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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 GogPMAlilgnTool. 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 ToolBlcokRefernceTool 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.
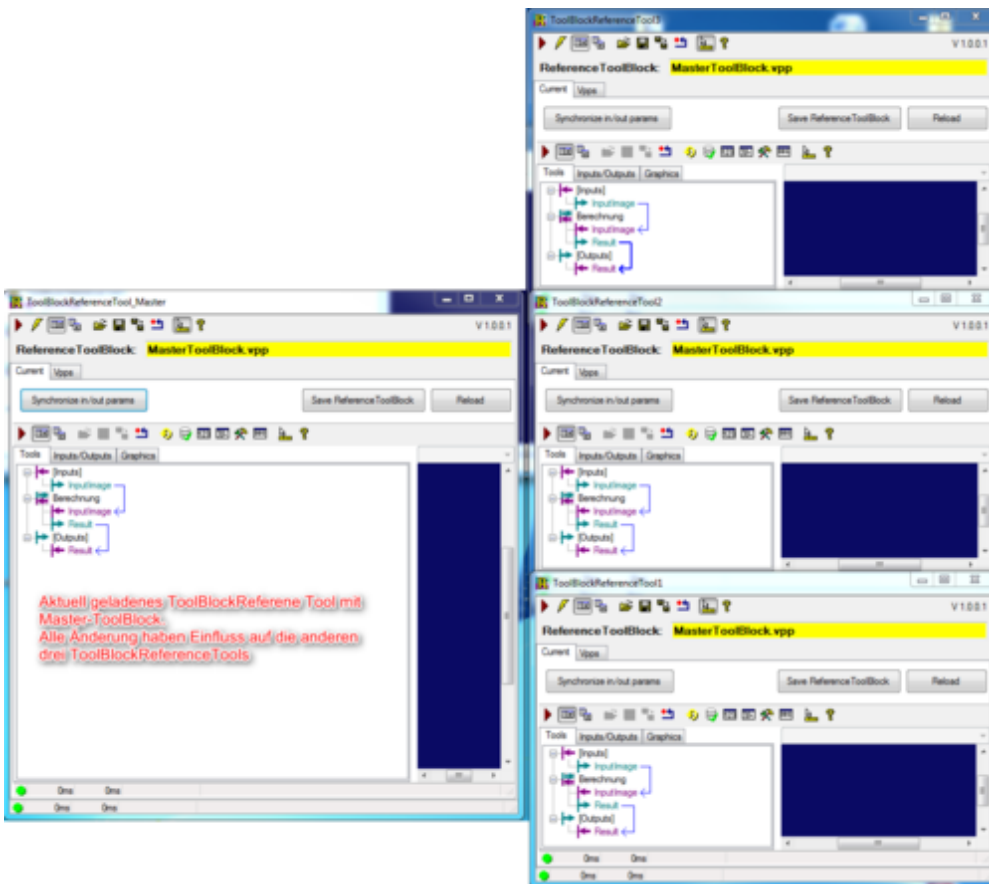
Features:

Automatic creation of input- and output terminals based on the master toolblock
Automatic update of all ToolBlockRefernceTools that use the same master toolblock
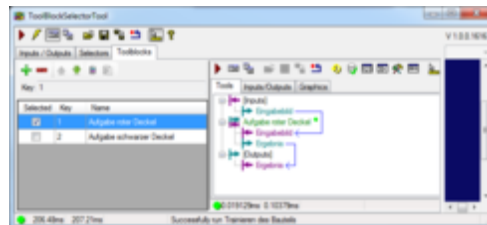Easy selection or creation of master toolblocks
Marking of input terminals connected to other tools, whose dedicated terminal of the master tool block is missing after modification
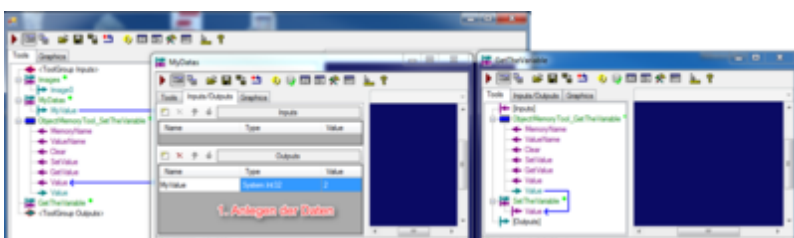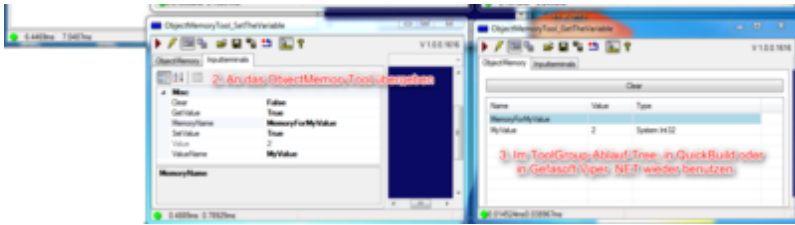
ToolBlockSelector Tool

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.
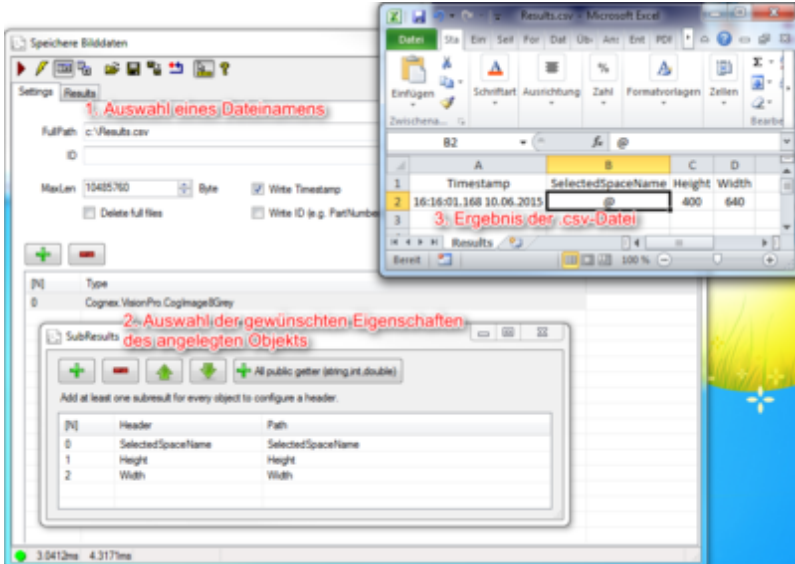

Object Memory Tool

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

ResultCsv Tool

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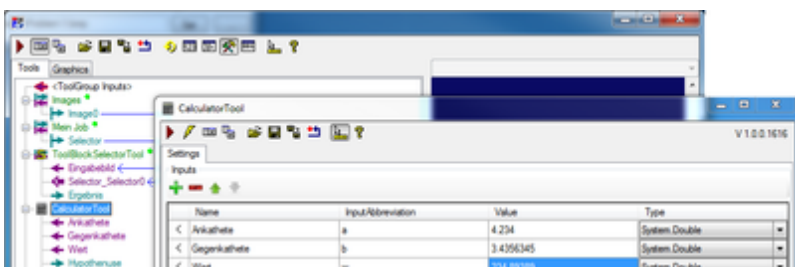

Calculator Tool

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

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