

Interface to External Programs

Requirements:

- CALYPSO 4.8 or higher
- Configuration file for the external program must be generated.
- Configuration file for the interface must be generated.

Opening the interface:

Check size, more, special program

Select program, coordinate system and features/characteristics. Start the program via "Launch program now." CALYPSO waits (up to the specified timeout) until the program has ended and then reads the result files.

Configuration file structure for external program:

Name, Format XML.

Example:

```
<ConfigFileTest>
  <PathToSP>C:\Program Files\Zeiss\Calypto\home\om\testPrg\fromCalypto\</PathToSP>
  <PathFromSP> C:\Program Files\Zeiss\Calypto\home\om\testPrg\toCalypto\</PathFromSP>
  <Timeout>10</Timeout>
</ConfigFileTest>
```

PathToSP: folders for files to external program

PathFromSP: folders for files from external program

Timeout: maximum waiting times (in minutes) before external program is terminated.

Configuration file for the interface:

Name: C:\Program Files\Zeiss\Calypto\home\om\config\configCFSpecialProgram.txt

Structure:

Name for menu, name of the executable program, name of the configuration file

Example:

Testprogramm1, wscript.exe "C:\Program Files\Zeiss\Calypto\home\om \testPrg\test1.vbs",
C:\Program Files\Zeiss\Calypto\home\om\testPrg\configTest1.xml

Starting the external program:

The program is started with 2 parameters.

Example:

Wscript.exe "C:\Program Files\Zeiss\home\om\testPrg\test1.vbs"

C:\Program Files\Zeiss\home\om\testPrg\fromCalypto\DataToSpecialProgram.txt

C:\Program Files\Zeiss\home\om\testPrg\toCalypto\DataFromSpecialProgram.txt

Files used for data exchange:

DataToSpecialProgram.txt:

List with files to the external program.

ElementsToSpecialProgram.xml:

Results of the selected features and characteristics.

SysParaToSpecialProgram.xml:

System parameters such as number of decimal places, language setting.

<name>_Points.txt:

File for each selected feature/characteristic that contains the associated actual points. The points are unfiltered and in the base system. The file contains the points and their vectors.

DataFromSpecialProgram.txt:

List with files from the external program to CALYPSO.

Possible files: ResultsFromSpecialProgram.xml, pdf files.

ResultsFromSpecialProgram.xml:

Format XML (see below). The results are entered as a plan-actual comparison in the CALYPSO log and can also be evaluated with statistics.

Pdf file:

Attached at the end of the CALYPSO log.

Example of ResultsFromSpecialProgram.xml:

```
<GeometryData>
  <Name>SonderProgramm1</Name>
  <Element>
    <GroupId>schnittpunkt_1</GroupId>
    <References>Kreis_1,Kreis_2</References>
    <Line
      TypeSymbol="xValue"
      Identifier="ZeileX"
      Actual="0.0868265939"
      Nominal="1.0"
      UpperTol="0.1"
      LowerTol="-0.1" />
  </Element>
</GeometryData>
```

Several features/characteristics can be included. Each feature/characteristic can have several lines. Each line is exported as a plan/actual comparison.

Expanding the interface with Revision 4.10:

SysParaToSpecialProgram.xml:

The file also contains the log header parameters.

The following data is sent to the external program for **curves**:

ElementsToSpecialProgram.xml:

Name of the selected features/characteristics such as name and type of geometry of the feature/characteristic, name of the file with actual points, name of the file with the nominal points, name of the file with the measured points.

<name>_ActPoints.txt:

File for each selected feature/characteristic that contains the associated actual points. For each point, the file contains the point number, the point, the normal vector, the status and the stylus radius. Number of actual points = number of nominal points.

<name>_NomPoints.txt:

File for each selected feature/characteristic that contains the associated nominal points. For each point, the file contains the point number, the point, the normal vector, the status and the upper and lower tolerance.

<name>_MeasPoints.txt:

File for each selected feature/characteristic that contains the associated measured points. For each point, the file contains the point number, the point, the normal vector, the status and the stylus radius. The number of measured points does not have to equal the number of actual points.

SysParaToSpecialProgram.xml:

System parameters such as number of decimal places, language setting.

ParaToSpecialProgram.xml:

Any data such as minimum/maximum error, number of points with min./max. error.

Expanding the interface with Revision 4.10.08, 5.0.02:

Changes with curves:

With curves, the ParaToSpecialProgram.xml file was only sent to the external program once (with the data from the last curve) until now. From this version, the file for each curve will be sent with the name <name>_ParaToSpecialProgram.xml. The name is contained in the ElementsToSpecialProgram.xml file (see CurveParam).

<Element

ActPoints="C:\home\om\2d-Kurve vorne_ActPoints.txt" CurveParam="C:\home\om\2d-Kurve vorne_ParaToSpecialProgram.xml"

GeoType="curve"

Identifier="2d-Kurve vorne"

MeasPoints="C:\home\om\2d-Kurve vorne_MeasPoints.txt"

NomPoints="C:\home\om\2d-Kurve vorne_NomPoints.txt" />

<name>_ParaToSpecialProgram.xml:

Any data such as minimum/maximum error, number of points with min./max. error.

Changes to the configuration file of the external program:

Until now, the timeout from the configuration file was used for manual and CNC operation.

From this version, you can now also specify the timeout for manual operation separately in an additional line in the configuration file. If this line is left out, the timeout for CNC operation is used as before.

<Timeout>10</Timeout>

CNC operation

<ManTimeout>300</ManTimeout>

Manual operation