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GAT 210A—Spring 2014

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Game Analysis

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Subterfuge (version 1: The Unfair Battle)

**Playtesters**

Classmates from multiple GAT210 sections participated as first-time players for the rules that are written in the Concept & Design document. There were only two students who playtested this version of “Subterfuge”.

**Name: Email:**

* Glen Aro g.aro@digipen.edu
* Nick Cascio [n.cascio@digipen.edu](mailto:n.cascio@digipen.edu)

**Playtesting Results**

Before the playtesting began, Subterfuge began as a brainstorming session between Glen Aro and me, so I felt it only fair to allow him to playtest my game for the first time. Along with Glen, Nick Cascio wanted to play so together they were the first playtesters for “Subterfuge”. I spent a lot of time designing the elements of this game, such as the components around the nautical and submarine theme of this game, so the written rules for the first version of the game were discussed with both players before both players started to play the game.

It became very clear that the rules needed a little bit more attention than I had originally given to them for the first playtest. While both Glen and Nick were excited to play, there are a lot of components to “Subterfuge” and as such, the game is a bit complicated to read. Thankfully, I had worried about this during the design of the game so I had created rules placemats for both players so they can reference what the rooms do. I almost did not add this feature to the game because I feared that a big placemat might seem intimidating to players. Glen and Nick disagreed and said that they both felt that the rule placemat was reassuring and an easy way for them to look up quick rules.

Unfortunately the written rules could definitely be better, as Glen had concerns about the way things were written out. Specifically, the rules for firing, evading, and damage for when a torpedo is fired is confusing. Nick suggested a diagram explaining the torpedo firing sequence, something I’ll have to consider in the next written rules. Overall, about 15 minutes were spent going over the rules and figuring out how the game is meant to be played. I had to explain a little bit more about the setup, but once it was discussed the playtest started with Nick playing as the Blue sub and Glen playing as the Green sub.

Both Nick and Glen took their four crew pieces and placed them in their subs’ weapons, engine, sonar, and other weapons room. The biggest difference between their starting setup was that Glen decided to start with his sub all unlocked and Nick choose to start with his sub all locked up. This is interesting because it will allow me to see just how well the lock and unlock door system for the subs work or if they are just a waste of time. Glen won the die roll and started the game with an event card that killed off one of his crew instantly from a bad die roll. From here, things went from bad to worse for Glen and Nick was very lucky to draw mostly all good cards from the event card deck.

The game continued with Glen losing control of the damage to his sub very quickly and Nick getting increasing lucky with his die rolls in evading attacks. Glen lost all his crew from flooding, subterfuges, and destroyed rooms in about 10 minutes of time. I was worried that this would be frustrating for Glen, but after the game he said that he had a good time. While it was frustrating for him to lose so quickly, he said that it was a fun ride while it lasted. Nick’s experience was also fun, even though he snowballed to his victory never really taking any damage aside from a few flooding instances which were fixed.

Some big areas of detraction from this first version of “Subterfuge” are the card system, the way actions work, and also the odds of evasion. Both players felt like it was way too easy to evade torpedoes and squids. Considering that Nick was able to evade almost all damage, I’d have to agree that this needs to be reworked. Both Nick and Glen feel like maybe squid attacks should not be avoidable at all, but I am not sure if I want to go down that road, considering that there are currently 20 out of the 40 cards in the deck that are squid attacks. The card system, while what I thought would be a great idea for the game, did not work very well. The card system was meant to organize what is happening in a room, but neither of the players paid much attention to it. I had to constantly remind them to flip to the right card, so the card system may not be necessary. I suppose I’ll try one more playtest with it before I scrap it, because I put a lot of effort and ink into it.

Subterfuge (version 2: Once Last Chance)

**Playtesters**

Classmates from multiple GAT210 sections participated as first-time players for the rules that are written in the Concept & Design document. There were only two students who playtested this version of “Subterfuge”.

**Name: Email:**

* Garrett Huxtable g.huxtable@digipen.edu
* Michael Van Zant [m.vanzant@digipen.edu](mailto:m.vanzant@digipen.edu)

**Playtesting Results**

For the second playtest of Subterfuge I mostly wanted to test if the new evasion system worked well, if 5 crew pieces felt better than having only 4 crew pieces, and most importantly, if the area card system was something that the play testers would use. Garrett and Michael had not seen or heard of my game yet, so I wanted to see if the card system was both intuitive to use as well as something that the game needed in order to work well. While the rules for this version of the game are more comprehensive than in the first version, I still made myself available to answer questions that the playtesters would have during reading the rules and playing the game.

