Tutorial

Halcon Commands

Using Halcon Commands with the vicosys

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'fixedvalue': 'run_filter'		Counter	
'inputs': [Image	
"identifier": "InputImage", "source": {	- 11		
"Selection": "himage_from_grey_page". "himage_from_grey_page": "-1" }		Ruby	
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1.			
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identifier": "OutputImage",			
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)			
1			
}			
	<u> </u>		
its error	v		

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Impress

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Validity

This document is valid for the following devices as well as the derived device configurations.

- Multi-camera system vicosys 5300
- Multi-camera system vicosys 5400
- Multi-camera system vicosys 19001

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1 Foreword

The command **Calculation Script (Ruby)** offers the possibility of integrating Halcon commands into the vicosys multi-camera systems.

This document explains how to use the tools provided by Vision & Control and gives you a brief overview of the methods.

Requirements

It is assumed that a PC with a current vcwin is available and that there is knowledge in using vcwin and HDevelop. You will need the following components:

- Multi-camera system (vicosys 5x00 or vicosys 19001 from software version 4.16.300 and valid Halcon license)
- Operating software vcwin (version 2.33 or higher)
- Programming environment HDevelop



2 Create image processing code with HDevelop

ADVICE

Test code, such as loading test images, can remain in the main. This is not executed when loading in vicosys. However, syntax errors in the test code prevent the program from loading.

- Create image processing code with HDevelop.
- Insert the image processing code into a procedure.



 Transfer the saved *.hdev program to the folder Modules on the vicosys. (Menu Communication > System Resources / Initial Program > Modules)

System Resources / Initial Pr	ogram		?	×
Display Test Programs Geometry Sets Pattern Images Process Data Modules Web Pages Parameter-Sets Initial Program Set Password	Name filter.hdev	Time 09:32:40	Date 01.11.21	Size 1 KB
Save on PC	File Information	Free Memory	: 25	5 MB
Load to Vision System	Remove		0	к



3 Create vicosys Halcon command code

You can create the JSON command code for the vicosys command with the DemoGUI utility or write it yourself. The DemoGui utility is located on your vicosys.

Open in the browser the path: http://[IP-vicosys]/jsongui/index.html

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Methode	
fester Text 🗸 🗸	
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Bildseite	-1
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Input Element	
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Ouelle	
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Ergebnis <mark>Variable</mark> Liste	en
erstes Ergebnis	5
letztes Ergebnis	
+	
Ergebnisse speichern	
-	
Ergebnis	
in Bildseite ~	
Bezeichner	OutputImage
Bildseite	2
Linosene	0
Kamera	

- 1. Select "Halcon Script ausführen" from the drop-down menu.
- 2. Enter the relevant *.hdev file and method under Script Datei and Methode.
- 3. Set all input parameters of the method under Inputs. The order of the parameters is freely selectable. The assignment is made via the identifiers.
- 4. Enter the desired output parameters of the method under Ergebnisse speichern.
- 5. When all parameters are set, use the [Generate JSON] button to create the JSON command code. Select the contents of the window and copy it to the clipboard.



4 Execute command code using Rubyscript

- 1. Insert a Calculation Script command at the desired position in your vcwin test program.
- 2. Use the VC::Command.run command to execute the JSON command code via Rubyscript.
 # run halcon filter

retval,error,testresults = VC::Command.run(%{

- 3. In the script window of the Calculation Script dialog, paste the copied JSON command code.
- 4. Complete the script with the code for error handling.

```
} )
puts error
return (retval==0)
retval is the ErrorCode that VCWin commands return. The Rubyscript command fails if the
HalconScript fails.
In the output of puts, error the errors are displayed, e.g. the exception message if Halcon to
```

In the output of puts error the errors are displayed, e.g. the exception message if Halcon threw an exception.

5. You can use the [Test] button to check the syntax of the current code and to display the result of the command to the right of the button.

```
Calculation script (Ruby)
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# Run Filter
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retval,error,testresults = VC::Command.run( %{
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       "HalconScript": {
                                                                                                                                            Lines
                                                                                                                                                     ۲
              "script": {
"Selection"
                   "Selection": "fixedvalue",
"fixedvalue": "filter.hdev"
                                                                                                                                           Circles
                                                                                                                                                     ۲
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                                                                                                                                                     ۲
              methode":
                   "Selection": "fixedvalue",
"fixedvalue": "run_filter"
                                                                                                                                          Contours
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             }.
"inputs": [
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                                                                                                                                            Image
                                                                                                                                                     ۲
                         "identifier": "InputImage",
                         "source": {
    "Selection": "himage_from_grey_page",
    "himage_from_grey_page": "-1"
                                                                                                                                         Ruby
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                         }
                   }
{
                         "identifier": "FilterSize",
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                          "source": {
    "Selection": "result",
    "result": {
        "first": "11",
        "last": ""
                               }
                         }
                  }
             ],
"outputs": [
                         "Selection": "image",
                         "image": {
    "identifier": "OutputImage",
    "..."_1"
                                "page": "-1",
"camera": "0"
                         }
                  }
            1
      }
|}
|})
puts
          error
    Test
                                                                                                                                              1:1
                                                              OK
                                                                             Cancel
```