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Siemens Digital Industries Software

User Documentation

for

Post Configurator Postprocessor

Parallel Axis Setting Layer

Summary

This document will help user to understand how to use parallel axis setting layer to redefine axis position output for parallel axes in Post Configurator Postprocessor.

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Table of Contents

1 Introduction

This document explains how to redefine axis position output for parallel axes of machine kit by parallel axis setting layer in Post Configurator Postprocessor.

1.1 What is it

It is single function to change axis position output of parallel axis in Post configurator postprocessor, including cdl, tcl and psl file. Post writer can import this layer by PC layer manager to any machining postprocessor.

About Layer manager, please reference NX help

- https://docs.plm.automation.siemens.com/tdoc/nx/1899/nx_help#uid:xid1128418:index_mfgpostconfig:xid1487919:xid1446295

2 Function

For machine kit with parallel axes, user could redefine driven axis motion based on quill axis position. Import this layer into postprocessor, add “Set Parallel Axis” UDE event in operation, then postprocessor outputs one reference point by quill axis, and every motion event of driven axis updates its axis position according to reference point.

Parallel axis setting layer could only work in turbo off or advanced turbo mode in NX1926 and later version.

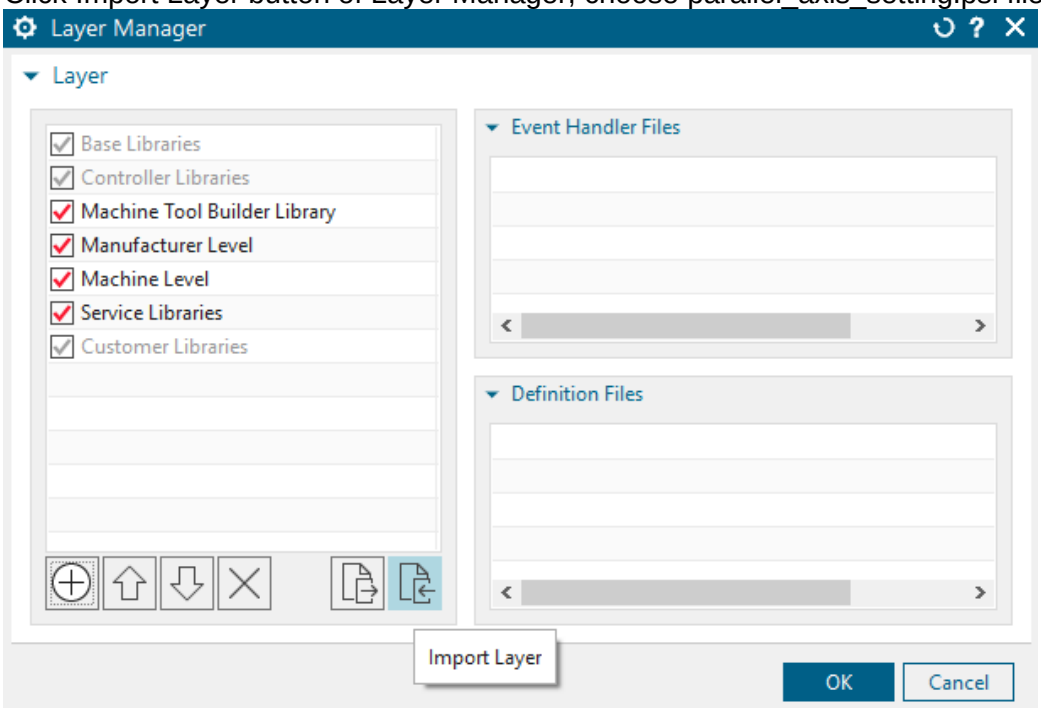
Take CAVITY_MILL operation in sim17_turnmill_setup_sinumerik_mm as an example, the machine kit has one W axis as quill axis and Z axis as driven axis.