For the most part, reading the rules went okay. Because of the numerous components, reading the written rules was kind of daunting for Michael. I’m not sure how invested in the playtest Michael was, because he seemed distracted easily and Garrett had to keep explaining things to him. I was tempted to tell Michael to sub out and let someone else play instead, but I suppose having a playtester who is not initially invested much in the game can help me figure out if the game is too complicated and not easily picked up. Reading the rules took up around 20 minutes of time before they both felt ready to play.

Garrett decided to play as Green leaving Michael to play as Blue for the playtest. Michael won the die roll and got to go first. Once again the game started off with a disaster for the first play as Michael’s pump room started flooding from a squid attack. This worried me as it was a very similar start to the previous playtest which resulted in an easy win for Nick and a struggle for Glen. Despite the rough start, Michael was able to overcome most of the damage dealt to him throughout the game and even appeared to start to enjoy the game. Both subs ended the game with 4 systems either entirely flooded or destroyed, ending with Garrett’s remaining crew piece dying of asphyxiation because the oxygen room was destroyed. The total time of the playtest was about 20 minutes.

I’ve deemed this playtest the “Last Chance” for the area card system, and unfortunately, it appears that the area card system will have to be scrapped. While it stings to have so much effort go to waste, it’s the price I pay for spending so much time on something that I could have rapidly prototyped and tested before going all out on designing. Throughout the game the area card system was neglected again in favor of simply tossing the hallway flooding and flooded tokens on the sub as a visual reminder of what is going on. Perhaps I’ll be able to repurpose the cards by cutting them up for use as tokens in the next version.

Also of importance is that this playtest lasted much longer than the first playtest. This assures me that the first playtest might have been an outlier case where one person just got really lucky while the other did not. Because Michael and Garrett’s game was close throughout the game I know that the game has some balance to it, meaning that players will not always feel like the game is one-sided. The extra crew piece seemed to help the players get things done, but I think the way actions work could be sped up still. There were a few turns in which players could not do much because crew could only do one thing at a time. I believe I’ll increase the actions per crew piece in future versions of the game.

The last great piece of feedback I got from Garrett is that the game could use some more flavor in the event cards and perhaps some different cards to spice the game up. While he understood the giant squid attack cards as a way of pushing the game towards ending, he brought up a good idea of varying the way in which the information is presented. This is great feedback because it means the players like an aspect of the game and want to see more of it.

Subterfuge (version 3: New Everything)

**Playtesters**

Classmates from multiple GAT210 sections participated as first-time players for the rules that are written in the Concept & Design document. There were only two students who playtested this version of “Subterfuge”.

**Name: Email:**

* Christopher Christensen c.christensen@digipen.edu
* Madelyn Santino [madelyn.santino@digipen.edu](mailto:madelyn.santino@digipen.edu)

**Playtesting Results**

The third playtest for “Subterfuge” saw a lot of big changes to the game. The biggest change was the creation of a new sub layout that allowed players to place their sub systems in rooms of their choice. This change was because of the elimination of the area card system in favor of an easier to use token system and because the hallways in the old version were odd and did not allow for easy access to rooms. This version also saw an increase in the number of actions that a crew piece could perform and the addition of a few more event cards. The last big change is adding some hidden information in the form of whether or not the sonar is operational.

Going into this playtest I hope that the game is easily understood at this point by new players, as well as intuitive in terms of using the tokens to keep track of what is going on in the areas of both subs. I am also interested in seeing if adding a new layer of hidden information to “Subterfuge” is a good idea. Once again, I was able to get two new playtesters to see if these new changes are able to work the way I’d like. Chris and Maddie volunteered to playtest my game, with Chris playing as the Blue sub and Maddie playing as the Green sub.

Reading the rules did not go as easily as I had hoped for both players. While Chris was able to pick it up rather quickly, Maddie was a little confused about the rooms and what benefits they provided. It does not help that in my rules I did not have an explanation that the oxygen room did not need a crew piece in it to operate. Because the area card system was taken away, I also did away with the rules placemat, but this might have been a mistake. I showed Maddie the old placemat and she said she would have liked to have it, even if the rules on it were old at this point in the development of the game. This further cements the idea that while I thought the rules placemat would be intimidating for players; it in fact is seen as a good thing and should be implemented back into the game. After both players felt comfortable with the rules the game began.

