

Rebellion

Final Project Specification

CSS 450 Fall 2010

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Purpose

Rebellion is a real-time strategy (RTS) game to be played by one human player and one computer player. The world will consist of a city where the computer player controls the current group "in power". Within the city will be movable units and buildings that are either part of the human player's group, part of the computer player's group, or part of the general populace. The human player's group are any objects that have an allegiance greater than zero. The human player's opponents are any objects that have an allegiance less than zero. The general populace has

an allegiance of exactly zero. Each player will start the game with a set number of units and buildings in their control. Either player will be able to coerce members of the general populace or the opposing group to join their group.

Objective

The game's objective is to overthrow the group "in power" (the computer player). This is done by reducing the number of members in the opposing group to zero (either by killing them off or by coercing them to join the player's group). Conversely the game is lost by losing all of the members in the player's group.

Objects

There will be two main object types in the world. Units and buildings. Each object will have an allegiance level from -100 to +100.

Units

A unit is the basic element for each player. Units fight other units or coerce other units to join their group. Units can move around the city, occupy buildings, train in their group's buildings, and take over opponent's buildings. All units have the basic actions of "Idle", "Move", "Attack", and "Coerce". An action can only be performed on one target at a time. A target can have more than one unit acting on it. Units will continue with their action until something changes their action (either because the action ended, cannot be finished, or the player changed the action). When a unit is attacked or coerced it will retaliate with its default action if it is not already performing an action. Units also all have the same attributes of "HP", "Strength", and "Willpower". A unit's default action is to "Attack" if its "Strength" is higher than its "Willpower". Otherwise its default action is to "Coerce."

Idle

The "Idle" action is not available to the players. It is an action that happens when a unit can no longer perform their given action. Unit's that are idle will perform a default action on other units in range who have an allegiance difference of greater than 100. For example, if the unit has an allegiance of +50 and two other units are in range, one with an allegiance of -25 and another with an allegiance of -60, the unit will only attack or coerce the opponent with an allegiance of -60.

Move

When the "Move" action is used, the unit will move to the specified target without using any of the other actions. If the target is a building, the unit will move to the

building and then occupy the building. Once the unit reaches its target, its action is changed to "Idle".

Attack

When the "Attack" action is used on a unit, the attacker will move to the target, and when in range proceed to attack the target, regardless of the target's allegiance. When the "Attack" action is used on anything else the attacker will move to the target, attacking any nearby opponents with an allegiance difference greater than 100. Damage will be calculated from the attackers strength and then the damage will be subtracted from the target's HP. When a unit's HP is reduced to zero, the unit is considered dead, is removed from the game, and the other combatant's action is changed to "Idle." When a unit is removed from the game, a new general populace unit is created from a random general populace building. If there are no general populace buildings left then no unit is created. If a unit's allegiance is changed during combat so that it is on the same group as the other combatant, both combatants actions are changed to "Idle."

Coerce

The "Coerce" action is similar to the "Attack" action, however instead of attacking the target or opponents, the unit will attempt to coerce the target and/or opponents to join the unit's group. The amount of coercion performed is calculated from the coercer's Willpower. This amount is then used to modify the target's allegiance. When a target becomes (or is on) the same group as the coercer, the target no longer retaliates. The coercer cannot change the target's allegiance beyond the coercer's allegiance. Once the coercer cannot change the target's allegiance (either because their allegiances are the same or because the target is dead), the coercer's action is changed to "Idle."

Buildings

There will be various buildings throughout the city. Each building will have an allegiance and the ability to train a specific unit attribute. A buildings allegiance is changed when it is occupied by units. The more units from a group in a building, the faster the allegiance changes. All units in a building perform their default action on opponents regardless of their allegiance difference. The buildings can only be used for training by members of the same group. The attributes that can be trained are Strength, Willpower, and Allegiance. Each building can perform the actions of "Train Unit", "Train All", "Remove Unit", "Remove All".

Train Unit / Train All

This action will train the selected unit (or all units) under the requesting player's

control (human or computer).

