TrackLab

Technical specifications

TrackLab™ is the complete tracking solution for your research with livestock or other animals. It is the versatile workbench for all your studies on movement and location, both in indoor and outdoor settings. Study your animals' activity, welfare, or health and gain meaningful insights in a variety of spatial behaviors. This includes social interactions, eating and drinking behaviors, and place-preference. The data you collect is processed, analyzed, and visualized from the TrackLab server.

INTEGRATED SOLUTION

TrackLab works with Ultra-Wideband (UWB) and Global Positioning System (GPS) technology for indoor and outdoor tracking. We work with renowned manufacturers who provide highly accurate and reliable real time location systems. Combined with our 30 years of experience in developing software tools, we have created a turnkey solution for your behavioral research. This means that TrackLab not only includes hardware and software, but the complete integration of equipment, on-site installation, and training as well.
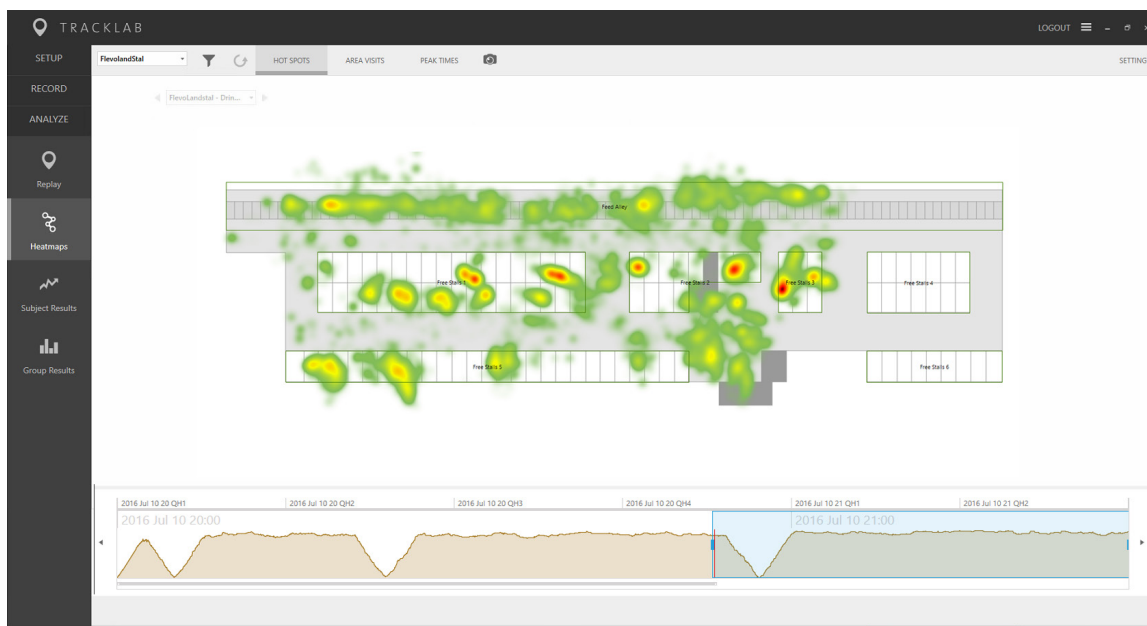
AUTOMATED DATA COLLECTION

TrackLab offers 24/7 monitoring of animal behavior, as well as scheduling options for recording data in specific time periods. This allows you to obtain real-time insights for the time periods of your interest. TrackLab can also detect a variety of spatial behaviors automatically, simplifying data processing and analysis.

ANALYSIS

TrackLab includes various options for data analysis:

- Play back recorded tracks along with the parameters of your choice. You can select the time interval you wish to review and choose the playing speed.

- Study velocity, distance moved, and type of movement with the software's built-in activity indicators.

- Track locations for custom areas of interest and study the frequencies and durations of visits. This is ideal for studying different barn layouts, feeding behavior, or bedding preferences.

Track the location of multiple animals in real-time, or play back data along with the parameters of your choice.

