

Hermann Brothers

Vehicle Tracking and Bin Information System Case Study



Industry:
Transportation

Challenges:

- Transform an inefficient wood chip collection and transportation process
- Need to capture accurate data on wood chip bin levels and allocate nearest vehicle for pick-up and transmit it to the company's information system in real-time
- IT to help streamline operations in times of tight margins.

Results:

- Wireless Fleet Tracking and Route Optimization (Quadrant) from WebTech Wireless and the Industrial Bin Information System (IBIS) from GLC Controls saves Hermann Brothers \$500/day in operating costs.

Find out how Hermann Brothers is saving \$500/day in operating costs IT Impacts on Bottom-line at Hermann Brothers

Hermann Brothers hauls residual wood products all over the Pacific Northwest, from lumber and wood chips to heavy machinery. One of its customers, a local sawmill, depends on the transportation company for time-critical pick-up of wood chips. Stored in overhead bins, the chips have to be emptied several times every few hours and Hermann Brothers is responsible for ensuring the bins don't overflow. If they do, the sawmill has to shut down operations, at considerable expense, until the bins are emptied.

Need to Monitor Operations from Dispatch Center

With that responsibility, Hermann Brothers has done its utmost to ensure the bins never overflow by having its dispatch center send trucks down at regular intervals. To complicate matters, the bins don't fill up at regular levels. That means drivers would leave empty-handed and would have to come back later to pick up the load. Bill Hermann, owner of the company, estimates this wasted 45 minutes of the driver's time, where each truck earns \$75/hour. With between 25-60 loads picked up on a daily basis, Bill Hermann says drivers would leave without loads as often as 10 times - losing the business \$550 on a bad day.

"There were two issues we needed to solve," comments Bill Hermann. "First, we had no way of remotely monitoring the levels in the bins and, second, we had no idea where

our trucks were at any given time. We needed a system that would help us monitor the bin levels from our dispatch office and track our vehicles to ensure dispatch allocated the load to the truck closest to the location." Realizing they needed to reclaim approximately 7.5 hours a day of lost time, Bill Hermann and his son Mike investigated IT solutions that would help increase their efficiencies.

A Remote Sensor to Measure Bin Levels

As bins fill up at an inconsistent rate, it is hard to estimate by time how soon a bin is full. A number of IT vendors have created solutions that measure the levels using different methods, from inserting rods to optical sensors. GLC Controls has created a system that calibrates the weight of the bin. This system works in all weather conditions.

Kam Ghuman, General Manager, GLC Controls explains the system: "The Industrial Bin Information System (IBIS) uses proprietary sensors that are mounted to the legs of each bin to transmit the weight of the bin via cable or wireless connection. The weight data is sent via the Internet to a server at GLC Controls to monitor bin levels. That data is then sent from the GLC Controls server onto Hermann Brothers' office computer for its dispatch personnel to view and act upon."

IT Impacts on Bottom-line at Hermann Brothers

Tracking Vehicles in Real-Time

Solving the bin level sensing challenges was only half the problem. Hermann Brothers still needed to find a way for its dispatch to monitor its vehicles in real-time. "We used to have to call our drivers to determine their location and dispatch vehicles using best judgment, without knowing exactly where all our vehicles were," continues Bill Hermann. "This was an issue with all our deliveries, so we were really pleased when we came across the vehicle tracking solution from WebTech Wireless."

WebTech's solution combines on-board computing, Global Position system (GPS) technology and two-way wireless communication, with the Internet and digital maps to allow transportation owners to track, manage, locate, monitor and communicate with their vehicles. The WebTech solution, Quadrant™ provides GPS-based location information in real-time to increase fleet productivity and reduce transportation operation costs.

Central to the Quadrant Fleet Management System is the WebTech Locator. A GPS/GPRS device, the Locator is installed in each individual vehicle and allows fleet managers to track vehicles and utilize collected field data to ultimately improve operations. Neil Chan, Senior Vice President of Business Development at WebTech Wireless explains: "Vehicle data gathered by the WebTech Locator can be accessed via a web interface through any PC connected to the Internet."

Quadrant provides a wide range of fleet management solutions including: automatic vehicle location, mapping, reporting, vehicle maintenance, driver status, in-vehicle telemetry, messaging and Internet connectivity. WebTech's solution also offers higher order services such as over-the-air upgrades, routing and scheduling, driver logs, automated fuel-tax calculations and integration to back office applications and databases.

Hermann Brothers has added the Locator devices to each truck to help them track where each vehicle is located at all times and to help its dispatchers optimize the vehicles' routes. "Combining the two technologies, we now know when bins need emptying and dispatch the closest vehicle to its location," comments Bill Hermann.

Time and Cost Savings

Investing in two new technologies at the same time, the company had to ensure it met the right price level. "We were surprised at all the new IT features we gained at a reasonable cost and how easy it is for our personnel to access the information," says Bill Hermann. "In fact, with the productivity savings we've made to date, both systems have already paid for themselves and are saving us a significant amount on operating costs."

WebTech Features ENHANCE PRODUCTIVITY

Recently, the company has upgraded its system to include Quadrant's geo-fencing feature. Basically, by putting a virtual perimeter around the sawmill, the dispatcher is notified when one of its fleet is within the perimeter. With this aid, the dispatcher receives a notification when one of the trucks is in the vicinity of the sawmill, and is reminded to check the levels in the bins. The dispatcher then has the opportunity to notify the driver to go onto another yard if not needed for that location.

Hermann Brothers has made further savings with the Quadrant system. All vehicle destinations are tracked in a historical report by location and time. At some customer sites, Hermann Brothers has negotiated agreements that stipulate when unloading takes longer than 30 minutes, the customer will pay Hermann Brothers 32 cents for every additional minute spent in the yard. In the past, as there was no way of tracking actual time spent unloading vehicles, the overtime was estimated and concessions made by both parties on actual cost. Today, Bill Hermann can pull up the vehicle history report and calculate the exact amount of overtime spent in the customers yards to receive a fair compensation.

