

DIGITAL COMMUNITIES

Internet Connected School Buses Work Wonders

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August 02, 2010 • Indrajit Basu



For years now techies around the world have been using Wi-Fi to connect buses and other forms of public transport, like trains and even aircraft, with the Internet. But usually the scale has been fairly limited.

But despite their clear cut business models, even as wiring most forms of public transport remain largely experimental until now, quite a few initiatives around the world has shown that

One initiative, however, might do more than just provide connectivity. By connecting school buses, particularly for rural children who commute long hours to school every day, it could mean significant additional time devoted to lessons.

At least this was the vision of one recent experiment in Arizona. Autonet, an Internet service provider for vehicles, has wired a school bus in the Vail district. The bus transports rural students to their schools, a journey that is a 90-minute commute each way. And the impact, they say, has been amazing.

Before students would spend the journey chatting, or listening to music, or even fighting with each other. But now, says the company, they tend to sit quietly and work on their laptops on the way to and back from school.

"For the students, the bus has turned into a mobile classroom," says Christine Williams of Autonet Mobile. "Besides benefiting the kids educationally, driver has far less of a problem dealing with rowdy kids. So the ride is safer."

According to teachers of the Empire High School in Vail, whose students commute in the bus, the Internet Bus -- as it is called -- has not only helped them to turn in their homework in time. It has also increased their productivity.

As a result of the pilot project in Vail, Williams says Autonet "has received numerous enquiries from schools around the country that are ready to undertake a trial." And it has sold pilots to schools or districts in Florida, Missouri and Washington, D.C.

A similar undertaking in rural Arkansas has been running a similar scheme for the past three years with even bigger impact.

Started by Billy Hudson, a Vanderbilt University medicine, biochemistry, and pathology professor, this initiative -- called the Aspirnaut initiative -- is more of a virtual schoolhouse on wheels. The project focuses on rural students in the community of Grapevine, Ark., where, according to Hudson, students are intellectual underserved as a result of long bus rides to and from school, as well as by a lack of community involvement in their education.

"The goal is to deal with long bus commutes in the rural areas, where some students have to commute for as long an hour and a half each way," says Julie Hudson, who is the wife of Hudson as well as the Assistant Vice Chancellor for Health Affairs at the Vanderbilt University Medical Center.

Julie who oversees the implementation of Aspirnaut adds that long bus rides mean that the students are cut out of other activities in school because they have to leave when the bus leaves. If they had families who could arrange or afford to drive them to school, they would. But since these students are pretty dependent on the buses, they are locked into rigid schedule when they are not in school. And they miss out on pre-school or after school activities."

Since the spring of 2007, Aspirnaut has outfitted three buses, turning them "into a classroom on wheels, providing productive learning opportunities" for the 14 communities they serve. And another 3 to 4 buses are slated to get wired in the next nine months.

Aspirnaut is different from other initiatives, Julie says. "While others just offer open access to the Internet, we are managing the time by making students use the Internet to work on online courses. And we reinforce that time by asking the students to meet after school in the community class room," she says.

But even without such rigid control of the student's Internet time on the buses, others such projects are finding that bringing the Internet to school buses has a very positive impact.

"We started Internet on school buses as a customer service to help children have a better experience on their way to schools," says Steve Jukes, general manager, The Green Bus, a

Birmingham, UK bus service that is now providing free Wi-Fi to the children so that they utilize the ride effectively or "at least more interestingly."

"However we found this move has not only made bus rides more productive for students; it has also made them prefer to travel by Green Bus rather than by car. The benefits are win-win; students enjoy the ride, their parents find it more convenient while the Green Buses reduce peak-time congestion outside schools."

According to Jukes, The Green Bus now carry over 1500 kids to school every day that saves over 2000 car journeys.

A similar experiment in Estonia has also opened up immense possibilities of extending the outreach of education. "We started wiring public transport cross country buses about 18 months back and as a part of that project we wired a few school buses as well," says Veljo Hammer, founder of WiFi.ee, the Wi-Fi initiative that has wired every nook and corner of Estonia. "Although only a few have been wired so far, the results have been amazing. We have now approached the government to extend support so that we can include more school buses in Estonia."

Wired school buses also has the potential to generate revenues, say those running these projects, although most of them so far - save Autonet's and the Green Bus projects - remain largely privately funded and not-for-profit initiatives until now.

Wiring doesn't cost the earth either. Autonet for instance can wire each bus for less than \$300 while it charges \$59 per month for the Internet service. Aspirnaut has spent somewhat more - about \$600 for the equipments on each bus. But Julie Huson says that Internet connections for its buses come as cheap as \$30 per bus.

The Green Bus on the other hand is a fully commercial venture that charges \$45 per student. But parents pay happily, says Jukes.

Nevertheless, according to Julie Hudson, rural areas or rural students are not the only ones that can benefit from wired school buses. In a number of urban areas like Atlanta, Chicago, Los Angeles, and New York, due to such things as traffic congestion and route maximization, many students ride their buses an hour each way as well.

"Twenty five percent of the population in the US is considered rural by the census bureau definition. That means a quarter of the population resides in the rural areas and if the congested urban areas are included as well, wired school buses indeed has the potential to impact a lot of students," adds Julie.

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