



Home // Asphalt // eRoutes App Brings Real-Time Tracking Data to Paving Contractors

×

eRoutes App Brings Real-Time Tracking Data to Paving Contractors

New Caterpillar Inc. mobile app will help asphalt contractors track mix delivery from their smartphone

BY JESSICA LOMBARDO — MAY 1, 2018



VIEW GALLERY 

Caterpillar, Inc. will soon launch a new web-based application for smartphones and the web that allows paving contractors to track the location and productivity of haul trucks as they travel between the asphalt plant and jobsite.

Caterpillar previewed their new app, eRoutes, during a presentation at World of Asphalt in Houston.

“The app is the result of an intellectual property purchase that Caterpillar is in the process of making from Minds, Inc., a company that specializes in developing automation control systems and process monitoring software for the asphalt and construction industries,” Dann Rawls, business development manager for eRoutes at Caterpillar says.

Contractors know that a consistent flow of material to the paver is critical for smooth, consistent paving. With eRoutes, paving contractors can open up the app and quickly see where their trucks are and when they will arrive to a jobsite.

“Having visibility to truck location and estimated time of arrival enables the crews to plan ahead for any problems or breaks in the trucking cycle,” Rawls says. “Today, the crews don't really know there is a bust in the trucking cycle until it happens. They will typically have to stop the paver when this happens. Knowing there is a potential trucking cycle problem coming, say in the next 45 minutes, crews are able to adjust paving parameters to avoid a paver stop.

“The goal is to allow contractors to align laydown and delivery by making adjustments to a paving operation based on information flowing in from the app,” Rawls continues. “eRoutes can also send push notifications to your phone about certain stages of the haul process such as when a truck is loaded or when a mix change has occurred.”

The app provides location tracking by placing devices at the plant and on the paver or material transfer vehicle that create a geofence at these locations. The trucks are also outfitted with a small device that is constantly pinging its GPS location. Thanks to the geofence devices, you can instantly see when a truck enters or leaves the jobsite or asphalt plant.

Improving Plant Operations

While it's easy to see how this app would improve jobsite productivity, it is also helpful for plant operators as well.

“For the plant, there is typically more than one mix type being produced each day,” Rawls says. “Balancing the production of these various mix types is challenging without visibility to the progress of trucks returning to the plant.”

With this technology, a plant operator can see which crew is being most productive, and he/she can plan production of the various mixes accordingly.



Contractors know that a consistent flow of material to the paver is critical for smooth, consistent paving. With eRoutes, paving contractors can open up the app and quickly see where their trucks are and when they will arrive to a jobsite.

“Today, the plant operator may be in the process of producing one mix type when numerous trucks for a different mix type begin to show up at the plant because that particular crew is in a productive state,” Rawls says. “Their trucks are typically forced to wait at the plant until a sufficient quantity of their mix type is ready. Unnecessary switching from one mix type to another mix type is costly for an asphalt plant due to time and waste.”

Beyond location tracking, the app’s geofencing functionality eliminates the hassle of a paper ticket, logging them electronically instead.

“There is a lot of time invested in paper tickets throughout the process, and time is money,” Rawls says. “Printing, collecting, sorting, totaling and the ultimate submission of ticket quantities to get paid is one of the major pain points associated with road construction in general. Having an exportable spreadsheet/file of tickets eliminates the majority of these pain points.”

Reporting Reduces Guesswork

eRoutes also promises to give contractors a view of how productive truck drivers are being.

“The paving "plan of the day" is reliant on accurate trucking cycle time estimation,” Rawls says. “Also, many companies hire

trucks as well as utilize their own trucks. Trucking is a major expense associated with paving, so ensuring the drivers are on task goes a long way to accomplishing the planned day.”

Identifying productive and safe drivers, whether hired or company owned, enables management to create metrics to measure the other drivers. With this app, managers are able to compare costs across company and hired trucks to see if there is opportunity to cut costs or decide if the compensation model needs to change.

While the smartphone app is designed for use in the field, Rawls said a web-based version will also be available for post processing and generating reports in the office which can be a big benefit for proper job planning.

“When I talk about "plan of the day" it is based on a lot of assumptions, and these assumptions are fundamentally the role of estimators to get right,” Rawls says. “If I bid a job assuming sixty minute cycle times at a given tons/hr delivered, I would expect to finish paving the job in x number of days. If my cycle times extend, then I finish in x+ number of days. My paving schedule, either monthly, bi-weekly, or weekly is dependent on starting and finishing on time.

“With this type of reporting, we are able to match expectations with reality,” he continues. “I may not like the fact that my estimate of sixty minute cycles is wrong, but if I use a realistic cycle time, the overall paving schedule is tighter, and therefore my only variable becomes weather, which contractors are accustomed to.”

eRoutes began life as a custom software request that Minds, Inc. delivered to customers looking for real-time truck tracking. Rawls says Cat expanded on the great work MINDS Inc. performed on the core software and built a new mobile web app and dashboard around it. The app is set to launch to the public as soon as the purchase from Minds, Inc. is complete.

eRoutes will be distributed through SITECH Systems and will be sold as a service through a yearly subscription.

RELATED

CONSTRUCTION NEWS

Poll Shows Partisan Divides on Border Wall, Support for Infrastructure

