



Motorola's VC6096 On-board Computer and MobiOne: Enhancing Fleet Safety and Driving Efficiency with Martinsen Transport's and Scan Tank's Petrol Tankers



"We take pride in running our vehicles as safely and efficiently as possible. Technology can support us in this goal and, when we took on all petroleum transport for Shell Norway, we became one of the first companies in Northern Europe to invest in Motorola's on-board computer, the VC6096, to further enhance fleet performance. The devices will run bespoke software from MobiOne, sending jobs to drivers dynamically, and guiding them to destinations by GPS. The system will also provide a powerful array of telemetry features to help refine driving styles, and warn drivers to adjust speed when they're exceeding limits or are near schools. The system is expected to generate fuel savings of up to 10 per cent and cut maintenance budgets, while demonstrably advancing fleet safety."

– Morten Tönjumshagen, Managing Director,
Scan Tank, sister company of Martinsen Transport

The company: Martinsen Transport

Martinsen Transport has been in operation since 1966 and its vehicles are a familiar feature on the roads of Norway. The company has an uncompromising commitment to safety, and is always searching for ways to enhance the environmental performance of its fleet.

The challenge

Shell recently awarded Martinsen Transport a contract to distribute petroleum in Norway. Concurrently, Shell also expanded its relationship with Martinsen Transport's sister company Scan Tank AS, which was already working for Shell. Together, the companies manage the entire petroleum transport requirement for Shell in Norway. When Shell set out to award the contract to find a distribution partner, it underlined its requirement for fleets to implement in-vehicle monitoring systems to enhance performance, safety and efficiency.

Customer profile

Martinsen Transport

Company

Martinsen Transport and Scan Tank

Location

Norway

Industry

Transportation

Motorola products

- Motorola VC6096

Applications

MobiOne has developed a range of bespoke applications to enhance fleet safety, efficiency and performance. The applications will run on Motorola's VC6096 on-board computer, with deployment complete by summer 2010:

- MobiRoute dynamically overseeing the management and distribution of orders to drivers
- MobiNav for route navigation (GPS is also used to help drivers locate the correct fuel storage tanks in petrol stations)
- MobiEco for telemetry to provide insight into driving styles so fleet managers can refine driving to enhance fuel efficiency
- MobiTrack for fleet tracking to provide real-time oversight into vehicle positions
- MobiSA provides Intelligent Speed Adaption (ISA) to recommend reduced speed in line with limits
- MobiBlack Spots, an Area Warning System (AWS) with audible alarms, to alert drivers who are approaching hazardous or speed-restricted areas

Partner

- MobiOne





Benefits

- **Enhancing safety:** The speed restriction and notification features help safeguard the driver, other road users and pedestrians
- **Real-time intelligence:** Customers can be kept in the picture about delivery times and results to enhance service
- **Reduced administration:** Electronic reporting and distribution of jobs cuts paperwork and administration across the business
- **Reduced environmental impact:** Route guidance, telemetry and speed advisories contribute to fuel efficiencies – estimated to be 10 per cent per annum – hence cutting carbon emissions
- **Reduced maintenance:** Encouraging smoother driving styles through telemetry analysis and driver training reduces maintenance costs

Solution

Martinsen Transport's business is based on a strong commitment to fleet safety and efficiency: a point emphasized by its decision to work with MobiOne to deliver a bespoke vehicle monitoring system. Comprising the installation of the latest on-board computer from Motorola, the VC6096, and a range of highly innovative applications, the technology is delivering a number of commercial and operational benefits.

Business benefit

The system, which will be deployed by summer 2010, will deliver jobs to drivers on a daily basis and in real time over the 3G communications network, guiding them on the optimum route to take. As much more information will be created and shared electronically across the business, drivers and back-office staff can save time managing paperwork. GPS, combined with telemetry data that will be used to adjust driving styles, is expected to cut fuel consumption by 10 per cent. Real-time intelligence on the position and status of the fleet is available to the business so customers can be fully briefed on the expected arrival of deliveries. And safety will improve as speed is automatically controlled and adjusted to limits and drivers are made aware of limits around sensitive areas (such as schools).

Shared beliefs

Shell is committed to ensuring that fuel delivery is as safe and efficient as it can be. These goals are shared by Martinsen Transport as Iain Bade, Managing Director, MobiOne, explains: "Martinsen transport approached us to deliver a comprehensive real-time computer system that applies the best technology to drive fuel efficiency, improve customer service provided to Shell, enhance safety, and reduce the environmental impact of the fleet. This is the perfect task for us. The system we've devised hand-in-hand with Morten Tönjumshagen's team at Martinsen Transport and Scan Tank has clearly impressed Shell, who gave the go-ahead for the company to take on its petroleum distribution in Norway."

