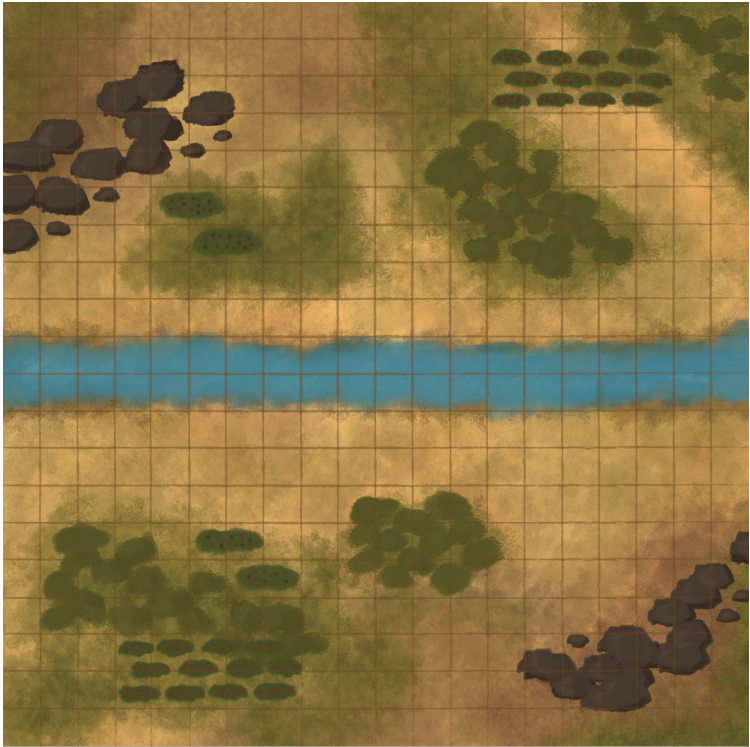# AGE OF EMPIRES

boardify a video game: report
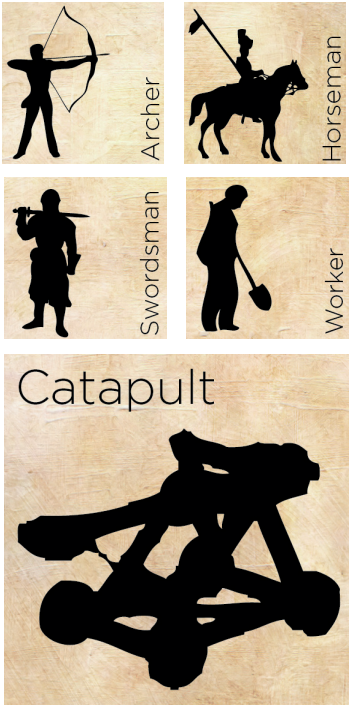
GROUP K

Ernie Tsang
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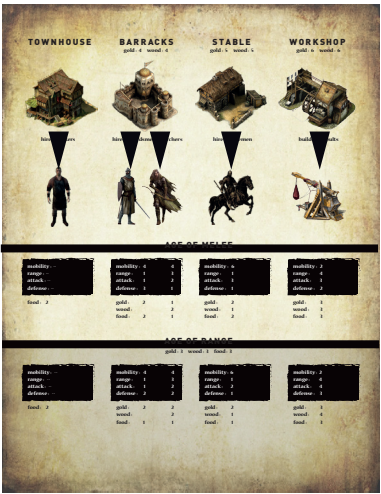# GAME BOARD

UNIT TOKENS

Archer

Horseman

Swordsman

Worker

Catapult

PERSONAL BOARDS

TOWNHOUSE | BARRACKS | STABLE | WORKSHOP

CARDS

SUCCESS

FAIL

GAME DESCRIPTION

For our final project, we've chosen to reconstruct the popular real-time strategy game, Age of Empires, into a board game. The most fundamental mechanics of the original game have been brought over and converted into a physical plane. The board game is made for two players, each taking on the role of community leader, heading the growth of their society. Their base of operations is the ever important Town Hall. In order to win the game, players must destroy the opposing player's Town Hall. To begin, players will situate workers around the game board to collect the resources necessary to advance their territory and military strength. These resources are: gold, wood, and food. Those resources are partitioned at the player's discretion for the creation of specific buildings: in turn, those buildings indispensable for the purpose of hiring military personnel.

