User's Guide

Dream Drawing 1.2

December 2013

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Content

Understanding Dream Drawing

Dream Drawing brings the power of 2D primitives to game and Unity editor. Create the primitives, styles, in addition to the available. Important part of schemes, debugging artificial intelligence etc.

Key features:

- Draws a point;
- Draws a line by two points;
- Draws a curve by three points;
- Draws a curve by four points;
- Draws an arrow by two points;
- Draws an arrow by three points;
- Draws an arrow by four points;
- Draws a double arrow by two points ;
- Draws a double arrow by three points ;
- Draws a double arrow by four points;
- Draws an ellipse by three points;
- Draws a triangle by three points ;
- Draws a quadrangle by four points;
- Draws a cross;
- Draws a line path;
- Draws a curve path;
- Draws a grid;
- Supports scrolling;
- Supports rotation;
- Supports colors;
- Supports width;
- Supports intensity;
- Supports on the run change;
- Supports creation user's primitives;
- Supports all platforms;
- No textures;
- High performance;
- Easy integration by code or prefabs;
- Full documentation.

As we value your feedback regarding our product, please take a moment to complete the short review at the Unity Asset Store.

Please, feel free to contact us, if you need any assistance or have a proposal for the future updates, go to our website, there you will find a contact form!

Packaging:

[Code]

DreamDrawing.cs (Code for main class)

[Prefabs] (Folder with code for prefabs.)

[Scenes] (Folder with code for scene's game objects.)

[Prefabs] (Folder with prefabs.)

[Scenes] (Folder with saved scene with example game objects.)

Integration:

Drag prefab from prefabs folder or write DreamDrawing class method in OnGUI or in OnInspectorGUI.

Contacts

Dear Customer!

Thank you for buying the package!

As we value your feedback regarding our product, please take a moment to complete the short review at the Unity Asset Store (http://u3d.as/content/2-fly-dreams/dream-drawing)!

Please, feel free to contact us, if you need any assistance or have a proposal for the future updates, go to our website (http://2flydreams.com), there you will find a contact form!

Sincerely,
2 Fly Dreams!

Class DreamDrawing

Dream Drawing draws all by placing a point at the start and at the end position, and then the remaining space is filling by the points from Bezier curve algorithm. At some points values such as width, intensity and transparency can appear distortion caused by Bezier curve algorithm inaccuracy, and also by the subsequent rounding of coordinates of points in screen coordinates. The solution is to change the width, or the intensity, or transparency.

You can make your own style by changing width, intensity, transparency, your own primitives by setting unusual positions or by combining primitives.

Functions

RotatePositionAroundPivot

Rotate position around pivot by angle and return it.

Variables:

position – position to rotate;

pivot – rotation's pivot;

angle – rotation's angle in degrees.

Bezier

1) Return line's position from **position0** to **position1** by **t.**

Variables:

position0 – position of the line's start;

position1 – position of the line's end;

t – assign where we are going to calculate position from **0f** (**position0**), to **1f** (**position1**).

2) Return curve's position from **position0** to **position2** by **t.**

Variables:

position0 – position of the curve's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, position1 and **position2** form second tangent)

position1 – position of the curve's end;

t – assign where we are going to calculate position from **0f** (**position0**), to **1f** (**position2**).

3) Return curve's position from **position0** to **position3** by **t.**

Variables:

position0 – position of the curve's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, position1 and **position2** form second tangent)

position2 – position for second and third tangent (**position1** and **position2** form second tangent, position2 and **position 3** form third tangent)

position3 – position of the curve's end;

t – assign where we are going to calculate position from **0f** (**position0**), to **1f** (**position3**).

Methods

DrawPoint

Draws point at position and set white **texture** size of 1x1 if not set.

Variables:

position – middle position of the point;

diameter – diameter of the point;

color – color of the point.

DrawLine

Draws a line from **position0** to **position1**.

Variables:

position0 – position of the line's start;

position1 – position of the line's end;

intensity – line's points count, normal count is **1f**;

width – line's width;

color – line's color;

rotation – line's rotation's pivot;

rotation – line's rotation's angle in degrees.

DrawCurve

1) Draws a curve from **position0** to **position2,** by two tangents**.**

Variables:

position0 – position of the curve's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, **position1** and **position2** form second tangent)

position2 – position of the curve's end;

intensity – curve's points count, normal count is **1f**;

width – curve's width;

color – curve's color;

pivot – curve's rotation's pivot;

rotation – curve's rotation's angle in degrees.

2) Draws a curve from **position0** to **position3,** by three tangents**.**

Variables:

position0 – position of the curve's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, **position1** and **position2** form second tangent)

position2 – position for second and third tangent (**position1** and **position2** form second tangent, **position2** and **position 3** form third tangent)**position3** – position of the curve end;

position3 – position of the curve's end;

intensity – curve's points count, normal count is **1f**;

width – curve's width;

color – curve's color;

pivot – curve's rotation's pivot;

rotation – curve's rotation's angle in degrees.

DrawArrow

1) Draws an arrow from **position0** to **position1,** by two points**.**

Variables:

position0 – position of the arrow's start;

position1 – position of the arrow's end;

intensity – arrow's points count, normal count is **1f**;

width – arrow's width;

color – arrow's color;

pivot – arrow's rotation's pivot;

rotation – arrow's rotation's angle in degrees;

size – size of arrow's tip.