System configuration

MobiOne specializes in on-board vehicle computers and associated applications and recommended to Martinsen Transport and Scan Tank that the system be based around the new VC6096 on-board computer from Motorola.

"While this is one of the first deployments of the Motorola VC6096 in Northern Europe, we have every confidence in it," says Iain Bade. "It's a given that Motorola devices are rugged and reliable – a critical demand for this type of application – and we

value the range of features offered by the product. The screen is large and bright, which is great for drivers, and the computer is intuitive to use too, with programmable keys for core features. For our developers, it's an open platform and with a powerful processor and a range of wireless connectivity including 3G compatibility, it's perfect for this type of application."

Martinsen Transport and Scan Tank evaluated the device before giving the go-ahead for applications to be developed for it.

Application development

MobiOne has devised a wide range of applications for the on-board computer. These can be broken down into three main categories: business performance, eco-performance and safety.

On the business performance front, the MobiRoute application will manage the real-time electronic distribution of jobs across the fleet of 51 vehicles through the VC6096's integrated 3G modem. Drivers can also wirelessly report on jobs and status as deliveries are completed to greatly reduce administration by cutting down on paper processes and ensuring the distribution of timely information across the business. Also, a tracking facility, which uses GPS to communicate truck positions, will present the dispatch team with a clearly mapped view of vehicle locations. This data can be used to keep petrol stations informed of any delivery issues to improve the customer service provided to Shell. The progress of journeys can also be replayed to track resources and fleet progress to see if improvements can be made in journey planning.

Eco-performance is advanced by a range of features. GPS routing with voice guidance will ensure that drivers follow the optimum route. They'll also have a range of maps to choose from to show the road ahead displayed on the bright, 6.5-inch VGA screen. Moreover, telemetry extracted from each vehicle will significantly reduce fuel consumption and maintenance.

The data, delivered at any pre-agreed frequency to fleet managers, reveals driving styles in detail – including acceleration and braking habits. The intelligence can be used in association with Eco Driver Training (offered by MobiOne) to help revise driving habits so that vehicles are controlled more

smoothly and momentum used more efficiently. In turn, CO₂ emissions and wear and tear on the vehicle are reduced.

The system, which will be deployed across the fleet by summer 2010, also informs the driver when fuel consumption is greater than expected. Says Morten Tönjumshagen: "We'll see in great detail how the fleet is being driven and, by working with the team, help them extract more value from fuel and look after their trucks better. Increasing safety and cutting carbon emissions is a major concern for Shell and our business and we're especially pleased with the capabilities that the tracking and GPS systems will deliver to achieve this goal. We expect to cut fuel consumption by around 10 per cent and, in some cases, perhaps by as much as 20 per cent, which adds up to a major financial saving too."

Safety of the vehicle fleet is expected to advance thanks to two key automated warning systems. The first, Intelligent Speed Adaption, uses a preloaded database of speed limits on the road network to sound an audible warning if these are exceeded. A report can also be sent to the fleet manager to report on repeated transgressions. Also, MobiOne is "geofencing" speed-restricted areas (e.g. school locations) on the mapping software so that, when a truck approaches a school, a warning is flashed on-screen together with the appropriate speed limit.

Iain Bade comments: "The safety features of the system particularly appeal to Martinsen Transport and Scan Tank, as safeguarding its employees, road users and pedestrians is a core priority of the business. In fact, all round, the company is pleased with the technology that's generating a wide range of benefits."

Technology pioneers

In recent years GPS and telemetry systems have become common features in the trucking sector. But it's the scope of the capabilities that are eye-catching in the Martinsen Transport and Scan Tank deployment.

The company will have a real-time view of its fleet and delivery status. Information will be shared electronically to deliver significant time-savings in the processing of paper for drivers and back-office staff. Driver invoices will be processed more quickly too for faster payment.

Shell will receive daily reports on its deliveries, while the fleet will be operated as efficiently as possible due to GPS guidance, and the application of telemetry promises ongoing fuel savings. Furthermore, the technology drives improvements.

Reviewing the technology, Morten Tönjumshagen concludes: "The team at MobiOne is experienced in its field and the applications they've written for the powerful Motorola on-board computer will deliver advantages across the business, saving money and time, reducing our carbon footprint, and enhancing safety. We're delighted to be at the forefront of wireless-enabled computing, which can make a significant contribution to the performance of logistics operations such as ours. In short, this deployment keeps us moving ahead."

About Motorola

Motorola is known around the world for innovation in communications and is focused on advancing the way the world connects. From broadband communications infrastructure, enterprise mobility and public safety solutions to high-definition video and mobile devices, Motorola is leading the next wave of innovations that enable people, enterprises and governments to be more connected and more mobile. Motorola (NYSE: MOT) had sales of US \$30.1 billion in 2008. For more information, please visit www.motorola.com.



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