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# freestyle.utils submodule (freestyle.utils.ContextFunctions)

The Blender Freestyle.ContextFunctions submodule

`freestyle.utils.ContextFunctions.get_border()`

Returns the border.

## RETURNS:

A tuple of 4 numbers (xmin, ymin, xmax, ymax).

## RETURN TYPE:

tuple[int, int, int, int]

`freestyle.utils.ContextFunctions.get_canvas_height()`

Returns the canvas height.

## RETURNS:

The canvas height.

## RETURN TYPE:

int

`freestyle.utils.ContextFunctions.get_canvas_width()`

Returns the canvas width.

## RETURNS:

The canvas width.

## RETURN TYPE:

int

`freestyle.utils.ContextFunctions.get_selected_fedge()`

Returns the selected FEdge.

## RETURNS:

The selected FEdge.

## RETURN TYPE:

FEdge

`freestyle.utils.ContextFunctions.get_time_stamp()`

Returns the system time stamp.

## RETURNS:

The system time stamp.

## RETURN TYPE:

int

`freestyle.utils.ContextFunctions.load_map(file_name, map_name, num_levels=4, sigma=1.0)`

Loads an image map for further reading.

## PARAMETERS:

- **file\_name** (*str*) – The name of the image file.
- **map\_name** (*str*) – The name that will be used to access this image.
- **num\_levels** (*int*) – The number of levels in the map pyramid (default = 4). If num\_levels == 0, the complete pyramid is built.
- **sigma** (*float*) – The sigma value of the gaussian function.

`freestyle.utils.ContextFunctions.read_complete_view_map_pixel(level, x, y)`

Reads a pixel in the complete view map.

**PARAMETERS:**

- **level** (*int*) – The level of the pyramid in which we wish to read the pixel.
- **x** (*int*) – The x coordinate of the pixel we wish to read. The origin is in the lower-left corner.
- **y** (*int*) – The y coordinate of the pixel we wish to read. The origin is in the lower-left corner.

**RETURNS:**

The floating-point value stored for that pixel.

**RETURN TYPE:**

float

`freestyle.utils.ContextFunctions.read_directional_view_map_pixel(orientation, level, x, y)`

Reads a pixel in one of the oriented view map images.

**PARAMETERS:**

- **orientation** (*int*) – The number telling which orientation we want to check.
- **level** (*int*) – The level of the pyramid in which we wish to read the pixel.
- **x** (*int*) – The x coordinate of the pixel we wish to read. The origin is in the lower-left corner.
- **y** (*int*) – The y coordinate of the pixel we wish to read. The origin is in the lower-left corner.

**RETURNS:**

The floating-point value stored for that pixel.

**RETURN TYPE:**

float

`freestyle.utils.ContextFunctions.read_map_pixel(map_name, level, x, y)`

Reads a pixel in a user-defined map.

**PARAMETERS:**

- **map\_name** (*str*) – The name of the map.
- **level** (*int*) – The level of the pyramid in which we wish to read the pixel.
- **x** (*int*) – The x coordinate of the pixel we wish to read. The origin is in the lower-left corner.
- **y** (*int*) – The y coordinate of the pixel we wish to read. The origin is in the lower-left corner.

**RETURNS:**

The floating-point value stored for that pixel.

**RETURN TYPE:**

float