

ShipWeight plug-in for Rhinoceros 3D (Version 1.1)

With the ShipWeight Rhino plug-in you can do visual sanity checks during estimation and monitoring.

The plug-in displays center of gravity and extension in 3D for all parts of a ship contained in a ShipWeight database:



There are two modes of display: Line-display and box-display.

Line-display shows center of gravity and extension of all items in each direction, box-display shows center of gravity and a 'bounding-box' defined by min and max values of LCG, TCG and VCG (if available).

When displayed as lines, extensions can be displayed even if values for one or two dimensions are undefined. You can also simulate min and max values for undefined dimensions, and then you can also visualize items as boxes.

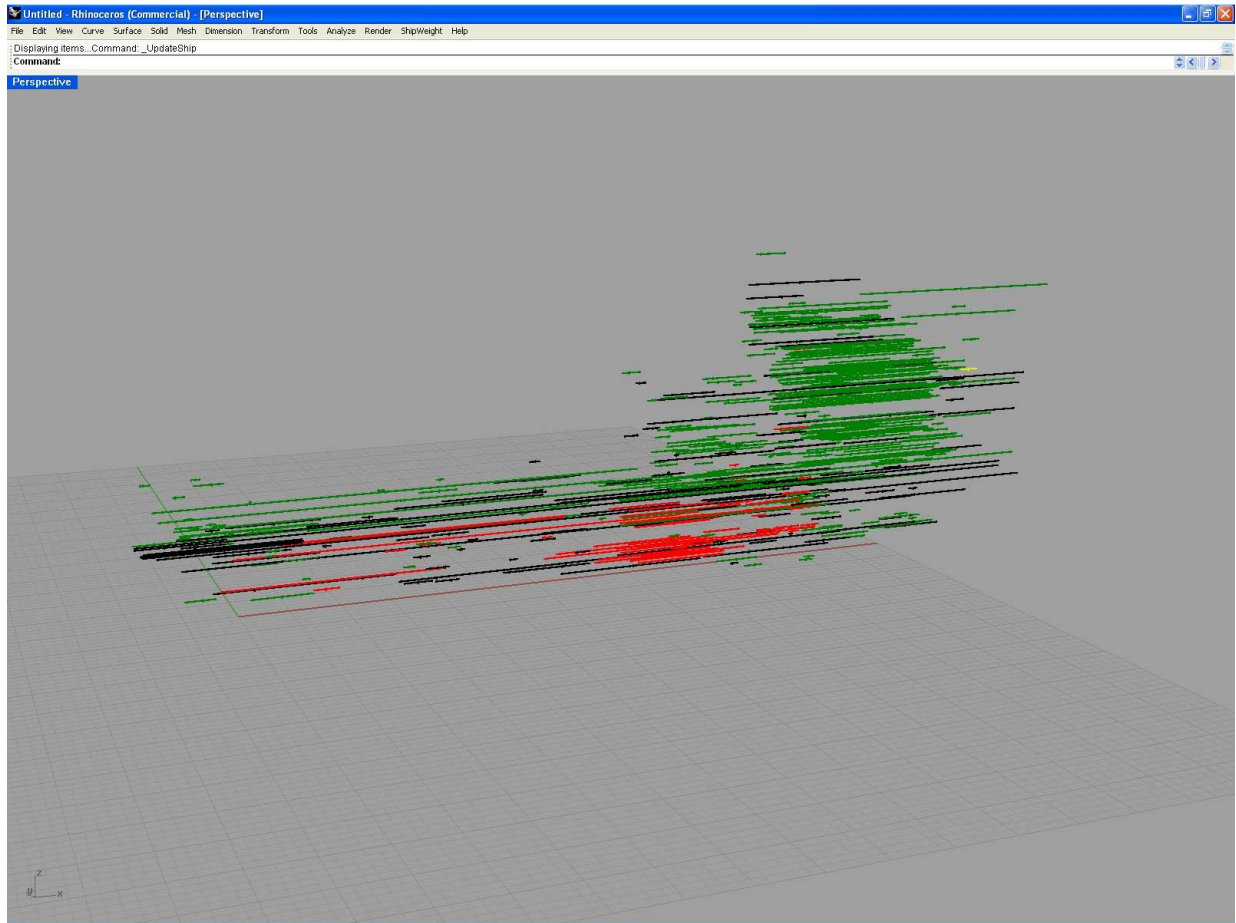


Figure 1 Line-display with some undefined min and max values

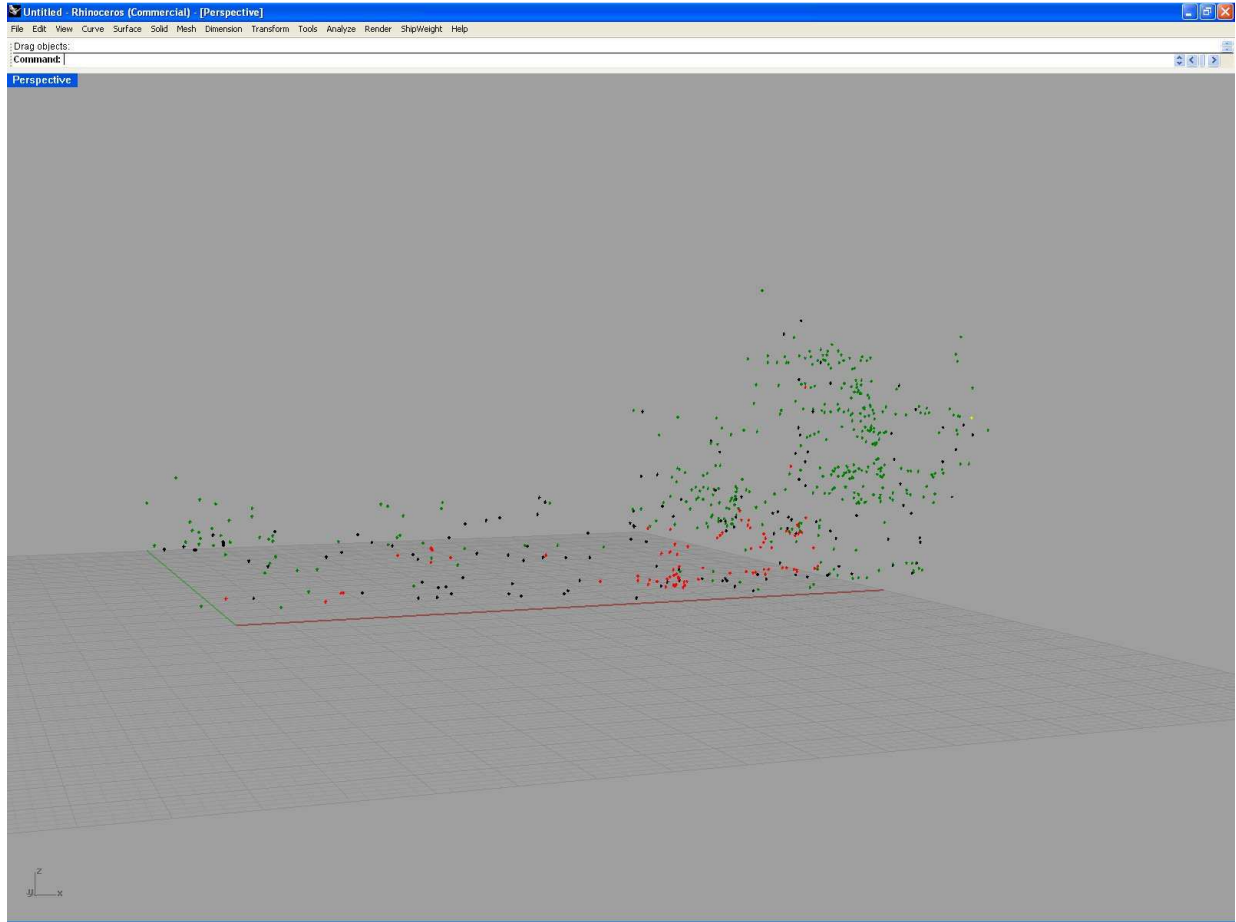


