

Project Assignment 3

Online Battlemat

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Introduction

Many friends get together on evenings or weekends to play Dungeons & Dragons (D&D), 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 important to playing D&D, but it's not reproduced easily or accurately in any existing networking software. The goal is to create an online battlemat solution which will allow players to engage in D&D sessions remotely and will replace the traditional, physical battlemat.

Conceptual Model

The metaphors and analogies that describe the system are:

- The battlemat (as an overall means of playing D&D)
- Online games
- Computer drawing programs

The system's concepts are:

- The actual battlemat surface
- Character tokens
- Drawing lines and shapes
- Game sessions
- Users
- Drawing program tools

These concepts are related in the following ways:

- Users host or join game sessions
- The battlemat is drawn upon
- Tokens are placed and moved on the battlemat
- Drawing tools are used for manipulating the battlemat, tokens, and drawing

Finally, concepts map to the task-domain in the following ways:

- Representation of the battlemat and everything on it (tokens, drawing) replaces a physical battlemat
- Tool icons represent the physical tools normally used

Scenarios

This section describes three scenarios for the Online Battlemat System.

Uploading a token

Justin just joined his very first D&D session using the battlemat with Tobias. Before Justin can do anything else, he is kindly reminded by Tobias that he needs to upload his character token. Finding the "upload token" button on the top menu bar, Justin selects it to find a pop up of a file browser. Navigating to the token image he wants, he selects the image and clicks "OK." Now the image path is displayed on the file dialog and Justin can enter the description of the image. Upon submission of the token upload, Justin checks the list of icons to see that the token he just uploaded is accessible.

Drawing on the battlemat

Before Tobias begins his D&D session, he would like to place few environmental objects such as buildings, trees, wells, etc. onto the battlemat. This task is simply accomplished by Tobias as he selects the "Pen" button and draws objects on the battlemat. This is analogous to Microsoft Paint's pen drawing on its canvas.

Moving a token

Justin is quite happily playing D&D with Tobias who is the dungeon master for this session. Tobias hints that there may be some treasure and magic items inside of a house near Justin's character. Justin excitedly wants to move his token into the house so that he can search for treasure and magic items. Justin clicks and holds down the mouse on his token and drags the token across the online battlemat until it is inside of the house. Then, he releases the left mouse button. Justin is happy because it was simple and easy to move his character.

Preliminary Interface Design

The Online Battlemat System's preliminary interface can be seen in figure 1 below. Intended to be constructed with Microsoft's Silverlight technology, the battlemat is designed to give the user a very open feeling. Screen real-estate is very important to users of the system, so allowing the best view of the battlemat possible is very important. To that end, the user controls on the battlemat have been designed to be accessible, but out of the way.

At the top of the battlemat is the system's logo (1) which doubles as a link back to the system's home page. An important note is that the link opens in a new window or tab, so as not to disrupt the user's current game. To the right is the current name of the session (2) which has a link next to it that allows the user to share or invite other users to the current session. On the far right side of the top is the current user's chosen icon and name (3), which doubles as a link for the user to configure personal options.

Below the top row on the left is a series of button controls. The first button is the default tool, the Selection tool (4). Using this tool allows the user to select and move tokens on the battlemat. Next is the Pen tool (5), which allows users to draw on the battlemat. Clicking and holding the pen tool will display a dropdown color selector to allow the user to select a different color of ink. The third button is the Paint

Bucket tool (6). With a click-hold function similar to the Pen tool, the Paint Bucket allows the user to color individual grid squares with the selected color. The next tool is the Shape tool (7). Using the same click-hold mechanic as Pen and Paint Bucket, the Shape tool allows the user to select from a variety of shapes (spell templates) and a simple line tool for measurement. The fifth button is the Token button (8) that allows the user to select from uploaded tokens in the current session and drag them onto the board. The last button is the Upload Token button (9) that displays a dialog allowing the user to upload a new token when clicked.

Below the row of buttons is a trio of buttons that make up the zoom control (10). The top button zooms in by one time, while the bottom button zooms out by one time. The third button in the trio returns the user to the center of the battlemat and zooms in to the default level.

On the right side is a list of users in the current session (11). Next to each of them is their chosen personal token, allowing easier identification of each user. On the left side of this box is a button (12) that allows the user to collapse the list of current users in order to maximize real-estate for the battlemat (13).

