Satellite-based animal tracking systems enable high spatial and temporal resolution to discover animal behaviour. E-Track develops an integrated hardware and software system that enables animal behaviour analysis using EGNOS-enabled GNSS tags. Making use of the latest technology, wild and domestic animals can be tracked to obtain new insights in their whereabouts, habitat use and behaviour.

**Integrated System**

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**Your Input is Welcome**

Join our growing community and learn what E-Track can bring for you. Nature managers, rural planners, dairy farmers, researchers and many others can take advantage of the new insights and base their decisions on real behaviour. We are looking forward to receive your feedback! Contact us through our website and subscribe to our newsletter.

www.etrack-project.eu
Here, the high accurate positioning and movement data are processed and analysed. The E-Track project aims to develop an end-to-end system for movement tracking and behaviour recognition based on GNSS (Global Navigation Satellite System) telemetry, with high temporal and spatial resolution, sufficient to enable the fine-scale measurement of behaviour and interactions of wildlife.

In addition to animal studies and research, the use of GNSS in livestock management has been suggested for applications in animal monitoring (oestrus and illness detection), movement and pasture use (grazing patterns), herd location (free range cattle) and virtual fencing. Barriers for further operationalisation involve the costs of the collars and the power supply to the devices, in particular in comparison to pedometers and close range sensors.

E-Track developed an integrated system for animal tracking and behaviour analysis. It is using the EGNOS augmentation system to GPS positioning. The objective of E-Track is to better and more reliably track and analyse the movements and behaviour of animals under field conditions. The E-Track system comprises data acquisition systems (collars for mammals, backpacks for birds) with GPS + EGNOS receivers and optional 3D accelerometers, data communication systems. The data is transferred in real-time (or another mode if desired) to the analysis and visualisation software.

The spatial movement patterns of individual animals have much to tell us about their behaviour, physiological status and wellbeing. Therefore tracking animals with Global Navigation Satellite Systems (GNSS), of which the GPS is the most commonly used, has become an important research method for studying wildlife behaviour and how human activities affect this behaviour. Feeding, fleeing and resting for instance each have specific spatial and temporal patterns.