

ZEN

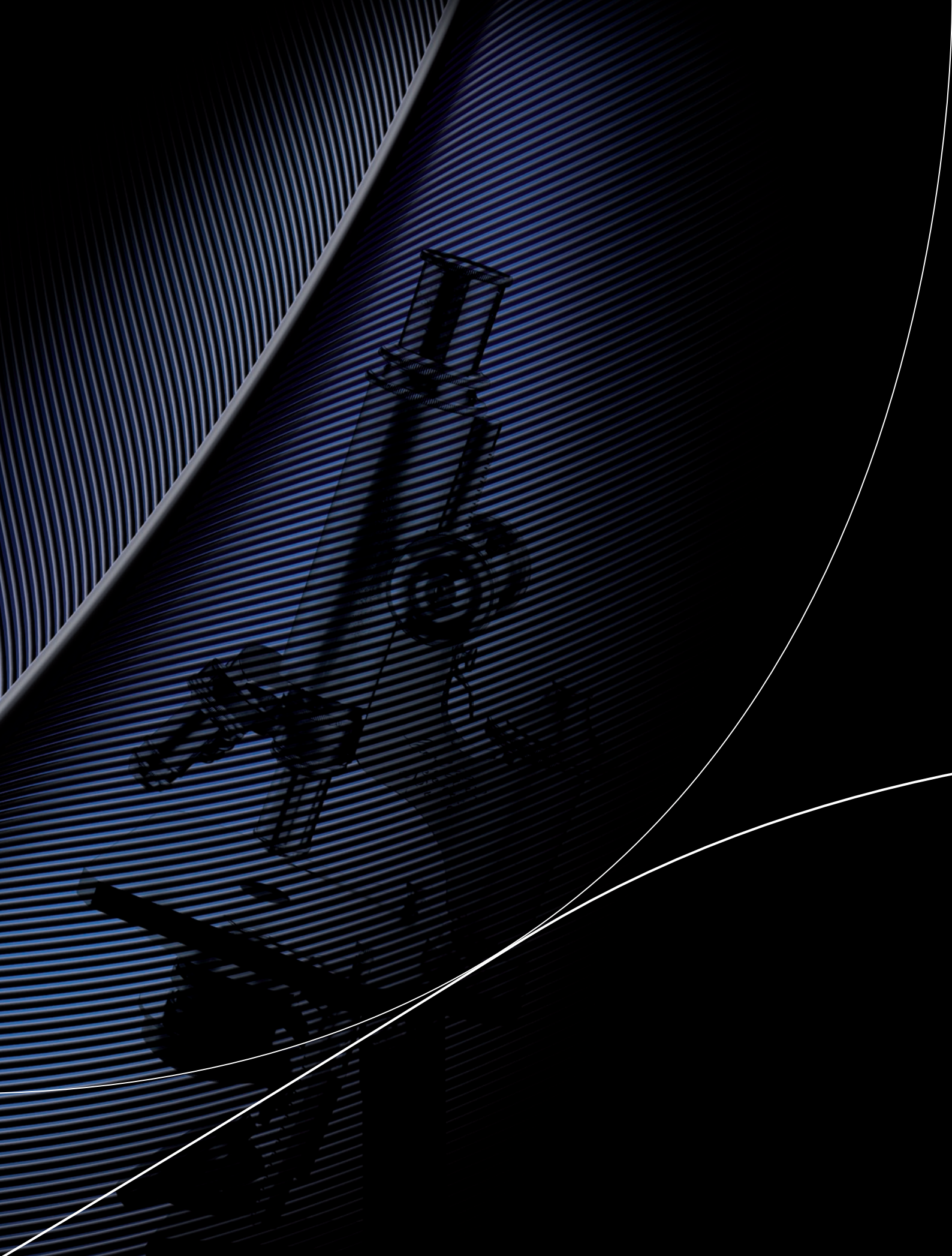
Efficient Navigation

Precision meets Intuition

Discover our new Software for Laser Scanning Microscopy



We make it visible.