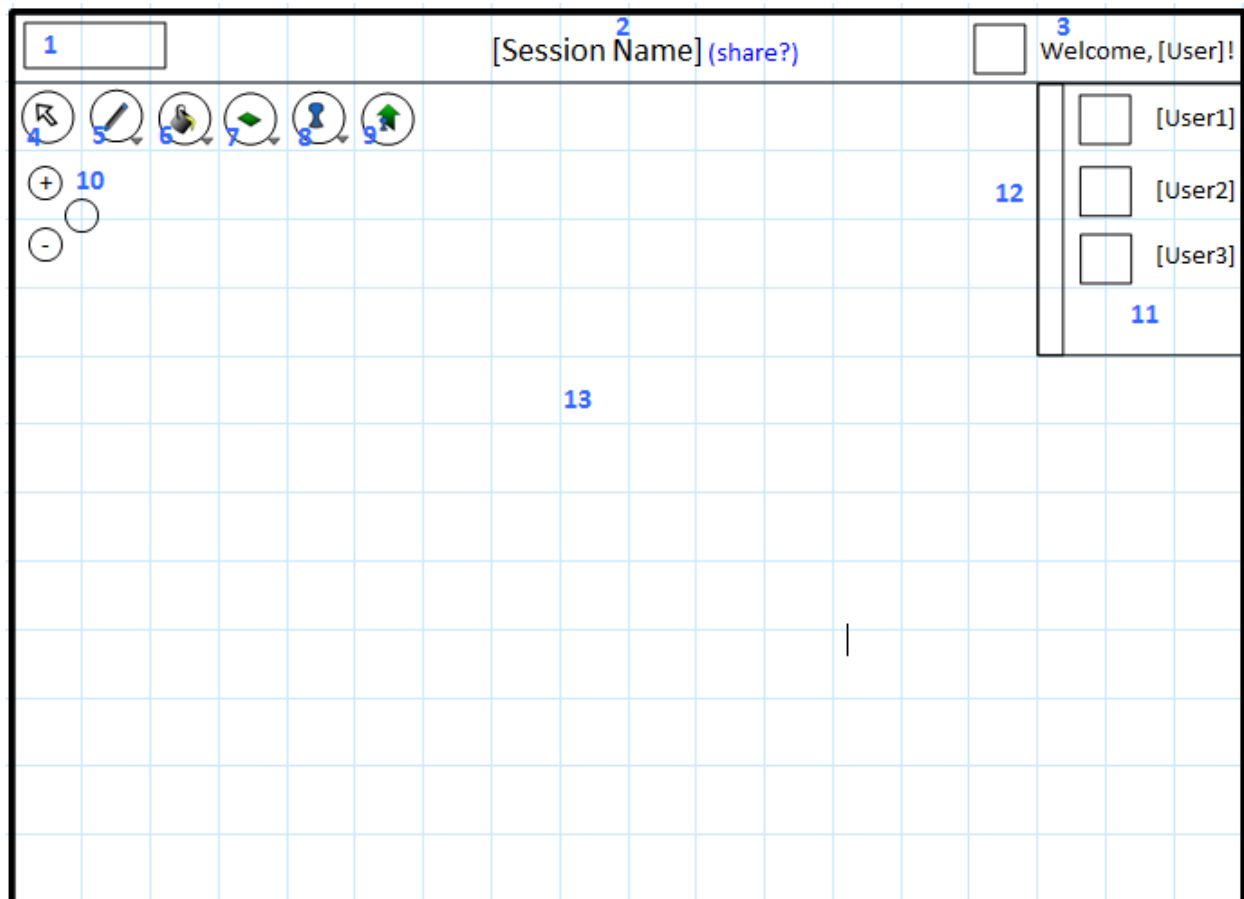


Figure 1 – Basic layout of the system.

Storyboards

This section illustrates three tasks – uploading a token, drawing on the battlemat, and moving a token on the battlemat.

User Uploads a Token

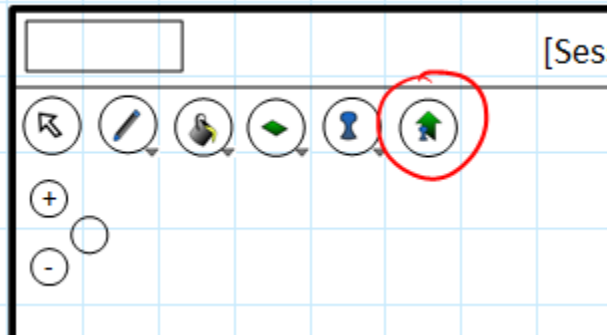


Figure 2 - User click "Upload Token" button.

