

Volocity Tutorial Importing and Exporting Data

This tutorial will demonstrate how to import and export data from Volocity®.

Import

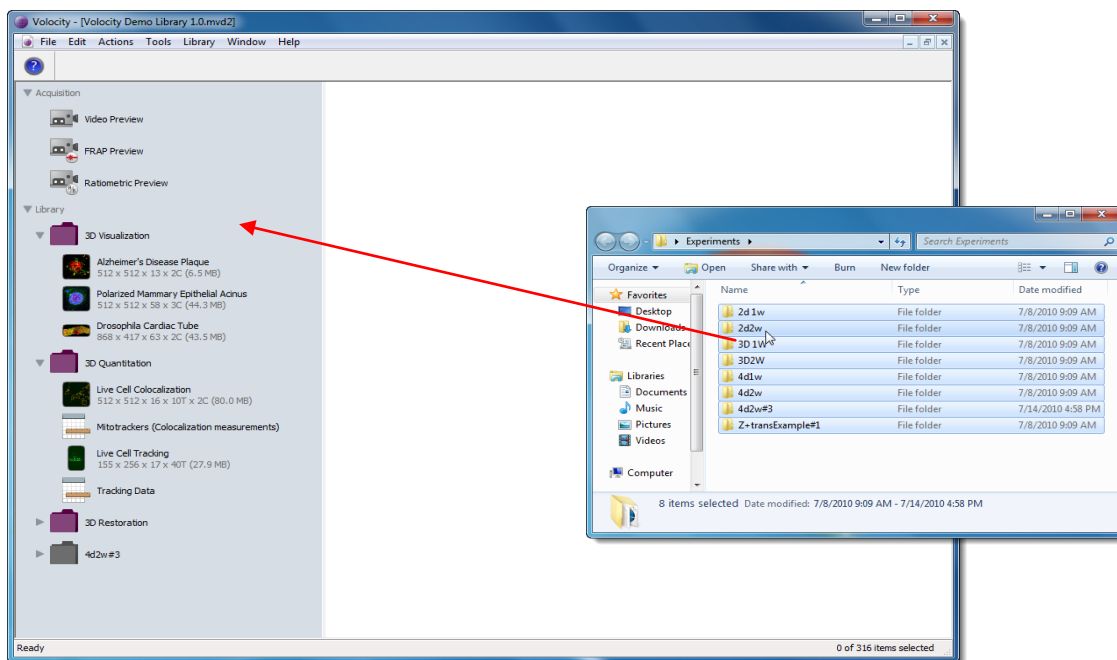
Images in supported file formats may be added to Volocity by drag and drop. Volocity will recognize metadata where present and create an image sequence with the appropriate XY, Z dimensions, channels and timepoints. An image sequence is the data structure within Volocity; it seamlessly handles two and three dimensional data with one or more channels and one or more timepoints.

The following file formats will automatically create image sequences if metadata is present:

