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GAT211

Lab Report 2

**Lab Report 2**

**Introduction**

For this week’s lab, I decided to scrap my previous combat system and work on a new one using the crafting-combat system I spoke about in the last lab report. I ended up using only a few of the ideas from the version of the system in that lab report after I saw a number of potential problems. The version that I brought to lab on Friday was the result of a great deal of brainstorming and rethinking, even up to the morning of the lab itself. In the interest of showing my process behind the creation of the game, I’ve decided to make the Creation section of this report a straight transcription of my brainstorming notes that I write freehand whenever creating a new game. It is completely informal and will be populated with incomplete sentences, random words and questions, and other vagaries that will hopefully make sense within the greater context. Following that section will be the rules for my system as they existed pre-lab. Then, I will detail the advice and suggestions I received after discussing the game with the class in lab. After this, I will add the re-written rules that take into account all changes made based on feedback received. Finally, I will write an analysis of the game using intensity charts and up/down intensity lists.

**Creation**

Combat-Crafting Game Ideas

Three phases?

1. Collection of Materials
   * Players buy “components” to use in the construction of the weapon or shield
   * These components are different colors of chalk
   * They use the coins given to them to buy certain colors that have certain properties when used
   * So, what are these properties???
   * What traits do weapons have including those in fantasy games?
     + Durability, Balance, Quality of the Steel, Sharpness of the blade, Handle/Cross Guard
     + Ornamental items like: inlaid jewels, golden cross guard, precious metals used in the handle
     + Magical properties that give the weapon supernatural strength: Unbreakable blade, A blade that will cut through anything, A sword surrounded by fire, ice, or lightning
   * Cards with the category of trait on one side that is drawn randomly that players then bid on. Only when a certain player has won the bidding can they flip the card over to see what they have bought
   * There will need to be degrees of components within each category from common to legendary known by players so they know relative value of what they’re bidding on
   * Each part has a max. bid amount that if tied goes to a dice roll
   * So, the three categories should be
     + Metals: quality of steel, durability, sharpness, materials for cross guard and handle
     + Ornaments: jewels, precious metals like silver, gold, and platinum
     + Magic: spells that grant the weapon supernatural strength (see prev. note)
2. Crafting the Weapon
   * Players use the various colored chalk that they have to construct the weapon. The pieces that are added to it define the overall hit points of the weapon
   * When crafting, random events occur that affect the overall outcome of the finished weapon.
   * These events could include: Missed and Critical Hits, Different degrees of shaping the blade, aesthetic misfires and masterpieces
   * Should these also come as card that must be randomly drawn?
   * What about the interaction between the two players?
   * Could things like skill, knowledge, and experience act as combat traits that protect the player from both random mistakes as well as attempts by the other player to sabotage the weapon?
   * Steps of constructing the weapon?
     + The handle
     + The cross guard
     + The blade
     + Ornamentation
     + Magical Properties
   * Should each round be timed to increase difficulty, keep players from taking forever?
   * At each stage the players have an opportunity to sabotage the other player by buying special “sabotage cards” with any coins they still have left.
   * Maybe both options should require spending coins so that they don’t use them all at the beginning; they would need to think ahead.
   * Whatever is decided, the finished product has a few traits that are numerically defined by the pieces that made up the weapon as well as any bonuses or penalties incurred during the process of making it.
   * Hit points = overall durability
   * Opulence = aesthetic value
   * Magicks = magical abilities
   * All of these attributes will be put into use in the next and final phase
3. Fighting with the Weapons
   * Players draw a card that has a warrior on it. This warrior will wield the weapon just made.
   * Each warrior must have their own unique attributes that tie into the stats of the weapon
   * They could be mercenaries that one buys with however much coin each player has left
   * The more expensive the mercenary, the better they will be at wielding the new weapon.
   * This could be a chance for a player with a not great sword to make up for losses incurred in the previous rounds

Note to self: Get the smaller chalk boards for players to keep track of what stats they have bought and used.

**Initial Rule Set**

NOTE: The following rules vary from the brainstorming above, sometimes completing disregarding initial thoughts. As I was writing the rules, I made changes that I felt better suited the game. Therefore, there will be comments included with this rule set to show changes made and why.