2) Draws an arrow from **position0** to **position2,** by two tangents**.**

Variables:

position0 – position of the arrow's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, **position1** and **position2** form second tangent)

position2 – position of the arrow's end;

intensity – arrow's points count, normal count is **1f**;

width – arrow's width;

color – arrow's color;

pivot – arrow's rotation's pivot;

rotation – arrow's rotation's angle in degrees;

size – size of arrow's tip.

3) Draws an arrow from **position0** to **position3 ,** by three tangents**.**

Variables:

position0 – position of the arrow's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, **position1** and **position2** form second tangent)

position2 – position for second and third tangent (**position1** and **position2** form second tangent, **position2** and **position 3** form third tangent)

position3 – position of the arrow's end;

intensity – arrow's points count, normal count is **1f**;

width – arrow's width;

color – arrow's color;

pivot – arrow's rotation's pivot;

rotation – arrow's rotation's angle in degrees;

size – size of arrow's tip.

DrawDoubleArrow

1) Draws a double arrow from **position0** to **position1,** by two points **.**

Variables:

position0 – position of the double arrow's start;

position1 – position of the double arrow's end;

intensity – double arrow's points count, normal count is **1f**;

width – double arrow's width;

color – double arrow's color;

pivot – double arrow's rotation's pivot;

rotation – double arrow's rotation's angle in degrees.

size – size of double arrow's tips.

2) Draws a double arrow from **position0** to **position2,** by two tangents **.**

Variables:

position0 – position of the double arrow's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, **position1** and **position2** form second tangent)

position2 – position of the double arrow's end;

intensity – double arrow's points count, normal count is **1f**;

width – double arrow's width;

color – double arrow's color;

pivot – double arrow's rotation's pivot;

rotation – double arrow's rotation's angle in degrees.

size – size of double arrow's tips.

3) Draws a double arrow from **position0** to **position3**, by three tangents**.**

Variables:

position0 – position of the double arrow's start;

position1 – position for first and second tangent (**position0** and **position1** form first tangent, **position1** and **position2** form second tangent)

position2 – position for second and third tangent (**position1** and **position2** form second tangent, **position2** and **position 3** form third tangent)

position3 – position of the double arrow's end;

intensity – double arrow's points count, normal count is **1f**;

width – double arrow's width;

color – double arrow's color;

pivot – double arrow's rotation's pivot;

rotation – double arrow's rotation's angle in degrees.

size – size of double arrow's tips.

DrawTriangle

Draws a triangle by three points.

Variables:

position0 – position for first side (**position0** and **position1** form first line);

position1 – position for second side (**position1** and **position2** form second line);

position2 – position for third side (**position2** and **position3** form third line);

intensity – triangle's line's points count, normal count is **1f**;

width – triangle's line’s width;

color – triangle's line’s color;

pivot – triangle's rotation’s pivot;

rotation – triangle's rotation’s angle in degrees.

DrawQuadrangle

Draws a quadrangle by four points.

Variables:

position0 – position for first side (**position0** and **position1** form first line);

position1 – position for second side (**position1** and **position2** form second line);

position2 – position for third side (**position2** and **position3** form third line);

position3 – position for forth side (**position3** and **position4** form forth line);

intensity – quadrangle's line’s points count, normal count is **1f**;

width – quadrangle's line’s width;

color – quadrangle's line’s color;

pivot – quadrangle's rotation’s pivot;

rotation – quadrangle's rotation’s angle in degrees.

DrawEllipse

Draws an ellipse by four points.

Variables:

position0 – position for first quarter (**position0,** position with x coordinate of position1 and y coordinate of **position0, position1** form first curve by three points);

position1 – position for second quarter (**position1,** position with x coordinate of position1 and y coordinate of **position2**, **position2** form second curve by three points);

position2 – position for third quarter (**position2,** position with x coordinate of position3 and y coordinate of **position2**, **position3** form third curve by three points);

position3 – position for fourth quarter (**position3**, position with x coordinate of position3 and y coordinate of **position0**, **position0** form fourth curve by three points);

intensity – ellipse's curve's points count, normal count is **1f**;

width – ellipse's curve's width;

color – ellipse's curve's color;

pivot – curve's rotation's pivot;

rotation – curve's rotation's angle in degrees.

DrawCross

Draws a cross by point.

Variables:

position0 – position for cross's center;

size - cross's length from center;

intensity – cross's line's points count, normal count is **1f**;

width – cross's line's width;

color – cross's line's color;

pivot – cross's rotation's pivot;

rotation – cross's rotation's angle in degrees.

DrawLinePath

Draws a path of line arrows;

Variables:

positions – positions for the line arrows;

intensity – line arrow's points count, normal count is **1f**;

width – line arrow’s width;

color – line arrow’s color;

size – size of line arrow’s tip.

space – space between line arrows;

DrawCurvePath

Draws a path of curve arrows;

Variables:

positions – positions for the curve arrows;

intensity – curve arrow’s points count, normal count is **1f**;

width – curve arrow’s width;

color – curve arrow’s color;

size – size of curve arrow’s tip.

space – space between curve arrows;

DrawGrid

Draws a grid from the top-left **position0**, to the bottom-right **position1**.

Variables:

position0 – left-top position of grid;

position1 –bottom-right position of grid;

square0 – grid’s square’s width;

square1 – grid’s square’s height;

intensity – grid’s line's points count, normal count is **1f**;

width – grid’s line’s width;

color – grid’s line’s color;

pivot – grid’s rotation’s pivot;

rotation – grid’s rotation’s angle in degrees.

Updates

Version 1.2

- Added arrow by two points;
- Added double arrow by two points;
- Added cross;
- Added line path;
- Added curve path;
- Added grid;