

Vision Assistant environment

ME-CAE/2019

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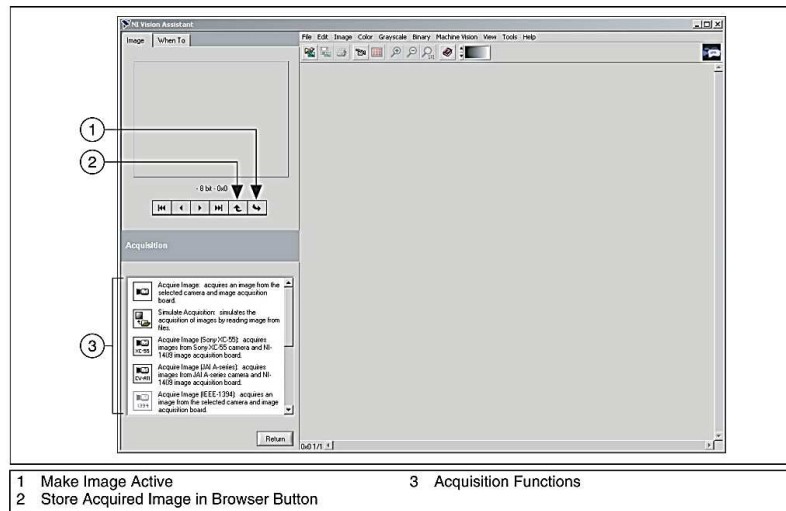
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Based on:

NI Vision Assistant Tutorial

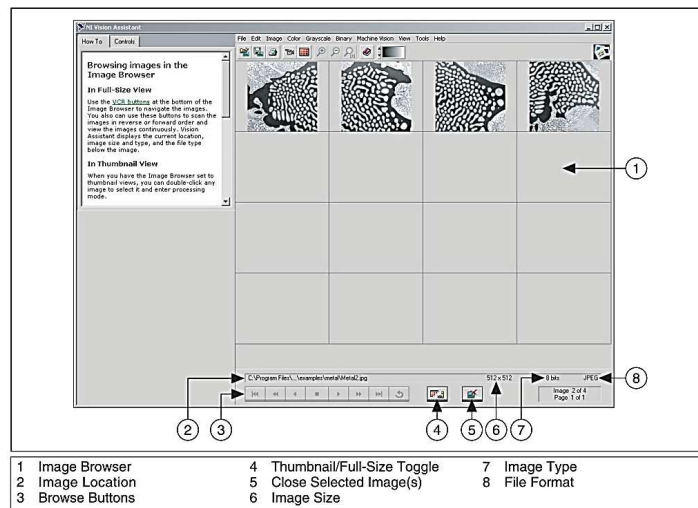
June 2011 372228M

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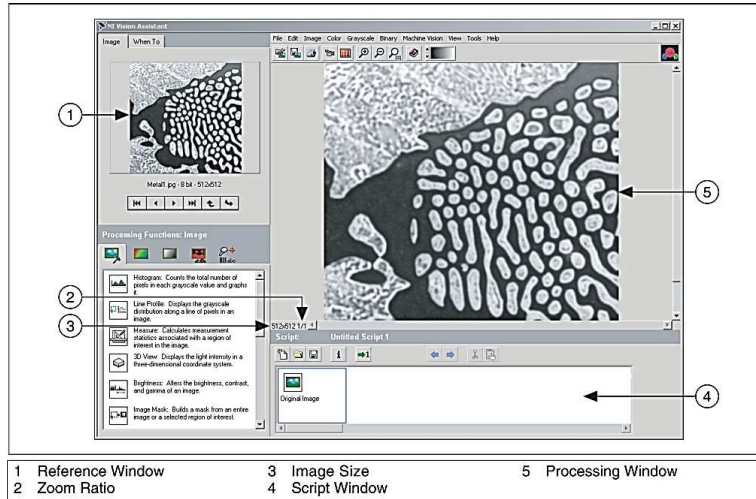
- | | |
|--|-------------------------|
| 1 Make Image Active | 3 Acquisition Functions |
| 2 Store Acquired Image in Browser Button | |

Figure 2-5. Acquiring Images in Vision Assistant



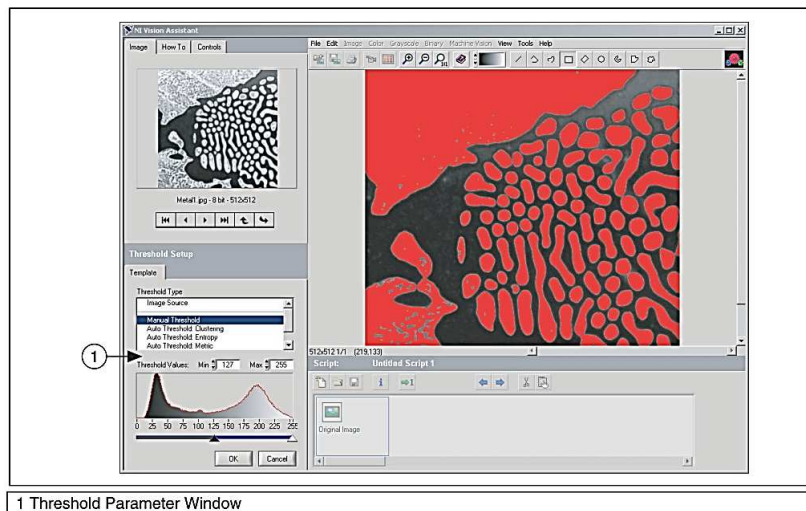
- | | | |
|------------------|------------------------------|---------------|
| 1 Image Browser | 4 Thumbnail/Full-Size Toggle | 7 Image Type |
| 2 Image Location | 5 Close Selected Image(s) | 8 File Format |
| 3 Browse Buttons | 6 Image Size | |