Perfection is not an Art, it is an Attitude

This attitude is one of the very few things that have not changed over the past 160 years at Carl Zeiss – we have advanced everything else. The company was founded on the guiding principle of providing superb technological resources to enable scientific achievement. Then as now, our experts seek to collaborate with leading researchers, bringing technical expertise to deep scientific knowledge. This is how we create research instruments that are perfectly tailored to the requirements of those who use them.

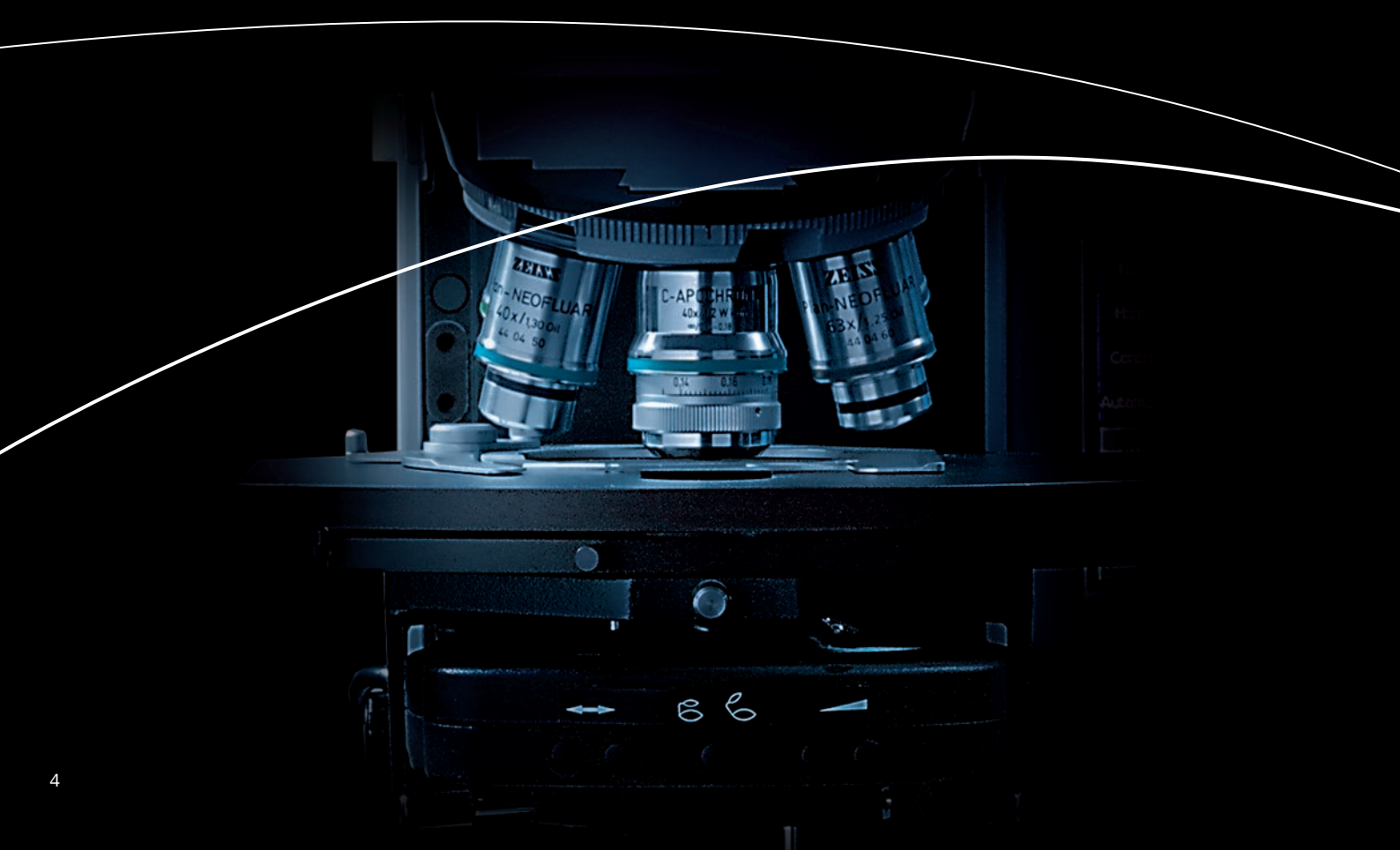
The precision and performance of our devices are a direct result of our pursuit of technological perfection. Our devices have paved the way for many significant discoveries and scientific breakthroughs. Microscope systems made by Carl Zeiss continue to provide the basis for a better understanding of the process of life and the world around us.



