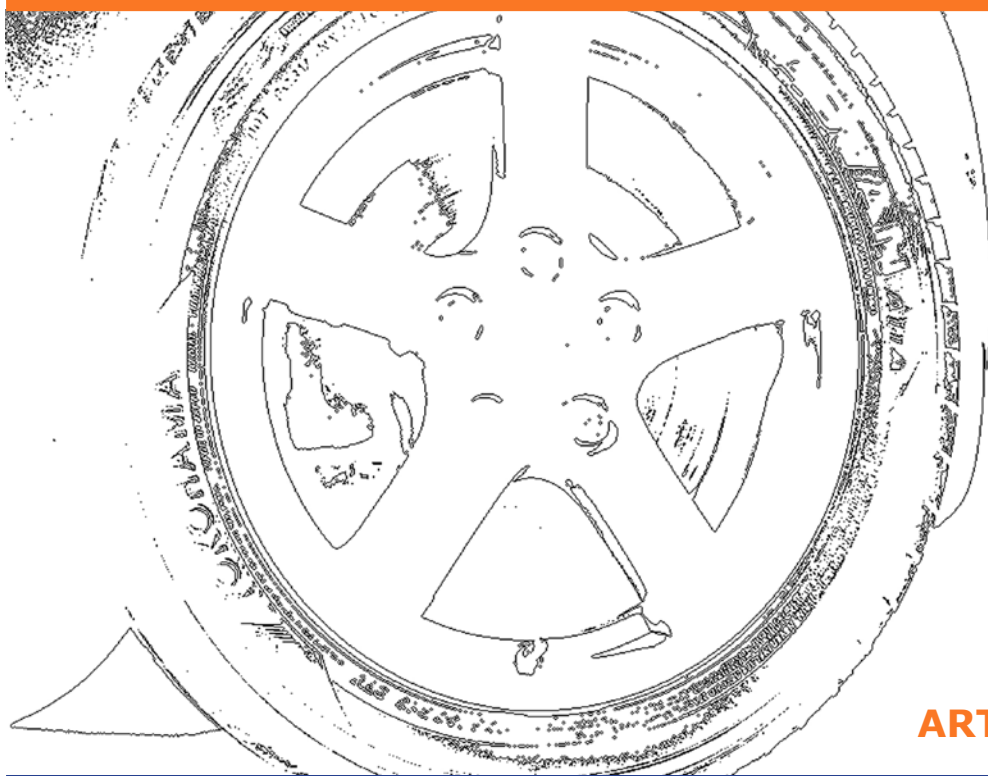


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**ARTICLE 3**

Telematics, sat nav and fleet management

## Telematics, sat nav and fleet management

Telematics is the name given to the combination of telecommunications and computing. The term also refers to vehicle systems that wireless communication with GPS tracking.

Over the past fifteen years we have seen the first telematics devices installed in motor vehicles. The earliest of these were location-tracking devices that could be switched on to alert the police if your car was stolen.

Mobile phone companies know where you are at any time. Your phone has to log in to the closest node, or cell, if it is to work. With the widespread use of mobiles, suppliers now use this feature to provide real-time traffic reports that can be delivered to you through your mobile phone, based on where you are at the time and the traffic conditions as reported by local roadside monitors.

Satellite navigation, using the US global positioning satellite system developed for military use, is now commonplace. 'Satnav' takes away the need to carry maps and allows the driver to concentrate on the road rather than on the route. Using moving electronic maps, pointing devices and voice instructions, the device directs the driver step by step to his destination.

Telematics systems can now hold an archive of all of a vehicle's movements and allow these to be played back as journey reports in your office. Some systems allow you to see where all of your company's vehicles are located, in real-time. You can also get reports of fuel usage and consumption, the current and average speed of the vehicle, even when the doors were opened and closed.

The emergency services can be summoned automatically if an airbag is activated or at the touch of a button you can be connected to a live emergency services operator.

Drivers can log mileage as business or personal at the press of a button when they start each journey and the log can then be used to submit business mileage expense claims into your office.

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There has been at least one case where an in-car telematics system has saved a life. A driver reported severe chest pain as he was driving. The company was able to pinpoint his location through his in-car telematics system and call an ambulance. He had a collapsed lung, a life-threatening condition.

Vehicle location devices are already used on buses, coaches and heavy goods vehicles. They allow buses to get priority at traffic junctions and allow messages to be displayed on bus stops showing when the next bus will arrive.

Satnav systems linked to mobile phones are now commonplace. These provide step-by-step instructions to get you to your destination.

