



Innovative solutions for animal behavior research

*Powerful software tools, fully integrated labs, and expert consultancy.
Trust our 30 years of experience to make your project a success.*

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Noldus
Information Technology

EthoVision XT

- *Reliable video tracking of animals*
- *Cost effective & easy-to-use software*
- *Track multiple animals in multiple arenas*
- *Extensive data selection and analysis*

EthoVision® XT is the market-leading video tracking platform that offers flexibility, versatility, and highly accurate data for a wide range of animal behavioral experiments. Do not just take our word for it - over 2000 labs use EthoVision XT and it is validated in thousands of publications. With EthoVision XT, you can automatically track and analyze any animal in any kind of enclosure. The software makes it very easy to assess variables such as



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velocity, distance moved, zone visits, and much more. Perform in-depth analysis with data selection and analysis tools such as track visualization and heat maps. Pick and combine modules to create the solution that meets your research needs.

UltraVox

- *Detailed analysis of (ultrasonic) vocalizations*
- *Full-spectrum sound capture with USB microphone*
- *Compact and cost-effective solution*
- *Easy identification and labelling of calls*

UltraVox™ XT is a software tool that analyzes sound, including ultrasonic vocalizations. The signal is displayed in real-time in a waveform and spectrogram. You can define frequency range, amplitude, duration, and time gaps to let UltraVox XT find all calls that fit those criteria, then easily label each call with user-defined names. UltraVox XT provides a PDF report with data, statistics, and spectrograms. It also plays back the



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recording in an audible (pitch-reduced) range. You can export data, audio files, and images. The data is fully compatible with EthoVision XT and The Observer XT so that you can integrate the vocalizations with other behavioral and physiological data.

Portable Observation Lab

- *On-site recording of behavior*
- *Complete and compact*
- *Robust*
- *Quick set-up in any environment*

Some phenomena are difficult to study in a lab; for example, deer behavior in their natural ecosystem. In those cases, you can achieve the best results with live and on-site observation using our compact portable lab. Designed for travelling, the lab weighs less than 11 kg (25 lbs) and is built into a rugged, wheeled carrying case. It contains all equipment needed to make live behavioral recordings in any context. With all components



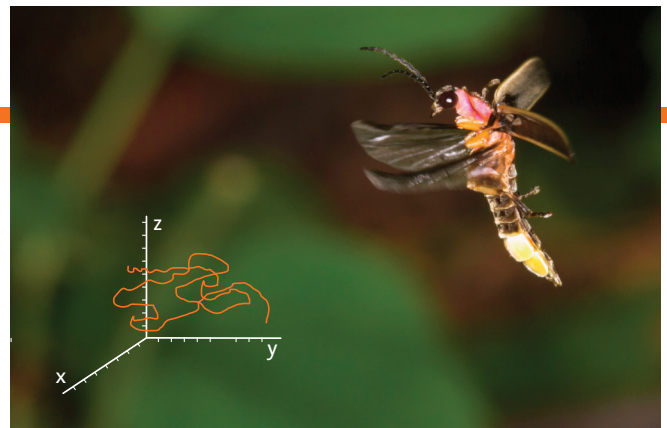
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labeled and ready for assembly, be ready to record quickly once you've arrived onsite, and save valuable time. A Noldus portable lab is built on a modular platform; it can even be extended with additional third party hardware such as an event logging keyboard.

Track3D

- *Study spatial behavior in 3 dimensions*
- *Ideal for swim tanks, wind tunnels and other chambers*
- *Individual calibration for accurate results*
- *EthoVision XT add-on*

Animals move around in a 3D space: they fly, jump and climb. Therefore, behavioral assessment in a 2D plane may be insufficient to fully analyze your subjects' behavior. Track3D is a video-based system for automated tracking of animals in a 3D space. It allows the researcher to record the movement of an animal in a test chamber, visualize and present the resulting trajectory in a 3D image, and calculate a number of movement parameters.



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The 3D trajectory is based on a combination of two 2D tracks recorded by EthoVision XT with two separate high-resolution cameras. To assure a highly accurate calculation of the 3D trajectory, a custom calibration frame is built for each specific arena.

TrackLab

- *Highly accurate tracking data*
- *Save time with automated data collection*
- *Insights into a wide range of animal behaviors*
- *Easily access, analyze, and visualize data*

TrackLab™ is the complete tracking solution for your research with livestock or other animals. Rely on highly accurate tracking data to gain real-time insights into the activity, welfare, and health of your animals, including place preference and social behavior. TrackLab works with Ultra-Wideband and GPS technology to accommodate tracking in both indoor and outdoor environments. The software includes features to automate



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data collection, and data can be processed real-time or after recording. Analyze data from any location, visualize your results, and easily export your data to The Observer XT or another statistical program.