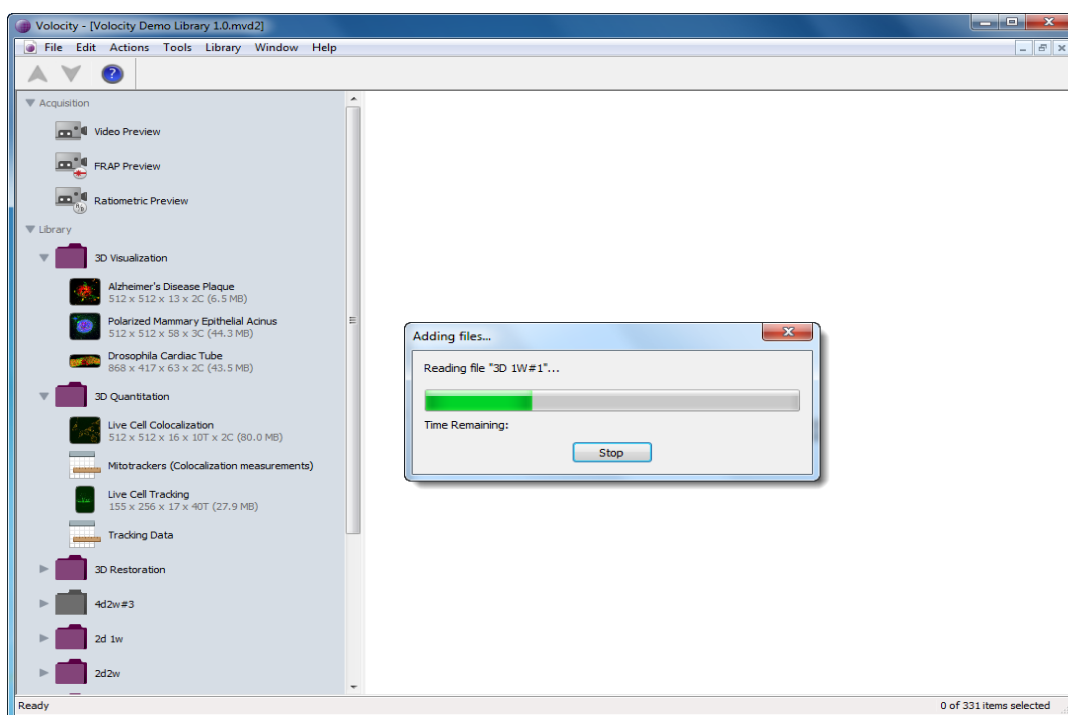
- Bio-Rad® PIC
- DeltaVision®
- GE® TIFF (generated by GE Healthcare IN Cell Analyzer 1000 systems)
- Harmony® Index and Images (generated by PerkinElmer Operetta®)
- Harmony Index with referenced Images (generated by PerkinElmer Operetta)
- ICS/IDS (Image Cytometry Format)
- Improvision® TIFF extensions (metadata included in the Image Description tag)
- Leica® LIF (generated by Leica confocal microscopes)
- Leica® TIFF (generated by Leica confocal microscopes)
- Meta Imaging Series® TIFF format (used by Metamorph® 7.5 software and later)
- MetaMorph® STK (this is a TIFF variant)
- NeuroLucida® Tracing XML format
- Olympus® OIF (this is a TIFF variant)
- Olympus® TIFF (generated by Olympus FluoView™ confocal microscopes)
- Olympus® TIFF (generated by cell^R, xcellence)
- OME TIFF (as described by the Open Microscopy Environment <http://openmicroscopy.org>)
- Openlab™ LIFF
- PerkinElmer AIC
- PerkinElmer TIFF (generated by PerkinElmer Ultra VIEW® systems)
- TILLVision
- Zeiss® LSM (this is a TIFF variant)
- Zeiss® ZVI (generated by AxioVision)

Open a library; recent libraries are listed on screen, or go to the File menu and select **Open Library...**

Drag the image, or folder of images, into the Library View on the left hand side of the screen. Multiple experiments may be added to the library in one drag and drop. Images may be added to Volocity from a server volume, removable media or local disk.



A progress bar is shown during the import. Images are added to the library as Image Sequences