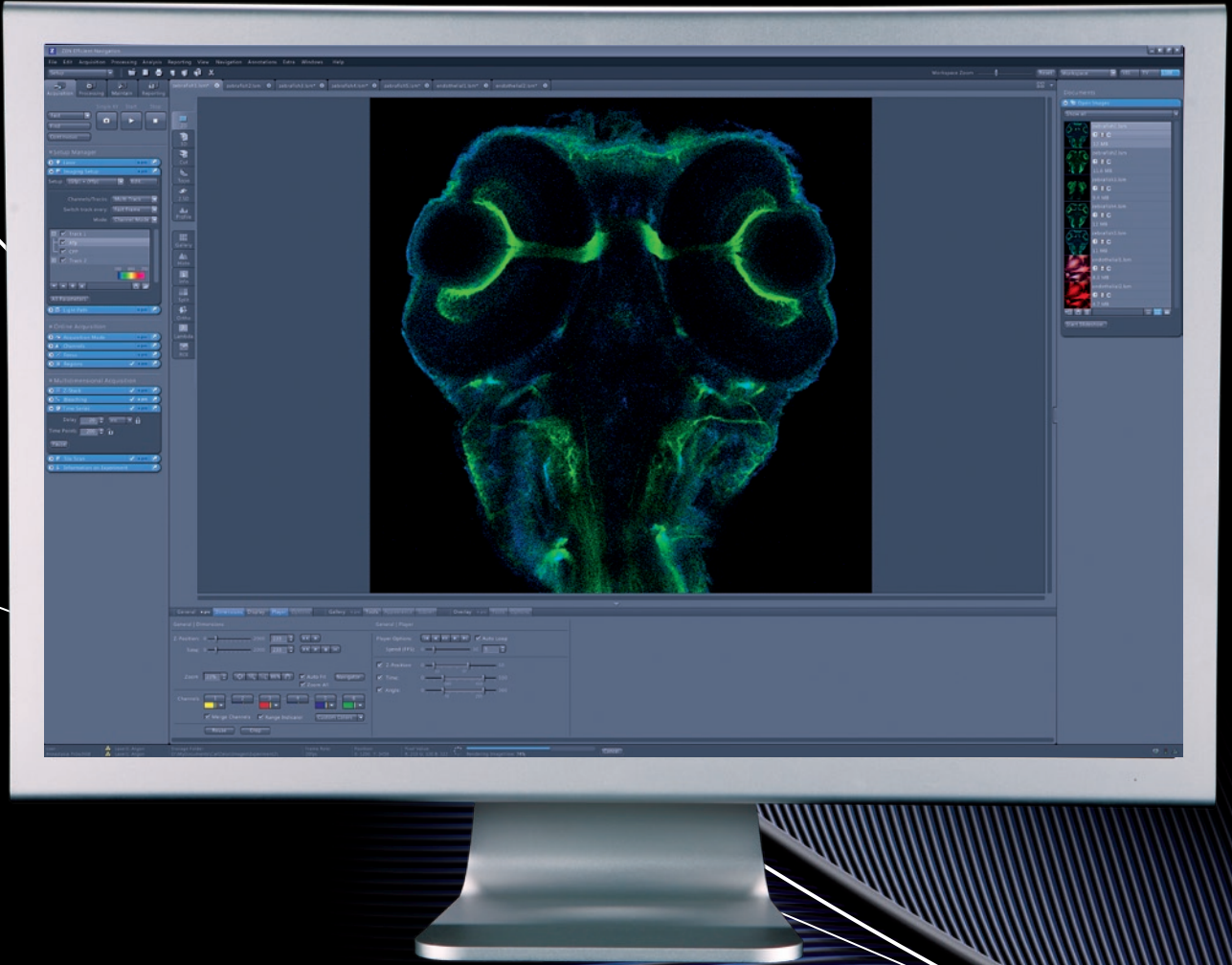
Intuition is the Key to Efficient Navigation