The Observer XT

- *Study behavioral elements in great detail*
- *Share the work and check reliability*
- *Integrate your data for extensive analysis*
- *Flexible scoring with on-the-go solutions*

The Observer® XT is the professional and user-friendly event logging software for the collection, analysis, and presentation of observational data, used by more than 20,000 researchers worldwide. It supports the entire workflow of a research project, from ethogram to presentation of the results. You can integrate external (physiological) data streams in your visualization and analysis. With several modules, you can adapt this tool



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to your research needs. You can score animal behaviors live or from video, which you can slow down to record the start and stop of certain behaviors. Choose continuous or instantaneous sampling, or combine both.

Pocket Observer

- *On-the-go flexible scoring solution*
- *Maximum freedom in moving about*
- *Observe unobtrusively*
- *Compatible with handheld devices*

With Pocket Observer, you can score on the go! Code on a smart-phone, tablet, or rugged handheld computer. Simply design your ethogram with The Observer XT on your PC, transfer it to your handheld device, perform the observations, and then import the results back into The Observer XT for analysis. With Pocket Observer, you can record observational data in detail and data coding is easy with its user-friendly interface. Just like with



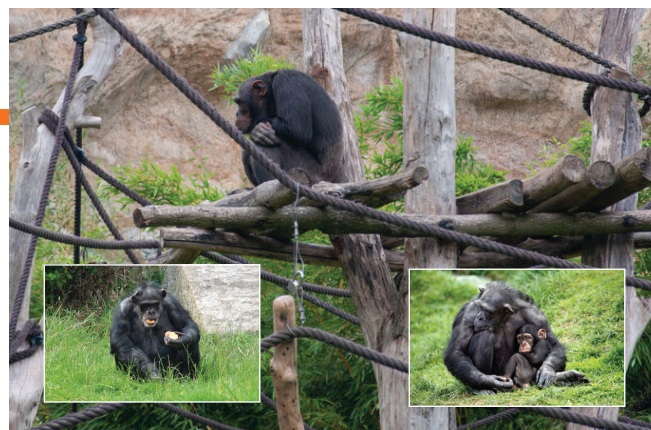
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The Observer XT, you can add behaviors while you are observing and score continuously as well as instantaneously. You will be able to move around to keep the animal of interest within view. Ideal for studying animals in their natural habitat or in a zoo!

MediaRecorder

- *Record up to eight synchronic videos at once*
- *View side-by-side or picture in picture*
- *Save separate or integrated files*
- *Synchronize video with behavioral data*

Need to study animals at different locations or at different angles? MediaRecorder is a software tool that enables the synchronous recording of up to eight different video and audio sources at a time. You can view videos side by side or use picture in picture. MediaRecorder is compatible with EthoVision XT, The Observer XT, and a broad range of cameras (such as FireWire, GigE, industrial USB cameras, and IP cameras), and is designed



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to be at the core of your lab. You can switch between different cameras and control them with your mouse or joystick. With IP cameras you can use pan-tilt-zoom, meaning that you can position your camera very precisely.

Services

- *Customized training courses*
- *Behavioral coding services*
- *Rent a system or software license*
- *Protect your investment with NoldusCare*

Noldus offers a wide range of services, from our consulting services and training, to rentals and NoldusCare. Our consultants understand how to turn raw data into meaning. They can advise you on how to perform your research in the most efficient and effective way. You can also outsource your video coding work to our experts to analyze already-collected data. Furthermore, you can easily rent equipment and software, or schedule a training



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course for your group. With NoldusCare you receive all software upgrades, technical support, and warranties on Noldus hardware. It gives you peace of mind, guaranteed project quality and continuity, and protects your investment for the long-term.

Noldus Information Technology

- *Leading in behavioral observation and analysis systems*
- *User centered design*
- *30 years of product innovation*
- *Worldwide service, support, and expert advice*

Noldus Information Technology has offices in nine different countries and is represented by ten distributors worldwide. With this global team, Noldus develops innovative solutions for behavioral research. These can vary from industry standard software packages and lab equipment to fully integrated observation labs including on-site installation, training, and support. With 30 years of experience, we translate your questions into practical



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and proven solutions. Our consultants have advanced degrees in the behavioral sciences, which provides a unique ability to uncover behavioral patterns and turn them into actionable results.