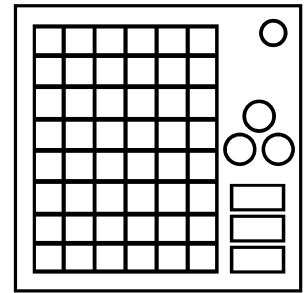# On the Subject of CA-RPS

"Funny fish module." –You know who you are.

On the module is an 8 by 6 grid. Each cell in this grid can be either Rock (Red), Paper (Green), Scissors (Blue), or empty.

The state of each cell in the initial grid is changed by number of rocks, papers, and scissors amongst its eight* neighbouring cells:

- If the cell is empty:
  - If all neighbouring cells are empty or there is a three-way tie, the cell remains empty.
  - Otherwise if there is a two-way tie, the state of the cell is changed to the state that wins against the other.
  - Otherwise, the state of the cell is changed to the most abundant state of the neighbouring cells.
- If the cell is not empty:
  - If the cell wins against more of its neighbours than it loses against, the state of cell remains unchanged.
  - Otherwise, the state of the cell is changed to the state that wins against its current state.

*The edges of the grid wrap around to the opposite side, therefore every cell in the grid has eight neighbours.

To change the state of a cell in the grid:

1. Press the rock, paper, or scissor button.
   Select a state that is already selected to change the selected state to empty. The empty state is selected by default.
2. Select a cell in the grid to change its state to the one selected.

- The clear button changes the state of all cells to empty.
- The reset button changes the states of all celles to their original state.
- The submit button is pressed to check the current configuration of the cells in the grid against the expected final configuration.
  The module is defused if the configurations match. Otherwise, a strike is incurred.