There are also systems available that uses the mobile phone network to check the location of your employees. You can use a web-based service to poll a mobile phone. The precise location of the phone is shown on a map on screen, to an accuracy of a couple of kilometres in rural areas, and a few hundred metres in cities. You need to obtain the consent of the employee before you can use this system, and you will need to ensure the information is only used for the purpose for which you have received consent, and not for any secondary purpose.

The possible uses of these systems are endless. If, for example, you have a team of service engineers or delivery drivers who spend all day on the road, you can quickly check their location if a client calls to ask how long it will take before the driver arrives.

There are health and safety benefits here too. Rather than calling the driver to find out where they are, you can have a quick look at a screen and pass the information to the customer without phoning and distracting the driver.

The applications are endless. If you are hungry and are looking for the nearest fast-food restaurant or pub, or if you are tired and seeking accommodation, the system will help you select something within your price range and give you directions.

If you are running short of fuel the system will tell you all of the local petrol stations you can reach before your tank runs dry, and the

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current fuel price at each of them. Once you have selected one you will be directed there by the satnav.

The telematics market has grown rapidly. Initial progress was hampered by a lack of agreed protocols but these have been standardised, so manufacturers are producing devices confident they will be compatible with other parts of the network.

#### The future

Telematics will revolutionise the way we use our vehicles.

As cars become more technologically advanced and use software to manage key processes, manufacturers will send software updates directly to the engine using telematics, rather than have you call into the dealership. This will happen without your knowledge or involvement.

Manufacturers or dealers will send messages to your car advising you that a service is due. You will be able to book a service directly from your car into the dealer's servicing diary without phoning.

In due course it will be possible to use in-car telematics devices as entertainment centres, selecting music to be streamed into the car's hi-fi system or television pictures to the TV screen to keep the kids happy on long journeys.

If you have locked yourself out of the car the system will help you regain access. Get an electrical fault and it will talk you through the procedure to isolate and repair the problem. If you are parked and have left the car, it will notify you if your alarm has been activated.

We have become used to telematics features being delivered via a special box but increasingly they will all arrive via a mobile phone, personal digital assistant or laptop PC.

Soon we will get to the stage where the car will prompt you that it has discovered a fault that requires attention. It will tell you it has checked the parts system at all of the nearby dealers to see which has the parts for the job and selected a particular one as it is on your normal

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route home and because their rates are the cheapest. It will say that it has provisionally booked the car into the workshop in thirty minutes for the fault to be seen to and that Alan Jones the service manager is looking forward to seeing you. It will tell you it is a twenty-minute job costing £125. It will also tell you that if you do not have it done, there is a 53% probability a major component failure will occur within the next 1,300 miles, which would cost £650 to repair. If you accept the system's suggestion to get it seen to right away, you will just say "Yes" and the satnav will direct you there. All of this will be voice-activated.

### Telematics and fleet management

Telematics systems stop fleets from being out of the control of the fleet manager. The ability to store journey, route, speed, mileage and fuel consumption details allow you to pinpoint problems. You can see if your delivery drivers are speeding, spending too long over lunch or stopping to do some personal shopping.

You can now have real-time cost control over your fleet.

Telematics help with route planning and this is particularly useful if you have delivery drivers who are calling at several addresses a day. The system calculates the optimum route for the day then modifies this during the day as real-time traffic information is received, or updated orders or instructions are received from customers.

If one of your vehicles is involved in an accident the system can accurately identify the speed, location and direction of the vehicle and the precise time of the accident.

Some telematics systems are designed with the driver in mind; others are designed with the fleet manager in mind. It may be fascinating for the driver to learn about the number of minutes in his current journey he has been exceeding 70mph but this is really information that the fleet manager needs. It is a distraction to the driver and compromises his safety.

You should decide what features you and your drivers need from a telematics system and buy a system that delivers these. If you don't need the "bells and whistles" of the most complex new system, don't

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buy the system, however interesting it may be to see the system at work. The driver is meant to be watching the road, not his information screen.

Researchers are developing 'head-up' displays similar to those used in military aircraft. These will allow the driver to read the information without looking away from the road.

Some people have expressed surprised that there has not been a public outcry, or even a public debate, about the invasion of privacy these devices can involve, especially the ability to monitor the drivers' movements outside business hours.

You may be able to give your staff the ability to switch off the telematics device at such times but this could mean that it will not be possible to track the vehicle if stolen.

In due course, no doubt, drivers will begin to complain about privacy issues. The Data Protection Act will become important here. It only permits companies to hold data on private individuals if they have agreed to that data being held and if they have received an explanation of the use to which it will be put. No doubt lawyers will soon be advising their clients to obtain signed declarations from their drivers consenting to their movements being tracked and this data then being held on computer for analysis.

Each company needs to have an agreed policy on how to deal with these issues.