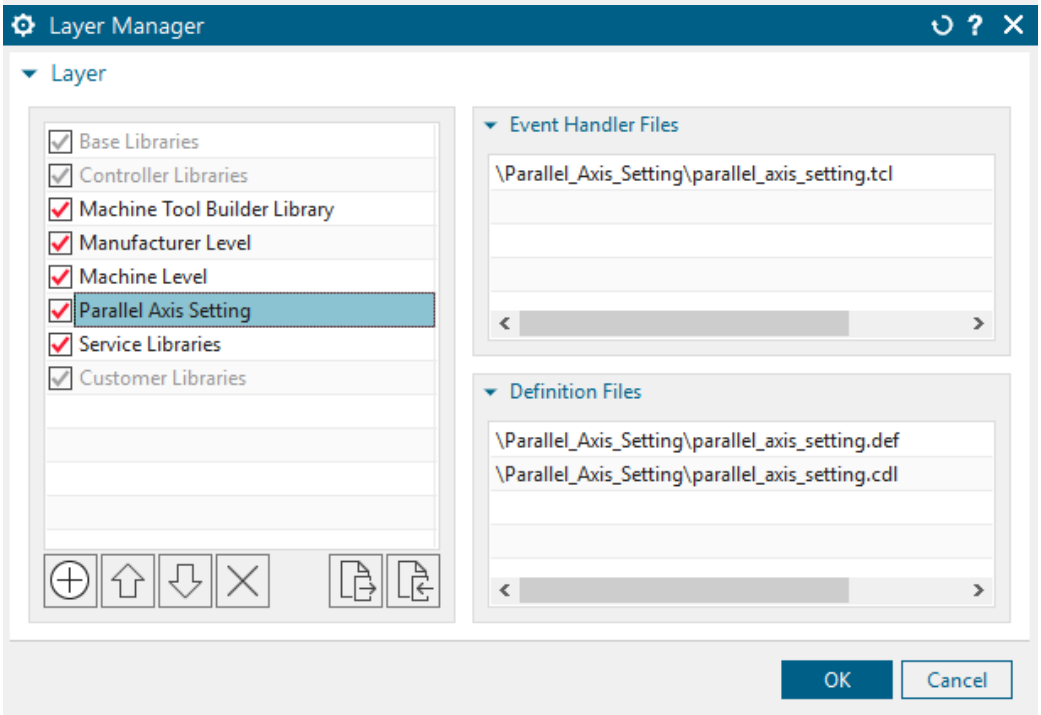
```
N20 SUPA Z=_Z_HOME
N30 SUPA X=_X_HOME Y=_Y_HOME
N40 T14003 M6
N50 G0 W3000.
N60 G55
N70 CYCLE800(1,"R_DATA",0,57,0,0,0, -2.618, -22.8017,0,0,0,0, -1,0)
N80 X-3105.69 Y219.67 Z-2452.927 S1592 D1 M3
N90 X-3519.074 Y204.884 Z-3177.005
N100 Z-3288.058
N110 G94 G1 G90 Z-3291.058 F1592.
N120 X-3477.823
N130 X-3408.381
N140 X-3415.43 Y145.133
N150 X-3494.96
N160 X-3534.966
N170 Z-3288.058
N180 G0 Z-3180.084
N190 X-3519.916 Y201.938 Z-3177.159
N200 Z-3319.016
N210 G1 Z-3322.016
N220 X-3478.512
…..
N500 Z-3349.974
N510 G0 Z-3177.437
N520 CYCLE800()
N530 M5
N540 G153 Z99999.9 D0
N550 M2
```

3 How to use it

3.1 Import Layer

Click Import Layer button of Layer Manager, choose parallel_axis_setting.psl file in browser.



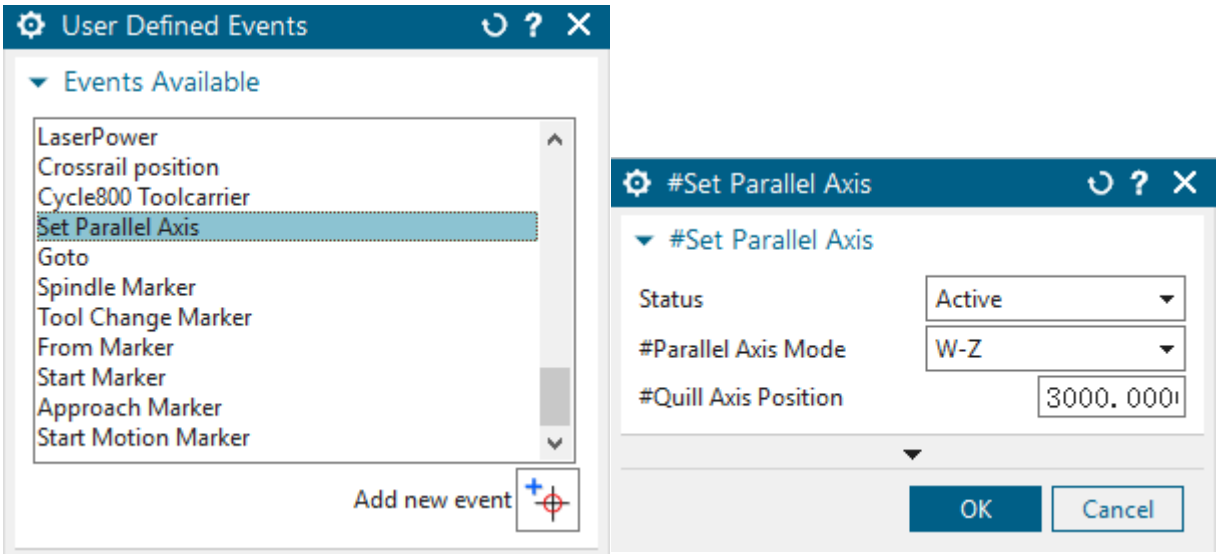


3.2 Set UDE

Add “Set Parallel Axis” UDE event into operation, it comes from parallel_axis_setting.cdl file.

Select one parallel axis mode according to machine kit, such as “W-Z”, the first axis name W means quill axis, and the second axis name Z is driven axis.

Input one axis position for quill axis.



4 Software Versions

This document has been created and maintained for below versions,

NX Version	Comment
NX1926	

5 Documentation History

When	Who	What
16-Jul-2020	Haixing Zhu	Initial version