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How not to get lost

An expert in getting lost, RICHARD HILL finds his way around the latest in-car navigation and traffic information systems

NOT long ago, in-car navigation systems were the preserve of the rich, restricted to top of the range vehicles.

Today, as the cost of microelectronics continues to fall, such systems are becoming increasingly commonplace and affordable, particularly to the driver who spends a considerable amount of time at the wheel.

Indeed, in a world where time means money, significant savings are to be made in the recovery of time lost due to poor navigation or traffic congestion.

At the moment, there are two basic systems. In-car navigation, which is a form of audio/visual guidance system based on an electronic map and in-car traffic information that collects, collates and displays real-time information on current traffic conditions and congestion.

As these two technologies evolve, they are fast merging into one 'dynamic' navigation and traffic information system.

In-car navigation: This is an intelligent system that knows where you are and - once you have told it - knows where you want to go. It then calculates and displays the optimum suggested route.

It does this using four key components: An electronic map - usually stored on CD or DVD, a gyroscopic system that keeps track of the vehicle movements and a Global Positioning Satellite (GPS) that can identify the precise position of the vehicle.

The fourth element is a speed sensor that senses the speed of the vehicle. By constantly monitoring these parameters, the system can track the movement of the car quite accurately, to within a few metres. The GPS tells the system the position of the vehicle right now using three or four of around 25 satellites orbiting the earth.

The gyroscopic system can tell exactly which compass direction the vehicle is travelling and the speed sensor tells the system how fast the vehicle is travelling.

By combining these inputs, the micro-processor can calculate the current position of the vehicle on its electronic map.

Having been pre-programmed with the ultimate destination, it can then calculate the best route and give the driver visual information or audio instructions along the route.



■ **ON TRACK:** Mark Goodwin of Motolec in Slough demonstrates one of the latest in-car navigation systems. 323/25

In-car multimedia specialists Motolec in Slough have considerable experience in the installation of in-car navigation systems.

According to Marc Goodwin of Motolec, in-car navigation systems have been around for around 15 years. "We've been doing them for around four years," he says. "Prices range from £1800 up to £3200." Installation costs around £100.

In-car traffic information: This is a system that collects, collates and calculates real-time information about traffic

conditions and congestion. It uses a system of sensors, which currently cover over 8,000 miles of highways in the UK.

Sensors, often mounted on bridges, simply monitor the speed of passing vehicles. If this speed is significantly less than would be normally expected, then obviously something is restricting the traffic flow. This information is fed back to a national computer system where it is collated with information coming in from other sensors so the system can calculate

The driver has a receiver and a computer that sifts the information coming from the control centre and displays information that is relevant to the driver's current position and planned route.

Trafficmaster is one of the leading suppliers of in-car traffic systems information. The company has developed new technology to make its information even more comprehensive.

Traffic information at your fingertips. Most mobile phone operators now offer traffic information service. This works because the system knows which 'cell' you and your mobile phone are currently in and therefore which information is most relevant to you.

By dialling a specific number, an audio report is relayed to your phone. For example: "You are near Slough. M4 eastbound towards London - no reported delays. M4 westbound towards Reading - no reported delays." Networks usually charge for this service.

Remember - The use of mobile phones whilst driving is dangerously distracting. Always use a hands-free kit when accessing mobile phone services.

Local Traffic Information

BTC call 1200

One2one call 2020

Orange call 177

Virgin call Menu

Vodafone call 2222