- Monitor an animal's basic proximity to other animals, as well as pair relations within a group. This enables you to study social behavior, which is an important factor in animal welfare.

- Zoom in on the behavior of individual animals, or explore results for experimental groups. Simply add the information that defines the groups and TrackLab will automatically calculate group statistics.

- Analyze your data for the time interval of your choice. Study a complete selection of the time interval or view results per minute, hour, day, or longer. This allows you to analyze behavior that evolves over time and even to compare results from different experiments.

VISUALIZATION

Visualize your results with track plots, graphs, diagrams, and heat maps. TrackLab provides different types of graphical place-preference behavior insights. A density plot shows place-preference of your animals across the site. With a place-time preference heat map, you can see which times of the day animals prefer to visit a specific area. You can also visualize social behavior in bar diagrams or a social network matrix.

DATA ACCESS

All tracking data is processed and saved in a central data server. Data can be accessed by multiple users, from any location. This means you can easily share your work and analyze data from the comfort of your office. You can also export data to your preferred statistical program for further analysis.

SYSTEM REQUIREMENTS

TrackLab has been tested with the following specifications:

- Processor: 3.7 GHz
- Memory: 8 GB.
- Hard disk: 1 TB SSD recommended
- Graphics card: NVIDIA GeForce GTX 1060
- Windows 10
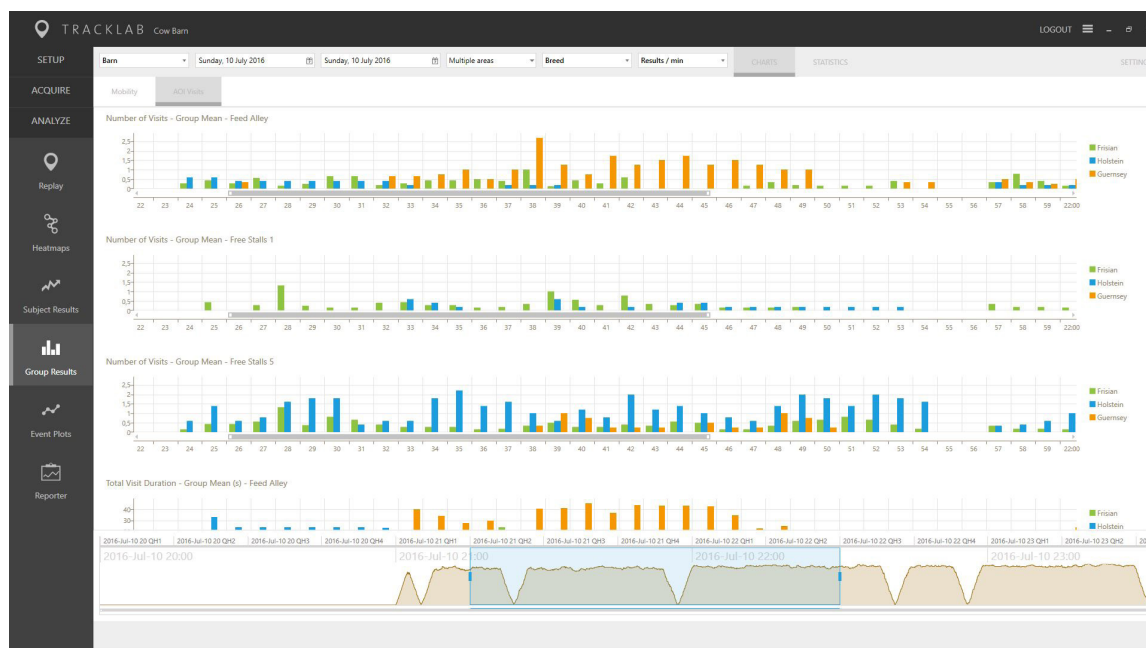
Additional recommendations

- TrackLab has been designed to work with multicore processors, which allows the application to run as fast and smoothly as possible.

CONTACT INFORMATION

Please check our website for contact details.

www.noldus.com

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Use TrackLab to study group results.