Laser scanning microscopy is a highly complex technology. This is where its enormous potential lies. We thought carefully about ways to make it easy for you to harness this potential – to make your workload “as light as a feather.” Consider the ease with which you steer your car into the curving right bend of a road, make a left turn and without thinking, keep an eye on oncoming traffic ... Intuitively you handle the complexity of this process perfectly and reach your destination without a hitch. This is made possible by sensibly located dashboard controls that let you find what you need quickly and efficiently.

Carl Zeiss and Ernst Abbe demonstrated a long time ago that user friendly products are only made possible by bringing together precision and intuition. Our new LSM software follows this principle. Using modern programming and design tools, we have created the perfect combination of state of the art technology and intuitive user interface: ZEN.









Efficient Navigation

With ZEN we have made it possible for you to concentrate completely on the essentials. Discover a new era in laser scanning microscopy.

ZEN Efficient Navigation

File Edit Acquisition Processing Analysis Reporting View Navigation Annotations Extra Windows Help

Setup

Acquisition Processing Maintain Reporting

Single Step Start Stop

Fast Fine Continuous

Setup Manager

Laser Imaging Setup

Setup (GP) + (YIP) Edit...

Channels/tracks: MULTI TRACK

Switch track every: FAST FRAME

Mode: CHANNEL MODE

Track 1 Alp CFP

Track 2

Parameters

Light Path

Online Acquisition

Acquisition Mode Channels Focus Regions

Multidimensional Acquisition

Z-Stack

First/Last Center Relative Piezo

SET FIRST: 200 µm

SET LAST: 45 µm

Range: 245 µm

Slices: 13

Step Size: 19 µm (Optimal)

Current Focus Position: 2 µm

Z-Stack Navigation

400 µm

50 µm

Move to: [Exit] [Center] [First]

Bleaching Time Series

Delay: 200 ms

Time Points: 2000

[Pause]