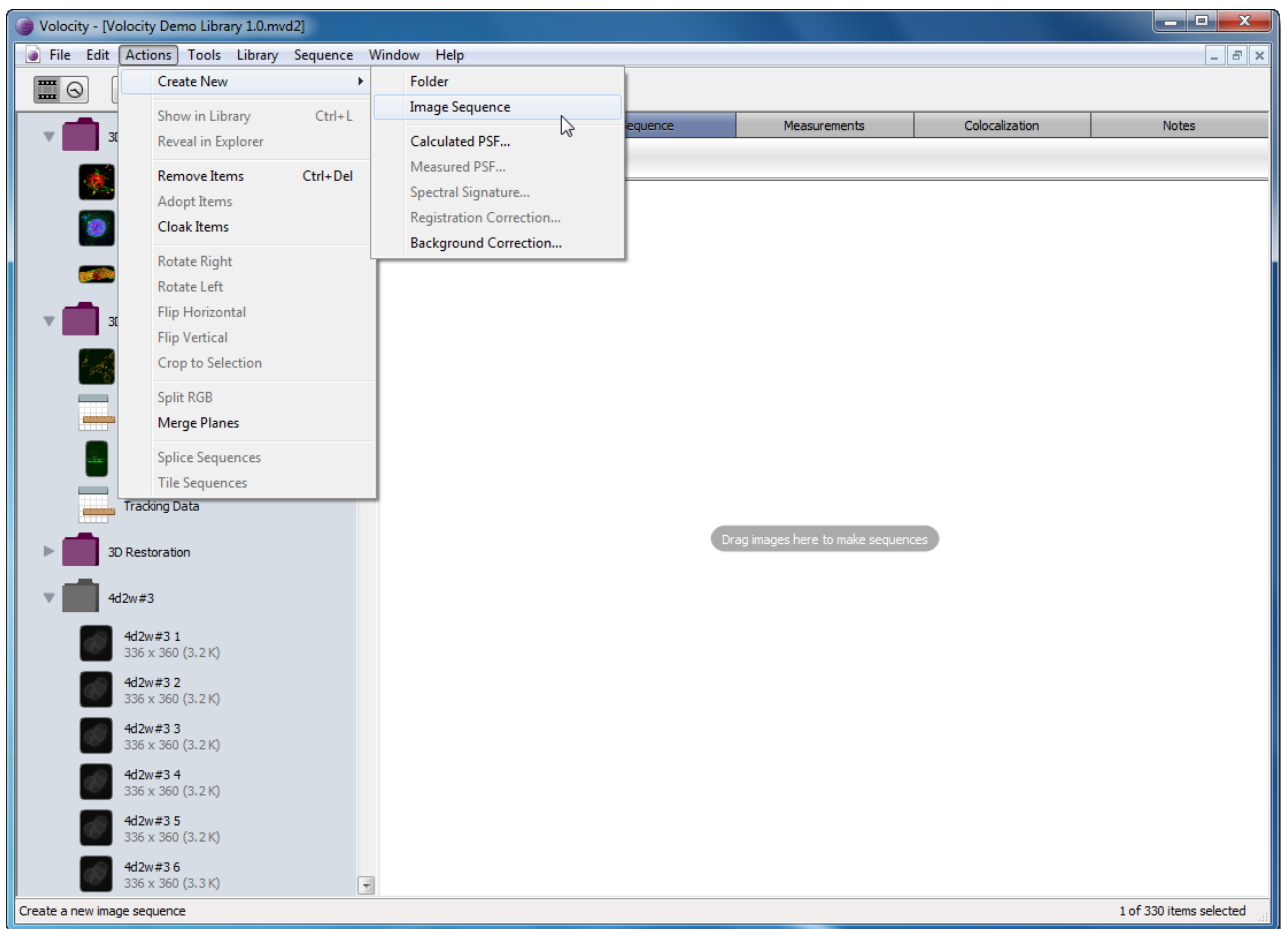


The following file formats, although supported by Volocity, do not normally have metadata associated with them:

