# **DeltaVision OMX<sup>™</sup>**

### Start softWoRx

- 1. Click the softWoRx icon ( ) located on the Linux desktop. The system will display the softWoRx main menu bar.
- 2. Click **Process** to display the Process menu. The last five items on the **Process** menu apply to the DeltaVision OMX.

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	OMX SI Reconstruction	1X Menu Items	
	OMX Alignment Parameters		
	OMX Image Registration Calibratio	n	
	OMX Image Registration		
	Make OMX OTF		

The table to the right briefly describes the primary function of each DeltaVision OMX menu item.

Menu Item	Description
OMX SI Reconstruction	Reconstructs SI image data acquired using the DeltaVision OMX.
OMX Alignment Parameters	Creates parameters for the "Shift and Rotate" registration method.
OMX Image Registration Calibration	Calibrates OMX channels by creating image maps and mathematical models and applying them to the image data.
OMX Image Registration	Applies image registration settings to the input file.
Make OMX OTF	Creates a structured illumination OTF file from a PSF file acquired on the DeltaVision OMX.

#### **Open Task Builder and Add SI Reconstruction Task**

- 1. In softWoRx, click **Process | Task Builder** to open the Processing Task Builder dialog box.
- 2. Select the image file(s) to process. Choose one of the following:
  - Click Add Files... Add Files... and select one or more files from the displayed list. If necessary, use the **Directories** and **Filter** fields in the Select File dialog box to navigate to the directory containing the file(s) to select.
    - OR
  - Drag-and-drop a file from the Konqueror File Manager into the Image Files to Process **1** section.
- 3. Enable the desired Processing Options.
  - Automatically Run the Queue 2. Starts the specified processing tasks immediately after you click Submit to Queue Submit To Queue. Disable this option to process the contents of the queue at a later time using the softWoRx Queue Manager.
  - Move Input Files Before Processing 3. Specifies a folder to move the specified input files to prior to processing. The output files will be saved to the same directory as the input files. (This option is often used to move the input and output files to a network location in order to save space on the workstation's hard drive.)
- In Processing Tasks ④, select the OMX SI Reconstruction task from the drop-down list (if it is not already selected), and then click Options \_\_\_\_\_ to display the parameters for that task.

**NOTE** Many tasks can be added to the task list. "OMX SI Reconstruction" and "OMX Image Registration" are described in this document. Refer to the softWoRx Imaging Workstation's online help system for information describing the other tasks.

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## **Define SI Reconstruction Task Options**

- 1. In the SI Reconstruction Task Options dialog box, specify an OMX Base OTF File OMX Base OTF File using one of the selection methods described in Step 2 earlier in this procedure. As shown in the figure to the left, the default setting for OTF file selection uses a single OTF file for processing all channels; however, you can also choose to use channel-specific OTFs:
  - a. Activate the Use Channel Specific OTFs Scheck box and then click Set Up OTFs Set Up OTFs to open the OMX Channel OTF Options dialog box (not shown).
  - b. In the OMX Channel OTF Options dialog box, select the correct **Image Source Drawer**.
  - c. Click \_\_\_\_\_ to select the OTF file to use for each channel. Once all OTFs have been defined, click **OK**.
- 2. The process for entering a background subtraction value is similar to the process used to specify an OTF:
  - To use the default background subtraction value for all channels, leave the Background Intensity Offset I field set to the default value and do not activate the Use Channel-Specific Background I field.
    OR
  - a. To specify background subtraction *for individual channels*, activate the Use Channel-Specific Background *o* check box and then click Set Up Background Offsets Set Up Background Offsets to open the OMX Channel Background Options dialog box (not shown). NOTE Channel-specific background subtraction values override the single value entered into the Background Intensity Offset field.
  - b. Select the correct Image Source Drawer, enter the background values for each channel, and click OK.
- 3. Activate **Use Camera-Specific kO Angles** (a), especially for systems configured with Blaze illumination. (Camera-specific kO angles are set up by the GE installation team and typically provide better results than the default kO angle values.)
- 4. Click **Done** to close the SI Reconstruction Task Options dialog box.

#### **Define Image Registration Task Options**

- 1. In the Task Builder, add a new task, "OMX Image Registration." Click Options \_\_\_\_\_ to open the OMX Image Registration Task Options dialog box.
- In the OMX Image Registration Task Options dialog box, specify the appropriate Image Source Drawer 1 and Registration Method 2. Ensure that Apply Z Alignment 3 is enabled.
- 3. Click **Done** to close the OMX Image Registration Task Options dialog box.



## Submit to Queue

• Click Submit to Queue Submit To Queue. Depending on whether or not you enabled the Automatically Run the Queue 2 in Step 3 on the previous page, the job will either start immediately after you click Submit to Queue or when you choose to run it at a later time from the softWoRx Queue Manager.

Refer to the *DeltaVision OMX Getting Started Guide* and the softWoRx Online Help for additional information regarding the above topics. See the DeltaVision OMX Quick Reference #1 for information regarding image acquisition.