File Scan Information & Experiment

User: antonia.pfeiffer

Laser1: Argon Laser1: Argon

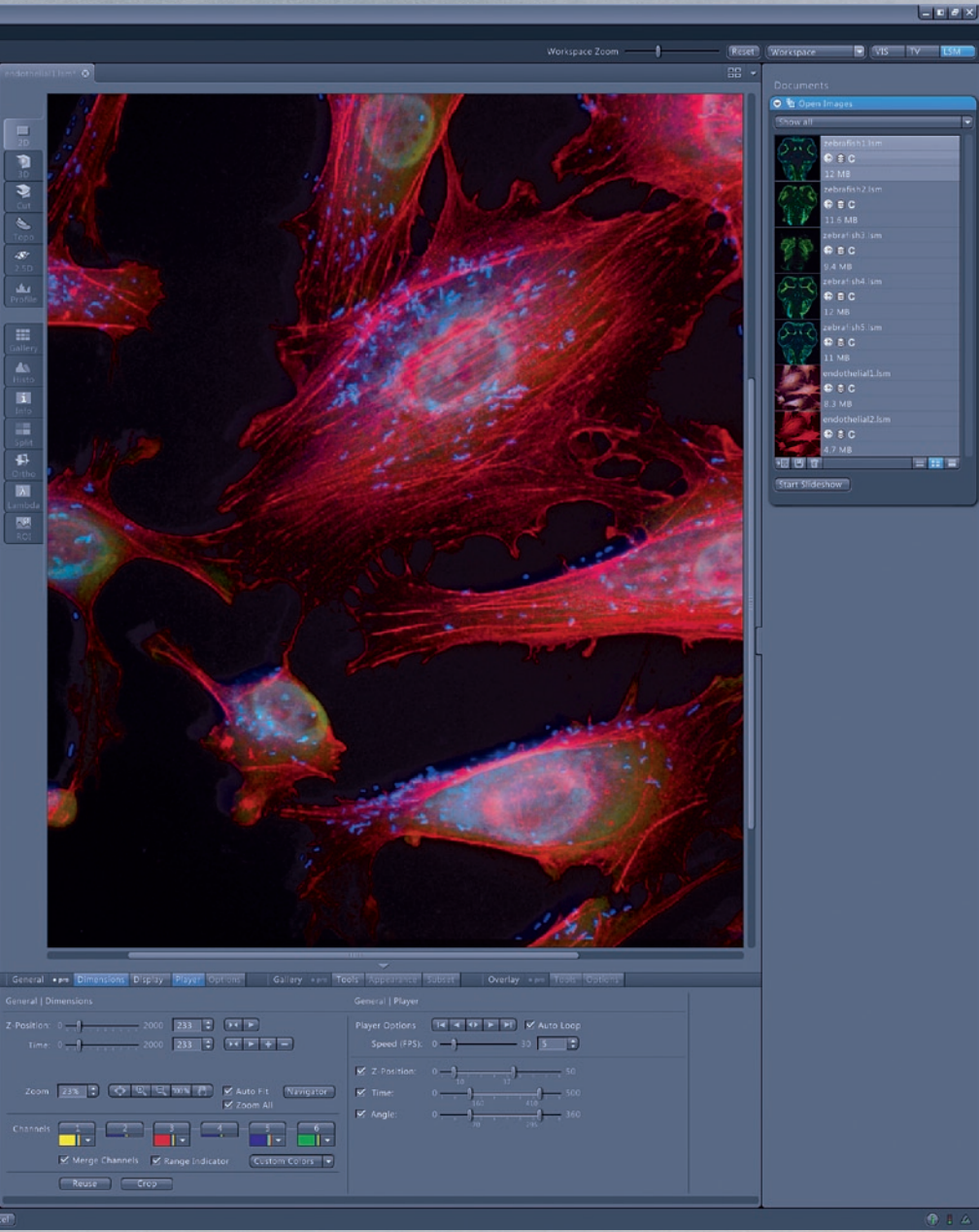
Storage folder: D:\My Documents\Carl Zeiss\Imaging\Experiment2

Frame Rate: 20fps

Position: X: 1210 Y: 3450

Pixel Value: R: 213 G: 100 B: 122

Rendering ImageView: 74%



Interface Navigation

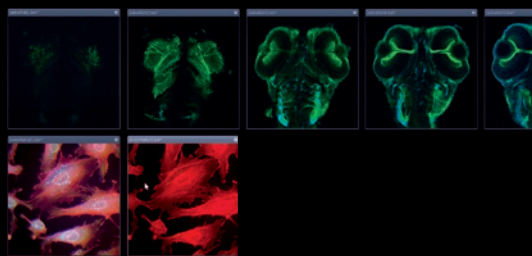
One glance at the well organized and elegantly minimal layout will convince you. Color and brightness of input fields and buttons have been carefully adjusted to the typical light conditions of the laboratory. The screen display has been optimized for the 30-inch widescreen format. The resulting additional space will prove to be especially useful during complex experiments in which many tool palettes and view windows are open.

The screen is organized into three areas, following the workflow typical of your experiments. Everything needed to control the microscope and to acquire images is bundled in the Left Tool Area, located on the left side of the screen. All tools are arranged from top to bottom following the logic of the operations in which they are used. In the middle of the interface is the area for viewing and interacting with images: the Central Screen Area. File management is found in the Right Tool Area.