Untitled Crafting-Combat System

Components

* 2 medium-sized chalkboards
* 2 small-sized chalkboards
* 2 packs of white chalk
* 2 packs of colored chalk
* 1 felt eraser
* 1 bag of gold coins
* 1 bag of green coins
* 1 six-sided die

Setup

* Each player takes one each of the following: medium-sized chalkboard, small-sized chalkboard, pack of white chalk, pack of colored chalk
* One player takes the bag of gold coins, the other takes the green coins
* Share the eraser as needed.

Goal

To craft the best weapon possible—using materials that grant attack and defense bonuses, as well as defensive and offensive magic—so that the mercenary you hire to wield it may be successful in combat against your opponent.

Rules

The game has three, distinct rounds—Materials, Crafting, and Combat—that must be played in order. Only when one round has finished may the next start.

Pre-Game Information

* Each player gets a piece of white chalk at the start of any game
* The smaller chalkboard is used to keep notes and keep track of various stats as the game unfolds
* All effects from the weapons during combat (that have not been noted in the descriptions themselves) occur on the next time the player who has been hit or is guarding takes their turn to fight.
* All effects from materials last only as long as described in the Materials Round section during combat. That is, to gain more than one instance of a particular effect, you must buy more than one material.

Materials Round

* With the coins in each bag, players must bid on the different materials they will use to make up their weapon. These materials are represented by the colored chalk.
* White chalk gives every weapon a base damage of 2 hit points per attack
* Each color of chalk represents the following statistics that can be added to the weapon
  + Red – Attack power is increased (2 x Base Damage for a total of 6 damage per hit)
  + Blue – Durability is increased (Weapon acts as a minor shield, reducing overall damage per hit by 1)
  + Green – Poison is added (A DoT equaling 2 hit points per turn for 2 turns on every hit)
  + Yellow – Blade on the weapon is incredibly sharp (Player hit with this weapon bleeds, losing 3 hit points the following round)
  + Purple – Magic Protection is added (User of the weapon wards off 2 hit points of damage for the next two rounds after weapon is used)
  + Orange – Magic Attack is added (For the next two rounds, the player hit with weapon carrying this magic suffers 1 hit point of damage and loses 1 damage per hit against their opponent)
* Players may bid as high as they like as long as that bid does not cause them to run out of coins.
* Bidding may not exceed 10 coins.
* If there is ever a tie between bids, the auction is decided by a roll of a six-sided die.
* Any coins players have not used after the bidding is over may be saved as bonus coins when hiring the mercenary to wield their weapon.

**Crafting**

* Using the piece of white chalk along with their colored chalk, players have five minutes in which to craft their weapon. Crafting takes the form of drawing the weapon on each player’s respective medium-sized chalkboard.
* Each material—that is, piece of colored chalk—must be used in the drawing of the weapon. If that color is not used in a distinguishable and unique feature on the weapon, the bonus that material grants is lost.
* After the five minutes is over, players must name their weapon and on the small-sized chalkboard, write all the stats that their weapon contains.

**Combat**

* Either deciding between themselves or by grabbing an impartial judge, the player with the neatest, most awesome weapon (artistic talent being mostly irrelevant) is given a bonus of 3 coins.
* Each player will then receive 10 coins back from the original supply they had at the beginning of the game.
* Using these coins, players will then choose a mercenary by buying skill sets they wish to use in combat. Write down each stat gained on your small-sized chalkboard. The skills and their cost are as follows:

(All of the percentages below apply to the role of a 10-sided die during combat.)

Attack Success Rate (mandatory purchase)

* + 5 coins = 100% successful attack
  + 3 coins = 70% successful attack
  + 1 coins = 50% successful attack

Damage Mitigation

* + 5 coins = 50% mitigation of damage
  + 3 coins = 30% mitigation of damage
  + 1 coins = 10% mitigation of damage

Damage Multiplier

* + 5 coins = 3x multiplier to base damage
  + 3 coins = 2x multiplier to base damage

Hit Point Addition (each mercenary starts with 15 hit points)

* + 5 coins = 5 extra hit points
  + 3 coins = 3 extra hit points
  + 1 coin = 1 extra hit point
* Finally, using the stats from the weapon as well as those gained from the mercenary hired, combat begins. A six-sided die is rolled to see which player attacks first.
* The player who wins the die roll, rolls the ten-sided die to see if they have successfully hit the other player. If their roll is successful, the players determine the amount of damage taken using the stats they have tallied on their small-sized chalk board.
* After the resulting hit points have been subtracted from the opponents overall hit points, the opposing player takes their turn, completing the same steps.
* Play continues until one mercenary has lost all of their HP, thus ending the game.