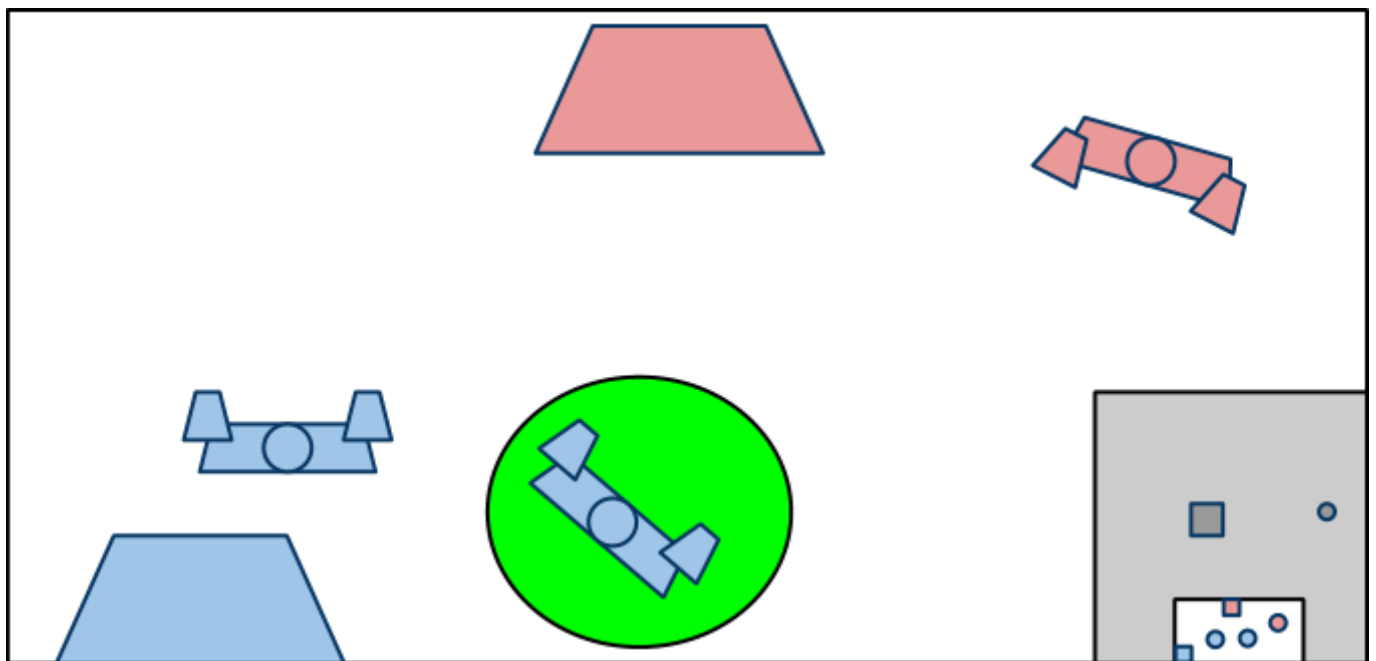
Remove Unit / Remove All

This action will remove the selected unit (or all units) under the requesting player's control (human or computer). The unit(s) will appear up around the building.

GUI

The following GUI windows will be used for Rebellion.

Game View Controller



Main View

The Main View consumes most of the Game View Controller window. It shows a close up view of the world from a perspective similar to a third-person view. The player can interact with the game through the Main View. Left clicking on an object in the Main View will select that object. If a unit is selected, right clicking in the Main View will send the unit to that spot with the Move action. If a unit is selected and a action is enabled, left clicking in the Main View will send the unit to that spot using the action.