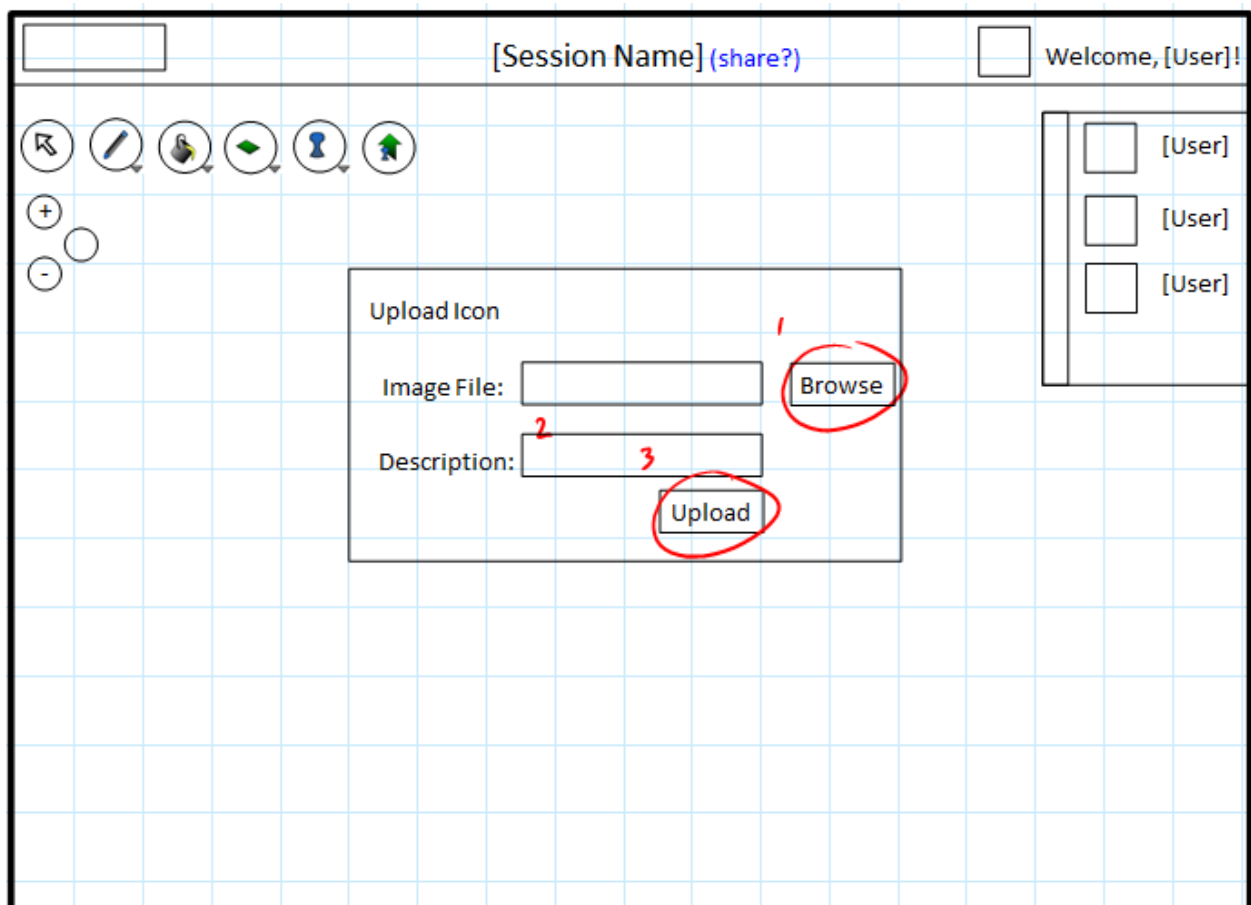


Figure 3 - User browses to the local image file and describes the token, then clicks the "Upload" button.

