

Search for:

- [Subscribe](#)
- [Search](#)
  
- [Subscribe](#)
- [Search](#)
  
- [News](#)
- [Insights](#)
  - [Editor's Notes](#)
  - [Expert View](#)
  - [Trends](#)
  - [White Papers](#)
  - [Ask The Experts](#)
- [Industries/Topics](#)
- [Events & Resources](#)
  - [Events](#)
  - [Event Recordings & Videos](#)
  - [Get Started](#)
  - [RFID Journal Glossary](#)
  - [RFID Journal Awards](#)
  - [Magazine Archive](#)
  - [FAQs](#)

Select Page

## **RFID Improves ETA Info for Bus Passengers**

Transit companies in Texas and the U.S. Northeast and Midwest are piloting a public-transit management solution using RFID technology to augment the location information provided by a GPS-based bus-tracking system.

The Public Transit Center 2 (PTC2), provided by Telargo, has been available in the United States since early summer, says the company's president and CEO, Bogdan Pavlic. Thus far, he claims, numerous U.S. companies are piloting the system, though he is unwilling to name any. Telargo, together with NEC subsidiary NEC Honk Kong, is also piloting the PTC2 system with major transit companies in Hong Kong.



Telargo's  
Bogdan  
Pavlic

Transit companies can use a system involving GPS to provide location data of a specific vehicle anywhere along its route. Such data can help the company determine when a given bus falls behind schedule, and to make necessary adjustments to the schedule. Passengers benefit from the system because of information on signs, both inside the bus and at bus stops, alerting them to a bus's location along its route.

Linked to a wireless-data network such as General Packet Radio Service (GPRS), the GPS system provides details regarding the bus's location every 30 seconds. However, wireless transmission of that data from the vehicle unit to the data network can be slow, and the GPS tracking imprecise, making the data potentially inaccurate by the time the system posts it at bus-stop signs. "It's embarrassing for the bus company if the sign states the bus is about to arrive and it has actually already left the bus stop," Pavlic says.

According to Pavlic, the answer lies with RFID, now a part of the PTC2 system. Using a 2.4 GHz RFID transceiver installed on the bus, with the same type of transceiver deployed at bus

stops, a transit company can pinpoint the exact moment a bus comes within 100 meters of each bus stop. When a bus enters the range of such a transceiver, which is connected to the bus-stop sign through a USB or serial (RS232) port, the transceivers talk to each other via a ZigBee wireless connection. The transceiver on the bus provides the unique ID number associated with that specific vehicle, as well as its route number, to the transceiver at the bus stop. The data is interpreted by the Telargo software system, after which the sign notifies passengers waiting at the bus stop when a specific bus is arriving.

Adding RFID to the GPS system is “the cherry on the cream,” says Pavlic. “The benefits are big when you take into account the accuracy of information for passenger services. We are enhancing reliability by using short-range radio.”

Telargo’s services include a hosted site from which transit companies can ascertain details about their scheduling and transit performance. Telargo charges a flat-rate monthly charge for this service.

In Hong Kong, says NEC Hong Kong spokesperson Louis Lau, pilots got underway early this year with some of the major bus companies in that country. They are now in the process of installing electronic signs for the RFID portion of the system. That RFID portion, Lau says, is an important feature to the entire bus-tracking system because it adds the accuracy element for passengers. “Hong Kong is very small, and the bus stops are very close together,” Lau says. “RFID can monitor the arrival of buses more effectively; it’s helping the GPS system.” The topography of Hong Kong, he adds, with its many hills and tall buildings, makes GPS less accurate. For that reason as well, he says, “RFID is very critical to the success of this system in Hong Kong.”

At present, approximately 3 million people ride Hong Kong buses daily, utilizing between 5,000 and 6,000 vehicles owned

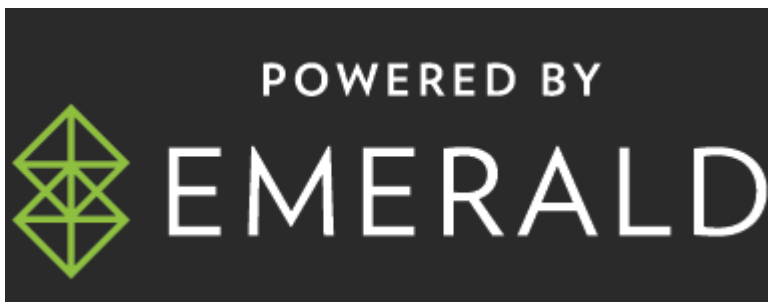
by several bus companies.



- ABOUT
- ADVERTISE
- CONTACT

FOLLOW US ON

- Follow
- Follow
- Follow
- Follow



© 2024 Emerald X, LLC. All Rights Reserved

ABOUT CAREERS AUTHORIZED SERVICE PROVIDERS Your Privacy  
Choices TERMS OF USE PRIVACY POLICY