**Lab Discussion**

Since about only half the students were able to discuss their game at the front of the class during this lab, there was a bit of a lopsided amount of people who were able to playtest versus those who just went through their game with the class. I was part of the latter group, though I was still able to get a number of helpful suggestions. Unfortunately, due to the timing of the lab and the necessity to turn it in the next day, I will be unable to do any real playtesting for this system until after this lab report is due. I will be making changes, however, based on the feedback received from both Prof. Holcomb and the other students when I presented the game to the class. That feedback will now be described and commented upon.

The first feedback I received was from Michael Green. He thought it might be interesting and fun to bring the blacksmith back into the action, so to speak, during the actual combat. Say during combat, a piece of the weapon is knocked off or an effect has worn off and must be reapplied. The players could then, between each round have a short “tune-up” section that allows them to add any additional effects that they have in their possession or perhaps reattach some part of the weapon that will has been broken off (though this breaking of the weapon will have to be a part of combat itself with its own rules). Prof. Holcomb chimed in, saying that the idea of having the smiths run in and staple gun parts on to the weapon was very appealing. Frankly, I think it is a great idea and hope to implement it into the current system, though I’ll have to be careful about how many more rules are added.

On the subject of rules, Prof. Holcomb also mentioned that there might be a few cases where rules I had discussed might not be necessary; for example, the rule that sets a time limit on drawing the weapon. He said that in actual play, the players will most likely solve this issue themselves by badgering the other one and thus it would make for one less element (the timer) that players would need to keep track of. I initially resisted but then thought about my experience in situations somewhat similar to this where my fellow players have demanded that a player either finish his or her move. This also has the virtue of requiring one less component (a timer, which I forgot to put in the initial rules anyhow). Another rule Prof. Holcomb brought up concerns the traits added to the mercenaries. I currently have a rule stating that the trait to gain a successful attack percentage is mandatory. His solution is to instead make it so that if players choose not to spend any coins on this trait, they will receive the lowest amount that originally just cost 1 coin. This makes it so that all players’ weapons will have at least a base attack chance (which makes more sense thematically) and gets rid of another rule.

Finally, at the end of class, I asked Prof. Holcomb if he had any more advice for my system and he mentioned three things. First, I will need to playtest and see how well players are able to keep up with the math. I expressed my own misgivings about that particular problem during the lab itself and know that I will need to adjust some things in the future. The next piece of advice he gave me is that I should perhaps unbalance the traits that can be bought for the weapons even more than they are so that they have different relative values for the players. This could make the bidding process even more interesting if certain traits are seen as inherently more valuable, thus causing players to bid more so that they can either have it for themselves and/or to keep their opponents from getting it. Finally, he mentioned that it might be interesting to try “hidden” bidding, where both players have a certain amount that they keep secret and then reveal that amount at the same time. If a tie results, that trait might be thrown out altogether. This would cut down on the complexity of the statistics during the combat and considerably cut down on some of the auction rules. All of these things have merit and I plan to try them out as I start to playtest the game in earnest this upcoming week. While I didn’t get to playtest the game with actual players during this lab, I am still confident that I received more than enough feedback to make meaningful changes to the rules.

**Revised Rule Set**

Untitled Crafting-Combat System

Components

* 2 medium-sized chalkboards
* 2 small-sized chalkboards
* 1 pack of white chalk
* 1 pack of colored chalk
* 1 felt eraser
* 1 bag of gold coins
* 1 bag of green coins
* 1 six-sided die
* 1 ten-sided die

Setup

* Each player takes one each of the following: medium-sized chalkboard, small-sized chalkboard, and a stick of white chalk.
* Remove the colored chalk pieces from the box and lay them out on the table to be used later.
* One player takes the bag of gold coins, the other takes the green coins
* Share the eraser as needed.

Goal

To craft the best weapon possible—using materials that grant attack and defense bonuses, as well as defensive and offensive magic—so that the mercenary you hire to wield it may be successful in combat against your opponent.

Rules

The game has three, distinct rounds—Materials, Crafting, and Combat—that must be played in order. Only when one round has finished may the next start.