Figure 2 Box-display with some undefined min and max values

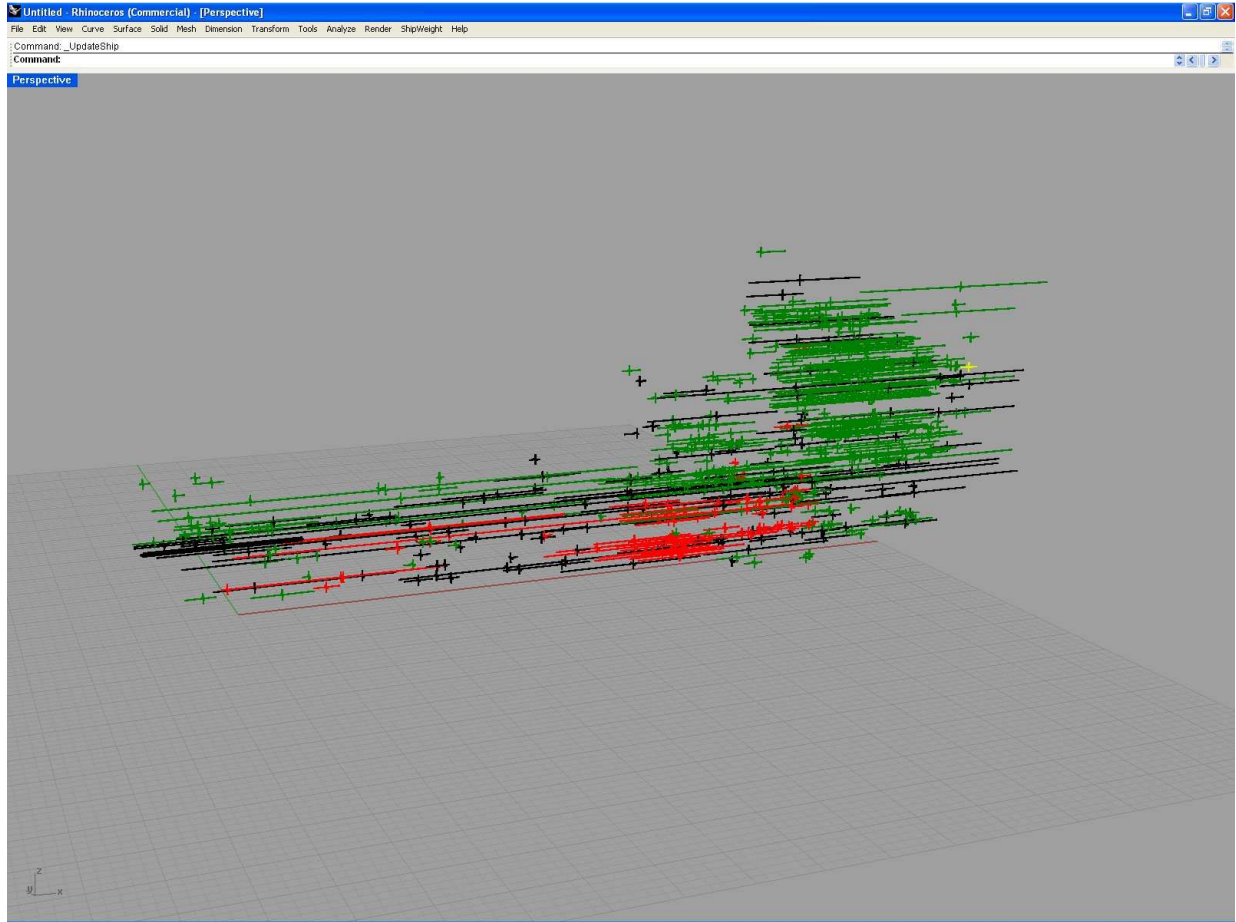


Figure 3 Line display with simulated min and max values

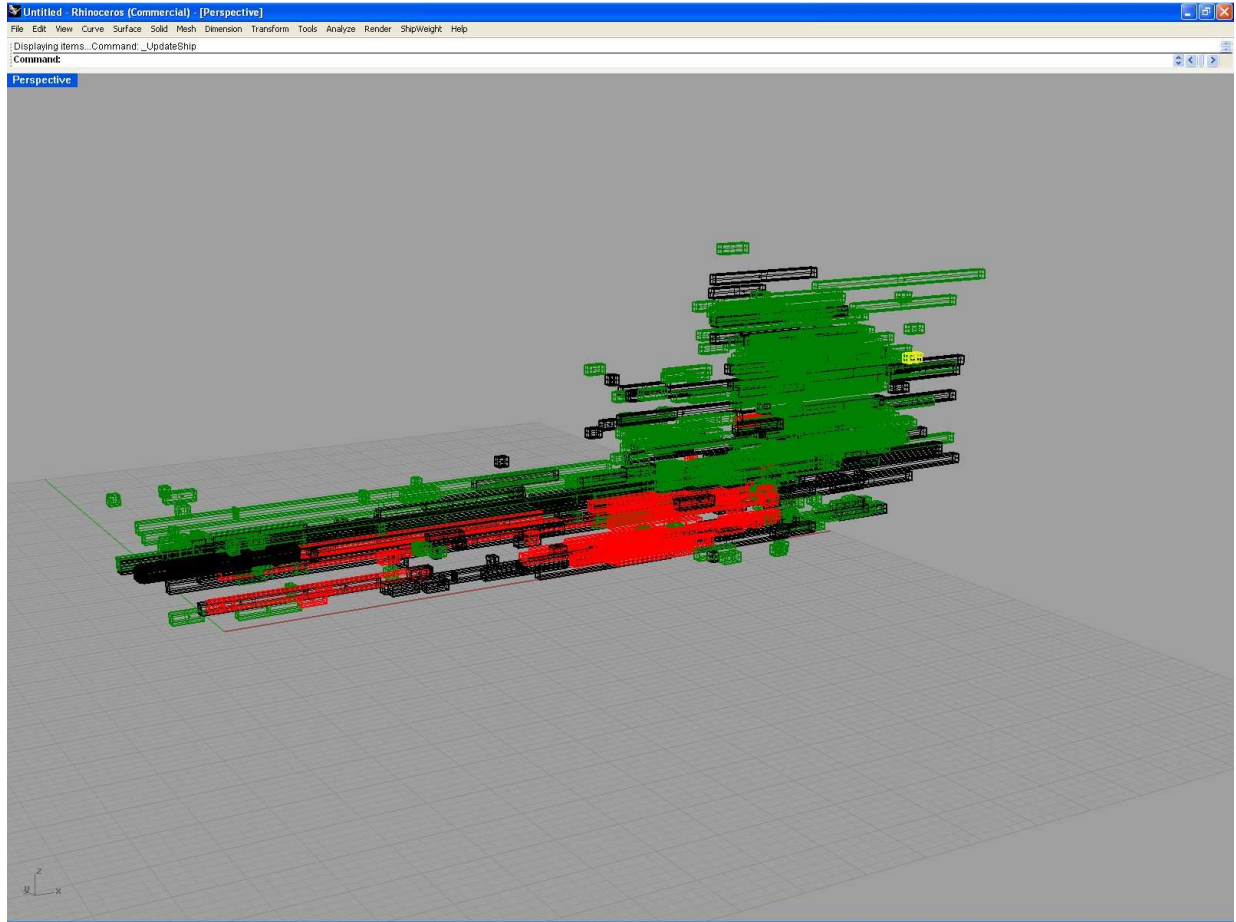
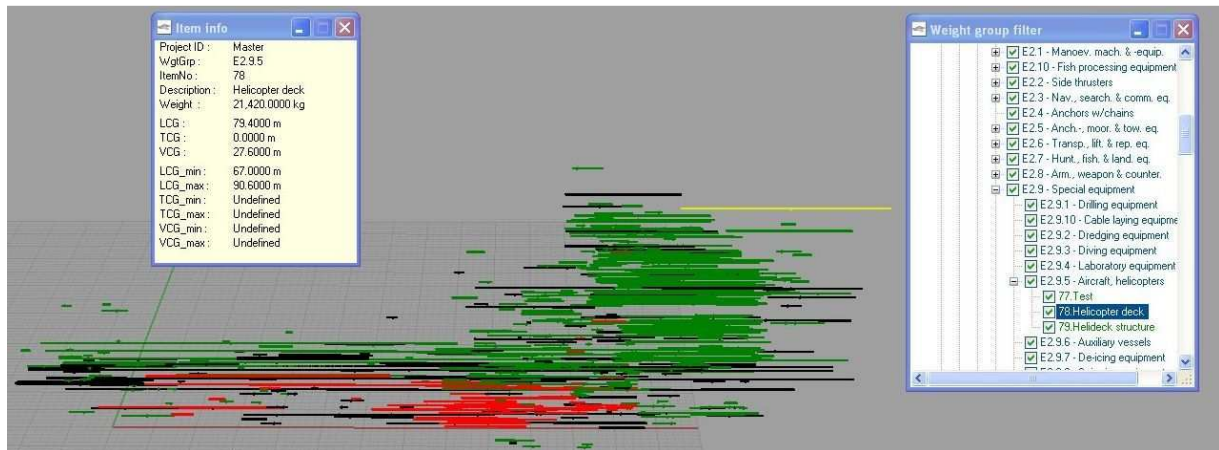


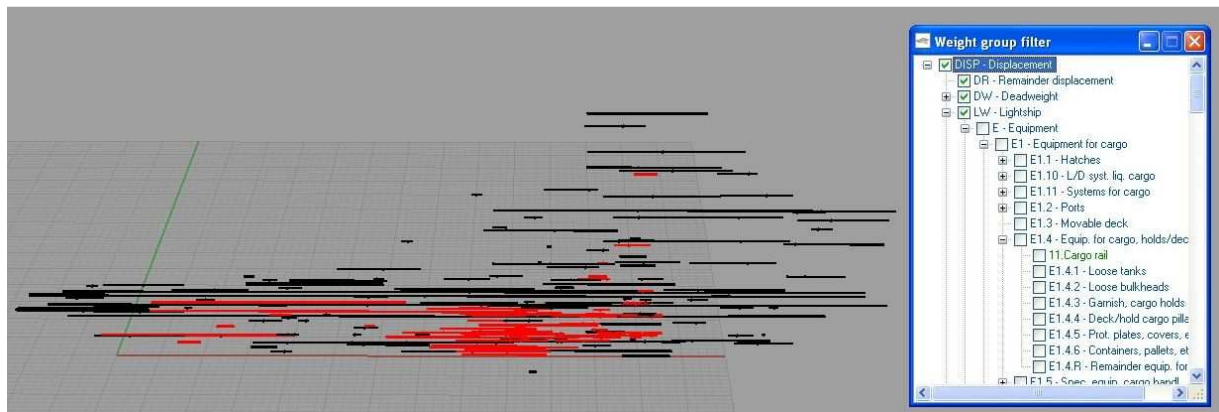
Figure 4 Box-display with simulated min and max values