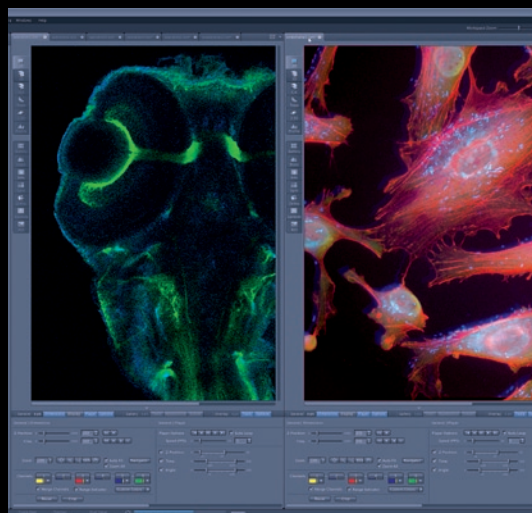
Image Navigation

The Central Screen Area serves as the stage for imaging. Here too, the clear and intuitive layout makes the interface user friendly. You can edit display options for multidimensional data sets using the View-Buttons on the left image edge. View Control Panels are located below the image. These include all the tools needed to interact with a data set. The visibility of the View Control Panels can be toggled to simplify the interface during an experiment.

In Exposé Mode, you can arrange all images from one container together in a lightbox so that you never lose sight of what's important.



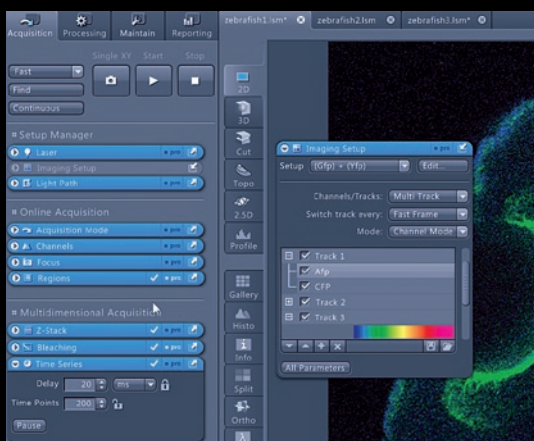
Up to three image containers can be opened at the same time to compare multiple images side by side.



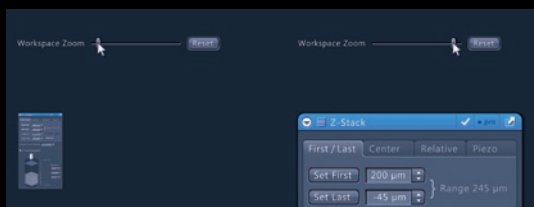


Individual Navigation

ZEN is extremely flexible and was developed so that functions can be adjusted individually – to meet the requirements of a particular user or a specific experiment. The innovative Pro-Basic concept ensures that your tool panels are never more complex than you need them. You can even add more columns to the Left Tool Area or detach individual tools to position them anywhere on the monitor that suits you.

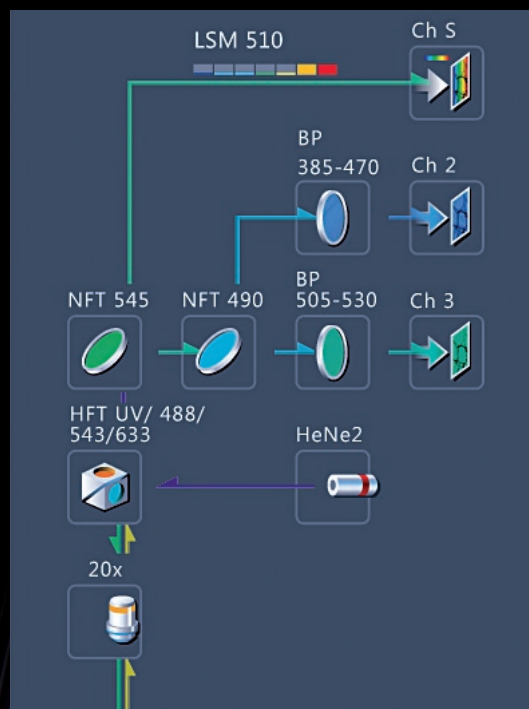


The entire interface can be scaled to improve monitor legibility at a distance.



