

# Sensors allow rescue teams to "speak" dog

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Have you ever had a burning desire to understand what your dog is saying? Personally, I feel it would be mostly, "Food? Walk? Toy? Food? But, seriously, food?" but that's just me.

For your average housedog, it's not really imperative the owner understand everything the dog is trying to communicate. However, if the dog's job is a little more intense, it could make a huge difference.

Presenting the [FIDO system](#) [1]: a dog-to-human translator for dogs with important jobs. FIDO, which stands for Facilitating Interactions for Dogs with Occupations, is designed to do exactly what the name implies and help service dogs, military dogs, search and rescue dogs or even cancer-sniffing dogs communicate more efficiently with their handlers.

The system—still in the prototyping stages--is the brainchild of [a team from Georgia Institute of Technology](#) [2]: Thad Starner, Google Glass technical lead; Clint Zeagler, a research scientist; and Melody Jackson, an associate professor.

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[FIDO](#) [1] is made up of a vest containing four sensors and an Arduino microprocessor. Each sensor has its own activation tag, which the dog can use by biting, tugging, or touching. In tests, the dogs were able to quickly pick up that particular tags correspond to certain responses. The tags then relay the information to the handler. For example, [Zeagler](#) [3] gives this example on his website, "Melissa and her guide dog Roman are walking along a familiar sidewalk when Roman suddenly stops. Melissa asks him to go on, but Roman refuses. Melissa checks for obstructions with her collapsible cane and feels nothing in their path. "What is it, Roman?" Roman tugs a tab on his harness and the message "go around" sounds in Melissa's earbuds. Roman finds a safe route off of the sidewalk, avoiding the wet cement in their path."

At times it seems like dogs are limited only by the human inability to interpret what they are saying. It's easy to answer yes/no questions. Is there a bomb? Yes/No. The challenge—potentially solved by FIDO—is asking "What type of bomb?" This system also allows for more remote management of the animal. For example, a search and rescue dog would be able to go into the woods and then notify the handler when it has found someone.

The creators have [ambitious dreams](#) [3] for the technology. But it could be incredibly valuable to anyone who depends on a dog, "Charles is engrossed in a movie in his dark home theater when his hearing dog, Schubert, alerts. "What is it, Schubert, the doorbell?" Charles asks, and Schubert touches one of the four buttons

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on his vest with his nose. A message appears on Charles' head-mounted display. "Tornado siren? Oh my!" As they immediately head to the basement, Charles praises Schubert for the warning."

While it won't help those of us who can't figure out why the dog won't stop scratching at the laundry room door for hours at a time, it could serve an much better purpose.

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### **Links:**

- [1] <http://www.technologyreview.com/news/516461/next-in-wearable-computing-a-device-for-dogs/>
- [2] <http://gizmodo.com/know-what-your-dog-really-wants-with-this-pooch-to-peop-870654352>
- [3] <http://www.clintzeagler.com/2013/07/15/fido-facilitating-interactions-for-dogs-with-occupations/>