

RFID tags to boost transit worker safety

January 21 2010

Trackside transit workers may soon be sporting RFID tags to improve their safety.

Bombardier Transportation, McMaster RFID Applications Lab (MRAL) and Ontario Centres of Excellence (OCE) are undertaking a \$1.4 million research collaboration to develop location awareness technology that can be used to notify subway vehicles of the exact location of track inspectors and other trackside workers.

"Our customers have asked us if we could develop a better way of communicating the location of track workers for improved safety," explained Keith Sheardown, general manager, Bombardier Transportation Technology Solutions unit. "We developed some early concepts and now we're looking to the RFID team at McMaster to help us complete the solution and test it."

The idea is to use [radio frequency identification](#) (RFID) tags to transmit a signal to approaching subway operators notifying them of the presence of track workers. Currently, subway operators have various manual methods of indicating the presence of inspection crews such as system-wide broadcasts or coloured lights that indicate sections where work is occurring. Lookouts notify track workers of approaching rail vehicles.

"This technology will be the first solution of this type in the world," said Pankaj Sood, MRAL. "We will be looking at how to create an entire automated communications ecosystem using technologies such as [RFID](#) systems, sensors, networks, data processing, user interfaces and new

[antenna](#) technologies."

The project is expected to take three years to complete. Up to 10 graduate and undergraduate students from McMaster University and other Ontario universities will be involved.

The research group is looking to commercialize the technology once it is developed and tested. Estimates are that 20 to 40 direct jobs could be created upon successful completion of the [pilot program](#), and another 40 to 80 indirect jobs. Real Time Location Systems (RTLS) are also in demand in other industries including health care and mining.

"When you have an industry leader and top research institute working together, this is an example of what can be created," said John MacRitchie, Business Development, Ontario Centres of Excellence.

"The development of these solutions could lead to the growth of new technology suppliers in this segment and the creation of new jobs. It also develops local expertise in this segment which would be in demand globally."

Ontario Centres of Excellence is providing \$600,000 in funding, with the remainder coming from the project partners.

Provided by McMaster University

Citation: RFID tags to boost transit worker safety (2010, January 21) retrieved 20 April 2024 from <https://phys.org/news/2010-01-rfid-tags-boost-transit-worker.html>

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