

Case Study

– GEOVIDEO® – Winter Maintenance

Introduction

The May Gurney WSP (MGWSP) joint venture was awarded the Northamptonshire highways management contract in March 2008 for a period of 8 years. MGWSP as part of Northamptonshire Highways are responsible for carrying out the precautionary salting of approximately 1,128 miles of road network. To ensure an efficient operation the routes need to be examined to determine timing, potential pinch points and overall route efficiency. Wilson Pym May supplied MGWSP with GeoVideo® in order to aid them in fulfilling the contract and improve the outcomes.

This case study looks at the innovative use of geo-referenced video to assist in the winter maintenance planning process.

Problem

Audits are carried out against the winter maintenance routes and drivers need to be trained and become familiar with the routes before the winter season begins. There is also a requirement to optimise the routes which, although they may appear to take the same amount of time to drive, experience shows this is not the case, as anyone using satellite navigation well knows. With new routes being planned and old routes revised, this was an ideal time to review the whole process.

Solution

In October 2009 MGWSP purchased GeoVideo. The system provides Northamptonshire Highways with a simple, complete and flexible way in which they can capture video data from the network which is time, date and position stamped and does not require any specialist vehicle or training.

Information is captured simultaneously from a GPS receiver and video camera, and the data is combined through an encoding process which links the video frames with the position. This video is then imported to a GIS system and is shown against any mapping layers required.

Whilst the case for procuring GeoVideo was based on a number of uses, the immediate need was to help improve the efficiency of the winter maintenance programme, in a number of ways. Although traditional methods can help to optimise routes to ensure one route does not take considerably longer than another, the methods are based on expected average speeds.

As the GeoVideo system is fully portable; it was a simple task to mount it in one of the gritter vehicles and with a few minutes instruction, geo-coded video of the first route was being collected.

By putting GeoVideo in the correct vehicle for the job, a true record of the route was collected with a visual record of instances that could slow down the progress of the vehicle and identify stretches that may need additional salt.

Training for both experienced and new drivers is a further valuable output from the video as it provides them with route experience without the need to physically drive that route. With 31 routes and the need to switch drivers, this saves a lot of time, money and delivers a carbon footprint reduction, not to mention health and safety ramifications

Outcomes

MGWSP were awarded the Northamptonshire highways management contract with the expectation that they *"...will play a key role in the development of highways programmes and projects. The contract will look to develop and bring forward innovations in highways management using all the latest technology to secure the best value for money."*

The use of the GeoVideo system is a prime example of innovation and value for money as it uses the latest technology and allows them to collect geo-coded video when they want and where they want without incurring high repeat costs.

Although procuring the GeoVideo system was initially fully justified for use to improve the efficiency and reduce the costs of winter maintenance operations, its flexibility means that it can be also used for many other purposes. The next planned uses include before and after scheme surveys and audits of safety inspection routes

"GeoVideo has proven to be a great asset in planning our Winter Maintenance operations, it has helped us to optimise the routes thereby reducing costs and using the videos for training purposes we have been able to improve driver interoperability. We are looking forward to using GeoVideo to monitor TMA works and generate supporting evidence for fixed penalty notices."

Garry Nash, Project Manager at MGWSP

