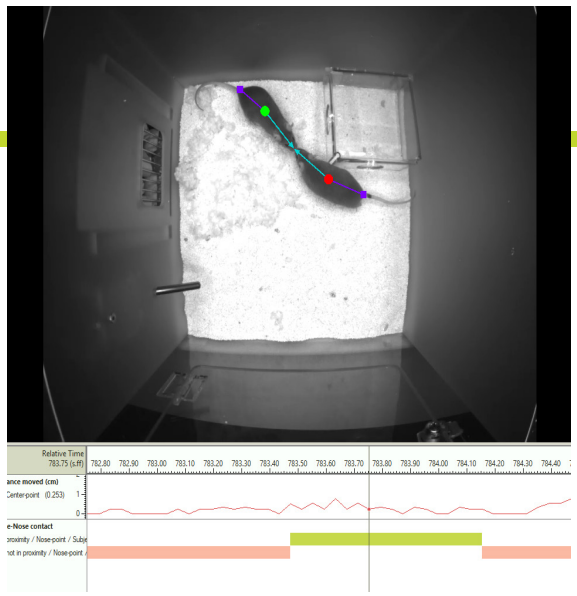


Noldus

Using EthoVision XT with the Social Interaction Module

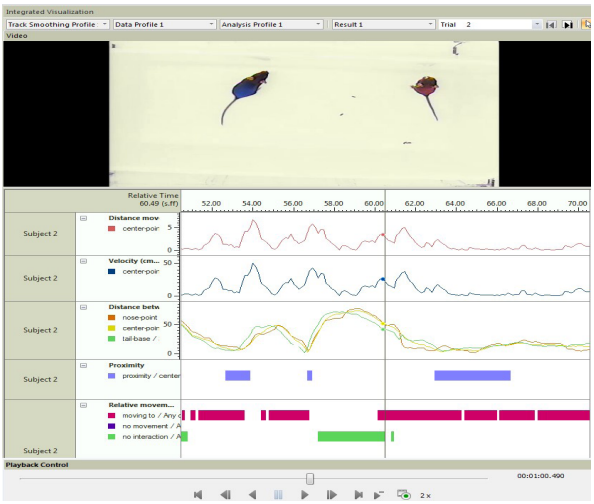
Automated tracking of two animals in one arena

Social interaction tests in rats and mice are common in research on anxiety, aggression, schizophrenia, and other psychiatric disorders.

With the Social Interaction Module in EthoVision XT you can track multiple animals per arena simultaneously and analyze key social parameters such as proximity or the amount of time an animal spent moving away from another animal and direct interactions like nose-nose and nose-tail contact as well as movement side-by-side or in a train.

NEW IN ETHOVISION XT 18: SMARTER, SIMPLER SOCIAL TRACKING

The latest version of EthoVision XT introduces deep-learning-based detection, making social interaction research more precise and effortless. Now, with the Social Interaction Module, you can automatically track two rodents without the need for color marking or extensive setup. EthoVision XT 18 accurately detects each animal's nose, center, and tail, ensuring reliable behavioral analysis, while keeping the individual identities across diverse research settings.



In one clear overview, determine where each subject is relative to the other.

ADVANCING SOCIAL BEHAVIOR RESEARCH WITH AUTOMATED TRACKING

The Social Interaction Module provides flexibility. You can track multiple animals at once to generate data for shoaling behavior in fish, or general proximity data in rodents and other subjects. With the new deep learning based tracking of 2 rodents or by using, individual identity is maintained throughout tracking, and detailed social parameters can be assessed, even in a home-cage-like environment.

KEY FEATURES OF THE SOCIAL INTERACTION MODULE

- Analyze interactions of two or more animals in the same arena.
- Automated tracking of two rodents using deep learning—no color marking required, although physical markings are. Best practices include shaving a section on the back of the animal, or applying a marking on the tail-base.
- Track up to 16 color marked animals in the same arena for individual identification (maximum depends on environmental conditions).

- Track up to 16 unmarked animals, which is ideal for when identifying each individual animal is not required. *Note: the maximum number of animals depends on environmental circumstances.*
- Analyze social-specific parameters: proximity of one animal to the other, movement to and from other animal, body contact, etc.
- Deep-learning-powered detection of nose-nose and nose-tail interactions in rodents, without requiring additional setup.
- Reliable tracking in most scenarios, even with low-resolution video.

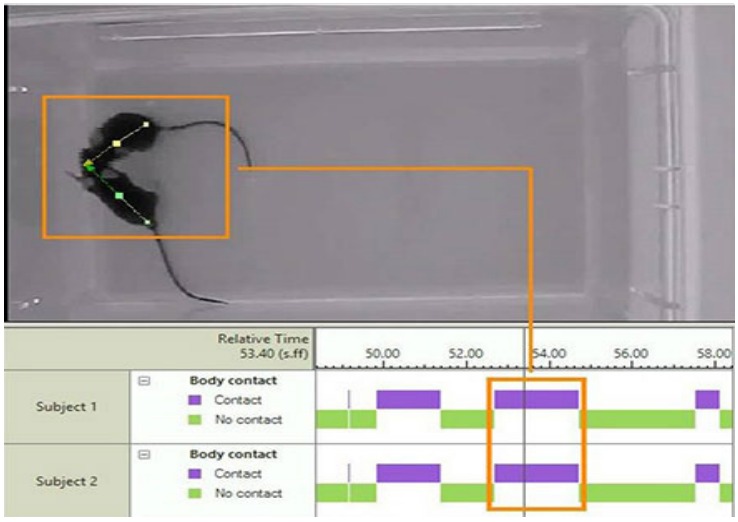
VISIT OUR WEBSITE TO LEARN MORE

REQUEST YOUR PERSONAL FREE TRIAL

REFERENCES

Many customers around the world use EthoVision XT to automate their social behavioral tests. We have selected a short list to give you an idea of the data output available when using Ethovision XT with the Social Interaction Module.

- Birnie, M.T., et al. (2023). Stress-induced plasticity of a CRH/GABA projection disrupts reward behaviors in mice. Nature Communications, 14, Article number: 1088.
- Byun, Y., & Noh, J. (2024). Social play exclusion model in adolescent rats: Monitoring locomotor and emotional behavior associated with social play and examining c-Fos expression in the brain. Physiology & Behavior, 273, Article number: 114379.
- Kim, I., et al. (2022). Simultaneous analysis of social behaviors and neural responses in mice using a round social arena system. STAR Protocols, 3(3), 101640.



On the graphical timeline, easily see when the animals are in contact with one another.

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