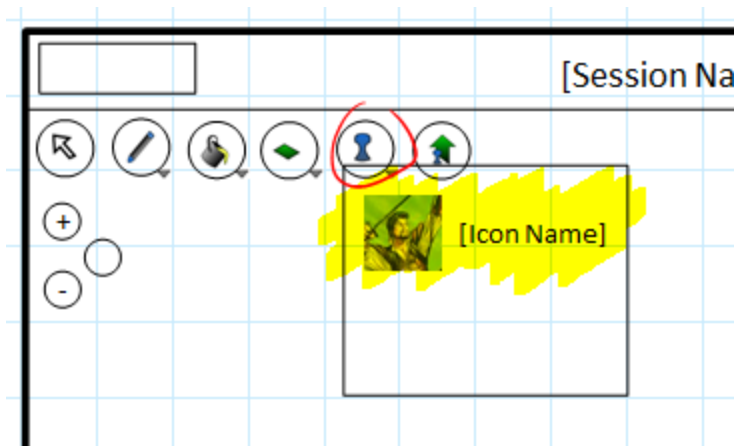


Figure 4 - User sees the uploaded token in the Token button's dropdown.

User Draws on Battlemat

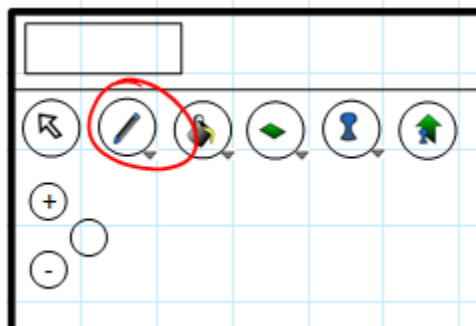


Figure 5 - User selects the Pen tool.

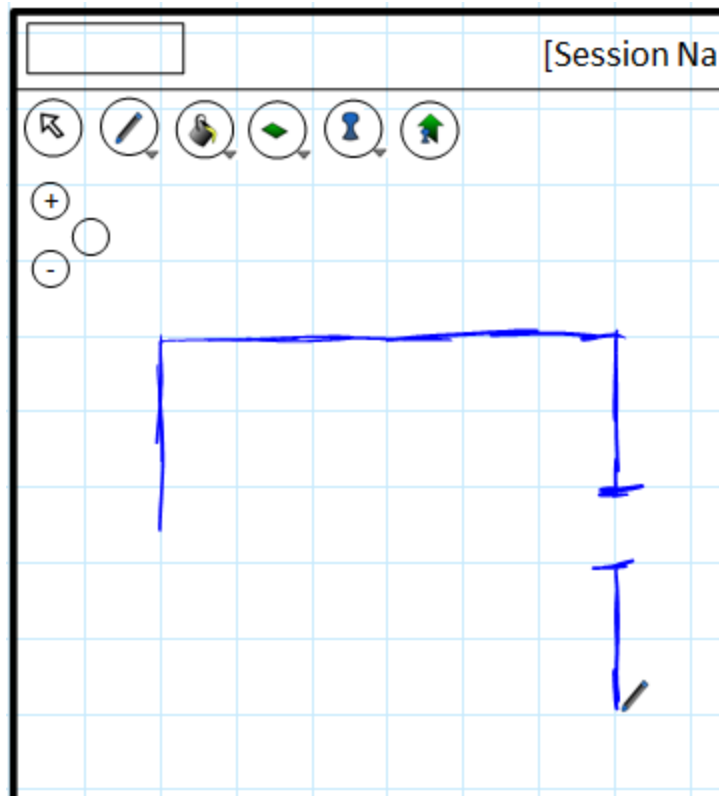


Figure 6 - User begins drawing on the battlemat.

