

PASSENGER Transport

THE SOURCE FOR PUBLIC TRANSPORTATION NEWS AND ANALYSIS

MONDAY, SEPTEMBER 26, 2011 | VOLUME 69, NO. 20

Ruggedized Consumer Devices For Transit: A New Standard for Cost Savings and Convenience

Special to *Passenger Transport*

Public transportation agencies are creating a new mobile standard for the industry. Many agencies are seriously examining, while some are eagerly implementing, ruggedized consumer devices as part of their CAD/AVL and fixed route operations.

They have good reason, too.

Most public transit managers and executives appreciate the significant cost savings and convenience that come with consumer devices when applied to transit. As traditional mobile data computers expire or become too cost-prohibitive to purchase or maintain, these agencies need viable alternatives.

A ruggedized consumer device is less than one-third the cost of a traditional mobile data computer: depending on the model, the current retail cost is \$200-\$500 per device.

Furthermore, consumer devices can be purchased off the shelf. Samsung Galaxy Tabs, for example, can easily be bought at a local retail store or through a cellular account representative, and the simplest installation can be done by maintenance staff using no-drill mounts. This offers transit agencies greater scalability and ample inventory readily at hand. Such low hardware costs mean that even if an agency replaces a device once every two years, the cost would still be less than investing in a traditional mobile data computer over the course of five to seven years.

Regarding functionality, consumer devices have gotten smarter. They can now integrate with complex, transit-specific software, enabling public transit agencies

to take advantage of real-time automatic vehicle location status, bus scheduling, and route optimization.

When loaded with RouteMatch Software's fixed route technologies, the Samsung Galaxy Tab delivers automated data collection, mobile communication, in-vehicle navigation, and emergency response capabilities. Maintenance can be done over the air.

Lucky for the public transit sector, consumer devices also are not as "dainty" as they were three years ago. "Ruggedizers" have caught on in the market.

The devices can be easily modified for extra durability through commercial-grade cases such as those provided by OtterBox. These clever, tough cases buffer the occasional day-to-day falls that can happen with the rigor of bus operations.

A variety of in-vehicle mounting options are now available to accommodate transit agency preferences. These can be mounted directly into the vehicle or placed on a mounting stand and removed at the end of the day. For transit agencies that may want to mix and match ruggedized consumer devices with traditional mobile data computer mounts or gradually replace mobile data computers with ruggedized consumer devices, that's feasible as well.

Despite all of these immediate benefits, what's really invigorating about this new adoption of ruggedized consumer devices is the promise that the highly commoditized consumer market will generate even greater functionality over time. Like the healthcare sector where iPads have been favored for improved patient care, the convergence between consumer mobile innovation and specialized industry sectors gives transit professionals more options.

Public transit agencies can choose how they increase safety and security for riders and vehicles, and at what price level.

Transit agency veterans may consider the move to ruggedized consumer devices a "graduation."

They can get what they need, plus new functions such as the ability to take pictures for incident management and being able to use Google's Droid development environment. While commonplace in the consumer realm, these capabilities have never existed in the world

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of traditional mobile data computers and the public transit industry.

Immediate cost savings is a given with this new standard of ruggedized consumer devices, and early adopters are encouraged. Just think of all the exciting possibilities for even more innovation down the line.