**Ryan Povall, Thomas Lovett**

**S1 Extension - Another Kind of Ship:  
The Pirate\_ship**

***Note***: For this feature, we have added an additional Island called “Pirate’s\_Cove” at (44,29) starting with no fuel and doesn’t generate any fuel. We also increased the Tanker’s resistance from 0 to 1.

***Behavior:***

The Pirate\_ship has the capability to steal cargo/fuel from other Ships that are not Warships and return the captured cargo/fuel to a home port which is a designated Island.

The home port will be set on each destination/position command in which the location is that of an Island. This means in the case that a Pirate\_ship already has a home port and the user enters a destination/position command with a location of an Island, then the home port will change to the newly entered Island. The Pirate\_ship has the ability to steal only when it’s home port location is known.

Once it docks at the home port, on the next update it will calculate the nearest non-Warship as its next Ship to attack and set a course towards the location of it.

For each update as the Pirate\_ship moves towards the target Ship and it will continue to change the destination location to where the target Ship is located. If at some point the target has sunk, the Pirate\_ship will change targets to the current nearest non-Warship.

On an update, if the target Ship is within 1 nm of the Pirate\_ship the following will all occur on the same update:

* The Pirate\_ship will then steal cargo if the target Ship is a Tanker or steal fuel if it’s any other type of Ship and hold it as cargo. It obtains as much cargo as it can hold unless the target Ship doesn’t have enough to fill the capacity. In that case, the Pirate\_ship will take all of it’s fuel, leaving the target dead in the water. Note: The cargo capacity is 500 tons, half of the fuel capacity.
* In order to obtain the cargo/fuel, the Pirate\_ship also has to damage the target Ship with a firepower of 1 while stealing.
* The course will then be set back to it’s home port unless the Pirate \_ship has sunk the Ship it was stealing from. In that case, the Ship will have sunk before the pirates could steal any loot so instead of going back to the home port, the course will be set to the nearest non-Warship to attack.

On the next update after a successful steal, the Pirate\_ship should be moving back towards its home port to drop off its cargo.

Once the Pirate\_ship docks at the home port, on the next update it will unload it’s loot to the Island’s fuel supply and set course to the next nearest target, thus beginning the cycle all over again.

***Special information:***

* A Pirate\_ship cannot take fuel from Ships docked at the home port.
* A Pirate\_ship cannot attack other Pirate\_ships, it’s the pirate code!
* If the Pirate\_ship is given stop or course commands, the Pirate\_ship will stop going after any other ships and “forget” it’s home port. If the Pirate\_ship is given a position or destination that is NOT an Island, the Pirate\_ship will stop going after any other ships and “forget” it’s home port as well.

***New command information:*** The create command creates a Pirate\_ship when given the type string "Pirate\_ship".

***Specific data:*** The Pirate\_ship has a fuel capacity of 1000 tons, maximum speed of 30., fuel consumption of 10 tons/nm, resistance of 1 and maximum range of 1.