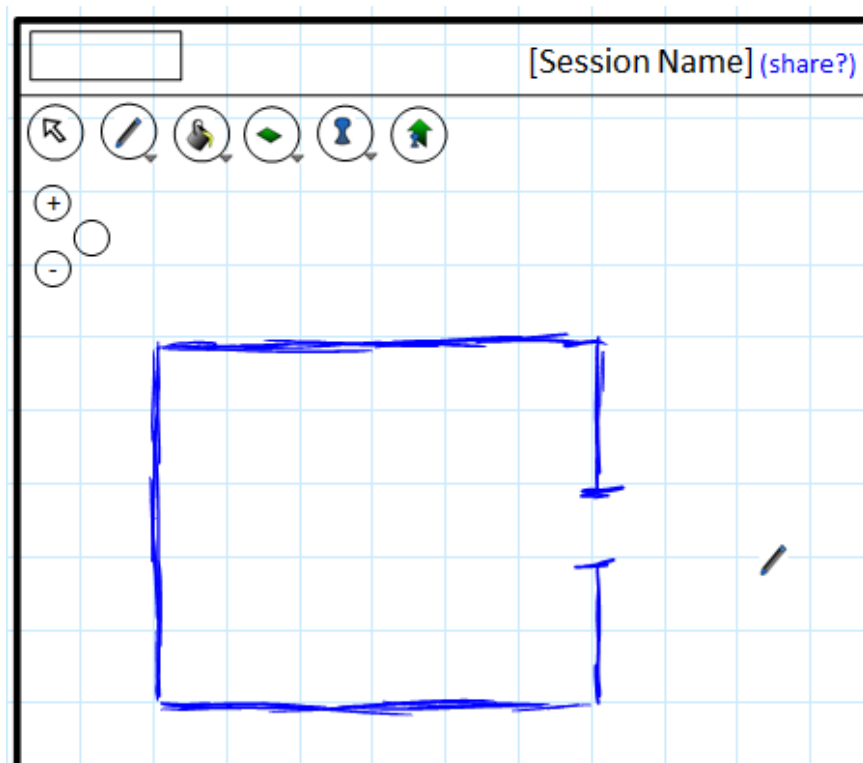


Figure 7 - User stops drawing.

User Moves a Token

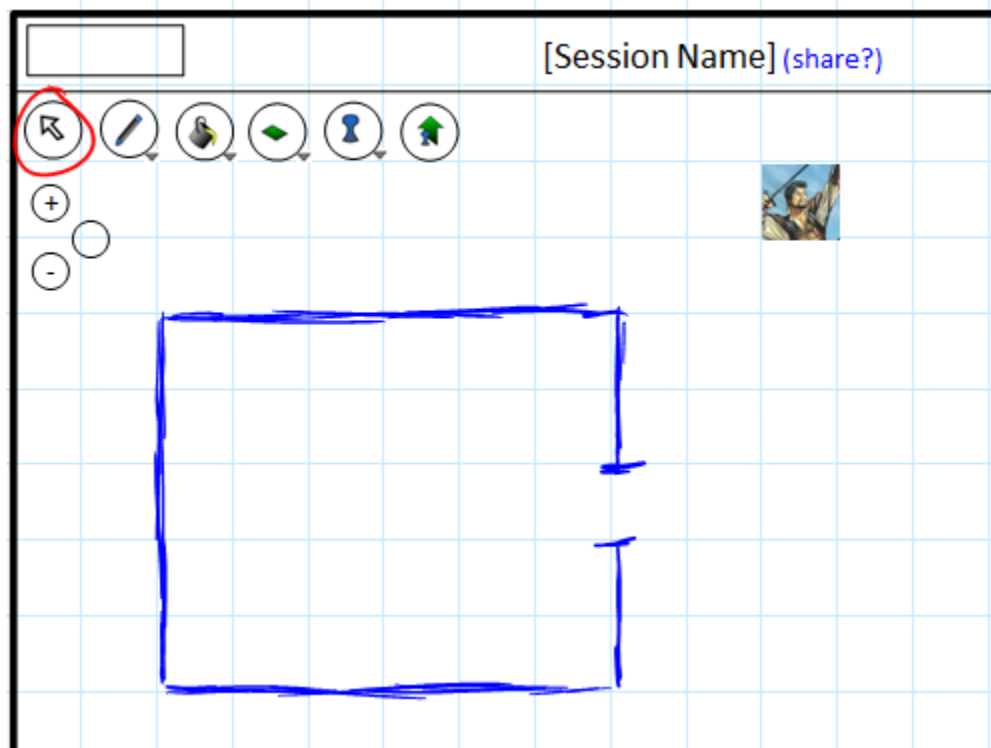


Figure 8 - User selects the Selection tool.

