GL Board Game: 3-D Game Support

Version 8.17.0.2

May 9, 2025

```
(require games/gl-board-game)
                                     package: games
gl-board% : class?
  superclass: canvas%
 (new gl-board%
     [min-x min-x]
     [\max-x \max-x]
     [min-y min-y]
    [\max-y \max-y]
     [lift lift]
    [[move move]
     \dots superclass-args\dots) \rightarrow (is-a?/c gl-board%)
  min-x : real?
  max-x : real?
  min-y : real?
  max-y : real?
  lift : real?
  move : (any/c gl-vector? . -> . any) = void
  who : string? = "this game"
```

The min-x, max-x, min-y, and max-y arguments specify the dimensions of the board plane to be visible in the window by default.

The *lift* argument specifies how many units a piece moves vertically when the user clicks on it.

The move function is called when a piece is moved to a space (possibly it's current space), when a space is clicked on, and when a space is dragged to another space. The move function is given the information of the piece or space selected and the coordinates to which it is moved.

The who argument is used for reporting an error to the user when GL is unavailable at run time.

```
(send a-gl-board add-space draw info) → void?
  draw : (-> any)
  info : any/c
```

Adds a space to the board. The *draw* thunk should draw the space (using GL commands) when called. The *info* value is given to the *move* function (supplied to the constructor) when the space is selected.

```
(send a-gl-board add-piece x y z draw info) → void?
  x : real?
  y : real?
  z : real?
  draw : ([shadow? boolean?] . -> . any)
  info : any/c
```

Adds a piece to the board. The draw thunk should draw the piece (using GL commands) when called. The info argument is given to the move function (supplied to the constructor) when the piece is moved. The piece is translated by x, y, and z before drawing.

```
(send a-gl-board remove-piece info) → void?
  info : any/c
```

Removes all pieces previously added with representative info.

```
(send a-gl-board add-heads-up w h draw info) → void?
w : real?
h : real?
draw : (-> any)
info : any/c
```

Add a "heads-up" display element whose size is w by h units with the given draw thunk and info representative.

```
(send a-gl-board remove-heads-up info) → void?
info : any/c
```

Removes all "heads-up" displays elements previous added with representative info.

```
(send a-gl-board set-space-draw info draw) → void?
  info : any/c
  draw : (-> any)
```

Sets the drawing function of all spaces added with representative info.

```
(send a-gl-board set-piece-draw info draw) → void?
  info : any/c
  draw : ([shadow? boolean?] . -> . any)
```

Sets the drawing function of all pieces added with representative info.

Enables or disables moving of all pieces added with representative info.

```
(send a-gl-board enabled? info) → boolean?
info : any/c
```

reports whether the first piece with representative *info* is enabled.

```
(send a-gl-board get-pieces) → list?

(send a-gl-board get-spaces) → list?

(send a-gl-board get-heads-up) → list?
```

Returns values for various kinds of content currently on the board. The result corresponds to *info* values given to add-piece, etc.