Five Imaging Challenges in the Research Lab

Five Imaging Solutions Using Ocular

OCULAR®
Scientific Image Acquisition Software

1 Live Image Tinting

Challenge:
Using scientific grade monochrome cameras versus color sensors is common in fluorescence microscopy due to the advantages in resolution and sensitivity. However, the scientist must jump between the green samples observed in the eye piece and the black and white sample seen on the screen.

Solution:
Ocular lets the user tint the live image to the correct dye color of choice. This enables the researcher to more easily view and capture the representative images that best represent their work.

2 Live View Control

Challenge:
Most imaging programs use multiple file menus or dialog boxes to control various aspects of image acquisition and saving. This slows down the process of capture.

Solution:
All the tools needed for image set-up and capture in Ocular are positioned around the live image, ensuring the researcher does not have to move the mouse far to find the next tool needed. In Ocular, this one dialog box solution is called “Live View Control” dialog.

3 Movie Preview

Challenge:
Most Imaging solutions freeze the live display during movie acquisition to capture the frames. But how does the scientist know what’s going on, what if it went out of focus? What if the sample went out of the field of view?

Solution:
Ocular’s Live Preview allows the user to monitor what’s going on during the move acquisition and adjust accordingly, making sure the best images are captured from the experiment.

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4 Time-Lapse and Stream – Start/Stop

Challenge:
Most imaging solutions allow the user to define a frame interval and number of images for capture, or a total set time of capture. For example, the functionality provides the ability to define 100 frames or 10 seconds of images. For a scientist, it is difficult to define the exact number of frames or amount of time in an experiment as each experiment happens. What might be most important could happen on frame 101 and the number of frames captured was set at 100 images.

Solution:
Ocular has two solutions for this challenge. The first is Start Stop, which allows the user to start the acquisition and stop when ready. The other solution allows the researcher to run the experiment live and when activity begins, he or she can press Start, and Ocular will save the last X number of selected frames. This capability allows scientists to never miss an important event during an experiment.

5 Advanced Saving – Snap or Publish

Challenge:
Scientific images carry more information than most Windows applications can manage. However, researchers need to maintain this information for analysis and publication.

Solution:
Ocular provides the ability to save images in high bit-depth analysis formats (such as TIFF) by using a Snap feature. Images can also be saved in a basic 24-bit color format that's suitable for publication.

Ocular also enables the user to Snap or Publish images to the desktop for additional analysis. It uses a prompt file to save each time or provides the ability to save to a default folder.

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