BERGKAMP

Industry
Machinery & Industrial

Location
Salina, Kansas, United States

Employees
50 - 100

Focus
Resource management
Crew safety

Solution
- CTM-ONE device
- Cypress VUE
- Custom in-cab Android tablet
- Custom FP5, SP5E Android apps

Category
Fleet management

Bergkamp Inc. helps make roads safer with complete solution

Bergkamp's InPave® Technology Pothole Patching Management System helps municipalities improve the performance and efficiency of their road patching operations. The system monitors the location of the Bergkamp FP5 and SP5E Pothole Patchers and crews along with key system information such as material type and amount of material used. The solution includes Cypress VUE fleet telematics platform, CTM-ONE wireless gateway with custom sensor integration, and a rugged in-cab Samsung tablet with customized applications. With Cypress VUE, Bergkamp provides reliable performance information for government agencies and contractors across the world.

The Challenge: Utilize a single telematics platform

Bergkamp has been offering the Inpave Technology to municipalities for years, where the system collects crew and pothole patching data from the FP5 and SP5E Pothole Patchers. The former InPave system consisted of three web-based applications that worked together to provide managers and owners with mapping and reporting functions. The previous FP5 system also had an in-cab mobile data terminal (MDT) that allowed for operator interface with the InPave system when repairing potholes. The data was then sent back to the office for analysis. However, the three applications came with separate logins and user accounts, decreasing efficiency for administrators.

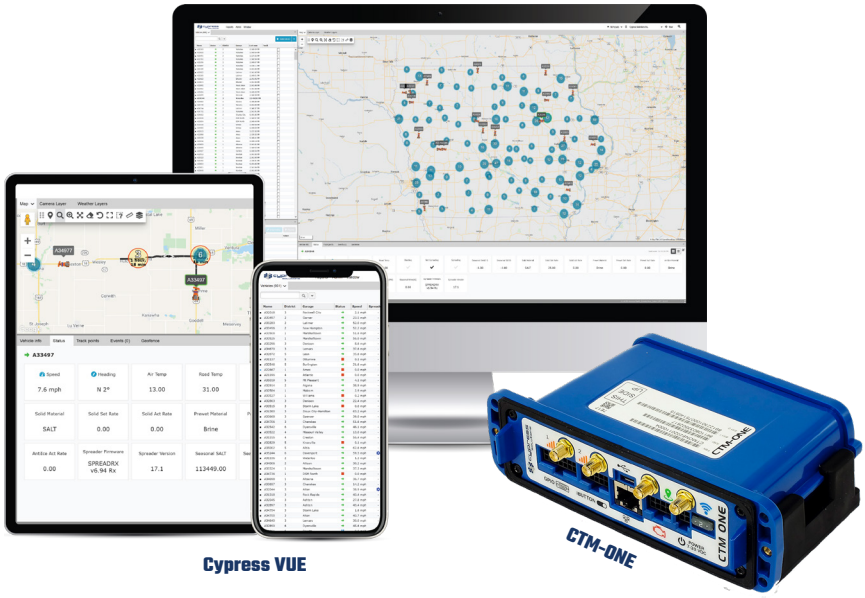
Additionally, the prior system did not have a dispatch functionality. The absence of this component made it difficult for administrators to efficiently send jobs to crews from a job management perspective. Caleb Abell, New Product Engineering Manager of Bergkamp, also notes that “analog signals coming from the FP5 Patcher were not directly compatible with the majority of the hardware in the market, most of which only accept CAN communication. However, with Cypress Solutions’ CTM-ONE wireless gateway, we are thrilled to know that this device can receive both types of signals. This eliminates our need to purchase two different types of hardware.”

To maximize the value of the Pothole Patcher line, Bergkamp needed to consolidate the patching data, sensor data, and dispatching data onto a single telematics platform. Therefore, when the contractual term with the previous vendor ended, Bergkamp was determined to look for a single telematics solution capable of collecting various data sets.

“The FP5 and SP5E collect different data, but ultimately we want the data to be viewable on a single platform. Another important requirement for this solution is report generation. A lot of firms out there are capable of collecting the data, but not every firm can customize reports. We were looking for a company that was willing to work with us to customize the various InPave reports to better serve our clients.” - says Caleb Abell.

In addition to generating powerful reports, Bergkamp had the following backend telematics needs for their pothole patchers:

- Utilize the map view to track current and historical movements of all pothole patchers
- Manage resources including customers, crews, material sources, and material types
- Manage jobs and job applications
- Monitor system status, job entry details, and dispatch & routing via an in-cab tablet



The Solution: Centralizing data all in one place

Bergkamp adopted Cypress Solutions' offerings in January 2020 following a Request for Proposal (RFP) process.After extensive evaluation, Bergkamp selected Cypress Solutions for the customizable and comprehensive reports, hardware ease of installation, and ease of integration with current sensors.