Figure 2-1. Image Browser



- | | | |
|--------------------|-----------------|---------------------|
| 1 Reference Window | 3 Image Size | 5 Processing Window |
| 2 Zoom Ratio | 4 Script Window | |

Figure 2-2. Processing an Image



- | |
|------------------------------|
| 1 Threshold Parameter Window |
|------------------------------|

Figure 2-3. Thresholding an Image

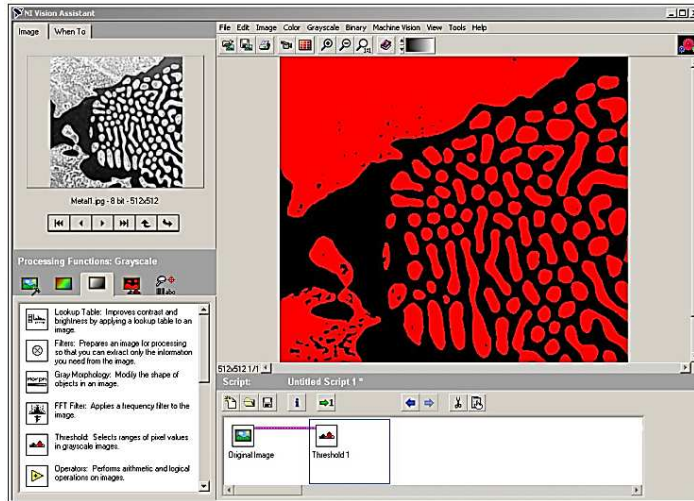


Figure 2-4. Thresholded Image

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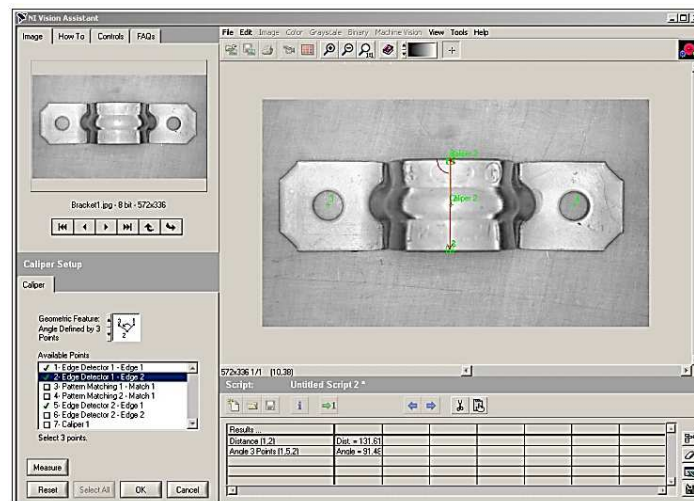




Figure 4-7. Using the Caliper Tool to Collect Measurements

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Main Menu → Tools

Tools Help

- Batch Processing
- Performance Meter...
- View Measurements
- Create LabVIEW VI...
- Create LabVIEW FPGA Code...
- Create C Code...
- Create .NET Code

Performance Meter ...

Grayscale Binary Machine Vision Identification Tools Help



Performance Meter

Host Machine
 An estimate of the time required by NI Vision Assistant to perform the inspection on the current image is: 1 ms or 765,22 parts/s.
 Average Inspection Time: 1,31 ms
 Longest Inspection Time: 1,53 ms
 Standard Deviation: 0,26 ms

Step Name	Average	Std-Dev	Shortest	Longest
Edge Detector 1	0,12 ms	0,03 ms	0,06 ms	0,15 ms
Edge Detector 2	0,11 ms	0,03 ms	0,05 ms	0,13 ms
Caliper 1	1,06 ms	0,22 ms	0,51 ms	1,26 ms

Details << OK

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Main Menu → Tools → Results Viewer

Results Viewer

Step Name	Step Type	Result Name	Value	Unit
Edge Detector 1	Edge Detector	Number of Edges	2	
		Edge 1.X Position (Pix.)	190,59	pixels
		Edge 1.Y Position (Pix.)	244,00	pixels
		Edge 2.X Position (Pix.)	284,76	pixels
		Edge 2.Y Position (Pix.)	244,00	pixels
Edge Detector 2	Edge Detector	Number of Edges	3	
		Edge 1.X Position (Pix.)	229,00	pixels
		Edge 1.Y Position (Pix.)	99,67	pixels
		Edge 2.X Position (Pix.)	229,00	pixels
		Edge 2.Y Position (Pix.)	154,23	pixels
Caliper 1	Caliper	Measure 1:Distance.Dist.	94,18	pixels
		Measure 2:Distance.Dist.	43,11	pixels

Close

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Batch Processing → to use the script for image processing

