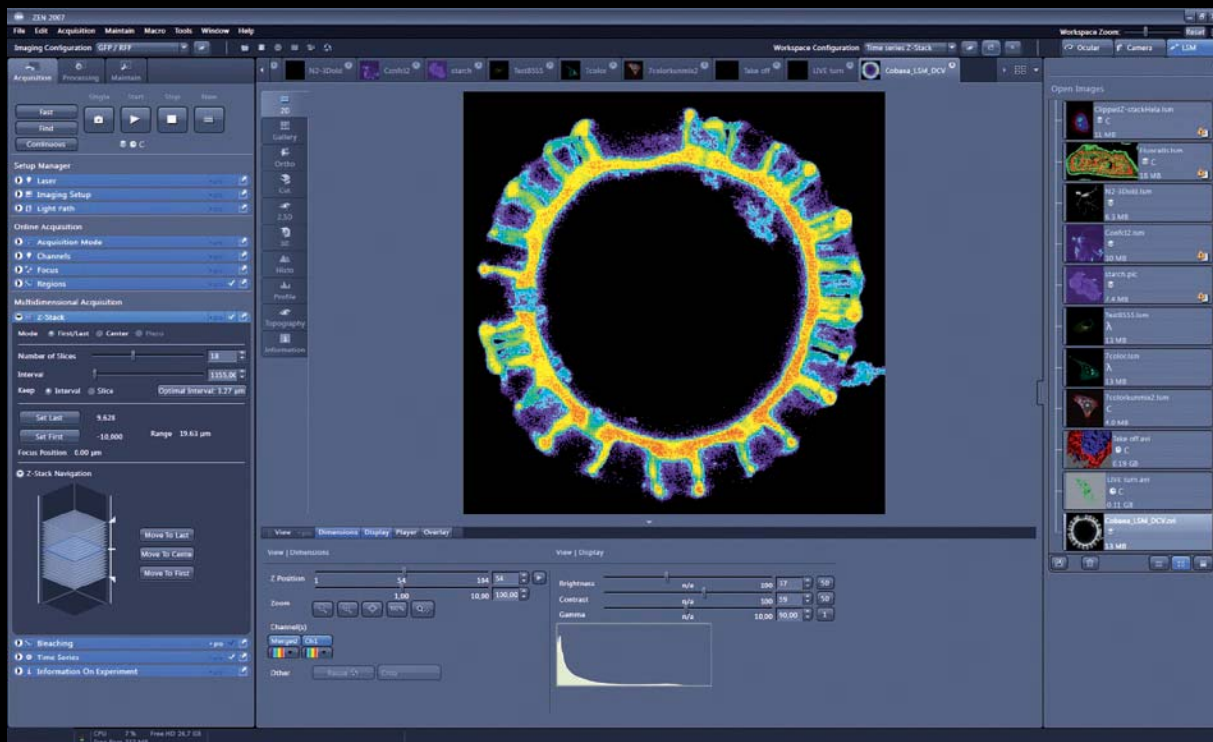


Efficient Navigation in Confocal Imaging

New Standards in User-Friendly Software



With ZEN 2007, Carl Zeiss is setting new standards in user-friendly software for Laser Scanning Microscopy. The combination of leading edge software programming and design tools with traditional, Zeiss optical and mechanical precision creates an optimal fusion between state-of-the-art technology and intuitive user guidance

The ZEN Interface is tailor-made made for the LSM 5 Family and is structured according to the typical workflow of the experiments performed with confocal systems:

On the "Left Tool-Area" the user finds the tools for Image acquisition, processing and System Maintenance, easily accessible via 3 tabs. All functions needed to control the microscope and to acquire images are bundled in the "Acquisition Tools". Arranged from top to bottom they follow the logic of the operations for which they are used. The area for viewing and interacting with images is located right in the middle of the interface: the "Central Screen Area". File management tools are found in the "Right Tool Area".

Color and brightness of the interface have been carefully adjusted to the typi-

cal light conditions of the imaging laboratory. The resulting major improvement in contrast makes it possible to immediately recognize details that were not visible before in fluorescence images. ZEN has been developed and optimized for 30 inch wide-screens. Displaying images on the large center screen provides the extra space the data deserves. It is also particularly useful in complex experiments in which many tool palettes and image windows are open.