"We sell equipment all over the world. We have distributors in Latin America, Africa, China, and other parts of Asia. Therefore, we needed a solution that is scalable and can be rolled out worldwide. With the CTM-ONE wireless gateway, Bergkamp can ship the hardware anywhere. Same with the Cypress VUE telematics software, the only thing administrators need is access to the online server."

The testing phase took place over a course of one year until the new solution was fully implemented in the summer of 2021.

Adopting the CTM-ONE device and Cypress VUE telematics

To collect the required data, the CTM-ONE wireless gateway is installed in both the FP5 and SP5E Pothole Patchers. The device is responsible for collecting sensor data in real-time, including current asphalt temperature and road temperature. As the CTM-ONE loads this information to the Cypress VUE telematics platform, administrators can view the data directly from a tablet or desktop. As a result, operations managers can manage costs to optimize budgetary use and evaluate patching performance.

In addition to real-time data monitoring, Cypress Solutions also created various custom panels within Cypress VUE for Bergkamp. The custom panels capture information related to the customer, crew, material source/type, and jobs. The panels give administrators an all-in-one view to manage and control resources in a convenient and organized manner.

Bergkamp also utilizes the following Cypress VUE features:

- Geofences to monitor pothole patchers in specified areas
- Event rules for customized alerts
- Custom app reports for the FP5 and SP5E Pothole Patchers

Seamless integration via connected in-cab Android tablet

In replacement of the FP5 Pothole Patcher's in-cab MDT, Cypress Solutions proposed the usage of an Android tablet, with the creation of a custom FP5 application that is accessible directly on the tablet for operators. A custom SP5E Android app was also created for the integration. Both the FP5 and SP5E apps allow operators to submit crew/job information, view system status and view or update material usage data. Information collected from Cypress VUE is made available to the operators through Wi-Fi communication between the tablet and the CTM-ONE. Subsequently, data that is gathered during patching is automatically sent back to the office.

On top of this, Cypress Solutions integrated a Dispatch app with the Android tablet, allowing administrators to dispatch jobs to operators directly from Cypress VUE. Hence, operators can easily view their jobs on the tablet and get started on them immediately.

According to Caleb, "The Dispatch app is a great addition to the whole solution - we are excited to see how our customers will be using this in the long-term because it is a great feature! Not only are we able to receive patching data in Cypress VUE, but now clients know that they can create, dispatch, and monitor jobs from the same platform, where workers can receive those jobs simultaneously from their in-cab tablet."

Custom workspaces for streamlined data reporting

To streamline resource management further, two workspaces were created for the FP5 and SP5E Pothole Patcher apps in Cypress VUE. Ultimately, as operators repair potholes, the unique information collected from the CTM-ONE device is displayed in the corresponding workspace, saving time for client administrators to do the categorization, analysis, and reporting. Dispatch also has an independent workspace for administrators to add jobs and dispatch tasks.

The Result: Robust, reliable data for better decision making

Supplied with patching data, municipalities are ready to maximize road quality and budget use through Bergkamp's InPave system. The custom reports provided by Cypress VUE provide administrators with accurate data in real-time to identify pothole issues and reliably predict future material usage. In addition, the CTM-ONE device provides robust communication to both Cypress VUE and the in-cab Android tablet, making data transfer and retrieval seamless in a single telematics platform.

With the recent launch of the new InPave system, Bergkamp is looking forward to educating municipalities on how to best utilize the telematics platform. "We are currently in the process of producing a variety of resources for our sales and service teams to train our clients and get them familiarized with how the system works," comments Ron Arredondo, Marketing Manager of Bergkamp.

> *"The Cypress Solutions team was great with the implementation process. We are very happy with the on-time delivery and that's a metric we use to judge our vendors."*
>
> *- Caleb Abell, New Product Engineering Manager, Bergkamp*

Reliable applications led to higher operations efficiency

Caleb Abell says "From an engineering perspective, we have achieved mostly every objective we set out initially and now, we have a great solution to bring to market."

In particular, the Dispatch app integration is highly tailored to government agencies. With constant alerts for new potholes and multiple crews, municipalities can now act on these alerts instantly and dispatch the units to where they need to go, handling route changes with ease throughout the day.

Overall, Cypress Solutions successfully met Bergkamp's requirements by providing a fully customized, scalable telematics solution with reliable hardware and applications.

Exceptional customer service

Furthermore, Caleb comments “We wanted an integration partner and that’s what we received. Cypress Solutions was there to help us throughout this process, starting with the device configurations, to the Cypress VUE platform set up, and to the shipments of working prototypes that we installed, used, and tested. The support team’s response time is extremely fast as well. All in all, we had an exceptional customer experience.”

With this new implementation, Bergkamp hopes to see clients across the globe adopt this advanced solution and take advantage of all its features.

For more information, please visit www.bergkampinc.com

Find out how Cypress Solutions can help your business operations.

Visit **www.cypress.bc.ca** or email **info@cypress.bc.ca**

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