

12.1.18 Editors - Geometry Nodes Editor - Header - Add Menu - Curve - Read

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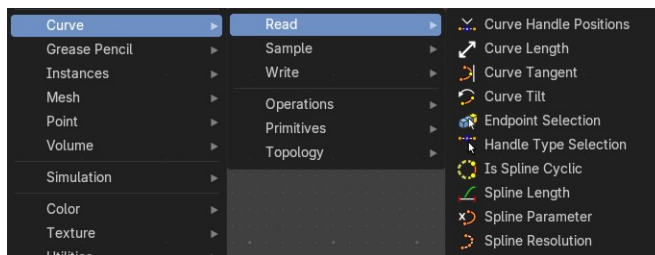
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Add - Curve - Read

Here you find curve related nodes.



Curve Handle Positions

Get the position of the left or right handle of a curve point.

Inputs

Relative

Output the handle positions relative to the corresponding control point instead of the local space of the geometry.

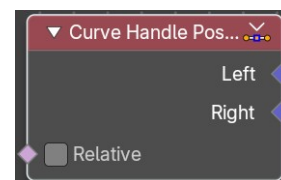
Outputs

Left

The left handle of the curve point.

Right

The right handle of the curve point.



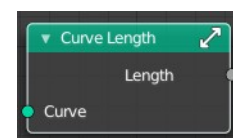
Curve Length

Retrieves the length of all splines added together.

Inputs

Curve

The input curve.



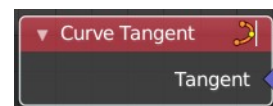
Outputs

Length

The length of the curve.

Curve Tangent

Retrieve the tangent direction of a curve. The output values are normalized vectors.



Note that for NURBS and Bézier spline curves the value retrieved from this node is the value at every control point, which may not correspond to the visible evaluated points. For NURBS splines the difference may be even more pronounced and the result may not be as expected. A Resample Curve Node node can be used to create a poly spline, where there is a control point for every evaluated point.

Outputs

Factor

The vector of the tangent.

Curve Tilt

Outputs the angle used to turn the curve normal around the direction of the curve tangent in its evaluated points.



The output is per control point. For NURBS and Bézier splines, the values will be interpolated to the final evaluated points.

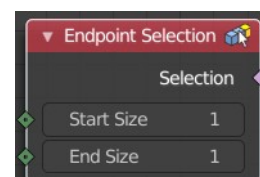
Outputs

Tilt

The tilt angle for the normal in radians.

Endpoint Selection

The Endpoint Selection node allows for the Selection of an arbitrary number of endpoints from each spline in a curve. The start and end inputs are evaluated on the spline domain. The result is outputted as a boolean field on the point domain.



Input

Start Size

The start point of the spline.

End Size

The end point of the spline.

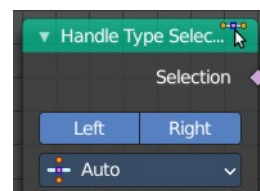
Outputs

Selection

Selection output.

Handle Type Selection

Creates a selection based on the handle types of the control points.



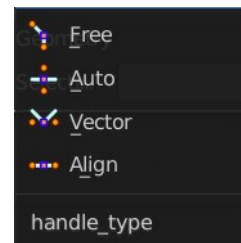
Properties

Left / Right

Whether to check for the type of handles.

Handle Type

What handle type to compare.



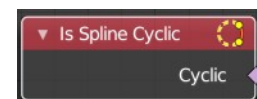
Output

Selection

The selection.

Is Spline Cyclic

Retrieve if the curve is set to cyclic.



Outputs

Cyclic

If the spline is cyclic or not.

Spline Length

Retrieve the total length of each spline in a curve.

Outputs

Length

The length of each spline in the curve.

Point Count

Integer Field input of the number of control points on each spline in the spline domain. Or in the point domain, it is the number of points on the spline that contains the given control point.



Spline Parameter

The Curve Parameter node outputs how far along each spline a control point is, with a value between zero and one. The output is different from dividing the index by the total number of control points, because the control points might not be equally spaced along the curve.

The first value is zero, so the output corresponds to the length at the control point rather than including the length of the following segment.

When used on the spline domain, the node outputs the portion of the total length of the curve (including all splines) has been traversed at the start of each spline. The order of the curve's splines is visible in the Spreadsheet Editor.

Note that for NURBS and Bézier spline curves the value retrieved from this node is the value at every control point, which may not correspond to the visible evaluated points. For NURBS splines the difference may be even more pronounced and the result may not be as expected. A Resample Curve Node node can be used to create a poly spline, where there is a control point for every evaluated point.

Outputs

Factor

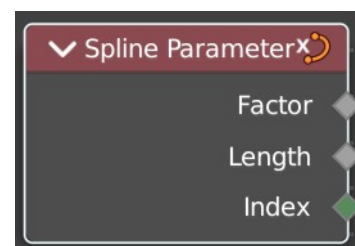
The factor of the curve.

Length

The length of the curve.

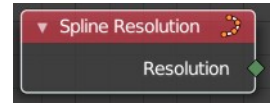
Index

The index of the curve.



Spline Resolution

Retrieve the curve resolution. Means the number of spline points.



Outputs

Resolution

The spline resolution.