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## Is In-Vehicle Wi-Fi a Boom For Commuters?

By John Kennedy

Laura Jones has a daily commute to and from work aboard the Dub Link Matthews Coaches service between Monaghan and Dublin. For this account coordinator in Dublin, that's 90 minutes of lost productivity. So, you'll often find Jones with her Lap Top flipped open, checking e-mail, surfing the Web, or doing something work-related, thanks to Matthews free Wi-Fi access.

"90 minutes is a long time back and forth," Jones said. "So, any of that time I can use to do something productive is always worth it."

### Why Wi-Fi?

By deploying a wireless infrastructure, public transportation companies, like Matthews, are offering free Wi-Fi access for passengers—an amenity that could help boost passengers.

"Coach companies are using Wi-Fi to entice more passengers to use their service," said Jim Baker, Chief Marketing Officer, Icomera.

"The one disadvantage to broadband technology on public transit vehicles is that the backhaul can be limited" added Baker. We all know that 3G has limited bandwidth, which means when you set up Wi-Fi access on a bus, you can only give people so much bandwidth."

However, Baker added that most passengers are not engaged in heavy uploading or downloading.

"Most people don't do massive file transfers," he said. "They do either e-mail or a little Web surfing—applications that don't require much bandwidth. But I do see that improving. European operators are rolling out what they call 4G—but what is really 3.5 G. As they become more efficient in managing the data traffic providing more bandwidth, file transferring will improve as well."

In addition to enhancing the commuter experience, Baker says that Wi-Fi is helping transit operators improve safety and efficiency, by using widespread video surveillance and sophisticated maintenance and diagnostic tracking.

"Streaming surveillance video from wireless cameras on buses to public safety authorities has been very successful for bus operators," she said.

Patrick Cotter agrees.

"While offering free Wi-Fi connectivity to passengers is a value-added service that is going to distinguish a public transit operator from its competition, that's not the main selling point for the operators," said Cotter, Managing Director of FleetConnect, whose company sells gateway devices that deliver broadband connectivity to public transport companies. "The primary driver is not Wi-Fi for passengers, but Internet connectivity for the vehicle."

Cotter says that there are three reasons why public transportation companies want Internet connectivity in the vehicles.

"One is passenger Wi-Fi, so they can deliver a service to the passengers that sets them apart from its competition," he said. "Transport operators' key focus in life is to get backsides on seats, no matter how they do it."

The second driver is delivering a vehicle area network (VAN) to allow connectivity between all of the vehicle's devices and applications.

"For example, the vehicle may have a telematics system, which measures the speed that the driver is going, fuel conditions, braking conditions, and the pitch of the vehicle as it moves," Cotter said. "That information is stored locally on a disk-based device in the vehicle. Our gateway allows that telematic information to be accessed remotely so that vehicle operators can have a complete overview of their fleets in real-time as their vehicles move around all over the place."

The final, and often significant, driver that convinces operators to deploy a wireless system is to enhance vehicle security. Although most buses now have security cameras on board, the problem that operators have is that the video footage can only be uploaded after the vehicle has gone back to the depot or station.

"What our gateway permits, is for IP-based DVR or CCTV systems to be accessed in real-time," said Cotter. "Someone can be sitting at headquarters and receive a message from the driver about a problem on board. That person can then instantly log in and see what's going on."