Each military unit has predefined stats that limit its movement, range of attack, attack power, and defense power. Players can maneuver their units however they please, with the goal of destroying the opponent's Townhall in mind. When a player's unit, or units, encounter an enemy unit within range they can engage in combat whereby the attacking player chooses which unit of theirs will attack which unit of the opponent. Both players then draw cards from their combat deck equal to the Attack or Defense points of their respective units. Whichever side draws the greater sum of Success cards is deemed the winner.

MECHANIC CONVERSIONS

As we are adapting a videogame to a board game, there are certain elements that we wanted to adapt in order to retain the purpose and personality of the game. The strategy element of balancing resources to accommodate the amount of workers, buildings, and armies are kept so that the original strategy aspect of the game is retained. By limiting the players to two, we create an environment for direct confrontation to increase the competitive atmosphere. Players would discover builds and strategies as they continue to play. Through experience, they would know when to attack and with what types of units depending on the opposing player's actions.

Our goal was to capture the original goals and environment of the video game in our physical interpretation, however, some sacrifices had to be made. It was impossible to replicate the computer simulated calculations in real life that allowed for simultaneity in the video game. Because of this, several game mechanics had to be discarded and the game was converted from real time to turn-based. In order to keep the game simple, health points for units were removed. Each unit has a chance of successfully hitting or blocking an enemy unit and If that unit is hit, then the unit is destroyed. Another mechanic that was modified is the process of gathering resources. Normally, players would need to build resource refining buildings such as a mine or a wood cutter's hut. The mechanic is altered into a worker placement mechanic so that players only need to place workers on a natural resource for that resource to be gathered on the next turn. While advancing to the next age is still present, researching technologies is removed in order to shorten the expected game length of each game.

PLAYTEST AND FEEDBACK RECEPTION

We held 5 playtesting sessions, with two players going through one game per session.

First and Second Playtest Sessions

Following our initial playtest, we focused on the flaws in our game board design, and combat mechanics. The players consisted of members from Group K. We used this first test to fine-tune the scale of our game board, and the placement of resource spaces.

Our original combat system involved army vs army, rather than unit vs unit, in order to simulate the squad-like confrontation in the digital Age of Empires in a simplified manner. In this scenario, units from the attacking side could attack all in range enemy units. Players would draw cards from their combat decks based on the sum of their respective involved units and the winner was decided based on which player had the higher number of successful hit/defend cards. However, we found this led to confusion on the behalf of the defending party.

This method of units in a mob attacking another group of units was time consuming. We were unprepared for questions such as: Can a single attacking unit attack more than one in-range enemy unit? Can I use two units to attack a single enemy unit? Furthermore, it was too simplified where there was very little strategy as the bigger army always wins.

In this case, regardless of our intended army vs army system, it ended up becoming a unit by unit calculation. For this reason, our primary takeaway from this playtest was that we needed to specify the limitations of units. From this point on, we began implementing better use of the Attack, Defense, Mobility, and Range statistics to certain units.

We relied on our card draw system to provide additional uncertainty to the game. Similar to chess and other turn-based strategy games, most of the anticipation and risk develops on the opposing player's turn. We expected players to try to out maneuver each other with their units.

Third Playtest Session and Onwards

With our updated combat system we approached unaffiliated people in our lab section to test our game. While they enjoyed the combat system, the time it took to set up an army took too long. We originally wanted the base building aspect to be at around 5-10 minutes but it took 30 minutes for players to get a couple of units onto the field. As a result, the game took an 1 hour 30 minutes to complete rather than our expected 45 minutes. This playtest session revealed to us that we needed to increase the pace of the early-game. Up to this point, because gameplay had been drawn out so significantly, players were unable to reach the Second Age of the game, where they could upgrade units or utilize catapults.

