

“Submarine Baseball” Treatment

Overview:

“Submarine Baseball” is a passive multiplayer game built for a platform such as Facebook. It combines the tactical yet adrenal thrill of submarine combat with the strategy and real-world grounding of fantasy baseball games.

In “Submarine Baseball,” each user is in charge of a submarine. The user must select the “crew” of the submarine from a selection of real-life baseball players, in a manner resembling fantasy baseball. The crew's real-life statistics affect the submarine's strength and capabilities.

Fantasy baseball offers both a built-in audience and an intriguing central play mechanic – events in the real world affect gameplay, and the main goal of the player is to maximize success by accurately prognosticating those events. “Submarine Baseball” introduces that mechanic into a new setting, one with the visceral excitement of martial competition.

Players:

“Submarine Baseball” is a multilateral competition. Players are organized on the level of “oceans,” which are analogous to leagues in fantasy baseball. Within an ocean, players compete to sink each others' submarines. There is no interaction between disparate oceans.

A player can start an ocean and invite friends to join it (potentially through Facebook). Oceans can be open to the public or password-protected. An ocean can contain up to twenty players. Most oceans will start play at the beginning of Major League Baseball's season, but new oceans can continue to organize throughout the season and elect to begin play at any time.

As a note, I'm going to be referring to players as “users” through the rest of the article, to differentiate them from baseball players, who I will be referring to as “players.”

Objectives:

The objective of “Submarine Baseball” is to maintain your own submarine while destroying those of other users. Users generally accomplish this by upgrading and repairing their submarine and firing upon opponents, actions which are enabled by the baseball performance of their crew. In order to succeed, users must carefully allot resources to hire a crew of players best suited for their individual roles.

The game system tracks the number of subs each user has sunk, and the number of times they themselves have been sunk. At the end of Major League Baseball's regular season, the user with the best differential between the two is the winner of the ocean.

Setup:

Once a user joins an ocean, he or she must hire a crew. Each player in Major League Baseball is assigned a point value based on a simple performance projection algorithm. The user begins with a total of 1,500 Crew Points (CP) to expend on filling the crew.

There are a total of fifteen slots in the crew, comprised of seven position players, seven pitchers, and a captain, who can be either. The different crew positions and their roles in submarine combat are as follows:

Weaponeer (3x position player): Develops weapons that can be used to sink opposing ships, using **power hitting**.

Engineer (3x pitcher): Repairs damage that has been dealt to the submarine, using **starting pitching**.

Crewman (3x position player; 3x pitcher): Accrues Upgrade Points (UP) that can be used to upgrade the ship by **reaching base** (for batters) or getting **strikeouts** (for pitchers).

Navigator (1x position player; 1x pitcher): Performs defensive maneuvers that can avoid enemy attacks, using **baserunning** (for batters) or acquiring **saves** (for pitchers).

Captain (1x pitcher or position player): The captain counts as a navigator, crewman, and weaponeer or engineer (depending on if he is a position player or pitcher). As such, he should be **well-balanced**.

Procedures:

Player selection: Upon initially joining an ocean, or after the user submarine is destroyed, the user must select a new crew. The general criteria for selecting crew are listed above. Once the user decides on a combination of fifteen players whose values add up to no less than the total number of CP available, his or her submarine will appear in the game's ocean.

Daily action: Every day, the user can check to see how much damage the sub has taken, and how many weapons and upgrade points are available. These values update overnight, after the day's last Major League Baseball game has ended (usually around midnight pacific time). Each time the user logs in, a brief animation plays, representing how much damage the sub has taken and how much damage was repaired. The user can also perform the following actions:

Fire torpedoes: Torpedoes are fired all at once, reducing the stock to zero. Each one targets a random submarine (besides the user's). A brief animation plays, showing which submarines the torpedoes targeted, whether the target evaded the torpedo or was hit, and whether it was sunk.

Fire depth charge: Depth charges are fired one at a time. The user chooses the target. A brief animation plays, showing whether the target evaded the torpedo or was hit, and whether it was sunk.

Upgrade ship: The user can expend UP to upgrade the ship's capabilities. The options are Weapons (upgrades damage output of weapons), Armor (reduces damage taken from weapons), or Repairs (upgrades frequency and effectiveness of repairs).