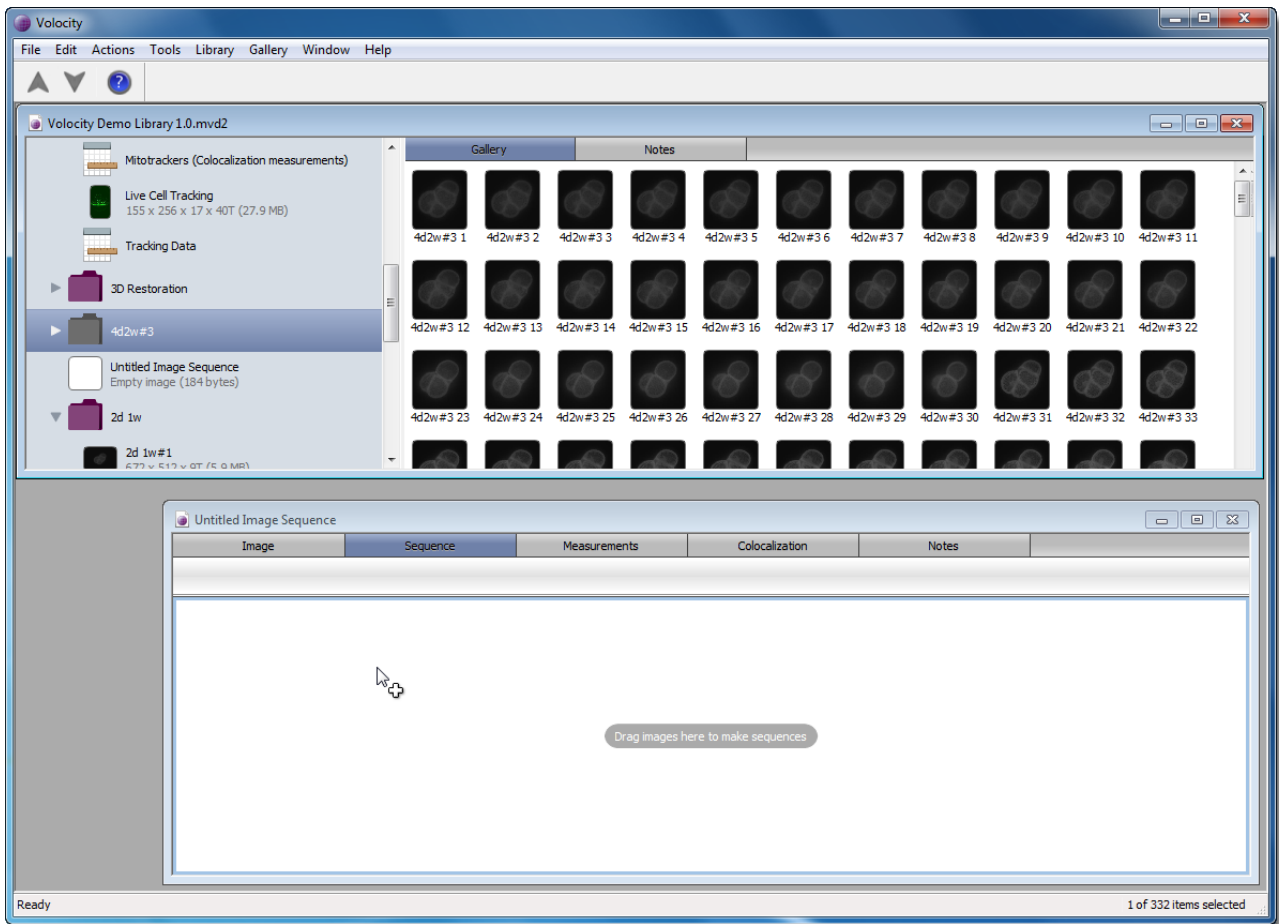
- Apple® PICT
- JPEG
- QuickTime® Images (this includes formats such as Photoshop® PSD and any other still image format supported by QuickTime®)
- TIFF
- Windows® BMP

For these formats, and any other format where it has not been possible to create an Image Sequence, files will be added to the library as 2D images. If a folder of images is dragged into Volocity they will be added to the library as a folder of images.

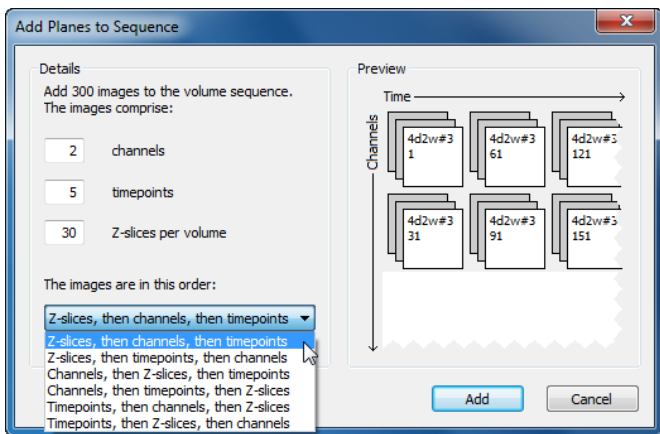
These images may be made into a sequence manually; you can only create one sequence at a time with this manual method. Create a new, empty Image Sequence by selecting **Create New... Image Sequence** from the Actions menu.



Double click on the new, empty Image Sequence in the library to open it in a separate window. Drag the folder, or selected images, to the new Image Sequence. To add a subset of images, select just those images required.

