GUI Report

Usability and playability were at the forefront of our design decisions when creating the initial graphical user interface. In addition to making the game easier to use and more fun to play, an efficient GUI will help to fulfill requirement 1.2.4. Usability here meaning the ease of use the game provides whereas playability is used in the context of creating an enjoyable experience for the user.

The game screen consists of three blocks of display, left, centre and right. Each block is responsible for displaying distinct information. The centre block displays the map image and its tiles, this separates the left and right blocks which contain written information; this prevents the screen from being overcrowded with words in one specific area and increases readability and therefore usability. The left block contains information about the current phase of the game and the player who is currently having their turn. The right block contains information about the selected tile and the market.

All parts of the HUD contain interactive elements. The left and right sections contain buttons for performing various actions, whereas the tiles in the central grid will not only cause tile-specific information (and claim/Roboticon deploy buttons) to be displayed in the right-hand panel when clicked on , but also generate identification tooltips that track the cursor when hovered over.

Map: The map has followed the requirement 1.2.2 whereby there are equally sized tile. Each tile is visibly distinguishable and follows a consistent style. The image was created to have a resolution of 512x512, with 128x128 for each tile; this resolution makes a playable game, allowing players to make out details and identify landmarks of the university (Requirement 1.2.1) but is simple enough to allow the production of the game to fit within our time constraints. The complete display has a resolution of 1024x512, complying with the resolution of the university monitors.

Current Phase: This section shows a timer to signify the length of time left before the end of the phase; this timer has been made very large in order to get the attention of users. As the users will not be able to complete any tasks in that phase once the timer has expired, it is important that it is noticeable. There is also an "end phase" button which will ultimately decrease the length of games and "pause game" button which makes the game more playable for users that need to momentarily divert their attention. Underneath this, there is a current player box that displays the user information associated with the current phase/turn and showing their resource amounts, college name and emblem; this makes it clear which player's turn it is to play, (considering that the phases cause frequent user swaps) this is important as the game would have very poor playability if neither player knew who was supposed to take the current turn. Given that the resource amounts count towards the final score and determine the winner of the game , they should be clear and always on display to the users.

Tile Details: The display shows the selected tile's details. The tile number is given along with the user's college that owns it and any roboticons that have been deployed on the tile.. All the possible functions, that a user can do, associated with tiles are also here grouped together so users can find them easily. When a player claims a tile, it gains a border in the colour of their college's primary motif, this fulfills requirement 1.2.3. When a roboticon is installed on a tile the roboticon with its given upgrades is shown above the map, this gives the player good feedback on the current state of the tile, fulfills requirement 1.1.2, and increases playability.

Market: Buttons for buying and selling resources are displayed in a table structure with resources on rows and buy/sell prices acting as the labels for the buttons which ultimately perform in-game transactions: this is an intuitive way of displaying the information without it appearing too cluttered and is easy to use. These buttons are also coloured green, red and grey to signify when transactions are possible, transactions are not possible due to missing funds or resources, or certain market functions are closed (speaking respectively), effectively conveying players' available options in an instant. The stock of the buyable resources is displayed just underneath this table, users will need to refer to the stock levels when buying from the market so grouping these together is important for usability. The Auction is also shown in the same location as the market so a pair of buttons are available for the player to move between the two, the button to get to the market is only active when in the auction and the auction button is only available in the market.

Auction: Like the Market the Auction is table based. It has buttons to increment and decrement the amount of resources to be sold, this allows us to control the value being sold so they can't sell more than they have or less than zero items. The price can be increment in 1s , 10s, and 100s. This makes it easy for the player to reach any price whilst we can still control the input (no negatives or non integer values). All increment and decrement buttons are disabled when using them would create an invalid value, making the auction more usable. There is a section at the bottom of the auction that allows you to scroll through the list of other players to choose which one to send it too, it only includes that can be dealt with and the buttons to move through the list

are disabled when the end/beginning of the list is reached. Finally there is a confirm button which is red and disabled until either money or resources are put forward to be traded, where it is enabled and turned green. This make it obvious that the trade is ready to send.

Trade Overlay: When a player is sent a trade an overlay will appear in their next turn. The overlay contains the resources for sale, the price and the player who sent it. The player can use buttons to accept or decline, if they accept but don't have enough money another overlay will appear telling them they can't afford it, they can then press the close button to remove it from the screen. When accepted or declined the trade overlay is removed.