Sample Crew Selection Screen

Captain	
Curtis Granderson	128 CP
.280 / .365 / .494 22 HR / 66 RBI / 112 R / 12 SB	

Weaponer	
Albert Pujols	208 CP
.357 / .462 / .653 37 HR / 116 RBI	

Engineer	
Brandon Webb	154 CP
226 IP 183 K ERA 3.30 WHIP 1.20	

Weaponer	
Mark Reynolds	98 CP
.239 / .320 / .458 28 HR / 97 RBI	

Engineer	
Jon Lester	147 CP
210 IP 152 K ERA 3.21 WHIP 1.27	

Weaponer	
Dmitri Young	31 CP
.280 / .394 / .400 4 HR / 10 RBI	

Engineer	
Radhames Liz	25 CP
84 IP 57 K ERA 6.72 WHIP 1.78	

Crewman	
J.D. Drew	116 CP
.280 / .408 / .519 103 Hits / 79 Walks	

Crewman	
Daisuke Matsuzaka	120 CP
167 IP 154 K ERA 2.90 WHIP 1.32	

Crewman	
Franklin Gutierrez	79 CP
.248 / .307 / .383 99 Hits / 27 Walks	

Crewman	
Justin Verlander	116 CP
210 IP 163 K ERA 4.84 WHIP 1.40	

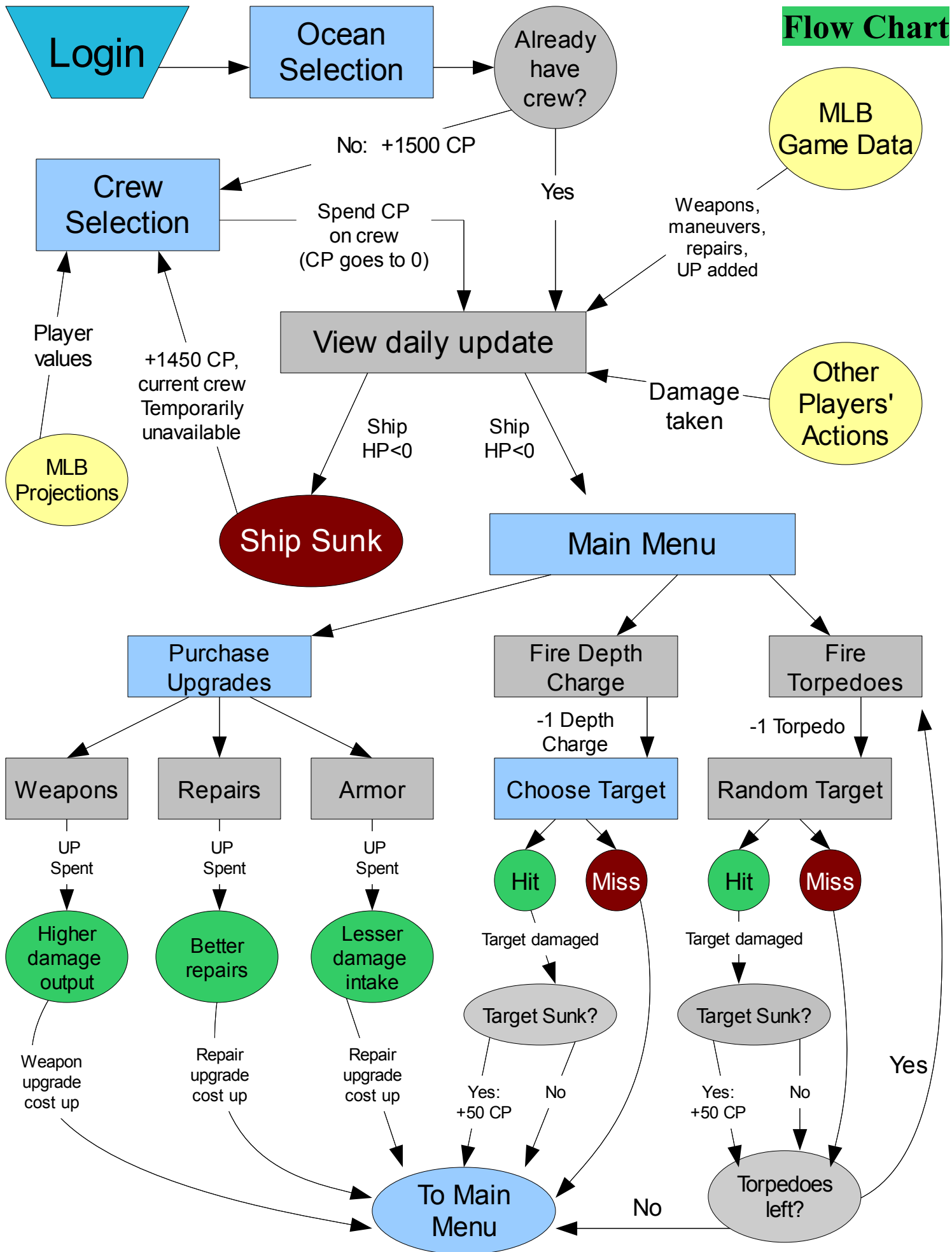
Crewman	
Pete Orr	12 CP
.253 / .282 / .307 19 Hits / 2 Walks	

Crewman	
Kyle Farnsworth	30 CP
44 IP 43 K ERA 3.65 WHIP 1.35	

Navigator	
Chone Figgins	115 CP
.276 / .367 / .318 72 R / 34 SB	

Navigator	
Jose Valverde	121 CP
ERA 3.38 WHIP 1.18 72 IP 44 Saves	

Flow Chart



Rules:

The following rules are used to determine how each player's baseball performance translates into the game:

Weaponeer: Each home run gives one depth charge. Each run batted in gives one torpedo.

