Battlecode

Battlecode: Official Game Specs

Updated 1/7/19 7:00PM EST

As we all know, the world is changing. Water levels are rising, pollution is becoming a global problem, and we are rapidly depleting our most valuable natural resource: soup. This year’s game is as much about surviving the changing climate as defeating the enemy team.

Game Format

Battlecode 2020 is played by controlling robots on a rectangular grid called the map. Two teams of robots, red and blue, roam the map. Every round, each robot will get to take one turn, in spawn order. More on what they can do with that turn later.

At the beginning of a match, at least one map tile will be flooded. On every round, each tile adjacent (the 8 neighbors) to a flooded tile whose elevation is below the water level will become flooded. Any robot on a flooded tile is destroyed, except delivery drones. If your HQ is destroyed, you lose. As the match goes on, the water level will increase at an increasing rate, flooding adjacent tiles if their elevation is too low. Elevations can be anywhere between Integer.MIN_VALUE and Integer.MAX_VALUE inclusive.

See up to date detailed game specifications at https://2020.battlecode.org/specs.html (you might have to sign up for an account).

Sprint Schedule

- Jan. 16: Kick off
- Jan. 30: Sprint 1 demo
- Feb. 13: Sprint 2 demo
- Feb. 27: Sprint 3 demo
- Mar. 10: Sprint 4 demo

Sprint 1

Jan 16 - Jan 30st

Minimum Units: HQ, Miner, Refinery, Design School, Landscaper

Sprint Goals:
- Conduct at least 10 scrimmages against other teams
● Submit a player for the seeding tournament on battlecode.org which uses
  ○ Required Units: HQ, Miner and Refinery
  ○ 1/20 7pm EST (subject to change see 2020.battlecode.org/tournaments)
● Submit a player for the qualifying tournament on battlecode.org
  ○ Required Units: HQ, Miner, Refinery, Design School, Landscaper
  ○ 1/27 at 7pm EST (subject to change see 2020.battlecode.org/tournaments)
● Submit a player to the class website

**Sprint Deliverables:**
- Report Seeding Tournament and Qualifying Tournament results
- Record one game that shows your strategy and talk through it with the class
- Share git stats (number of commits, merges issues)

**Sprint 2**
*Jan 31st - Feb 14th*

**Minimum Units:** Sprint 1 Units, Fulfillment Center, Delivery Drone, Blockchain

**Sprint Goals:**
- Increase rating of submissions to the class server by 400
- Create unit tests and a unit test coverage report
- Unit test coverage should be >10%

**Sprint Deliverables:**
- Record one game that shows your strategy and talk through it with the class
- Share unit test results with the class
- Share git stats (number of commits, merges issues)

**Sprint 3**
*Feb 14th - Feb 28th*

**Minimum Units:** Sprint 2 Units, Net Gun, Vaporator, Cows

**Sprint Goals:**
- Increase rating of submissions to the class server by 300
- Unit test coverage should be >50%
- Run cyclomatic complexity analysis over code and report results

**Sprint Deliverables:**
- Record one game that shows your strategy and talk through it with the class
- Share cyclomatic complexity results with class
- Share git stats (number of commits, merges issues)

**Sprint 4**
*Feb 28th - March 12th*

**Minimum Units:** All

**Sprint Goals:**
- Increase rating of submissions to the class server by 300
- Unit test coverage should be >50%
- Create a class diagram and solution overview

**Sprint Deliverables:**
- Record one game that shows your strategy and talk through it with the class
- Share class diagram and solution overview with class
- Share git stats (number of commits, merges issues)