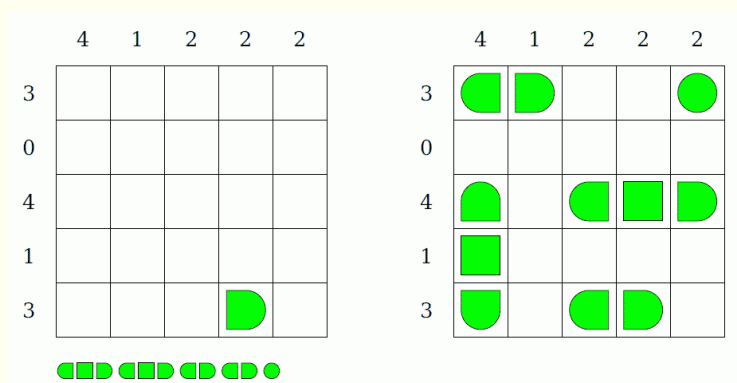


# battleship.sty

v1.1

**A style file for typesetting Battleship logic puzzles**



**February 16, 2013**

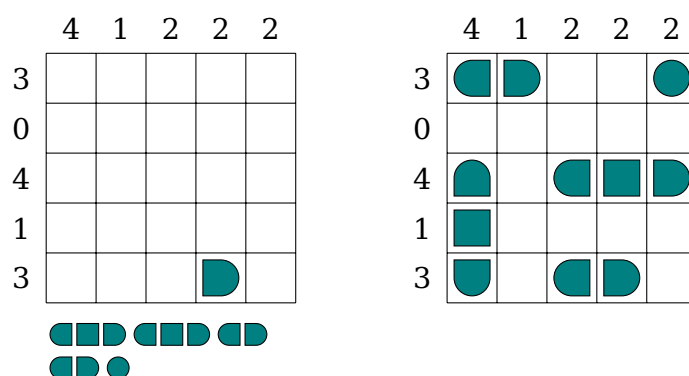
Package author:

**Josef Kleber**

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## 1 The puzzle

Try to find the positions of the ships listed below the puzzle. The numbers on the side of the puzzle reveals how many ship segments can be found in the rows and columns. All remaining fields indicate 'water'. Consider the following rules: The ships are arranged horizontally and vertically. No ship touches another ship at any point, not even diagonally. Here's a little self-explanatory example:



```

1 \begin{battleship}
2 \placesegment{4}{1}{\ShipR}
3 \shipH{4,1,2,2,2}
4 \shipV{3,1,4,0,3}
5 \shipbox{3,3,2,2,1}
6 \end{battleship}
7 \hspace{1cm}
8 \begin{battleship}
9 \placeship{V}{1}{1}{3}
10 \placeship{H}{1}{5}{2}
11 \placeship{H}{3}{1}{2}
12 \placeship{H}{3}{3}{3}
13 \placeship{H}{5}{5}{1}
14 \shipH{4,1,2,2,2}
15 \shipV{3,1,4,0,3}
16 \end{battleship}

```

## 2 Options

### 2.1 rows (5)

With the option rows, you can define the number of rows in the grid.

### 2.2 columns (5)

With the option columns, you can specify the number of columns in the grid

### 2.3 shipcolor (green)

With the option shipcolor, you can set the color of the ship segments.

### 2.4 width (6cm)

With the option width, you can set the width of the minipage, in which the grid is typeset.

### 2.5 scale (1)

With the option scale, you can scale the size of the grid in the minipage.

### 2.6 fontsize (Large)

With the option fontsize, you can specify the size of the numbers next to the grid. Here, the usual L<sup>A</sup>T<sub>E</sub>X sizes are used. Possible values: tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge, Huge)

### 2.7 sbindent (0.75cm)

With the option sbindent, you can define the indent of the ship box below the grid.

### 2.8 sbwidth (5.15cm)

With the option sbwidth, you can specify the width of the minipage, in which the ships are typeset.

### 2.9 sbshipscale (1)

With the option sbshipscale, you can scale the size of the ships in the ship box.

## 3 Environments

### 3.1 battleship

```
\begin{battleship}[\langle options \rangle]
...
\end{battleship}
```

The battleship environment is the central core of the style file. With the optional argument of the environment, you can reset the options with local scope. Here, a blank grid is created that you can fill with ships using other commands.

## 4 Commands

### 4.1 placeship

```
\placeship{\langle direction \rangle}
{\langle column \rangle}{\langle row \rangle}{\langle length \rangle}
```

With the command `\placeship` you can place complete ships in the grid. It expects the specification of the direction as horizontal (H) or vertical (V). Furthermore, it requires the starting coordinates and the length of the ship.

### 4.2 placesegment

```
\placesegment{\langle column \rangle}{\langle row \rangle}
{\langle ship segment \rangle}
```

The command `\placesegment` is used for the placement of ship segments in the grid. In the mandatory argument *ship segment*, you can use the following commands:

<code>\Ship</code>			<code>\ShipC</code>
<code>\ShipL</code>			<code>\ShipR</code>
<code>\ShipB</code>			<code>\ShipT</code>

### 4.3 ship

The command `\ship` was replaced by the `\placesegment` command. The command `\ship` is deprecated and should not be used longer. It may still be used, but it is not recommended.





### 4.4 placewater

```
\placewater{\langle column \rangle}{\langle row \rangle}
```

With the command `\placewater` you can place water markers ( • ) in the grid.

### 4.5 placeisland

```
\placeisland{\langle column \rangle}{\langle row \rangle}
```

With the command `\placeisland` you can place islands (  ) in the grid. The island outlines are created randomly: , , , ...

### 4.6 shipH

```
\shipH{\langle csv list \rangle}
```

The command `\shipH` typesets the horizontal numbers above the grid. It expects a comma-separated list as an argument.

#### 4.7 shipV

`\shipV{<csv list>}` The command `\shipV` typesets the vertical numbers beside the grid. It also expects a comma separated list.

#### 4.8 shipbox

`\shipbox{<csv list>}` The command `\shipbox` defines the number and size of the ships, which are typeset under the grid.

#### 4.9 battleshipsetup

`\battleshipsetup{<options>}` With the command `\battleshipsetup` you can reset the options with global scope.

### 5 Examples & Solutions



You can download application examples and their solutions from the [project site](#). The puzzles are originally licensed under .