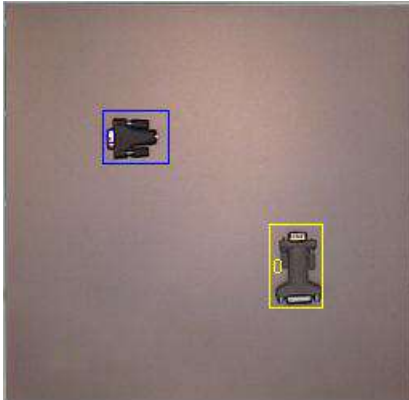


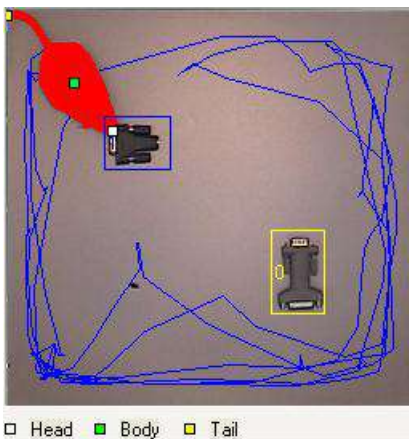
Object recognition with the "Viewer" tracking software

To perform an object recognition experiment with a tracking software, it is necessary that the software is capable to detect not only the center of mass of the animal but also the nose and the tail. Otherwise it is not possible to ensure that the animal has inspected the object with its nose. The "Viewer" tracking software tracks all three points of an animal (nose, center of mass, tail).

To perform an object recognition experiment, two or more objects are placed within an arena. Around each object a zone is drawn in the software. Each time the animal enters a zone with its nose is counted.



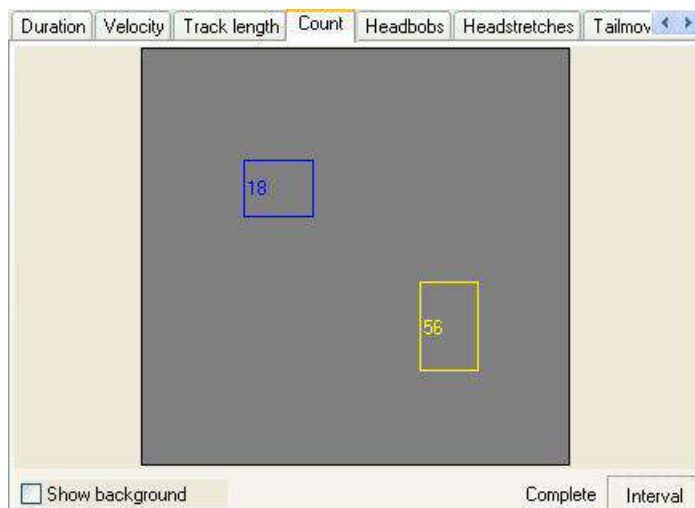
Two objects are placed in an arena. Around each object a zone is drawn in the software (blue and yellow). The program measures, how often the nose of the animal enters a zone to inspect an object.



Screenhot during the experiment.

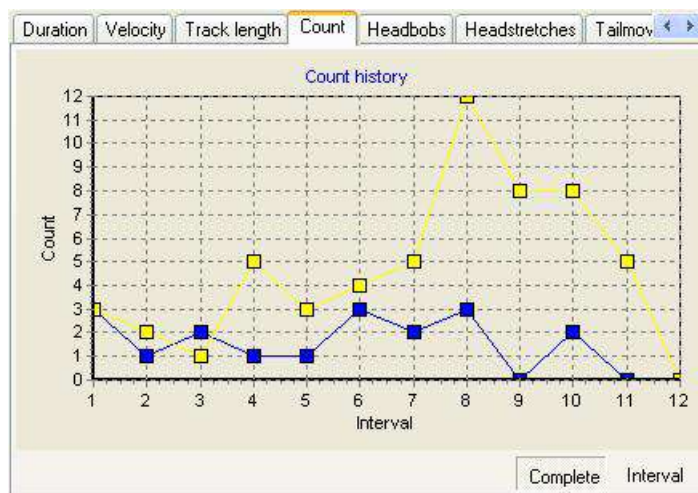
The animal inspects the object in the blue zone. The blue line represents the trajectory of the animal. The numbers in the zones show how often the animal entered a zone within the current interval (definable, in this experiment one minute).