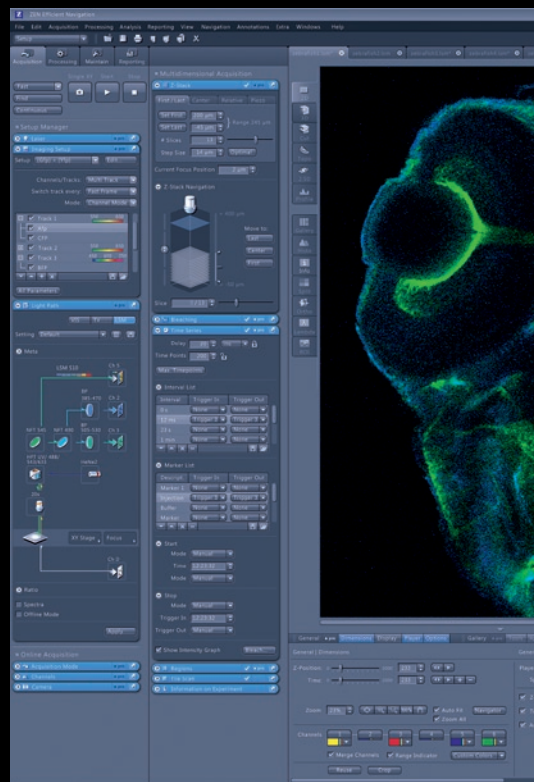
Interactive Navigation

ZEN offers completely new interactive features that have been conceived to change the way you work with the hardware. The Light Path Tool for example is the core feature of the system. It is used to adjust the settings of the scanning module. This is ameliorated by adapting the color representation of the emitted light to the selected filters. Then there is the Z-Stack Tool that enables you to easily navigate through an image stack and simultaneously control your microscope. Both features have been visually designed so that they are completely intuitive to use.



Focus on the Essentials to discover the Unexpected

The Pro-Basic concept is one of the key features that ZEN offers to enable you to focus on the essentials. We reduced the complexity of the imaging software to a minimum but you will never be without the full technical possibilities the system offers. You decide whether the basic functions of a tool suffice for a particular task or whether you need the complete functional spectrum. In this way, the user interface is always as simple and clear as possible. You can take the complexity of the interface into your own hands.



ZEN offers is the ability to save almost all user interface adjustments as preferences. This is another function that will simplify your work and provide valuable time to focus on what is essential. User and experiment preferences can be recalled with just two clicks of the mouse. The interface will adapt over time to your particular needs and user habits. This too is a ZEN feature beyond compare in the world of laser scanning microscopy.

Extensive usability testing has shown that ZEN is extremely fast to learn thanks to the intuitive user interface. After a particularly brief training phase you will complete experiments more effectively and in less time than ever before. This is what we mean when we say Efficient Navigation. ZEN provides the added concentration to keep your eyes open for that special moment in which you encounter the new and unexpected and recognize it as scientific breakthrough.



We knew then

We know now

Unsere Maxime

Wer in der Wissenschaft etwas erreichen will, muss beide Augen offen und den Geist in Bewegung halten. Herausragende Entdeckungen erfordern von jedem Beteiligten ein herausragendes Maß an Energie und Ausdauer. Solange der Name Carl Zeiss unsere Geräte ziert, werden wir uns die Zeit nehmen, die die Köpfe unseres Landes nicht haben. Nur mit ausgereiften Methoden bauen wir die besten Mikroskope der Welt.

Those who want to succeed in science are well advised to keep both eyes open and an agile mind. Exceptional discoveries demand exceptional amounts of energy and stamina from everyone

involved. For as long as our products bear the name Carl Zeiss, we will devote the time that others cannot spare. We use our expertise to build the best microscopes in the world.



Carl Lewis

160 Years of Microscopy

25 Years of Laser Scanning Microscopy



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