To combat this, it was agreed that building costs should be lowered so that players may more easily carry on into the more significant combat aspects of the game. An additional bonus to decreasing the cost of building in order to hasten the pace of the game, is the negative feedback loop associated with resource collection. As players place more buildings, they will eventually build overtop resource collecting spaces. In this way, eventually players will be limited in the number of resource spaces they can take advantage of as they game progresses.

Moreover, we as the game designers initially played knowing that buildings and townhalls should be built within a certain boundary of the game board. This was not apparent to players and they were unsure of where to place their Town Halls in the setup stages. For this reason, we approached our game board to include a clear boundary of spaces between the two players and a border signifying the territory for building pla

Throughout all of our playtest sessions, we were given feedback on how well our units' stats were balanced. In some cases, catapults were too weak while archers were too strong, and other times, the horsemen's range was too large and they covered the whole board in two moves. On the topic of movement based actions, we also found the players had assumed that units were not able to move diagonally, something we hadn't considered. We agreed that this method of limiting movements bene-fited the balance aspect of units.

Given the balancing issues, there was something that the game does extremely well and that is tension. All of the games that we tested came pretty close and that there were many shifts in power throughout the games.

CONCLUSION

While the overall feel of the game is done up to our expectations, the pacing still needs some work so that the game is more about the combat rather than the base building. Furthermore, more time is needed to properly balance out the units between the two factions so that player can have a proper experience when playing the game. The purpose of factions was to provide specializations between the players for added intrigue and narrative context. These aspects of our game are also in need of further development; as they are now, they have little impact on the overall gameplay.

When we were designing our boardgame, we found it tough to decide which features to keep, change, or discard. While some mechanics were easy, others such as how factions should be imple-mented and how combat should work was difficult to design. Real time calculations are present in the original Age of Empire's combat system, and simplifying that into a turn based board game proved to be one of the most significant challenges. From this project, we learned that pacing is a really import-ant key part of boardgame design. If the pacing is off, then it will be difficult to retain player interest. If we were to do this again, we would focus more in the design of the pacing of the game. Moreover, we were oblivious to many regulations we failed to cover in our initial playthrough of our game. It is essential to test with players who are unrelated to the design process of the game as we found that, we, as the originators of the game, were biased in how we played. We played the way we expected the game to progress, with certain elements that were unclear to outsiders, such as where to build and diagonal movements or units. Outside party testing is a great asset to redefining and developing the rules in addition to enhancing and clarifying gameplay mechanics.

RULESHEET

Age of empires is a competitive real time strategy game that takes place in multiple eras. Players are able to expand their base and defeat other players by building an army and destroying the opposing player's town hall. In order to do that, players need to hire workers so that those workers can gather resources which would enable them to construct buildings that either enhance their empire or build additional units types. Players can also research individual technologies that upgrade their buildings and units. They are also able to advance to the next age in which everything becomes stronger in addition to unlocking new units and technologies. Our adaptation of Age of Empires is a combat based strategy board game with worker placement mechanics added to it. Our game targets competitive players that are familiar to either the age of empires series or players who are familiar with the turn-based strategy genre. It is designed to accommodate 2 players.

Each player will have access to a personal sheet for them to organize their resources. In addition, the costs of buildings and hiring new workers are indicated on the sheets for their convenience.

STARTING CONDITIONS AND RESOURCES

Each player starts with a Town hall and 2 workers alongside 2 gold, 2 wood, and 2 food for resources. On each side of the board, there are locations where workers can harvest food, mine gold, and gather wood. These resources are used to build additional buildings and to hire soldiers or extra workers. In order to gather resources, workers need to be placed on top of spaces indicated with the corresponding natural resource and stay there for the turn. At the start of the following turn, the resources would arrive at the town hall and be added to the player's resource pool. Each worker gathers 2 of that resource per turn. If a player wants a worker to work on other things such as build a building or gather a different type of resource, the worker needs to be relocated physically to that section of the board. Each player may also choose a faction. One faction is more melee focused while the other one is more ranged focused. The melee focused armies have stronger melee units but they cost more to build. This also applies to the ranged units as well.

