

News

Catching the Wireless Bus

By [Eric Griffith](#)

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Remember when sitting on the bus as you traveled to and fro meant, at best, reading a good book or napping -- and at worst, staring into space? Those days are numbered, if trials in the cities of Seattle, Washington and Cedar Rapids, Iowa are any indication. Soon, you'll be able to take the laptop and PDA along with you to get some work done online -- or, if nothing else, wireless on the bus can keep you informed of updates in the city and its transportation infrastructure.

Seattle's [King County Metro Transit](#) has two lines that are testing out bus-bound hotspot service. To do it, they're using the [Junxion Box](#) from Junxion, a Wi-Fi router that uses 3G connections -- specifically EV-DO -- for backhaul. The boxes are frowned upon by providers like Verizon Wireless, which would rather sell EV-DO connections on a per-person basis, but they're growing in popularity. Even the New York Times did a story on them recently, highlighting how the production teams for the TV show *The Sopranos* use them in the field.

Up to 29 buses visiting the University of Washington and areas like Loyal Heights, Columbia City and Rainier Beach in Seattle, as well as Kent-Des Moines, Star Lake and Federal Way will be equipped with Junxion Boxes. Soon, the route run by [Sound Transit](#) between Seattle and Redmond (home of a rather well-known high-tech company) will join the pilot. After February 2006, the Transit lines will consider gathered feedback to see if the service should continue and expand to the 1,000+ buses in service there.



EV-DO is a simple way to get Wi-Fi on a bus without building out an infrastructure, but that's not the way Cedar Rapids has gone. In the middle of a revitalization project, the city went to [Motorola](#) and system integrator [Trapeze Group](#) (not to be confused with system vendor Trapeze Networks) to get a mesh network installed that mobile units -- the buses -- could use to access data.

The buses are the primary focus of the deployment in Cedar Rapids, where they'll be used to provide more than just Wi-Fi for use by riders. They will also support security and surveillance equipment to help cut down on vandalism, and provide video entertainment and information (and of course advertising) on LCD screens mounted in each bus. That video isn't necessarily real-time -- it's more likely to be packaged and re-uploaded when appropriate, like the video feeds found on airlines. However, video from the bus used for security will be up to the minute.

Rick Rotondo, Director of Marketing for Mesh Networks at Motorola, says drivers can actually ping the management system, and folks back at the headquarters "can call up any of the buses and look in real time at the security video feed."

Five of the city's 50 buses have the system in place. They traverse about seven miles of the city continuously.

Motorola's mesh hardware doesn't use Wi-Fi for connections, but serves as backhaul to Wi-Fi equipment on the bus, much like EV-DO does for the junction box. Motorola's mesh, however, provides better throughput than EV-DO, so it can support the two-way video.

For now, the Cedar Rapids buses are the only deployments in town for the Motorola mesh, but Rotondo says that could change. "Typically, when we see a city deploy a mesh network, they have it in mind for one application," he says. "Over time, they realize you can put other stuff on it... a year from now, I won't be surprised to see other agencies and applications on it."