

# Students develop cane with e-tags to guide blind

August 3 2009, By DAVID N. GOODMAN , Associated Press Writer

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This May 6, 2009 photo released by Central Michigan University shows Kevin Rock wearing glasses that simulate visual impairment to test a Smart Cane on the school's campus in Mount Pleasant, Mich. The cane is able to detect electronic navigational aid tags and help the blind avoid obstacles and reach their destinations. (AP Photo/Robert Barclay)

(AP) -- A cane equipped with the technology that retailers use to tag merchandise could help blind people avoid obstacles.

An engineering professor and five students at Central Michigan University have created a "Smart Cane" to read electronic navigational tags installed between buildings to aid the blind in reaching their destinations more easily.

"This project started as a way for me to teach students to see and understand the ways that engineering can be used for the greater good," said Kumar Yelamarthi, the professor and project leader. "We wanted to do something that would help people and make our campus more accessible."

During the spring term, Yelamarthi and five senior engineering students tested the cane, which is equipped with [Radio Frequency Identification](#) technology, similar to what retailers put on products to keep them from being stolen.

The Smart Cane contains an ultrasonic sensor that is paired with a miniature navigational system inside a messenger-style bag worn across the shoulder.

For the test, the students installed identification tags between two buildings on the campus in Mount Pleasant, Mich.. A speaker located on the bag strap gave audio alerts when the system detected an obstacle and told the user which direction to move.

Students wearing glasses that simulate visual impairment tested the cane.

The students also created a vibrating glove to assist those who are both visually and hearing-impaired.

Yelamarthi said it's one of the first outdoor applications of [RFID](#) and said he plans for students in upcoming classes to further refine the system while he seeks grants to speed the research.

The next step probably involves using the system in a wider area. Down the line, Yelamarthi wants to work toward integrating the Smart Cane's data with [GPS](#).

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