CONSTRUCTION AND PRODUCTION BUILDINGS

Each unit and building has their own unique cost. In addition, certain units can only be hired if the player has built the corresponding building. If the player wants to construct a new building, a worker will need to be placed at the desired location for the duration of the turn. On the next turn, the building will be finished- in this way new buildings can only be used the turn after they have entered the game. The same rules apply when buildings hire soldiers or workers. Each building represents one build action. When a player wants to build an archer for example, that building's action is used up and the archer will be ready next turn. If the player wants to hire multiple archers in one turn, the player needs to construct additional barracks. This means that if the player has 3 barracks, then that player can hire 3 archers. All of the buildings except for one, the workshop, are initially unlocked. In order to unlock the workshop, players need to advance to the second age which requires a cost. Players can only advance to the next age once.

UNITS AND MOVEMENT

Each unit type has their own unique stats. Some are cheaper but are weaker in general, while others are more expensive but can attack at range. When moving units, each unit may only move a certain number of spaces. This is unique to each unit and indicated by their Mobility stat. Units are unable to move diagonally and through or past units that are blocking their path. When moving an army, players have to move each individual unit.

COMBAT

Each player is given a deck filled with Success and Fail cards. During the combat phase, the attacking player will draw attack cards equal to the number indicated by the unit type they are using to attack (under ATK). They must establish at the beginning of combat which defending unit they are attacking. The number of in range units that will engage in combat is at the attacking player's discretion. The defender will draw cards from their deck equal to the defense (DEF) number of the defending unit. If the total number of success cards from the attacking player is greater than the total number of success cards pulled by the defending player, the targeted unit is destroyed. If the total defense is greater than total offense, then neither player loses any units for that combat round. On the next turn, the previously defending player has the option to retaliate. In this way, the act of attacking and defending is alternated between players. When engaging buildings, the army will spend one turn to attack that building but it's destruction is guaranteed. Victory is achieved once the opposing player's town hall is destroyed.

EXAMPLE TURNS

TURN 1
    1. Place worker on wood and gold

TURN 2
    1. Collect resources (two wood token and two gold token) - The player now has 4 wood, 4 gold, and 2 food tokens
    2. Relocate one worker to builds barracks, keep the other worker on gold - The player uses up 3 wood and 3 gold to build the barracks. They are left with only 2 food now.
    3. Town hall hires one new worker and the player uses the rest of their food tokens for this.
    The player ends their second turn with no more resources, a new barracks they may use to hire soldiers, and a new worker that can be use to gather more resources next turn.

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TURN SEQUENCE

Collect resources based on allocation of workers on gameboard
Build new building / Hire new units / Enter new age
Move any available units on the board as you wish
    -Engage in combat
Relocate workers
End turn

EXAMPLE COMBAT TURNS

Player 1 (3 swordsman and 2 archers) **vs Player 2** (3 archers vs 2 swordsman)
On Player 1's Turn
    -each swordsman targets each opposing archer, 2 archers target 1 opposing swordsman
On Player 2's Subsequent Turn
    -retaliates and attacks each of Player 1's 5 units with their own 5

BUILDING	UNITS	COST
townhall (1given at beginning - cannot be built)	workers	NA
barracks	swordsmen and archers	3W 3G
stables	horsemen	4G 4W
workshop	catapults	5W 5G

Next age cost - 3g, 3w. 3f

FACTION 1 (MELEE FOCUSED)

UNIT TYPES	MOBILITY	RANGE (ATK)	ATK	DEF	COST
worker	-	-	-	-	2F
swordsman	4	1	1	3	2G 2F
horseman	6	1	3	1	2G 1W 2F
archer	4	3	2	1	1G 2W 1F
catapult (2nd age weapon)	2	4	3	2	3G 3W 3F

FACTION 2 (RANGED FOCUS)

UNIT TYPES	MOBILITY	RANGE (ATK)	ATK	DEF	COST
worker	-	-	-	-	2F
swordsman	4	1	1	2	2G 2F
horseman	6	1	2	1	2G 1W 2F
archer	4	3	2	2	2G 2W 1F
catapult (2nd age weapon)	2	4	4	3	3G 4W 3F