Right from the start more complications came up with how firing a torpedo worked. While it is explained in the rules, I had neglected to put the diagram that Nick had suggested early on from the first playtest. This must be done in the next version of the game, because firing on an important is a core part of the game and must be understood properly. Once firing a torpedo was understood, the game continued at a quick pace, but there was a problem with the new sonar rule. Not being able to see the action of what is happening on the enemy sub is a big detraction from the game. It seems like it is negatively impacting the interaction between players, not to mention it complicates the saboteur rules. Halfway through the playtest I told them to scrap the new rule and play without it. While these complications did create a bit of a hurdle to understand the rules at first, it did not hurt the game much. “Subterfuge” seems like it can quickly be enjoyed once the initial effort of understanding the rules has been made. Both Chris and Maddie seem to be enjoying inflicting damage on each other, and using the new event cards.

Once again, the destruction of the oxygen area becomes the death of a player, this time with Chris’ crew dying from lack of oxygen resulting in Maddie winning. This happened rather quickly, at about 10 minutes into the game. I asked Chris how he felt about losing in this way and his response was great in helping me fix the oxygen area instead of scrapping it. Chris liked the idea of the oxygen room, but felt it was too harsh to die immediately if it is broken. Instead, the idea of having to fix it within a few turns, as if there is still some oxygen on the sub, is a great idea. This still makes losing the oxygen area dangerous, but gives the players a way to overcome it instead of straight up losing the game.

Both Chris and Maddie loved the newer event cards, which included positive action cards like finding a new crew piece on board the sub and also bad events like not being able to fire torpedoes for a turn. However, it was agreed by both testers that the “extra actions” card was kind of lame, and did not make a huge difference in the game. At this point, the crew can do 2 different actions and move in 1 turn, so the extra action didn’t really apply because they could not move to a new area to use it effectively. Despite this, both of them really seemed to enjoy the game and loved the new sub layout, so I’m thinking I might be on the right track.

Subterfuge (version 4: Fix All The Things)

**Playtesters**

Classmates from multiple GAT210 sections participated as repeat players for the rules that are written in the Concept & Design document. There were only two students who playtested this version of “Subterfuge”.

**Name: Email:**

* Nick Cascio [n.cascio@digipen.edu](mailto:n.cascio@digipen.edu)
* Madelyn Santino [madelyn.santino@digipen.edu](mailto:g.huxtable@digipen.edu)

**Playtesting Results**

For this playtest both Nick and Madelyn wanted to participate as playtesters for my game, which was okay by me because there was not a lot of big changes other than losing the “extra actions” cards, the ability to fix destroyed things, and also the turn limit on fixing the oxygen area. I’m hoping that this version of the game can possibly be the last version of the game because the rules are understood by both players and it is a punishing, yet fun game.

Nick wanted to reprise his role as the commander of the Blue sub and Maddie wanted to try and win again with her Green sub for this playtest. While Nick was sad to see the area card system done away with, he agreed that the tokens are a better way to go. This was further emphasized with how easily he took to the token system, placing them on the sub when things were damaged. Both Maddie and Nick already understood the rules for the most part, so playtesting began very quickly.

Both Nick and Maddie took a lot of damage from each other and the giant squid, but then Nick got an extra surprise. Due to the new sub layout each sub has a blank room, which 1 card in the deck of nearly 50 cards can be used as the “Temple of the Squid God”. In this room a player can sacrifice a crew piece to forever have any squid attack on their sub redirected to their opponent. While this card is very powerful, the odds of drawing it are slim and I hoped it would add a wacky yet fitting variety to the nautical nonsense that is “Subterfuge”. It took several turns for Nick to be able to get a crew piece to the room to sacrifice it, but when he did it turned his losing situation into a winning one. Nick ended up defeating Maddie through sheer damage to her sub.

I had some fears that the “Temple of the Squid God” might be seen as unfair, but both Maddie and Nick loved the idea and thought it provided a fun addition to the game. In fact, they both loved their playtest experience so much that they asked me if they could play again. Of course I said yes, and let them have another go at “Subterfuge”. The second game ended with Maddie defeating Nick by slowly taking out all of his crew through destroyed rooms and subterfuge. The ability to fix things worked really well, it was difficult to accomplish, and put crew at risk, but was a fair way for players to try and keep afloat instead of denying them this ability at all.