Engineer: Each day, the chance of repair equals $((IP - R)/9) * (1.2)^U$, where IP is the number of innings the pitcher pitched the previous day, R is the number of runs given up, and U is the number of times "Repairs" have been upgraded. For example, a pitcher giving up 3 runs in 7 innings has a 4/9, or about 44%, chance to repair a hit. If "Repairs" have been upgraded once, the chance rises to 53%.

Crewman: Each time reaching base by a hit or walk earns one upgrade point. Each pitching strikeout earns one upgrade point.

Navigator: Each run scored results in a 50% chance of avoiding one torpedo fired the next day. Each stolen base results in a 50% of avoiding one depth charge fired the next day. Each pitching save results in a 50% chance of avoiding one of either weapon fired the next day.

The following rules are used to determine how the submarine's systems operate:

Upgrades initially cost five UP. After a category has been upgraded once, the cost of subsequent upgrades increases by the number of times it has been upgraded plus one. In other words, the first time upgrading "Weapons" will cost 5 UP, then 7, then 10, then 14, then 19, and so on.

Ships begin with 100 hit points. Each torpedo hit deals $(5+W-D)$ damage, and each depth charge hit deals $(10+2W-D)$ damage, where W is how many times the attacker's weapons have been upgraded, and D is how many times the target's defense has been upgraded. Repairing restores $(10 + 5U)$ damage, where U is the number of times repairing has been upgraded. Repairing cannot restore a ship beyond its original 100 hit points.

When a ship reaches zero hit points, it sinks, and the user must crew a new ship. During this hiring process, the user cannot hire any of the players on the previous crew, as they are ostensibly hospitalized from the ship sinking. The first time a user hires a crew, 1,500 CP are available. Each consequent time, there are only 1,450 available. However, each ship the user sinks grants the user a 50 CP bonus the next time he or she hires a crew. In effect, sinking a ship "steals" 50 CP from it.

Notes/Extensions:

Gameplay Variants: There is no reason why an ocean couldn't have team-based competition, with two or more teams of submarines competing. Perhaps these teams could even correspond to subsets of Major League Baseball – for example, a team with only American League players versus a team with only National League players. Limiting the player pool allows for a multitude of other variants, such as having each submarine be limited to players of a certain MLB team. The time limit of games could also vary. Oceans could decide to start the score fresh every week or month, instead of keeping it persistent through the whole season.

Player Selection: There are many ways of selecting teams in fantasy baseball. “Submarine Baseball” uses the approach of a “salary cap,” in which every baseball player is systematically assigned a point value and the user has a certain amount of points to spend to fill out a team. This was selected on the basis that it would most easily allow team adjustments, along with quasi-monetary penalties and rewards, during the season. However, as an extension, perhaps “Submarine Baseball” could allow users to establish an ocean using the more common fantasy baseball procedure of a draft, in which users take turns selecting players in a set order. In a draft, players can only be chosen once, so each player would be unique amongst his ocean. Users could select a “bench” of backup players in case of casualties or real-life injuries. The disadvantage of a draft league is the lack of parity – somebody gets to pick first, and somebody has to pick last. Furthermore, it would be difficult to reward or penalize players in a manner affecting gameplay, as the “cap bonuses” in the core game do.

Ocean Size Limit: One aspect of the game that requires tinkering is the size limit of each ocean. An ocean with 8-16 submarines, the standard size for fantasy baseball leagues, will likely work well enough. But what about thirty? A hundred? A thousand? Is it possible to have a tournament style, with a series of oceans where the top places in each pool advance to the next round?

Balance: A cursory overview of MLB's historical and present rates of event occurrences indicates that the game will be roughly balanced. However, it has so many numbers involved that it will require significant playtesting to balance well. Also, the projection algorithm used for player valuation will have to be fairly accurate to reduce easy choices and loopholes.

Premise: It doesn't have to be about submarines. There could be a war between armies, or castles, or space fleets. The combination of “Submarines” mixed with “Baseball” is simply a premise conjectured in brainstorming to hold maximal popular appeal.

