



3D Path Generator

This example demonstrates the use of the visualization element Path3D. Path3D is designed to be used in combination with CODESYS SoftMotion (see the CNC 3D Editor example). However, this example shows the application of it independently from CODESYS SoftMotion.

Product description

A path with 2200 points in the shape of a gate is created in this example. The generated path is visualized in yellow. Parts of the path are highlighted in red, by setting the member variable `udiSourceElementID` of `VisuStruct3DPathPoint` and the visualization property `Highlighting` variable. The track is calculated from the points of the path.

The data structure `VisuStruct3DTrack` of `System_VisuElem3DPath.library` is used for hosting the points of the path and the track.

More information

PLC_PRG:

The main program of this example instantiates an element of `VisuStruct3DControl` for navigating in the 3D model. It also creates an instance of `PathGenerator (FB)` that generates the path and calculates the track. Both structure instances are linked with the appropriate visualization element.

`PathGenerator (FB)`:

This function block first creates a path of 2200 points. Afterwards, the track, which moves along the path, is calculated with the help of a ring buffer. That means, when the buffer is full, the next point will be saved at the beginning and the starting point will be incremented by one and so on.

Visualization:

The visualization object `Path3D` uses the information of the `VisuStruct3DTrack` elements `Path` and `Track` and the instance of `VisuStruct3DControl` for the 3D model. In the `Path3D` Properties the color of the path and the track can be changed. Also the color for highlighting specially elements of the path can be chosen.

General information

Manufacturer:

3S-Smart Software Solutions GmbH
 Memminger Strasse 151
 87439 Kempten
 Germany

Support:

<https://support.codesys.com>

Item:

3D Path Generator

Item number:

000032

Sales:

CODESYS Store

<https://store.codesys.com>

Included in delivery:

- CODESYS software and / or license key with billing information
- For training courses and events: Booking confirmation

System requirements and restrictions

Programming System	CODESYS Development System Version 3.5.1.3 or higher
Runtime System	CODESYS Control Version 3.5.1.3
	All
Supported Platforms/ Devices	Note: Use the project "Device Reader" to find out the supported features of your device. "Device Reader" is available for free in the CODESYS Store.
Additional Requirements	-
Restrictions	-
Licensing	License activation optional on CODESYS Runtime Key or CODESYS Soft Key (free of charge component of CODESYS Controls)
Required Accessories	e.g. CODESYS Security Key

Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact sales@codesys.com.

Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.