polyData Documentation

POLYGON WIREFRAME SHADER
PLUG-IN FOR MAYA 6.5/7.0
VERSION 1.5

Overview

To install the polyData Plug-In follow the instructions available in the 'README.TXT' file. Don't forget to test all the sample scenes.

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polyData shading node Plug-In allows Maya users to render true polygons wireframe in software rendering. polyData supports Polygon surfaces only.

Its engine provides constant-thickness high-quality anti-aliased lines as well as different attributes to control the thickness and color of the wireframe.
polyData is also capable of rendering wireframe vertices. There are available attributes to control the shape, color and thickness of the vertices.
Since polyData is a shading node it supports IPR as well as its attributes can also be connected to other nodes so that you will be able to build a complex shading network.
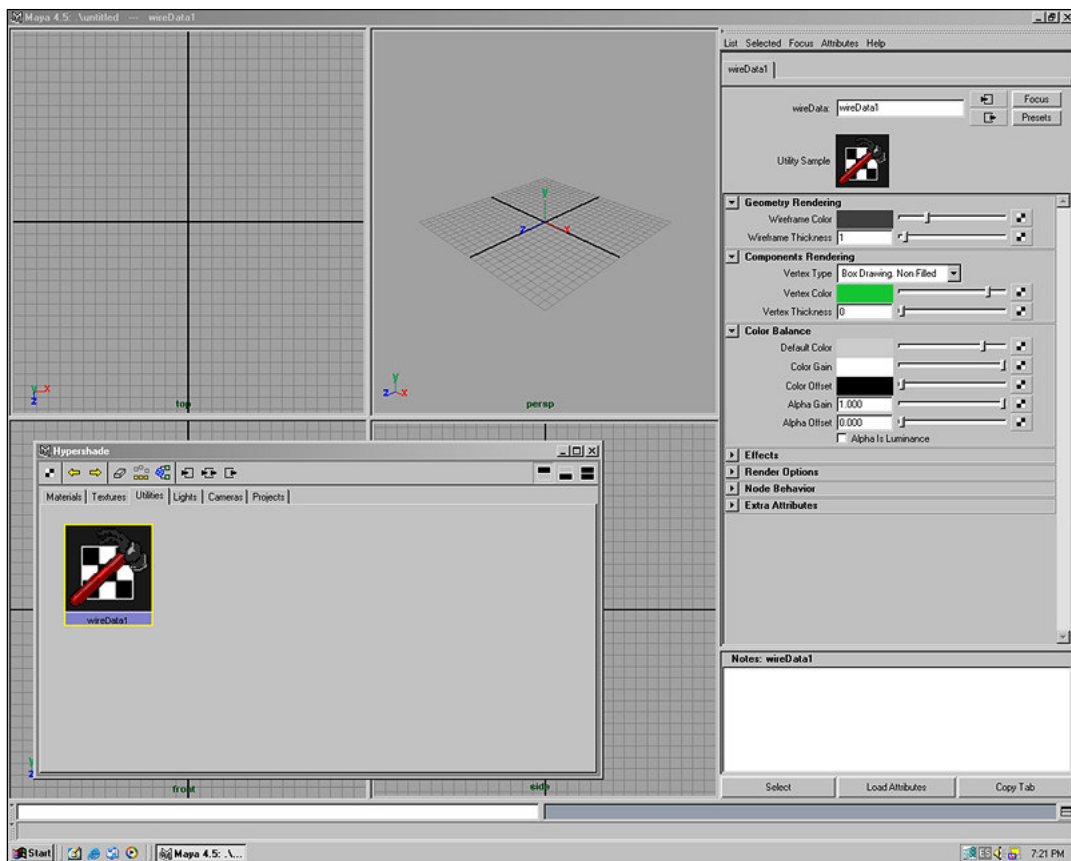
SCREENSHOT: polyData in the Hypershade.
To create a polyData node use the 'Create Render Node' window.
polyData is available within the 'General Utilities' section. Then, use the Connection Editor to connect polyData's 'Out Color' attribute to a Material's 'Color/Transparency' attribute, or drag and drop the polyData node onto the Material's attribute.

