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## **GEFASOFT** Vision Pro tools

Gognex VisionPro gives the opportunity to develop own tools and integrate then seamless. GEFASOFT uses this interface both for project specific tools and features to make things easier for vision engineers.

Decrease of complex workflows or scripts to just a few tools Easier teaching and parameterizing Integration of additional features and functions not available from Cognex

At the moment there are about 30 tools in the GEFASOFT VisionPro tool library.

#### Halcon Wrapper Tool

Visualize, you could have the ease of use and funcionality of Cognex combined with the enormous functions of MVTec Halcon to develop image processing solutions without borders...

The GEFASOFT Halcon Wrapper Tool makes it real - very easy and efficient.

The image processing library Halcon from MVTec is a comprehensive collection of image processing algorithms that are way beyond the features Cognex provides - especially for 3D purposes. However Halcon has no GUI elements like the Cognex tool-editors or the Cognex ToolGroup-workflow-tree.

Our HalconWrapperTool combines the best of both worlds. Halcon-procedures or -applications can be executed easy and without any further programming effort within Cognex jobs.

Features:

Automated creation of terminals for all input and output parameters of the Halcon procedure Edit Halcon procedure in tool editor Display Halcon iconics in tool editor Use procedure file (\*.hdvp) or select a procedure from HDev program (\*.hdev) Automated configuration of data for supported filetypes: CogImage8Grey ? HImage CogImage16Grey ? HImage CogImage24PlanarColor ? HImage CogCircle ? HRegion CogEllipse ? HRegion CogRectangle ? HRegion CogRectangleAffine ? HRegion CogLineSegment ? HRegion CogPolygon ? HRegion Int (+Array) ? HTuple Double (+Array)? HTuple String (+Array) ? HTuple

#### **Reference Toolblock**

In image processing applications there are often workflows and toolchains that are absolutely identical in numerous jobs and only differ in e.g. the search pattern of a GogPMAliIgnTool. Modifications on such a workflow, e.g. additional tools, have to be done manually in all jobs. This is very time consuming and often leads to errors.

The ToolBlcokReferenceTool gives the opportunity to usa a single tool block at different locations within the same or also in different jobs. Modifications to the master toolblock are reported automatically to all loaded ToolBlockReferenceTools. Due to using a single memory location for the master tool block, a modification also impacts all not loaded ToolBlockReferenceTools.

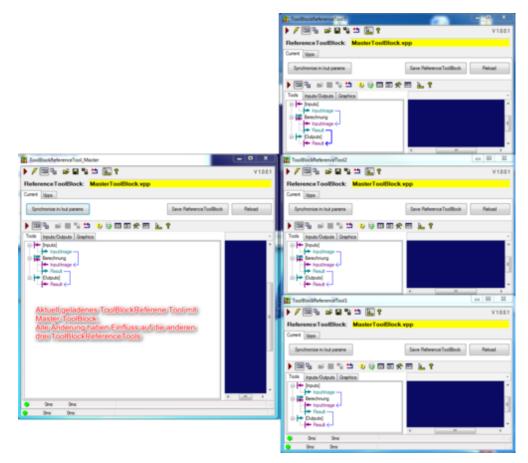
Features:

Automatic creation of input- and output terminals based on the master toolblock

Automatic update of all ToolBlockRefernceTools that use the same master toolblock

Easy selection or creation of master toolblocks

Marking of input terminals connected to other tools, whose dedicated terminal of the master tool block is missing after modification



#### **ToolBlockSelector Tool**

The ToolBlockSelectorTool is capable of switching dynamically between different ToolBlocks or workflows. A so called "Selector" is defined as an input terminal, whose data is used to load a specific ToolBlock. The Selector can be set e.g. by a PLC.

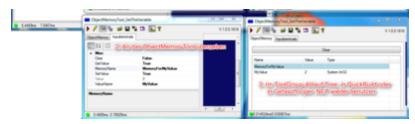


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#### **Object Memory Tool**

The Object Memory Tool sets up a global object memory. Any object can be written there using a designated key and read / used elsewhere.

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### **ResultCsv Tool**

The ResultCsvTool is made for saving any data to CSV files. The files can be processed using e.g. Microsoft Excel.

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# Calculator Tool Calculator Tool

With the Calculator Tool calculations and queries can be realized and and used as terminals in further tools.

Features:

Availabe constants / operators / functions Euler's number e Pi

Operators Add and Subtract Multiply and devide Positive or negative algebraic sign Opened or closed Brackets XOR-Operator Comparison operators (!=, <, <=, ==, >, >=) If-Then operators

Functions Angle conversion (Angular degree <--> radian measure) Absolut-Betrag Rounding up and down Cosinus, Cosinus-Hyperbolicus, Sinus, Sinus-Hyperbolicus, Tangent, Tangent-Hyperbolicus, Cotangent Exponential-function, Logarithm, Potency Minimum and maximum determination Radical calculation

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System requirements Cognex VisionPro 7.2 or 8.2 SR1 Optional: MVTec Halcon V11 or better