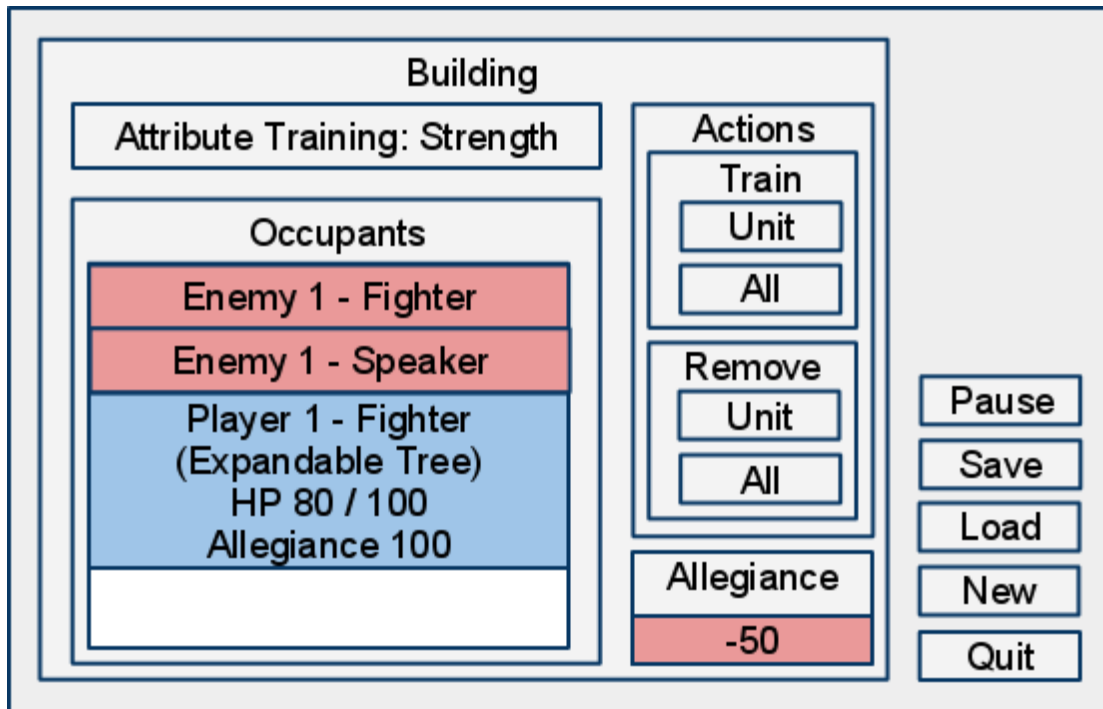
World View

The World View uses a small section of the Game View Controller's lower right

corner. It shows the entire world from a bird's-eye view. The Main View's area is shown clearly, the rest of the world is grayed out. All objects will be shown in the World View. The player can interact with the game through the World View. Left clicking in the World View will change the center of the Main View to that point. If a unit is selected and a action is enabled, left clicking in the World View will send the unit to that spot using the action. If a unit is selected, right clicking in the World View will send the unit to that spot using the Move action. An optional feature that may be implemented (time permitting) is a "Fog of War". The "Fog of War" would hide all areas not visited by the player's units by blacking them out, gray out all areas not within sight range of the player's objects, and hide all opposing units that are not within sight range of the player's objects.

Form View Controller

Unit	
Attributes	Actions
HP	<input type="button" value="Move"/>
Strength	<input type="button" value="Attack"/>
Willpower	<input type="button" value="Coerce"/>
	<input type="button" value="Allegiance"/>
	<input type="button" value="+100"/>
<input type="button" value="Pause"/>	
<input type="button" value="Save"/>	
<input type="button" value="Load"/>	
<input type="button" value="New"/>	
<input type="button" value="Quit"/>	



Main Functions

The Form View Controller provides information about the currently selected object, actions for the currently selected object, and general program actions. The Pause button Pauses the game and changes to a Resume button. The Resume button resumes the game. The Save button saves the current game. The Load button asks if the current game should be saved, then loads a previously saved game. The New button asks if the current game should be saved, then starts a new game. The Quit button asks if the current game should be saved, then quits the game. The Form View Controller's object information display changes depending on the current object selected.

Unit

This Form View Controller variation shows the current unit's attributes, actions, and allegiance.

Building

This Form View Controller variation shows the current building's Ability Training, list of occupants with tree view for each occupant, actions, and allegiance. The "All" buttons will only affect units under the player's control.

Glossary

RTS	Real-Time Strategy. "a sub-genre of strategy video game which do not progress incrementally in turns...In an RTS, as in other wargames, the participants position and maneuver units and structures under their control to secure areas of the map and/or destroy their opponents' assets. In a typical RTS it is possible to create additional units and structures during the course of a game. This is generally limited by a requirement to expend accumulated resources. These resources are in turn garnered by controlling special points on the map and/or possessing certain types of units and structures devoted to this purpose. More specifically, the typical game of the RTS genre features resource gathering, base building, in-game technological development and indirect control of units." - Wikipedia
HP	Hit points