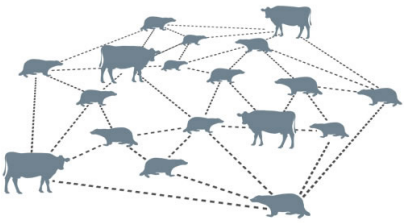
Lotek

AVIAN TERRESTRIAL MARINE FRESHWATER

nCounter Proximity System

White-tailed deer (*Odocoileus virginianus*)



New possibilities for your Study Design

Lotek proximity sensors are now available on a wide array of Lotek GPS collar models. With this feature included, two or more collars that are within communication distance from each other exchange and log their respective IDs.
The durations of their encounters are also logged in the memory.

Lotek's new GPS collars with contact proximity logging help you answer new questions:

- WHO was involved in the interaction?
- WHAT happened?
- WHERE did the contact occur?
- WHEN did the contact occur?
- WHY did the contact happen?
- HOW long was the contact?
- HOW often were the contacts?

WHERE did the contact occur NOW POSSIBLE:
A contact triggered GPS location improves the animals social network data and allows detecting the variability in contact patterns within and between species, with better spacial resolution than ever possible before

Frequency of interactions and duration:
Estimating the number of times an individual animal comes in contact with another provides a greater understanding of disease transmission opportunities for inter and intra-specific context

Increased memory capacity:
To capture even more contact events and for a longer period of time

Product Applications

Disease Transmission Studies (eg. Brucellosis, CWD),
INTER-SPECIES INTERACTIONS:
Competition for food resources, Kill site analysis (eg. duration of stay, frequency of visit),

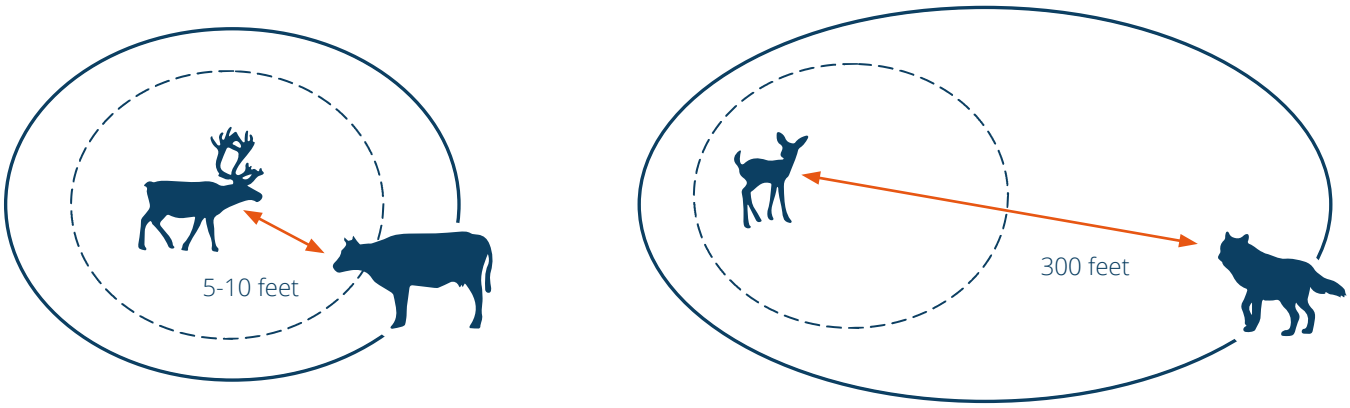
CONSPECIFIC INTERACTIONS:
Social status, Reproductive strategy, Herd coherence, Social interactions
PREDATOR/PREY:
Predation efficiency, Individual kill participation, Refractory period/chase details.

Close Contact Proximity (5-10 feet)

Close contact proximity event logging for studies of disease transmission and social interaction.
The detection range can be defined down to 5 feet.

Far Proximity (up to 300 feet)

For studies involving doe-fawn interactions, predator prey and or others the detection radius can be user modified.



NOTE: The actual range of proximity signals is determined by many factors other than transmitter's power, receiver's sensitivity, and frequency range used. They can be: transmitter's and receiver's antenna elevation above the ground - which are dependent on species under study, animal's neck size - which determines antenna length and type, terrain, vegetation, etc. It is possible, especially while studying small animals, that what we call far proximity exhibits range of a few tens of feet only.

Figure 1. Logging encounters

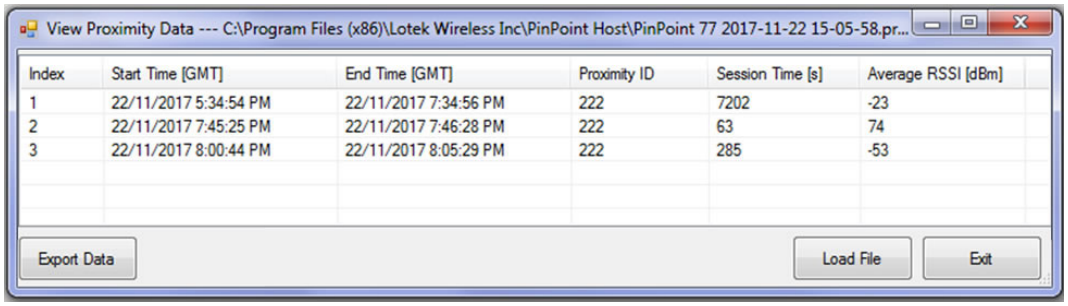


Figure 2. Logging individual events