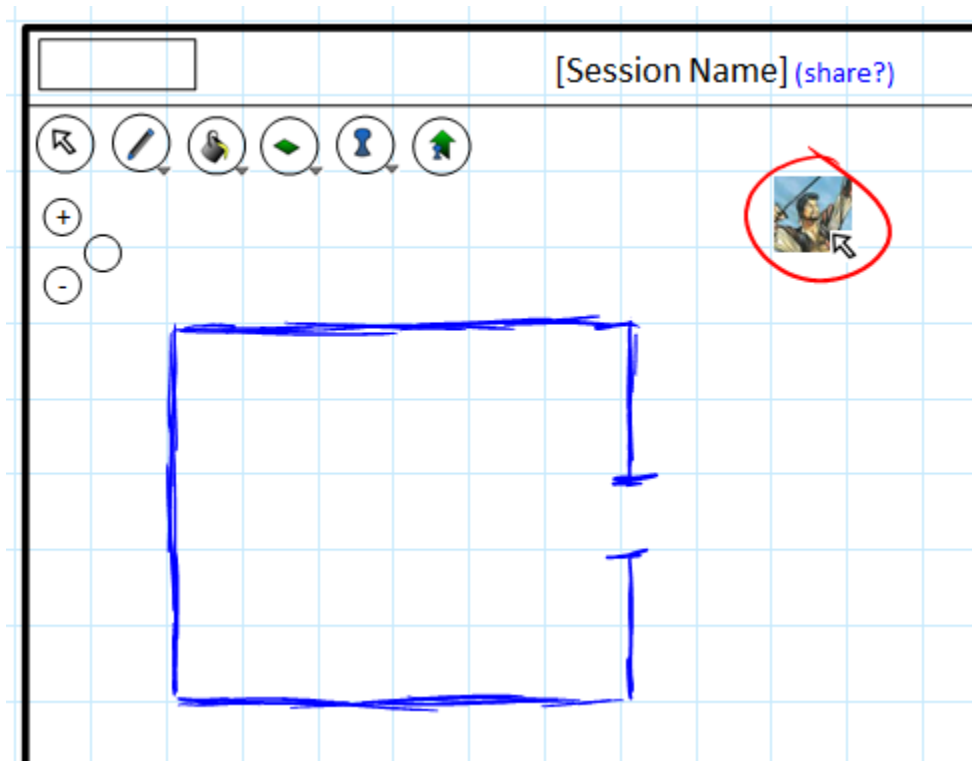


Figure 9 - User clicks and holds the left mouse button on the desired Token on the battlemat.

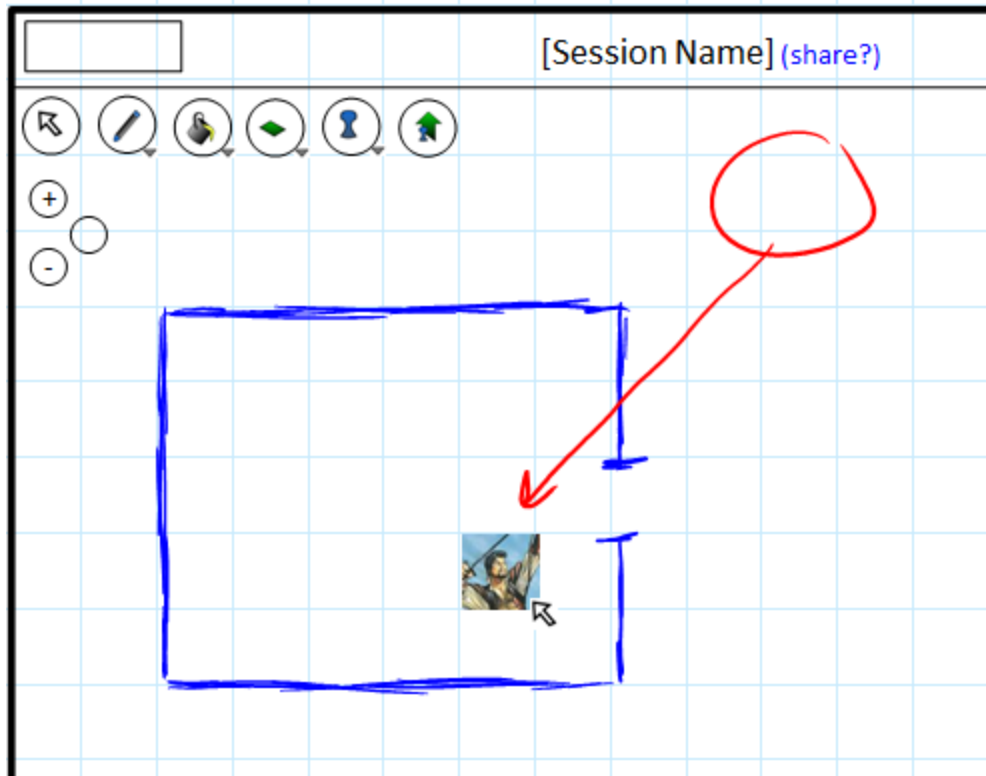


Figure 10 - User drags the chosen Token to the desired location on the battlemat and releases the mouse button.