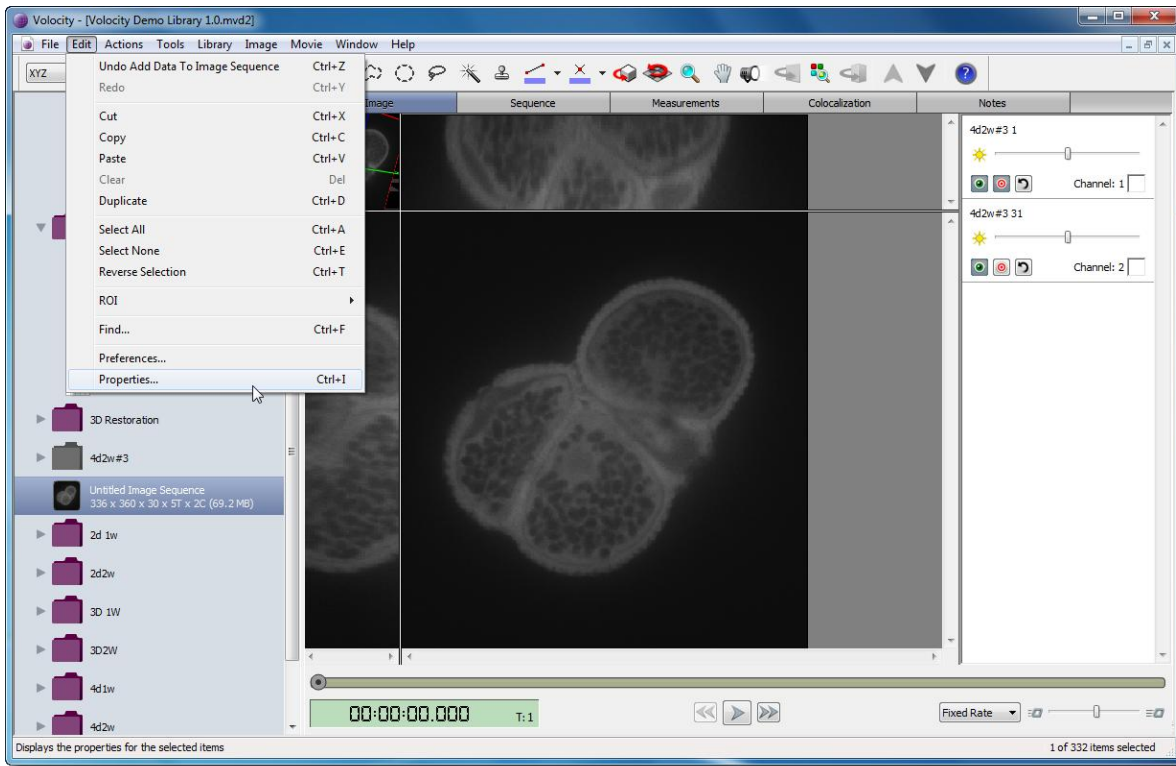


You will then be prompted to specify the number of channels, timepoints and z slices and to specify the order of the images.

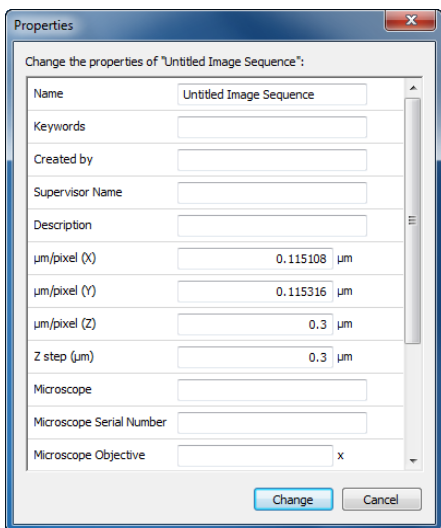


For other files of the same type, drag them straight from the source into an empty Image Sequence without going to the library first.

Finally, check the spatial calibration of the Image Sequence. This will ensure that the images appear in the correct aspect ratio in Volocity Visualization and will allow calibrated measurements to be made. Click once on the new Image Sequence and select **Properties...** from the Edit menu.



