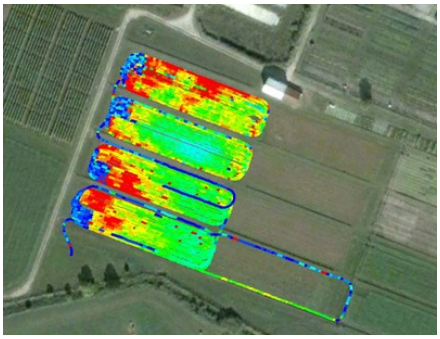
TIME-SYNCHRONIZED ACQUISITION OF GPS POSITIONAL DATA

A Single System for Measurement and Analysis



Delphin data loggers have the ability to determine positions via **GPS signals**. This is ideal for vehicular applications including automotive testing, flight testing, field trials and more. The GPS signal is received via a GPS sensor serially connected to a Delphin data logger. The sensor records GPS data according to the NEMA protocol. The Delphin device can then compute (independently and online), positional determination via longitudes and latitudes as well as speed.

Software Evaluates Positional Data:

The GPS data is then available as a software channel and can be combined with measurement data as required. A direct relationship can then be established between positional and measurement data. Delphin ProfiSignal Go software can be used to observe the data online and to evaluate it offline. The measurement and positional data can be directly merged into Google Earth (e.g. position, speed, consumption, performance).

Application Features:

- Time-synchronized acquisition of GPS positional and measurement data
- Absolute, precision time-synchronization for independent measurement applications
- Mobile use in vehicles using a 12 VDC power supply

- Scalable solutions available from 1 to 1000 measurement channels
- Evaluation of measurement data using ProfiSignal or Google Earth

Example: Conductivity measurement with combined GPS positional data acquisition

At a research institute for vegetable and ornamental plants, soil conductivity tests are carried out for academic purposes. This institute has developed an unmanned vehicle which travels across the experimental area. It utilizes a rolling electrode system which feeds alternating currents into one axle and measures its return at several other axles.

As it moves, the Delphin **Expert Vibro measurement data acquisition system** simultaneously records process data and GPS coordinates. In this way, researchers can observe the results directly during measurement. ProfiSignal software is used to read-out data from the device memory and to immediately portray it in colored XY diagrams.

Typical Areas of Application:

- GPS and combined measurement data acquisition in trains
- GPS data logger in vehicles (cars, trucks, etc.)
- Flight test measurements
- Diagnosis of effects with positionally-changing machinery
- Monitoring hired machinery
- Measurements in field trials (forklifts, tractors, construction equipment)
- Field trials for alternative drive systems in vehicles

Professional Measurement Technology:

Delphin Technologies data loggers/data acquisition systems solve a variety of measurement and control problems in many different applications. They feature different analog and digital I/O modules for use with a wide range of signal types including: voltage; 4-20 mA current; thermocouple; RTD; and resistance. They also offer powerful alarm and programming capabilities allowing them to process measurements and initiate actions on their own.

Delphin systems can be used for local data acquisition and logging when connected to a PC; for remote unattended data collection connected the internet; or as stand-alone devices.

To learn more about **Delphin measurement systems**, or to find the ideal solution for your application-specific needs, contact a **CAS Data Logger Applications Specialist** at **(800) 956-4437** or visit our website at **www.DataLoggerInc.com**.

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