Interactive Software tools speed-up your imaging

A demanding task in the development of ZEN was to fulfill the needs of both basic users and specialists who drive their instruments to the technical limit. Both types of users will appreciate the set of

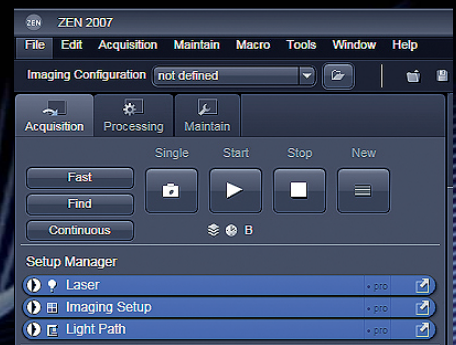


Fig. 1: Action buttons

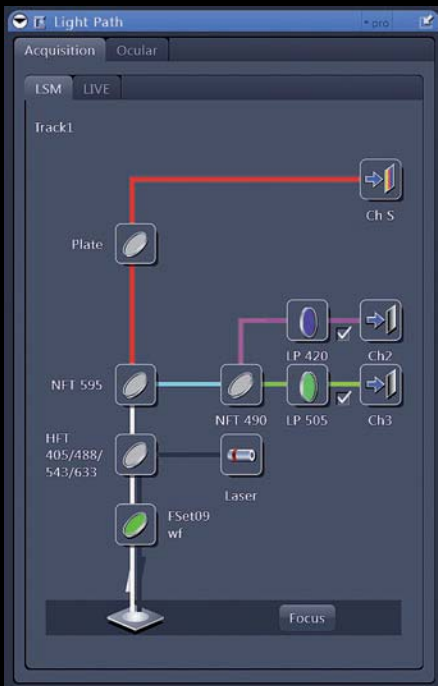


Fig. 2: Light path

| Information On Experiment | | |
|--|----------------------|--------------|
| Dimensions | | |
| <input checked="" type="checkbox"/> Z-Stack | Number of Slices | 21 x 1.00 µm |
| | Stack Size | 20.00 µm |
| <input checked="" type="checkbox"/> Time Lapse | Number of Images | 10 |
| | Interval | 0.0 msec |
| <input checked="" type="checkbox"/> Bleaching | Number of Iterations | 1 |
| Image | | |
| | Channels / Bit Depth | 1 / 8 Bit |
| | Dimension | 512 x 512 |
| | Size | 52.50 MB |

Fig. 3: Information on experiment

intuitive tools designed in order to make the necessary settings of a confocal microscope from Carl Zeiss easy and fast:

The innovative Pro-Basic concept ensures that tool panels are never more complex than needed. In “Basic Mode”, the most common tools are displayed. For each tool, it is up to the user to activate “Pro Mode” and add additional functionality. One can also add more columns to the Left Tool Area or detach individual tools to position them anywhere on the monitor.

In many cases the Microscope System and the monitor are far apart. Therefore, when loading the sample and adjusting the focus it becomes very hard to read the settings on the computer screen. The ZEN interface is scalable, so that the user can perform any setting comfortably. This “Workspace Zoom” is a feature unique in Imaging Software.

Setting up conventional confocal software to perform a given experiment can take a long time and is tedious to repeat. With ZEN these adjustments have to be done only once – and may be restored with just two clicks of the mouse. For each type of experiment one can now set up and save the suitable layout. These configurations can be shared between

users – which is particularly useful in multi-user environments. In addition, the interface remembers user specific settings and layouts. A feature beyond compare in the world of Laser Scanning Microscopy.

Controlling a motorized microscope becomes really easy, as ZEN uses intuitive Software Joysticks and interactive graphical elements to adjust e.g. the focus or the microscope stage. A feature making the configuration of the scanning module easy and fast is the newly designed “Light Path” tool, which indicates the colors of the emitted light by the sample depending on the emission filters used.

The ZEN File Browser combines the best of image-database and a folder-based data handling systems. All supported image formats can be displayed in 3 different views including thumbnails, form and table view. From LSM Images, the browser can also re-apply the system parameters used to acquire an image to the hardware again.

The Carl Zeiss website (www.zeiss.de/ZEN) provides a free Version of ZEN for download. The LE-Version (Light Edition) allows access to LSM Files, the browser, basic image – processing functions, provides rendering and projection functionality for 3-dimensional datasets. Visit the website and try out the new Software.

Can I install ZEN 2007 on my existing confocal of the LSM 5 Family? Any LSM System from Hardware Release 2.8 onwards is upgradeable. Ask your local Zeiss representative about our special upgrade packages – they come with a significant discount!

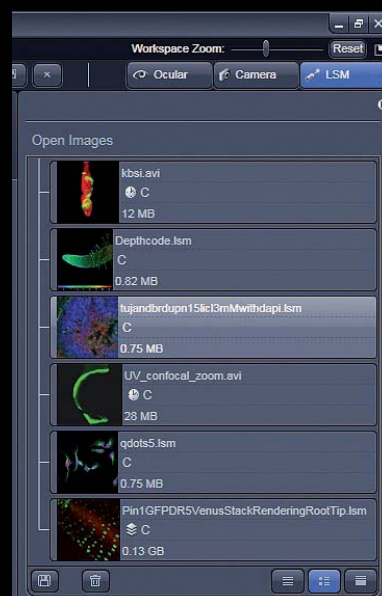


Fig. 4: Open images

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