



TracerPlus Mobile RFID Success Story

Minnesota Dept. of Transportation uses TracerPlus to build World-Class roads

Portable Technology Solutions, the makers of TracerPlus and ClearStream RFID software and its partner EMKAT have deployed a mobile solution for the Minnesota Dept. of Transportation (MnDOT) to help improve the operations at its MnROAD facility.

MnROAD is a pavement test track researching various materials and pavement designs that is owned and operated by the Minnesota Dept. of Transportation. Its goal is to find ways to make roads last longer, perform better, cost less to build and maintain, faster construction, and have minimal impact on the environment. Located near Albertville, Minnesota, the MnROAD test track is one of the most sophisticated, independently operated pavement test facility of its type in the world. MnROAD is broken into over fifty 500 foot test cells both on its interstate-94 mainline and its low volume road.

One way MnROAD is able to document each road design's performance is by embedding sensors in the different test cells and then having different types of vehicles drive over them to measure their dynamic response. In order to get an accurate reading, the test vehicles must be able to drive directly over these sensors to ensure a correct response. The challenge was that the MnDOT had tried several different methods of keeping track of these sensors location including GPS survey equipment, visible markers, and even video surveillance. All of which were proven to be ineffective at keeping accurate track of the sensors exact location.

In June, the MnROAD team decided to take a different more effective approach. Working with Plymouth MN based Emkat, they installed RFID tags approximately 6 inches below the concrete within 1 to 2 inches of the sensors. Then, armed with a Motorola MC9190Z enabled with TracerPlus mobile RFID software, the new mobile solution was able to locate each sensor and successfully mark the path with 90% accuracy, reducing costs and increasing overall efficiency of the testing performed by ensuring that the test vehicles are accurately directed to drive within inches of the sensors to get the best reading possible.

" In order to do our research at MnROAD, we need to embed sensors, sometimes hundreds of sensors, in each pavement test cell. Data is collected from the sensors as a test vehicle is driven over the sensors. The precise location of these sensors is needed to properly analyze the data for both concrete and asphalt surfaced roadways.

This is where the RFID tag and reader comes into the picture. We attached a tag to the mounting brackets for each sensor prior to paving. With TracerPlus developed programs we can give each tag the sensor name and precisely locate the tag after it has been paved over. This saves us time in relocating and marking sensors on the finished pavement surface "

- Robert Strommen, MnDOT.

Once Emkat met with MnDOT to understand their existing system, they were able to quickly develop a solution that was immediately well received. By offering the Tracerplus software combined with Motorola's best in class MC9190Z RFID enabled mobile computer we were able to easily deploy a solution that met all of MDOTs requirements.

PTS solutions require no programming experience, enabling users of any ability to create enterprise class RFID and mobile applications in minutes. Organizations that utilize PTS solutions add tremendous efficiencies to their IT staffs by shortening application development cycle time and decreasing costs.

About Emkat

Emkat, Inc. located in Plymouth, MN is a mobility solutions provider. Concentrating primarily on mobile hardware sales and service, Emkat presents customers of all industries with creative, cost effective deployment solutions for barcoding, asset tracking, and other efficiency increasing projects. We supply hardware solutions and professional services to thousands of customers, from small offices to Fortune 500 companies. Our success and continued growth throughout the last 9 years has led to recognition on both the Inc 500 and Minnesota Fast Fifty Growth Company lists.

For more information, please visit www.emkat.com or call 1.877.882.1204