



TRACKING THE TRANSPORT OF CONSTRUCTION MATERIAL WITH RFID TECHNOLOGY PROVIDES TOTAL TRACEABILITY AND REDUCES COSTS

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The eRoutes™ PaveTag application traces trucks from hotmix plants to pavers using inexpensive RFID tags. The system automatically collects ticket data, computes transportation and waiting time and insures total traceability on loads delivered to the job.

trucks to haul the product from the plant to paver. In order to control operations, it is very important to measure tonnage, time and delivery location. Time and tonnage are of interest to contractors and truck owners as they are part of the hauling cost equation. Tonnage and delivery location are scrutinized by end customers or their representatives.

Typical hot mix operations involve a fleet of rented

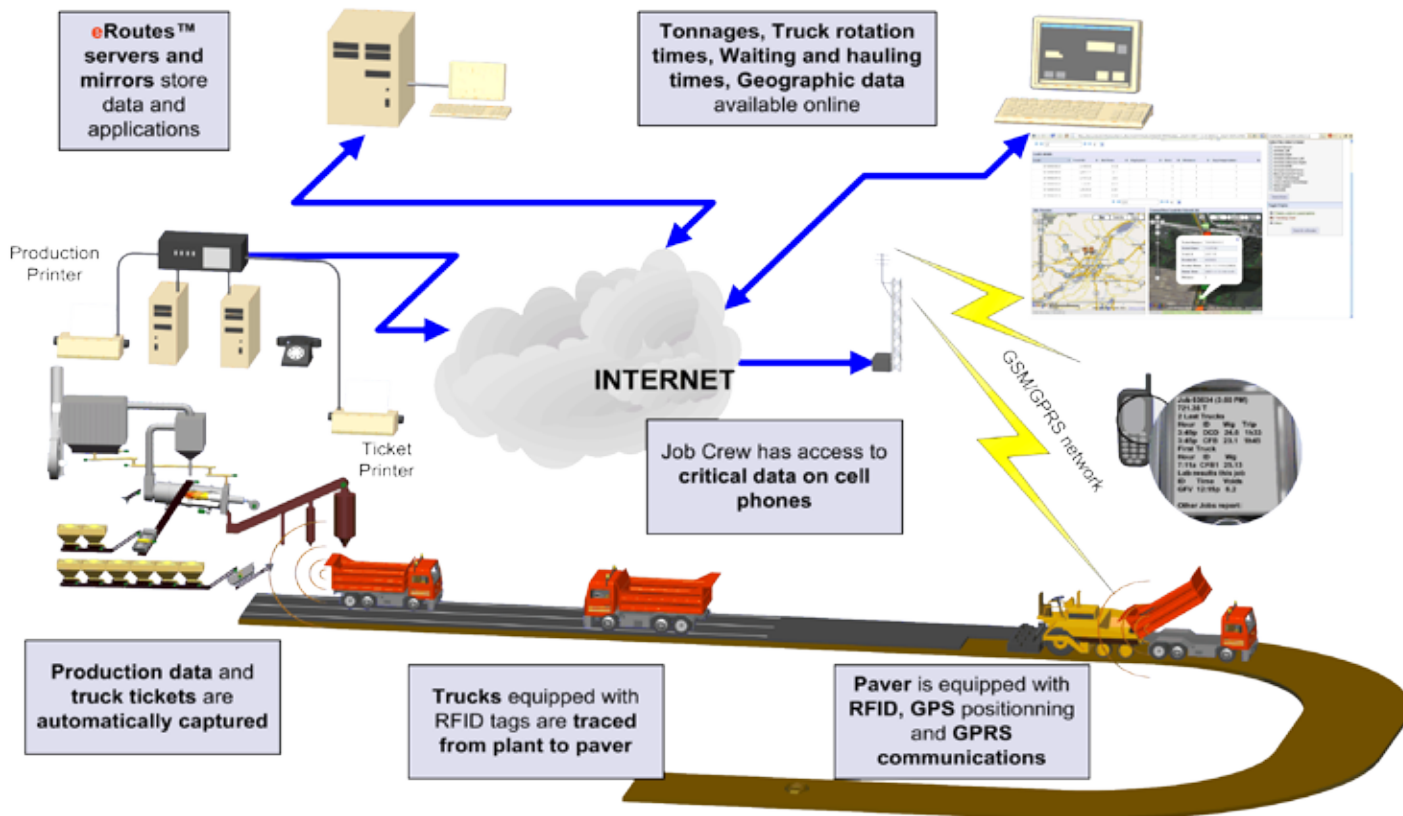
trucks to haul the product from the plant to paver. In order to control operations, it is very important to measure tonnage, time and delivery location. Time and tonnage are of interest to contractors and truck owners as they are part of the hauling cost equation. Tonnage and delivery location are scrutinized by end customers or their representatives.

Such monitoring involves a truck checker at the paver and sometimes another at the truck scale. Disagreements with haulers are not uncommon because information about arrival and departure times or time spent waiting at the paver is not easily measured. This operation can be improved by systematically tracing truck activities. In many cases, tracing truck fleets means using GPS systems; however GPS systems cannot easily be used with rented trucks.

PaveTag™ is a solution that uses state-of-the-art RFID technology from IDENTEC SOLUTIONS to trace truck

activity. Trucks are equipped with a transponder and are traced from their arrival at the plant yard to their delivery at the paver and back to the plant. Ticket data, and optionally production data, is also automatically captured and stored with the hauling data on an online database. Web application servers make the data available with focus on total traceability of time and location. The RFID system makes data collection automatic and reduces time and resource inefficiencies. This documented environment also helps manage the relationship with haulers.

AUTOMATED SYSTEM FOR TRACKING THE HAUL OF HOT MIX MATERIAL



RFID TECHNOLOGY

PaveTag uses IDENTEC SOLUTIONS Intelligent Long Range (ILR) tags. This technology features a field loop marker providing two detection ranges: a long range of about 300 feet and a short range of about 10 feet. With this technology waiting trucks are detected around the paver while the truck being serviced is singled out.



Load	Truck Id	Net Tons	Avg kg/m2	Area	Distance	Avg temperature
301086388-0	L155338	21.26	0	0	0	0
301086389-0	L401141	21.1	0	0	0	0
301086391-0	L157220	20.6	0	0	0	0
301086392-0	1-22-04	20.13	0	0	0	0
301086393-0	L352528	20.81	0	0	0	0
301086401-0	L155338	21.54	0	0	0	0

Job Overview

Current Paver Loads for Selected Job

Ticket Number: 301086410-0
 Ticket Time: 13:57:00
 Truck Id: L401141
 Product Id: 442503
 Dump Time: 2007-11-13 14:16:45
 Distance: 0

Screen shot of PavetAg application on a web browser showing geographical history of a pavement project on Google(TM) maps.

The following data is available for each load: time of arrival at plant, time of loading, time of departure, time of arrival at paver, time of dump at paver, time of departure from paver, rotation duration, ticket number, tonnages (net, gross, tare), distance travelled by paver and geographic position where load has been laid down, product ID, Job ID, Truck ID. Options are hot mix temperature at paver, quantity of material per surface unit, paver speed, paving width and more.



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