Pre-Game Information

* Each player gets a piece of white chalk at the start of any game
* The smaller chalkboard is used to keep notes and keep track of various stats as the game unfolds
* All effects from the weapons during combat (that have not been noted in the descriptions themselves) occur on the next time the player who has been hit or is guarding takes their turn to fight.
* All effects from materials last only as long as described in the Materials Round section during combat. If you buy more than one of the same component that has an effect like this, it must be added on during the combat stage of the game.

Materials Round

* With the coins in each bag, players must bid on the different materials they will use to make up their weapon. These materials are represented by the colored chalk.
* White chalk gives every weapon a base damage of 2 hit points per attack
* Each color of chalk represents the following statistics that can be added to the weapon
  + Red – Attack power is increased (2 x Base Damage for a total of 6 damage per hit)
  + Blue – Durability is increased (Weapon acts as a minor shield, reducing overall damage per hit by 1)
  + Green – Poison is added (A DoT equaling 2 hit points per turn for 2 turns on every hit)
  + Yellow – Blade on the weapon is incredibly sharp (Player hit with this weapon bleeds, losing 3 hit points the following round)
  + Purple – Magic Protection is added (User of the weapon wards off 2 hit points of damage for the next two rounds after weapon is used)
  + Orange – Magic Attack is added (For the next two rounds, the player hit with weapon carrying this magic suffers 1 hit point of damage and loses 1 damage per hit against their opponent)
* Players each decide on a certain amount of coins to bid for a certain trait and secretly put that amount of coins in their hand without revealing it to the other player. Players must decide on which trait to bid for as the auction goes on.
* Once both players are ready, they reveal their bid amounts at the same time.
* If there is ever a tie between bids, the trait in question is removed from gameplay for the rest of the game.
* Any coins players have not used after the bidding is over may be saved as bonus coins when hiring the mercenary to wield their weapon.

**Crafting**

* Using the piece of white chalk along with their colored chalk, players craft their weapon on the medium-sized chalkboard.
* Each material—that is, piece of colored chalk—must be used in the drawing of the weapon. If that color is not used in a distinguishable and unique feature on the weapon, the bonus that material grants is lost.
* Once their drawings are finished, players must name their weapon and on the small-sized chalkboard, write all the stats that their weapons contain.

**Combat**

* Either deciding between themselves or by grabbing an impartial judge, the player with the neatest, most awesome weapon (artistic talent being mostly irrelevant) is given a bonus of 3 coins.
* Each player will then receive 10 coins back from the original supply they had at the beginning of the game.
* Using these coins, players will then choose a mercenary by buying skill sets they wish to use in combat. Write down each stat gained on your small-sized chalkboard. The skills and their cost are as follows:

(All of the percentages below apply to the role of a 10-sided die during combat.)

Attack Success Rate

* + 4 coins = 100% successful attack
  + 2 coins = 70% successful attack
  + If no coins are spent, mercenaries have a base 50% successful attack.

Damage Mitigation

* + 5 coins = 50% mitigation of damage
  + 3 coins = 30% mitigation of damage
  + 1 coins = 10% mitigation of damage

Damage Multiplier

* + 5 coins = 3x multiplier to base damage
  + 3 coins = 2x multiplier to base damage

Hit Point Addition (each mercenary starts with 15 hit points)

* + 5 coins = 5 extra hit points
  + 3 coins = 3 extra hit points
  + 1 coin = 1 extra hit point
* Finally, using the stats from the weapon as well as those gained from the mercenary hired, combat begins. A six-sided die is rolled to see which player attacks first.
* The player who wins the die roll, rolls the ten-sided die to see if they have successfully hit the other player. If their roll is successful, the players determine the amount of damage taken using the stats they have tallied on their small-sized chalk board.
* After the resulting hit points have been subtracted from the opponents overall hit points, the opposing player takes their turn, completing the same steps.
* At the end of each round, players may add on any round-based materials that were bought at the beginning of the game that have not yet been used. If neither player has anything to add, nothing happens, and play resumes.
* Play continues until one mercenary has lost all of their HP, thus ending the game.

**Intensity Curve Analysis**

Given the three distinct, unique sections of the game, it might be more helpful in analyzing my game if, at first, I make intensity curves for each of the three sections. The sections, I’m assuming, will be of slightly different length and will have different levels of intensity reached. For example, I imagine the height of the bidding will be a bit more intense than say, drawing the weapon, however enjoyable that part of the game may be. Coupled with each intensity curve will be Up/Down lists that correspond to times on the curve itself. Because of three factors—this being a completely new system, the fact that I have not had the opportunity to playtest this yet, and that most all of the changes to the game need to be made completely within the individual, discrete stages—I have elected to save the complete game intensity curve for the next lab report, where I will go into far more detail about how each of the systems work together to create one complete, engaging experience.

