



Pumping Concrete and Profits Are Aim of New Speech Solution

Overview

Country:
USA

Industry:
Construction

Customer Profile

Based in Atlanta, Ga., ATR is an ISV that develops voice and location-aware solutions for the construction industry.

Business Situation

Concrete pumping companies must provide equipment to job sites on extremely tight construction schedules. Reducing dispatch errors and more efficient operations is the goal.

Solution

ATR created mPath Radar into which Microsoft Speech Server 2004 R2 was integrated. Pump truck operators can now get start times, update midday schedules and get change orders via a speech solution.

Benefits

Dispatcher load reduced
Dispatch efficiency up 25 percent
Dispatch errors down 40 percent
Rapid ROI

“Our customers can pour 25 percent more jobs each day because of the mPath solution. If your average revenue per month on a concrete pump is \$20,000, the benefits of being able to dispatch that one unit more efficiently could be \$60,000 per year or, across a 40-pump operation, potentially \$2.4 million.”

Turner Rentz
President
Advanced Technology Research Inc.

At nearly \$1 billion in revenue annually, concrete pumping — use of boomed pumping trucks to deliver concrete truck contents to precise pour locations — stands as a significant segment of the construction industry. However, dispatch inefficiencies are costing the industry an estimated \$780 million a year according to the American Concrete Pumping Association. Advanced Technology and Research Inc. (ATR), a Microsoft Speech Partner, developed mPath™, a GPS and Microsoft Speech Server 2004 R2-enabled solution to address truck dispatch issues. One ATR customer is pouring 25 percent more jobs, reducing dispatch errors by 40 percent and saving fuel costs as well. The total annual impact per year is estimated to exceed \$4 million with an ROI of less than one week.

“More efficient dispatching also translates into a fuel savings of approximately \$60 per truck per day. One customer with 40 trucks saves \$600 a day or about \$200,000 per year.”

Turner Rentz
President
Advanced Technology
Research Inc.

Situation

ATR is a Georgia-based business focused on improving the usability of computer applications through the integration of speech, Geographic Information Systems (GIS), and multimodal technologies in multiple languages.

Through research and careful observation, ATR discovered that concrete pumping plays a key, time-sensitive roll in the pouring of concrete for commercial buildings. If they arrive at a site too soon, a concrete pumping truck and crew waste time waiting for concrete trucks to arrive; if they arrive at a site too late, the integrity of the concrete may be compromised and entire construction schedules may be negatively affected. In fact, according to the American Concrete Pumping Association, pumping companies lose \$780 million each year to dispatch errors such as late arrival penalties and underutilized equipment.

Historically, the concrete pumping industry attempted to solve dispatch-associated problems using generic GPS solutions. However, the solution would often go unused as dispatches needed more than a point on a map or simple truck location. What was needed was a way to integrate time-sensitive construction schedules directly into the workflow of the concrete pumping company.

Solution

ATR is bringing the power of GIS, speech recognition (Microsoft Speech Server 2004 R2) and multimodal environment with its ATR mPath Radar dispatch solution.

mPath Radar is an innovative implementation of GIS and multimodal speech recognition. The complete solution consists of a computer, software (Microsoft Speech Server 2004 R2, Microsoft MapPoint® 2004, mPath and GPS truck feeds).

mPath Radar allows a dispatcher to see a live-data screen showing the positions of each pumping unit located on a map. It enables the dispatcher to zoom into the area around a city and see the locations of pending job orders, pumps on the move, and free pumps matching ready to be assigned. Alerts also indicate when a pumping truck has an associated dispatch error that needs immediate resolution.

Microsoft Speech Server 2004 R2 is integrated into mPath Radar in three, key ways: First, pump truck operators can call in for job dispatch times to make sure they are starting each day on time per specific site schedules. Second, speech technology is used to increase the accuracy of midday dispatches. For example, a single job site might include several pours or subjobs that need to be tracked and invoiced separately. Operators can rapidly call in to notify that a specific pour has been completed and the next pour (sometimes only requiring a quick repositioning of the pump boom) has begun. Third, ATR's mPath Radar automatically initiates outbound calls to operators who have not called in for leave times.

“Concrete pump dispatchers thrive on chaos,” noted Turner Rentz, president of ATR. “They’re the equivalent of air-traffic controllers in the world of construction. Getting the right equipment at the right job at the right time is the difference between success and failure.”

The ATR mPath product family brings the power of speech recognition, GPS and mobile content technologies together to create powerful, easy-to-use applications. The mPath Radar voice- and location-aware applications are built on mobile content technologies such as AJAX, Microsoft .NET and Mobile Web Services.

Benefits

ATR's mPath Radar primarily delivers better and more efficient dispatching capabilities to concrete pumping companies — all affect the company's bottom line.

Dispatcher call load reduced three hours per day

ATR's mPath Radar solution has changed the basic nature of calls needing attention each day. Instead of having to track operators and workflow, the dispatcher can now focus on specific customer needs.

"Dispatchers are often swamped with calls to and from their truck operators," Rentz noted. "mPath can save a dispatcher team up to three hours per day."

Dispatch efficiency up 25 percent or \$300,000 per month

"Our customers can pour 25 percent more jobs each day because of the mPath solution," Rentz said. "If your average revenue per month on a concrete pump is \$20,000, the benefits of being able to dispatch that one unit more efficiently could be \$60,000 per year or, across a 40-pump operation, potentially 2.4 million."

The impact on the cost of fuel and the environment is significant as well.

"More efficient dispatching also translates into a fuel savings of approximately \$40 per truck per day," Rentz said. "One customer with 40 trucks saves \$600 a day or about \$200,000 per year."

ATR customers also calculate the benefits of mPath Radar in terms of personnel needs:

"Increased productivity means increased profitability," noted Pat Inglese, president of American Concrete Pumping Association. "mPath was like adding a free dispatcher to my team."

In the near future, ATR will be integrating real-time weather and traffic reports into its mPath Radar dispatch solution. This additional capability will enhance a dispatcher's ability to find alternative solutions to work flows that can easily be affected by external conditions.

Rapid ROI

Because of the cost of each commercial concrete job and potential financial penalties for missed pours, running a more efficient, error-free operation significantly impacts return-on-investment.

"A typical customer can see a return on investment for our basic speech and GPS-enabled solution in a matter of days or weeks," Rentz said.

Dispatch errors down by 40 percent

One of ATR's major concrete pumping customers is using the mPath Radar dispatch solution with Speech Server 2004 R2 to reduce dispatch errors such as missed appointments.

"Concrete pumping contracts literally spell out penalties of up to \$10,000 per job if a 'pour' is missed," Rentz noted. "Averaging two pours per day per truck, the financial consequences of right place, right time are very significant."

"Increased productivity means increased profitability. mPath was like adding a free dispatcher to my team."

**Pat Inglese
President
American Concrete
Pumping Association**

For more information

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For more information about Microsoft Speech Server, visit the Web site at <http://www.microsoft.com/speech>.

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Software and Services

Microsoft Speech Server 2004 R2

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