

## Wireless and Mobile

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Telematics enables information and control over remote equipment. Dependent on the industry involved the amount of information and the need for or level of control can vary. The need for telematics can be to protect an asset or equipment, allow remote access to equipment where a visit would be prohibitive or expensive or allow logging of information whilst not requiring anyone to be present. Practical Control achieves this using the most appropriate wireless technology available. We can help as follows:-

### Electronics Design

Based on your application we can design the electronics and firmware for sensors, full products or provide a solution for enhancing your existing product with a telematics interface. You may have already significantly invested in your product and not require a full re-design. Practical Control can evaluate this for you.

### Systems Design

If an end-to-end solution is sought then we have experience of systems providing email alerts, text message alerts and full server hosted solutions which collect equipment data and provide slick web based pages for easy monitoring and viewing.

### Manufacture

If you require manufacture of any designed product then our contract manufacturing experience will provide a cost-effective, no hassle service. This can allow you to focus on business knowing that the full product will be assembled, programmed, tested, boxed and shipped.

The common factors to consider in any telematics design are:-

### Data transmission

Is this continuous, commonly known as real time data representing the current state of the equipment? Or is it the ability to connect as and when to see the history of events?

### Data rate

How much information is required? Low data rate examples are Automatic Meter Reading (AMR), Remote pumping station alarms and control, RFID tagging, Home automation, NurseCall and Warden Call alarm systems. High data rate examples are vehicle telematics, positioning, medical biotelemetry systems, agricultural weather, crop and soil data and scientific data acquisition systems.

### Data collection and technology

Typical technologies that can be used are low power, low data rate sensors utilising Zigbee, proprietary 869Mhz (European), 915Mhz (USA), 433 Mhz (Global). Or for applications with higher bandwidth requirements GSM, 3G and GPS satellite positioning.

## Data logging

As well as transmitting data, systems can be designed to log data and only transmit when alarms or events occur, once the alarm is received either via email or text message then the system can be contacted to view any historical information and take corrective action.