**Curve 1: Materials Auction**

Up List

* Players Bidding
  + As can be seen on the graph the two players are constantly interchanging their relative intensity values. At the start, when the field is wide open and there’s everything to choose from, game play isn’t especially exciting, but still probably more so than the second choice, when both players are accustomed to the mechanic somewhat but still have most all of the options available to them. That is why the intensity takes a bit of a dive at Time + 0:30. As the auctions continue, the choices continue to dwindle along with the amount of coins the players have to bid with. These two events together cause the intensity to make ever higher leaps as the auction progresses. Finally, at the last bidding, the intensity takes one more rather large dive as the outcome would most likely be obvious at this point.
* Deciding which material to be up for auction
* Deciding how much to bid for each material up for auction

Down List

* Waiting on the opposing player to make his or her move, especially if that opposing player is trying to make a detailed, complex analysis while you are just ready to move on.
* Repetition of bidding – this one is not necessarily a bad one at all. As players get more comfortable bidding, they might gain a bit more confidence. While they may not be quite as “on the edge of their seat”, they are still comfortably engaged with the game.

**Curve 2: Crafting**

Up List

* At Time + 1:30, after the player has gotten into the comfortable, grindy part of drawing the weapon, that moment when it starts to come together and you can see the finished product in your mind, starts to raise the intensity and will continue to for the next few minutes.
* Drawing an unexpected, but amazing piece of your weapon

Down List

* After the initial burst of excitement at Time + 0:00, players will most likely get into the flow and rhythm of drawing for a minute or two. Like the “repetition of bidding” mentioned in the previous Down List, this one is also not a bad thing. During this phase of the game, players should be able to let their guard down a bit and just have fun creating the most unique weapon they can think of.
* Near the end of the crafting period, starting at around Time + 4:30, it is very clear what the weapon will look like and most of the work from this point out is polish. That’s not to say there’s not the opportunity to make a last-minute addition that really pulls the entire thing together, but I imagine that’s much more rare than merely letting what you already have be.
* Waiting on the other player to finish, especially if you’ve been done and they seem to be taking their precious time creating a very detailed, photo-realistic representation of their weapon. This might initially spark a bit of intensity of the waiting player as they try to imagine some novel way of talking smack, but that would be quite short-lived.

**Curve 3: Combat**

Up List

* High rolls. In my system, high rolls can be especially loaded. If a player has, say, not taken a very high success rate of attack, but in turn has pumped up their damage to crazy levels, then a high roll for them vindicates their decision, making that player feel smart and accomplished.
* Low rolls, especially for the opposing player and extra especially if that attack would have been catastrophic—a very real possibility in my system for a player with certain types of builds.
* Unexpected convergence of multiple abilities and stats that gives a player a huge advantage. It this type of situation that I am representing in the above intensity graph at Time + 2:00 (the Blue line). Given the amount of traits available to the player, I imagine there will be a number of times when a player simply forgets everything they have, but once they run through the abilities and stats they’ve kept track of on the small chalkboard, they realize they’ve just made a devastating attack.

Down List

* Being the victim of said devastating attack. This is also represented at Time + 2:00 (the Orange line). After trying your best to create a powerful, awesome weapon and having the foresight to wisely choose the best features of your mercenary, there are still going to be times when the other player just demolishes the best of your intentions. With this system, that’s just part of the package.
* Math—lots of math. This is a very real and serious problem with my game that I honestly have no idea how bad the situation really is. Because I was one of the students who presented in front of the class instead playtesting, I was unfortunately unable to playtest this before this lab report (while there is usually no excuse for this, even when the lab report is due the next day, this particular weekend is the Zero Engine Game Jam in which I’ll be taking part, thus forcing me to write this lab report directly after the lab itself). So, the first thing I must do come Monday is playtest, playtest, playtest. That is, without a doubt, the only way to figure out how bad the problem is and how I might go about fixing it. I can think of any number of solutions, but without actual playtest evidence, it would be like shooting in the dark trying to find a solution that would work for players.