and schematic diagrams of the battlefield on the battlemat during play sessions.

Proposed Solution

What I have in mind is a web-accessed interface within which players can host and join a session together. Everyone in this session sees the same representation of a battlemat updated dynamically as changes are made by any player. This allows a shared understanding of a D&D game's environment and characters.

The main part of the interface would be the battlemat itself. Beyond just a simple grid, users can draw lines of various colors, place icons representing model miniatures, and move these miniatures to different squares on the grid. It could also allow enhanced drawing functionality such as shape tools or text tools, as well as useful gameplay-enhancing elements like distance measurement and spell area templates.

I see these various drawing tools as being laid out similar to familiar drawing software like Microsoft Paint – a toolbar on the side will have buttons that turn the mouse cursor into an appropriate tool for modifying the visual aspects of the battlemat. The interface for hosting and connecting to game sessions will likewise be similar to the multiplayer aspects of computer games. In this way users will find the software familiar and easy to learn. Representing functionality by the implements used in pencil and paper D&D games – for instance, a drawing tool that has a wet-erase marker for an icon – will furthermore help with a shallow learning curve and memorability.

Finally, the interface will only support the battlemat-related aspects of a D&D game, leaving communication to existing software. This is just another way to keep the interface simple enough that no one is confused. Overall the functionality is limited and focused enough that efficiency, learnability, and memorability should be easy to obtain.

Contextual Inquiry

We intended to sample a broad range of D&D experience in our user selection. Some users are relatively new to the game and less comfortable with the battlemat's functionality while some are advanced users who regularly perform more complicated tasks.

Customer A still feels relatively new to the game and is often unconfident about the various actions her character can take on the battlemat. She often lets other players redo her character placement for better tactical situations. She has only played with the one D&D group so far; they gather around a battlemat on a table in a vacant class room.

Customer B, on the other hand, has been playing D&D for much longer and often must take more complicated actions with the battlemat. This frequently includes spells that affect various ranges and shapes on the battlemat and may even involve drawing or adding tokens to the

battlemat, as well as moving characters that belong to other players. He brings his own battlemat to several D&D sessions occurring in various lounges and bedrooms.

Finally, Customer C is a moderately experienced D&D player but the most actively involved in online games and other computer applications. He is already familiar with online chat and voice chat software, multiplayer video games, and computer graphics tools. He most frequently uses these programs from a dedicated desktop computer in his bedroom where he can interact without interruptions.

All users accessed both visual and physically interactive aspects of the battlemat. Terrain features are drawn or erased; miniatures are placed, moved, and removed; distances are measured and evaluated. This is, in general, the battlemat functionality we plan to reproduce. Though the battlemat is used to play the game, it does not constrain the players to any rules beyond the size of the grid - players must enforce the rules themselves. In any case, the battlemat is used for multiple games besides D&D. This confirms the level of simplicity planned for our battlemat application.

Tasks

In this section, we analyze six general tasks that common users would perform. These tasks are:

- Place a character icon
- Draw colors/terrain
- Move a character between squares
- Measure a distance
- Area effects
- Upload icon

Below, we answered ten questions to give an overview analysis of the tasks the users will be performing.

What tasks do the users perform now?

Users perform all but uploading an icon currently, only in a physical form. Instead of uploading an icon right now, users choose a physical plastic figure to represent their character.

What tasks are desired?

Users simply desire digital versions of their current actions. This will allow them to play from anywhere instead of being required to be in the same room to play together.

How are the tasks learned?

All tasks are currently learned in the context of the rules of the game. We will continue this method of learning and not try to restrict user actions in the application. Instead, shared

learning will be encouraged by allowing the leader to instruct newer players. This has the added benefit of making cross-over to the actual battlemat easy if the user is presented with the opportunity.

Where are the tasks performed?

Tasks are currently performed on a physical battlemat with all users sitting around it. In the context of our project, tasks will be performed in the browser window.

What is the relationship between the user and data?

The data presented is a representation of a user's actual character. The battlemat interface represents the physical battlemat the user may already be used to.

What other tools does the customer have?

With the exception of the basic, physical tools that this project is based on, users have no alternate tools to perform these tasks digitally.

How do customers communicate with each other?

Customers can simply talk to each other out loud if they're in the same room, or use their preferred method of communication. If users do not have another communication method, a simple chat box will allow users to communicate.

How often are the tasks performed?

During a normal game, all of these tasks will be performed rather often.

What are the time constraints on the tasks?

All tasks should happen instantaneously.

What happens when things go wrong?

If an action fails, the user will simply retry the action after being presented with an error message.

Task Descriptions

When Tobias is playing a D&D session with his friends, there are several tasks he performs with the online battlemat. Since the players will be fighting a new type of monster, Tobias uploads a new character icon to use. It's as easy as finding and selecting the image to upload; the icon is now available to use as a character token.

To create the environment for the encounter, Tobias must draw the terrain on the battlemat. He selects a pen tool and draws lines on the grid to represent walls and other objects. He changes the pen color to distinguish between certain types of terrain such as grass or water. Now the players can see the restrictions on their fighting space. Some players will also use the pen tool to draw the effects of spells they cast.

The players must place their tokens on the battlemat, and Tobias places the monsters. This is a simple drag and drop maneuver from the potential icons. Tokens snap to a square on the grid but can also be stretched to fill multiple squares. Players will also be placing tokens for the characters they intend to control.

On a monster's turn to act Tobias decides it will move a few squares over to get next to the players so it can attack. He merely needs to drag and drop the icon again, from one square to another. Second guessing himself, Tobias moves the monster again to a different square. Character movement happens frequently for any person playing the game.

For a longer move Tobias might need to check the distance with one of the tools; another monster needs to check the range of its magical ranged attacks. This could be done by counting the squares by hand but instead Tobias selects a range-finding tool. He uses this tool to select a starting square; holding his mouse cursor elsewhere on the battlemat shows the distance between the two squares.

Tobias has found that the monster is in range for its magical attack. This attack is an area spell that affects several squares at once, so Tobias now wants to measure the possible areas and see which characters could be affected by the attack. Using the area templates tool, he finds a size and shape of a template and moves it around the battlemat - affected squares are highlighted.