Our software not only tracks the point of mass of the animal but also the nose and the tail. The colored squares represent these points (white: nose; green: center of mass; yellow: tail).



This figure shows how often the animal entered each zone during the whole experiment (12 minutes). The blue zone 18 times and the yellow zone 56 times.

Object recognition with the "Viewer" tracking software



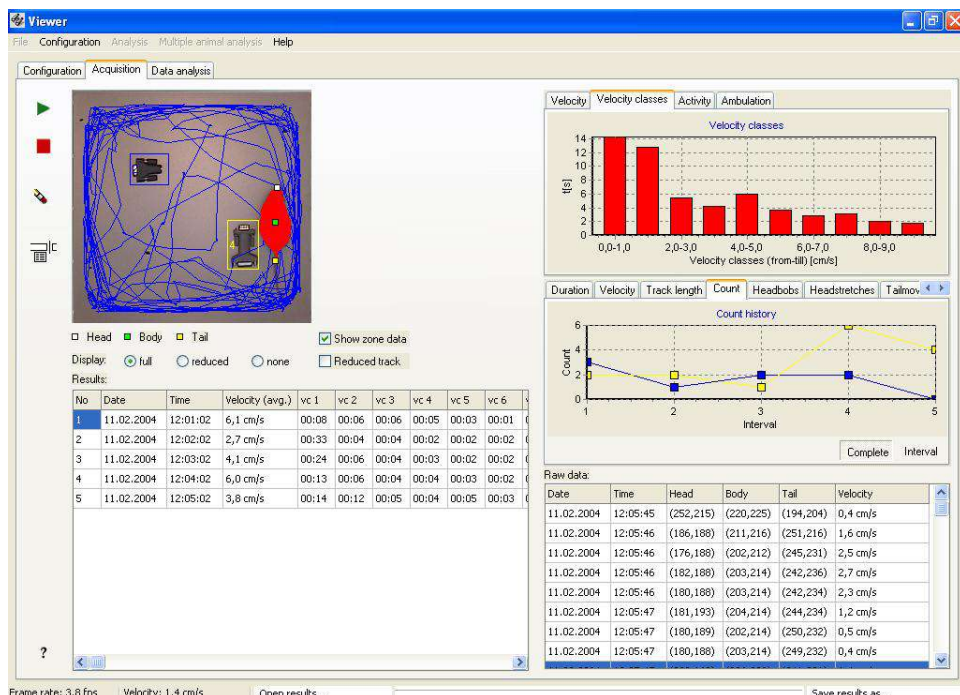
This figure shows how often the animal entered each zone during each time interval. It is very nice to see how the animal inspects both objects with quite the same interest during the first three minutes and is much more interested in the object in the yellow zone after that.

The time interval can be defined by the user (in this experiment one minute).

Beside the special parameters for the object recognition experiments, the software can of course be used for all of the standard maze and open field experiment as well. It measures a lot of parameters like:

- experiment duration
- track length
- velocity
- activity (definable threshold)
- ambulation
- distance to zones
- zone entries
- time in zone
- track length in zone
- headbobs
- headstretches

The data are calculated and presented in real time during the experiment. All data can be exported in various file formats (*.txt, *.doc, *.csv, *.xls, *.xml) and all figures can be exported as well (*.bmp, *.wmf, *.emf).



Screenshot of the software during an experiment.

In the left upper corner the video picture with the tracked animal is shown. Below the video picture the table with the summarized data is presented. On the right side are two areas where the data are presented graphically. With the tabs you can switch between the different figures. In the lower right corner you can find the table with the raw data.