

The economic benefits of real-time GPS fleet tracking for timber hauliers



General concept of GPRS/GSM communication.



Scania 124 and Iveco Stralis trucks.

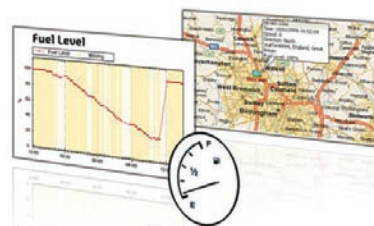
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A research project – GPSTRACK – is providing the forest transport sector with new technologies to monitor vehicle movements across the Irish road network and beyond. The project has arisen as a result of a recommendation from the Forest Industry Transport Group to encourage closer co-operation between consignors and hauliers, to plan routes in an efficient and cost effective manner within the legal framework.

The project involved the installation of two GPS asset tracking providers onto two timber haulage trucks – Scania 124 (400 hp – rigid + trailer + crane) and Iveco Stralis (530 hp – 6 axle artic configuration).

Both trucks have the GPS blackbox plus GPS satellite receiver installed from two suppliers and the truck's position is tracked across the road network using satellite location technology. This allows truck movements to be visually monitored in real time and these are displayed on a detailed road map of Ireland.

The accuracy of the GPS can define the location of the truck to within ± 2 - >5 metres. Accuracy is best on public



GIS road map with GPS tracklogs of trucks.

roads, and although difficulties with the GPS signal can arise in forests due to tree cover, the technology has now advanced to the stage where trucks can be located within forests.

Using the coordinates of forest entry and exit points it is possible to:

- develop a full GIS routing map;
- integrate this information with a GPS tracking provider;
- insert co-ordinates into in-car satellite navigation systems to optimise directions for the truck driver; and
- reduce general driving time by 15% (GPS Ireland 2008).

The GPSTRACK study showed that increases in distance travelled per unit of fuel are possible from the current 9-10 km/pg to 14-15 km/pg. Taking the average annual kilometres per truck to be approximately 100,000 km, we can calculate a saving of €11,000 per truck per annum on fuel alone. Considering that the initial capital of one of the systems is approximately €2,500, then it is fair to say that, economically, these new information age asset tracking and diagnostic systems are a good investment.

GPSTRACK is funded by COFORD. The project is carried out by Dr Ger Devlin and Dr Kevin McDonnell.

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