

A New Role For Parking Guidance Sensors

• By Kristin Phillips

It may seem strange to think of parking guidance sensors as an “emerging technology” because they’ve become so well established throughout the parking industry. However, a handful of entrepreneurial parking technology experts are pushing the boundaries of parking guidance technology, finding new ways to use sensors.

The latest example can be found at Assembly Row, a massive mixed use project just outside Boston. When fully built the 40 acre development will feature 635,000 square feet of outlet shops and restaurants, 2.8 million square feet of office space, a 159-room hotel, and 1,800 residences—and thousands of parking spaces. Assembly Row is one of the jewels of the Boston development scene and has been recognized by Boston Globe Magazine as a “Game Changer” and by the Boston Business Journal as one of the transformative projects shaping Greater Boston.

Three hours of free parking is provided for the convenience of patrons of tenant shops and entertainment venues. However, parking shortages had become a problem because the spaces were frequently used by commuters traveling into downtown Boston via a subway station located on the site. Some travelers would avoid paying for parking provided for commuters at the station, taking up free spaces intended for shoppers

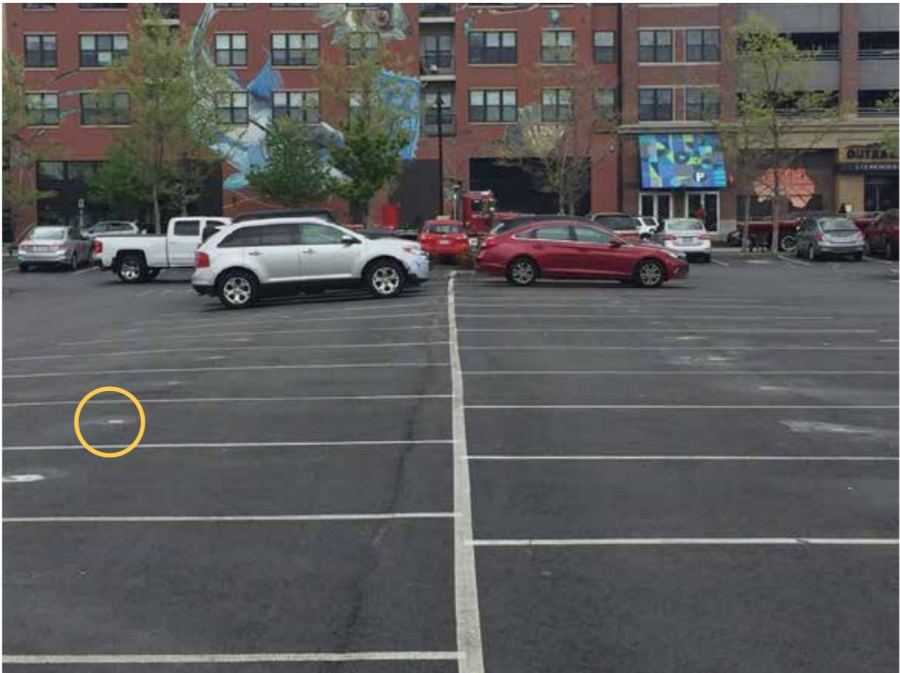
To combat this the owners of Assembly Row, Federal Realty Investment Trust, turned to two parking technology leaders, IPsens and INDECT USA, to design and implement a sensor-based strategy for managing their free parking. They came up with a plan to provide an integrated wireless parking solution that would utilize wireless in-ground Nedap sensors to manage the free parking.

This wasn’t the first time that sensors have been used to manage free parking. The University of Central Missouri has a similar “Shop & Go” program that provides dedicated short-term parking

zones for visitors wishing to make quick shopping runs. However, though the Assembly Row program isn’t the first installation of this kind, it is by far the largest in the United States. Building a network of 1,144 in-ground sensors and creating specialized software to manage the system was an enormous undertaking. Making the accomplish that much more impressive was the fact that the installation was completed in just two weeks. Nedap Identification Systems’ sensors were chosen for their proven performance because they have proven to be extremely reliable and durable, even in the most difficult weather conditions.

“This is a unique parking sensor project,” said David Middleton, Assistant General Manager at Federal Realty Investment Trust. “These sensors permit us to monitor how long visitors are parked in each space to assure that parkers don’t exceed our three hour limit for free parking. The idea is to ensure that visitors to Assembly Row can always find parking by keeping the spaces turning over regularly. The wireless in-ground sensors allow management to monitor parkers’ length of stay in real time and ensure that time limits are observed. If parkers do overstay the limits, enforcement officers can be notified.

“It’s effectively electronic chalking,” said Dale Fowler,



President of INDECT USA. "In fact, it's better than traditional chalking because it's more reliable and accurate."

The brain of the system is software co-developed by INDECT and IPsens. The software was created to meet the unique needs of Assembly Row, its tenants, and customers. In addition to managing the operations of the sensors, the software also collects data and creates reports providing comprehensive data about how the parking spaces are being used, how long vehicles tend to remain parked, and when peak parking hours occur. This data is used by Assembly Row administrators to manage the parking lots more efficiently and effectively, as well as to determine how to handle parking enforcement.

"The software is the key to making this whole program work," said Gorm Tuxen, President of IPsens. "It doesn't matter how good your equipment is if you don't have the right software to run it. We worked very closely with Assembly Row's managers, as well as the folks at INDECT and Nedap to make sure that the software we were building would meet all of Assembly Row's requirements while flawlessly running the software."

For now, the in-ground sensors aren't being used to provide parking guidance (though sensors located in parking garages on the site do). However, the system was

designed to ensure that guidance can be added to the program in the future.

Whenever you have a project of this size and scope you need to make sure that it is expandable and adjustable," said Fowler. "Over time businesses' needs change, as do organization's goals. You need to build in flexibility to meet those changing needs and goals. One way we've done that with this system is to include everything that will be needed to introduce parking guidance in the future."

This creative use of parking sensor technology demonstrates that even the best-established and most commonly used technologies can often be used to drive innovation. Just as Shop & Go programs will continue to proliferate, other creative technology applications will also continue to be introduced.

It's the nature of technology," said Tuxen. "Our understanding of how technology can improve parking is constantly advancing and evolving. We are really only limited by our imagination."

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