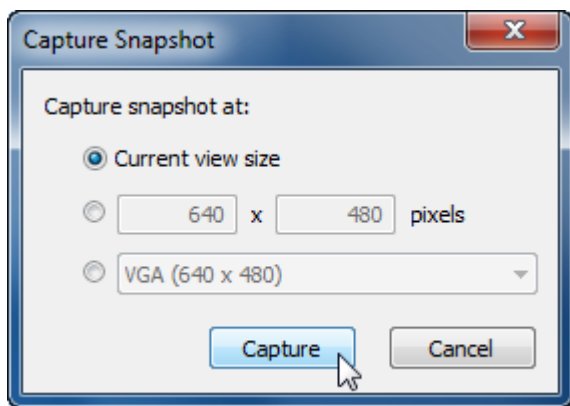
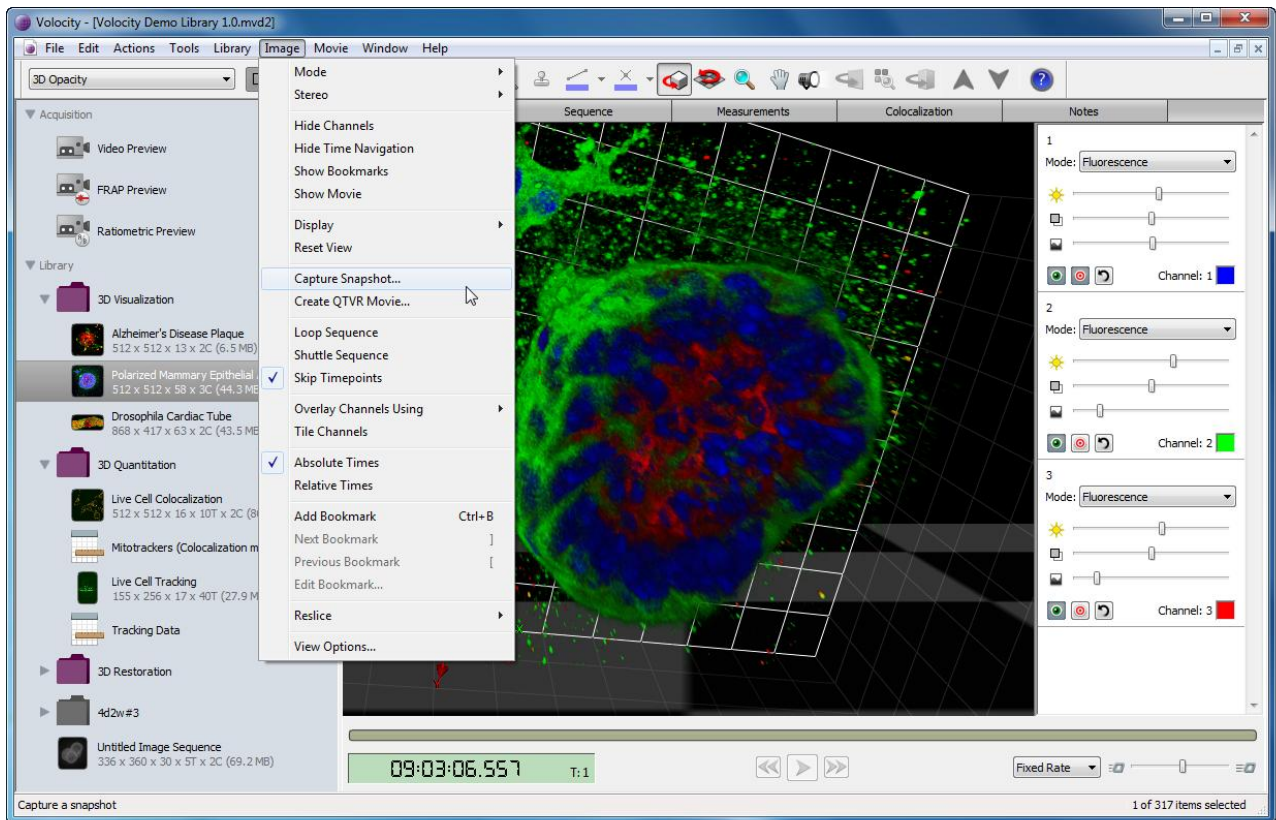
Check these properties and adjust if necessary. You are now ready to work with your data in Volocity.