You can select a particular item by clicking on it or by selecting it from a tree-view.

The item is then highlighted and information about it is displayed in a window.



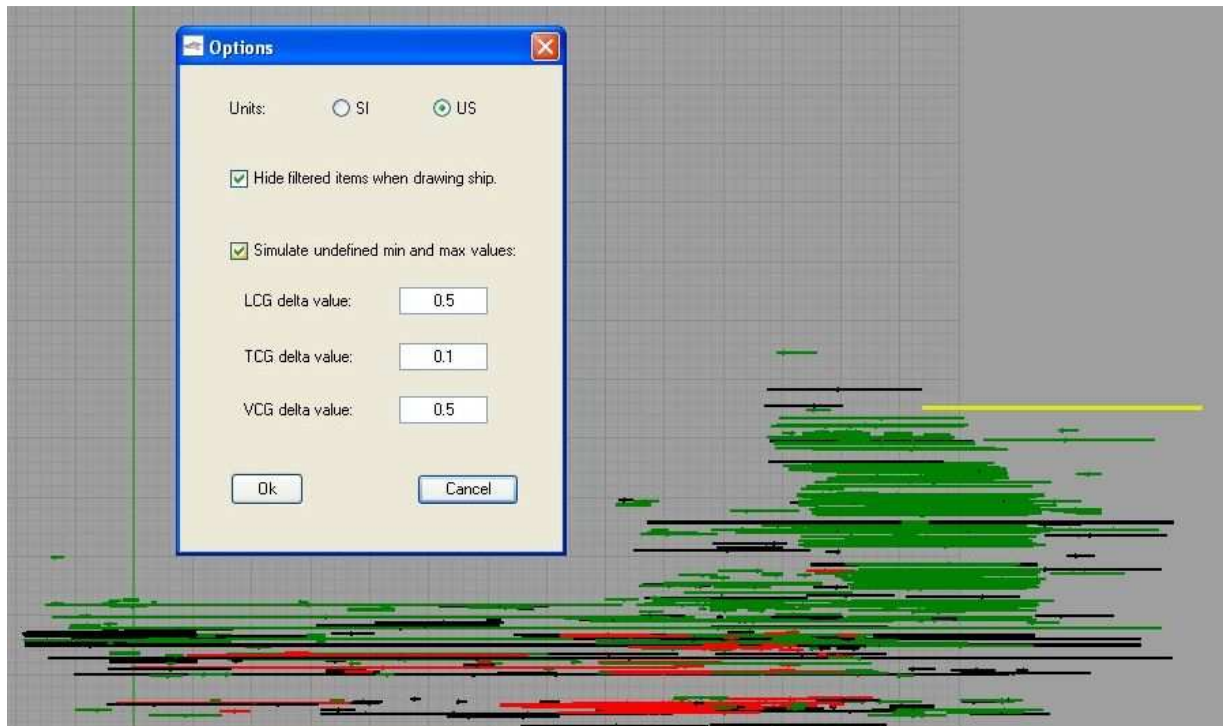
By filtering on weight classes or individual items you can choose which items to display when rendering.



You can choose to use SI or US units when displaying information about items.

When 'hide filtered items' is checked filtered items are 'grayed out' instead of hidden.

When 'simulate undefined...' is checked you can adjust the magnitude of simulated values in each direction.



Plug-in interface

- You can't alter data in a ShipWeight database by using the plug-in.
- You can't move (on display) a rendered graphical object representing a Ship-item from the database.
- When rendering a ship, non-ship objects are not affected.
- Non-ship objects can be freely selected and moved.

Known limitations and bugs:

- Can't read certain older database formats
- Units of items are not coordinated with Rhino units
- Item information- and filter windows might disappear when manipulating the Rhino interface
- No user authorization implemented (plug-in doesn't save data in database, though)