To see rendering examples go to polyData's gallery area:
products.provide3d.com/polyData/gallery

NODE NAME: polyData
NODE VERSION: 1.5
NODE TYPE: Dependency Graph Rendering node. Shader/Shading node
NODE CLASSIFICATION: Utility/General
NODE ID: 0x81199

FLAGS REFERENCES:
C=Connectable (The attribute can be connected to a compatible attribute of another node)
S=Stored (The value of the attribute is stored with the scene file)
K=Keyable (The attribute can be keyframed)
H=Hidden (The attribute is not visible in the attribute editor)

Input Attribute Name [Description]	Type [Min value; Max value] [Flags]
Wireframe Color [Controls the Wireframe Color]	Compound Float3 [0.0; 1.0] [CSK]
Wireframe Thickness [Controls the Wireframe Thickness; Pixel Units]	Int [0; 32] [CSK]
Vertex Type [Controls the Vertex Shape Type]	Enum [0=Box Drawing. Non Filled; 1=Box Drawing. Filled; 2=Circle Drawing. Non Filled; 3=Circle Drawing. Filled; 4=Cross Drawing. Filled; 5=Plus Drawing. Filled] [CSK]
Vertex Color [Controls the Vertex Shape Color]	Compound Float3 [0.0; 1.0] [CSK]
Vertex Thickness [Controls the Vertex Shape Thickness; Pixel Units]	Int [0; 32] [CSK]
Fill Color [Controls the Default Color; Non-Wireframe/Non-Vertex rendered area]	Compound Float3 [0.0; 1.0] [CSK]
Color Gain [Controls the Output Color Gain]	Compound Float3 [0.0; 1.0] [CSK]
Color Offset [Controls the Output Color Offset]	Compound Float3 [0.0; 1.0] [CSK]
Alpha Gain [Controls the Output Mask Gain]	Float [0.0; 1.0] [CSK]
Alpha Offset [Controls the Output Mask Offset]	Float [0.0; 1.0] [CSK]
Alpha Is Luminance [Switchs between Mask and Luminance for the Output Alpha]	Bool [0; 1] [CSK]
Invert [Controls the Invertions for the Output Color and Mask]	Bool [0; 1] [CSK]
Antialiasing [Controls the Antialiasing Type]	Enum [0=None; 1=Geometry; 2=Components; 3=Geometry + Components] [SK]
Filtering Size [Controls the Antialiasing Filtering]	Float [0.2; 1.0] [SK]

Input Attribute Name [Description]	Type [Min value; Max value] [Flags]
Double Sided [Controls the Wireframe and Vertices rendering visibility]	Bool [0; 1] [CSK]
Opposite [Controls the Wireframe and Vertices rendering visibility]	Bool [0; 1] [CSK]

Output Attribute Name [Description]	Type [Min value; Max value] [Flags]
Output Color [Resulting Color]	Compound Float3 [0.0; 1.0] [CH]
Output Alpha [Resulting Mask]	Float [0.0; 1.0] [CH]

Tips and Tricks

Best Quality/Performance rendering settings.

polyData node:
Filtering Size = 0.45

Maya Render Globals:
Edge Anti-aliasing = Highest Quality
Shading = 2
Max Shading = 3
Use Multi Pixel Filter = ON *
Pixel Filter Type = Gaussian Filter
Pixel Filter Width X = 2.2
Pixel Filter Width Y = 2.2

(*) The using of filtering will cause an increasing of the wireframe thickness during software rendering. If you want to render a crisp wireframe, turn it off.

FAQs

01- Is there a way to render wireframe shadows ?
No. polyData does not support wireframe shadow casting.

02- Is there a way to render wireframe thickness < 1 pixel ?
Yes. By decreasing polyData's 'Filtering Size' value. (e.g.: Filtering Size=0.4)

03- Is there a way to improve the antialiasing quality ?
Yes. By increasing polyData's 'Filtering Size' value. (e.g.: Filtering Size=0.75)

04- Is there a way to render NURBS wireframe ?
No. polyData supports polygons only.
There is a Plug-In called nurbsData which allows Maya users to render NURBS curves and surfaces wireframe. Have a look at PROVIDE3D website: www.provide3d.com

05- How can I purchase the polyData FULL version ?
Go to PROVIDE3D's purchasing area: purchase.provide3d.com/howTo
or Contact Us: purchase@provide3d.com

06- I need more info. Where can I find it ?
Have a look at PROVIDE3D website: www.provide3d.com
or Contact Us: products@provide3d.com