I cannot be more excited about how well this playtest went. The players seemed engaged in the game, laughing at the horrible events that were taking place, whether it happened to them or to their opponent. The game appears to be easy to play once the rules are established and the submarine theme seems strong and fun with the addition of new event cards. At this point, the biggest changes I see to my final version is some polish in how the way locked door tokens look and maybe finding a way to affix them to the board so they are not flying around during the game.

Subterfuge (final version)

**The “Why”**

I went into creating “Subterfuge” highly inspired by my brainstorming session, as well as influenced heavily by my recent love of the computer game “FTL”. The final version of this game is the result of accepting the zaniness of nautical combat with mechanics that fit the nautical theme well. The cross section layout of the subs is very much like “FTL” and allows the players to have an easy way of visualizing what is happening on the ship. While the initial area card system seemed like a perfect fit for the game, it was too separate from the main action being on the sub game boards and had to be scrapped. This was a great learning experience, because I really should have tested the card idea early before I went and designed a nice card system.

The crew pieces and actions fit the nautical theme of the game in the types of actions they can all perform on the sub. Repairing floods and damage, operating pump rooms, firing torpedoes, and committing acts of sabotage are all in keeping with the nautical theme of the game. Losing crew on your sub fits the nature of the game and makes it harder for players to keep their sub from sinking, but also makes the game a mess of frantic maritime madness. This is furthered even more by the event cards which add seaworthy events like giant squid attacks and drinking too much grog.

The rules did change often in this game, from the way evasion works to the ability to fix things, even when destroyed. I believe these changes helped the game become more playable to the players and increased their investment in the sub. While a lower 50% evasion chance did cause more damage to the sub, this was offset by the ability to fix even destroyed things. This created situations where players had to prioritize their actions, whether they should fix their sub or continue the attack on the opponent. This fits the nautical battle theme well, and made the game exciting.

**Mathematical Analysis**

Compared to my previous games, “Subterfuge” has a lot more areas involving mathematical analysis. There is important math behind the way evasion, damage, and torpedo targeting works, as well as math behind how the event cards are used. There is even math behind the accessibility of the sub and how the crew can traverse it and use their actions.

The math behind evasion, damage, and torpedo targeting all requires dice in order to work. Specifically, a D4 is used to decide evasion and damage, and a D8 is used when the area targeted needs to be randomly decided. While a player has sonar available, the D8 does not need to be used to target a system. However, the D8 comes into play when a squid attacks a player or they are trying to fire a torpedo at the opponent without the aid of sonar. The D8 is meant to be a fair way of randomized room targeting. Because there are 7 systems on the sub the values of the D8 are used to decide which of the 7 rooms are targeted, with the extra value given to the “attacking player’s choice”. There is an even 12.5% chance of any room being hit when the D8 is rolled. The D4 for evasion is a 50/50 chance of successfully evading on a 1 or 2 or being hit on a 3 or 4. This is rolled by the defending player, while the damage D4 roll is rolled by the attacking player. The damage evenly spread at 25% between flooding, damaged, flooding and damaged, and destroyed.

There are 40 event cards in “Subterfuge” with the majority of the cards being “Giant Squid Attack” event cards at 17 in the deck. The intention of the “Giant Squid Attack” cards is to supplement the damage being taken by the players to move the game to a conclusion. Because there is a 42.5% chance of this happening, damage occurs quite often in the game, and often at just the right, or wrong depending on your perspective, times. In addition to the “Giant Squid Attack” event cards, other bad events include 4 “Man Overboard?”, 4 “Batten Down The Hatches”, and 4 “Loose Cannons” event cards all with a 10% chance of occurrence. There are a few positive cards with 3 “Bale Out”, 3 “Holy Mackerel, Subterfuge!”, and 3 “All Hands on Deck” event cards with an even chance of 7.5% chance of happening. These few good cards help the player and make it seem like a miracle when they do happen. There are 2 wild cards in the deck in the form of 1 “You’re Damn Crazy…” and 1 “Temple Of The Squid God” cards which can either be good or bad each with an even chance of 2.5% chance of happening. These cards are meant to bring some wackiness to the game and spice things up, hence their low occurrence.

The last bit of math is difficult for me to provide in pure numbers. The amount of movement and actions, coupled with the layout of the subs provides an area of math in “Subterfuge”. This math involves the franticness of the game and just how important crew placement and movement is in the game. The math limits the player in a good way, creating situations in which they must prioritize their actions throughout the game.