This is the file format definition. If you change the expectation of what is stored in a file or what should be stored, please update this document.

# General Format Definition

|  |  |  |
| --- | --- | --- |
| Line | Description | Valid Values |
| 1 | Width (x-axis) of the space region | Min: 1, Max: 20 |
| 2 | height (y-axis) of the space region | Min: 1, Max: 15 |
| 3 | Number of drones | Min: 1, Max: 10 |
| 4 – Number of drones | Drone Definition (see drone line definition table) | (See drone table) |
| 5 | Number of suns | Min: 0, Max: 50% of space |
| 6 – Number of Suns | Location of suns (x, y coordinate for each sun) One line per sun | Valid X, Y location in space |
| 7 | Maximum number of turns for this run | Min: 1, Max: 200 |
| 8 | Turn to stop on and save | Number < max turns 0 if no stop and save |
| 9 | Current turn | Which turn the simulation is on currently. 0 for new simulation |

# Drone Line Definition

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Value | X-Location | Y-Location | Direction | Strategy | Fuel |
| Valid Values | < line 1 | < line 2 | See table | See table | Min: 0, Max: 10 |

## Direction

## Which direction the drone is facing.

## The valid terms for direction {north, northeast, east, southeast, south,

## southwest, west, northwest}

## Strategy

* Zero (0) = select an action randomly
* One (1) = leverage environment info and drone collaboration to select “best” action
* Two (2) = allow the user to select an action via the input prompt (diagnostic only!)

# Example file

This is an example of a valid file. Comment are not allowed, so remove any // to create an actual valid file.

5 //Width (x-axis)

4 //Height (y-axis)

3 //Number of drones. There must be three drone lines

1,2,north,1,10 //drone 0: x, y, direction, strategy, fuel

0,1,northeast,1,5 //drone 1: x, y, direction, strategy, fuel

3,1,west,1,0 //drone 2: x, y, direction, strategy, fuel

3 // Number of suns. There must be 3 sun lines after this.

1,1 // sun 0: x,y location

1,3 // sun 1: x,y location

3,0 // sun 2: x,y location

3 // Max number of turns

0 // Turn to stop and save

0 // current turn