

Smart collar to track your pet in real-time

November 5 2020, by Alison Donnellan



CSIRO's Data61, the digital specialist arm of Australia's national science agency, announced today it is developing a prototype smart pet collar in collaboration with agtech company Ceres Tag, that will enable pet owners to accurately track the location of their animal from a short and long distance, filling a gap in the smart collar market . Credit: Unsplash, Koen Eijkelenboom

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agency, announced today it is developing a prototype smart pet collar in collaboration with agtech company Ceres Tag, that will enable pet owners to accurately track the location of their animal from a short and long distance, filling a gap in the smart collar market.

The prototype builds on work between CSIRO and Ceres Tag to develop smart ear tags for tracking livestock across expanses of open grazing and monitoring their activity and health. Unlike similar products for pets, the prototype collar uses both Bluetooth and [satellite communications](#) rather than one or the other to track an animal's movements in real-time. Updates are sent to the owner's phone via an app whenever their pet wanders outside of a boundary they've established.

Dr. Phil Valencia, Senior Research Engineer at CSIRO's Data61, said the solution developed for the agriculture industry could also have flow-on benefits for conscientious [pet owners](#). "The Companion Collar uses Data61's EIP (Embedded Intelligence Platform) and BLE (Bluetooth Low Energy) technology to determine if the pet is nearby, automatically switching to satellite communications when the collar is outside of the home network," Dr. Valencia said.

"Many devices only employ Bluetooth or WiFi-based tracking, which often involve a community of people listening' on their phones and sharing their location data with a service in order to report the [tracking device](#). This method is also only suitable for short distance monitoring."

The other approach available on the market is a GPS-based tracker that requires a mobile plan. These devices are often expensive, rely on cellular coverage and use a large amount of power, requiring weekly, if not even more frequent, charging. The Companion Collar requires monthly charging on average, depending on the amount of activity the animal performs.

Pets who remain within the virtual boundry set up by their owner will trigger the device's automatic power saving mode, but those who wander outside will cause it to switch to GPS location and direct satellite reporting.

Other crucial information such as specific behaviors, out of the ordinary activity and data for health metrics will also be monitored by the Collar, with information being uploaded to the cloud and displayed on a smart phone app. "Owners will get valuable insights into how their pet has behaved throughout the day, with the system identifying if the animal's activity is above or below its typical levels, and whether it was significantly different at a certain time of day," Dr. Valencia said.

Lewis Frost, Ceres Tag Chief Operating Officer, said insights will lay the foundation for personalized pet treatment and medication, suggesting the collar will vastly improve the health and welfare of domestic pets.

"Ceres is leveraging all its learnings from the livestock smart tag development to create a superior product in the companion animal market utilizing the skills of our very capable development team," Mr Frost said. The Companion Collar is the latest project in a longstanding partnership between Ceres Tag and Data61, with CSIRO's Kick-Start program making this project possible.

Provided by CSIRO

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