



# New In-house cage monitoring system for weight- and activity measurements of mice

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## 24/7 acquisition of vital happenings

TrackPaw Scientific is committed to breaking new ground in managing and monitoring research animals during preclinical pharmaceutical development. By combining **machine learning** and **sensory technology** to detect behaviors and weight of animals, we enable new ways of tracking the animals during ongoing trials and provide scientific data across a wide range of disease areas. As a result, we contribute to improved reading of the study results, improved animal welfare and better use of resources in the preclinical laboratory setting.

## The **TRACK**-solution

The technology is based on a sensory equipped hardware platform combined with machine learning software algorithms to continuously monitor and document biological and behavioral changes in ways not possible with current procedures and technologies. **Our vision is to contribute to the development of new safe and effective pharmaceuticals at increased speed and quality, while at the same time improving animal welfare in the preclinical laboratory.**



Fig 1. Schematic overview of the TRACK-hardware and interface.

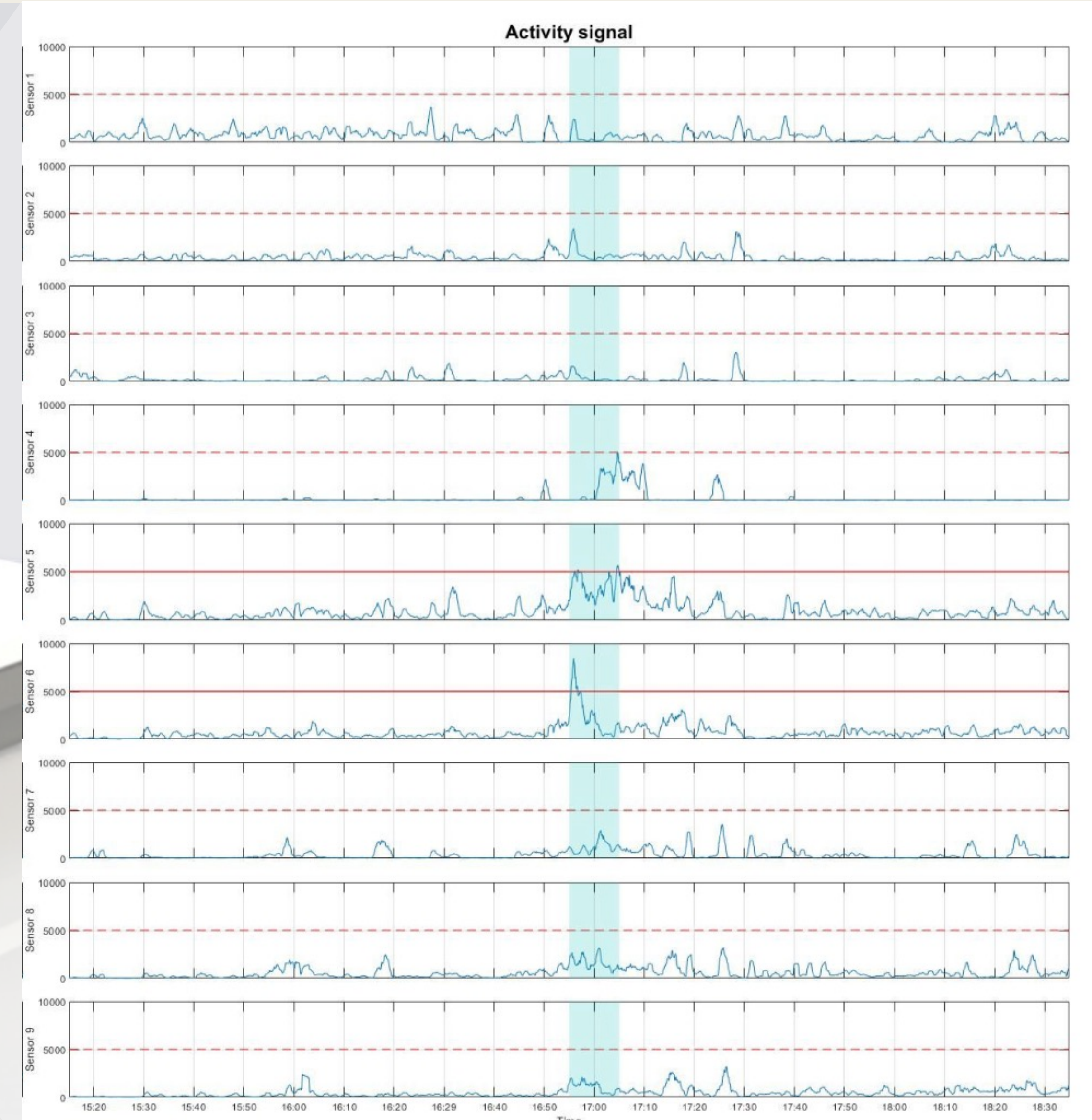


Fig 2. Example output from the system, here defining aggressive activity occurring between two mice on sensor 5 and 6. The data will be presented in a user friendly way.

## Software – Statistical analysis and AI

The platform can be used both as an intelligent surveillance system, and as an advanced tool for longitudinal weight monitoring and behavioural analysis. Behaviours that can be tracked and analysed using state of the art machine learning methods include disease markers, movement patterns and social behaviour.

## Hardware – Seamless integration

The platform can be placed on the cage floor and does not interfere with bedding, enrichment or feeding utilities in the cage. The sensors and RFID readers tracks the individual mice weight and activity status. Thus, it can be seamlessly integrated with any pre-existing workflows, rack systems and cage environments. The data is wirelessly transmitted to a server which makes our solution easily scalable.

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