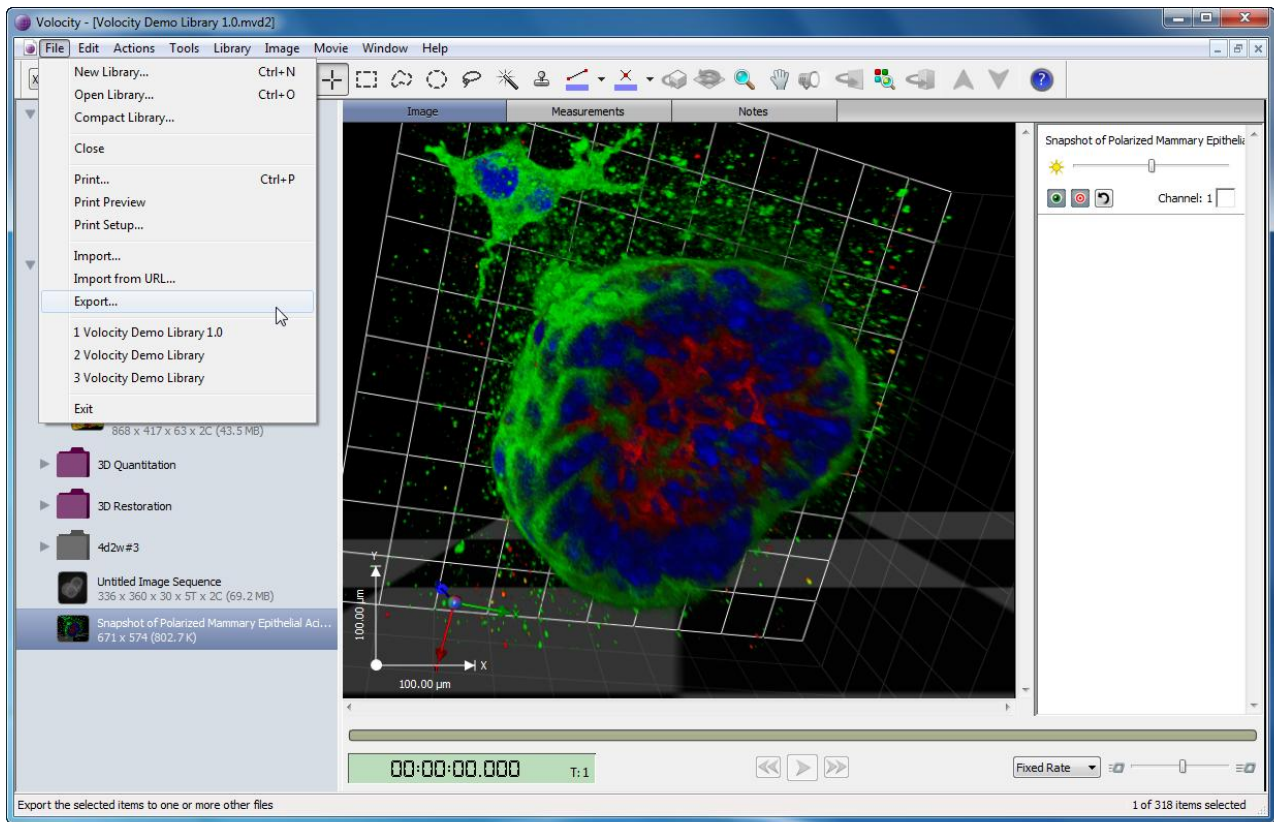
You may encounter an additional file type called a Velocity Library Clipping (.acff), which is also read by Velocity. These files are library content that has been exported from one library for adding to another library. Drag and drop a library clipping folder into an open library.

Export

To export what you see in the Image View at any time, capture a snapshot. The **Capture Snapshot...** command is found in the Image menu in the Image View.



The snapshot is added to the library as a 2D image. Select this image in the library and choose **Export...** from the File menu to export the snapshot in any of the supported file formats.



Snapshots may be exported in any of the following supported file formats:

- AVI Movies
- ICS/IDS (Image Cytometry Format)
- JPEG
- OME-TIFF (as described by the Open Microscopy Environment <http://openmicroscopy.org>)
- Openlab LIFF
- QuickTime® Movies
- TIFF for Publication
- TIFF (with Improvion extensions)
- Velocity Library Clipping
- Windows® BMP
- WMV Movies

Velocity also supports writing views as QuickTime® movies and as AVI movies.

Select an Image Sequence in the Library View to export it as any one of the previously listed supported file formats.

If you are interested in creating an animated movie of the Image View, see the [3D Visualization and movie making tutorial](#).

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