

# How to improve the file management of PICOLAY

PICOLAY loads the stacking sequence into an internal list and then stores all resulting images in this very list, too. This kind of file management soon renders the list more and more confusing for the user. The method given below is strongly recommended:

## 1. Prearrangement of a PICOLAY-Session

Before starting PICOLAY generate the folder PICOLAY\_TEMP. Inside this folder generate the following subfolders:

1\_STACK\_A

2\_STACK\_B

3\_PICS+MAPS

4\_STEREO

5\_SLIDESHOW

Copy the stacking sequence into the subfolder 1\_STACK\_A, start PICOLAY and load this sequence into the internal list of PICOLAY using <File> <Add images>.

## 2. Generating an improved stacking sequence

Start the stacking-routine using <Stack operations> <Set stacking parameters> and activate in the dialog box {Auto-align images} and {Auto enhance} in the dialog box. If SEM-sequences are processed, activate in addition <Options> <Correct rotation> before you start the stacking-routine.

PICOLAY now generates a second stack whose images ("frames") begin with xy#, furthermore the files p#map... (depthmap) and p#sharp... (resulting synthesized stacking image).

Now leave PICOLAY and answer the question "Keep them saved ?" in the dialogbox with <YES> (this you must do whenever leaving the program).

## 3. Saving the results

Shift the improved stacking sequence into the subfolder 2\_STACK\_B, then shift the files p#map... and p#sharp... into the subfolder 3\_PICS+MAPS. After that rename these two files. In both cases let the filename begin with 01\_ .

From now on all stacking operations are based on the improved stacking sequence in the subfolder 2\_STACK\_B loading this sequence into the internal list of PICOLAY, then using <Stack operations> <Stack with current parameters>. All pairs of files so

generated are shifted into the subfolder 3\_PICS+MAPS after leaving PICOLAY, then use 02\_, 03\_ and so on instead.

All images of the improved stacking sequence are marked with a “x”. If some of these files are disturbing the stacking image to be generated (usually those which display the deeper part of the object) double-click on those images. The “x” will be deleted and when activating the stacking-routine again PICOLAY will ignore those images. This is a very effective way to optimize the result, because those files can easily be reactivated by another double-click.

In addition PICOLAY has many other image-processing features not dealt with here.

#### **4. Stereo images**

To generate stereo images copy the best file pair into the subfolder 4\_STEREO and load this pair into the internal list of PICOLAY. Then act in the following way:

1. Click on the depth map and transfer this map into the right window by <Edit> <Copy to depth map>.
2. Click on the stacking image and transfer this image into the right window by <Edit> <Copy to result window>.
3. To check these procedures click on <Flip view> in the upper frame of the right window. Map and image should be present then.

Now the 3D-modus is activated in the upper frame of the right window and stereo images of different formats can be generated using varying parameters if necessary. After having generated several stereo images deactivate map and stacking picture by double-click.

Now click on the stereo images generated one by one and check their quality again in the left window. Usually you must reduce their size by clicking on [-] in the upper frame of the left window. If you do not want to store them activate them by double-click – the “x” is displayed again – then delete them using <Image list> <Delete marked p#-files>. When you leave PICOLAY then you will find map, stacking image and the neat stereo images in the subfolder 4\_STEREO.

#### **5. Slideshow and animated GIF-files**

To generate animated GIF-files copy map and stacking image into the folder 5\_SLIDESHOW, then proceed as described in chapter 4. When the 3D-modus is activated execute the following steps:

1. Click on <3D-modus>
2. Activate {Stepwise rotation around axis}
3. Key in the other parameters required (see “Stereo images of microscopical objects”)
4. Choose format [L]+[R]
5. Deactivate {Stereo}

After starting the process with <GO> a sequence of slide show images will be generated. Activate these images by <Image list> <Toggle marks>, then start the slide show by <Image list> <Start slide show>. Stop the slide show by clicking at random on the list (<ESC> does not work!). If you are content with the resulting slide show generate the animated GIF -File by <Image list> <Generate animated GIF-image>

The method given here is rather clear, but the resulting GIF -file has usually about 50 MB, too much to be displayed on a website. How to avoid this is explained in detail in the script "Stereo images of microscopical objects".

## **6. Terminating a PICOLAY-session**

When everything is done rename the resulting images stored in the subfolders and shift them into your own permanent folders. Always store the stacking image plus the corresponding depth map as you need the map to generate stereo images again. This must be considered when renaming the images (e.g. Cymbella\_pic.jpg, Cymbella\_map.jpg). After this the contents of all subfolders are deleted.

## **7. Concluding remark**

Readers of this short text who have never used PICOLAY before may come to the conclusion that the methods given here are rather laborious and cumbersome, especially the frequent quitting and restarting of PICOLAY. In fact this can be done easily as PICOLAY starts without any delay; and as the file-managing program (TOTAL COMMANDER e.g.) is kept open all the time it becomes part of PICOLAY during the whole session, if you so place the icon of PICOLAY in such a way that you can click on it without difficulty.