

## Customer

Fountains Plc provides a diverse range of integrated environmental services for local authorities, central government, energy supply companies, parks and landowners. Services include amongst other GPS-based vegetation survey.

## Challenge

In order to carry out large scale vegetation survey projects for the National Grid and Watford Borough Council, Fountains Plc had to select suitable equipment consisting of a reliable handheld GPS receiver along with efficient mobile GIS software that contribute to save efforts and costs.

## Solution

Replacing pen/paper and PDA equipment more suited for an office environment, Magellan MobileMapper CE devices with DigiTerra Explorer mobile GIS software proved to be appropriate for these large scale survey projects.

## Results

More effective surveying process: less time for preparation, more freedom on site, easy integration with the existing geo-database.

## Fountains Plc (UK)

### Vegetation Management Services for the National Grid and Watford Borough Council

Fountains Plc is a provider of integrated environmental services for a broad network of customers in the UK and US. The company has specialized knowledge in GIS which is the basis for GPS-based vegetation survey and management services offered to local authorities, parks, energy supply companies.



### The Challenge

One of the most important GPS survey assignments of Fountains Plc relates to the **National Grid**, an international electricity and gas company, providing energy to millions of customers across Great Britain and the Northeast of US. Fountains Plc had to carry out a large GPS vegetation survey work on 22,500 spans of overhead transmission network throughout all of England and Wales. In frame of the National Grid's Spatial Project, a survey of every span was conducted over a three-month period in order to plan and prioritize vegetation clearance work. Up to 25 surveyors were involved in the project which took careful planning due to the geographic spread of the project area.

Field surveyors from the company were also involved in a project conducting tree condition surveys for **Watford Borough Council**. The purpose of this survey was to provide the council with expert analysis of the current condition of around 1400 trees in order to elaborate a strategic risk management program.

Historically, surveyors used simple PDA equipment more suited to an office environment. Cold weather for example caused diminished battery life and equipment damage led to cost inefficiencies. On top of this, surveyors previously have captured information about an asset using GIS software without the requirement of GPS data capture. These projects had to introduce the requirement for surveyors to capture waypoints using GPS in order to track work completed, and to conduct real-time GPS capture of vegetation. Further requirement was the usage of GIS software that can produce the data in ESRI Shapefile format for importing them into a geo-database.

## Software used

DigiTerra Explorer 5 mobile GIS and data collection Software

## Hardware used

Magellan MobileMapper CE handheld GPS receiver

Trupulse 360 laser range finder

## Consultant involved

Ormston Technology Ltd.

## For more information

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## The Solution

In order to meet the requirements of the customers, Fountains Plc had to select an appropriate handheld GPS receiver along with the flexible mobile GIS software. Common goal of both projects was to utilize **GPS technology and the power of a GIS application to produce an asset management system** supporting the daily operational organization of these vegetation management contracts. Magellan MobileMapper CE as a rugged handheld GPS receiver with DigiTerra Explorer mobile GIS and field mapping application proved to be the right choice for Fountains Plc. By completing the equipments with Laser Technology's Trupulse 360 laser range finder equipment, surveyors are now able to gather information about the ID, species, and growth rate of each tree but also their height, proximity and density will be recorded. All data captured either by the GPS receiver or the laser range finder will be automatically linked to the geographical information stored in DigiTerra Explorer.

Alan Churchward, GIS manager at Fountains explains about his experience with DigiTerra Explorer:

*"Apart from being extremely versatile with the ability to export in many different formats, one of the most impressive features in DigiTerra Explorer is the ability for it to automatically produce data entry forms with combo boxes. The combo boxes are produced simply by populating a text file held in a directory on the mobile device. Because of this feature alone it saved lengthy development tasks back at the office and allowed the surveyor the freedom to make any amendments to the choice lists whilst on site."*

## The Results

Due to the flexible nature of DigiTerra surveying became more effective: preparation of data capture sheet can be done within less time, and surveyors have more freedom on site since they can make necessary adjustments on the spot. Thanks to standard file formats, field data can be easily processed and uploaded into the existing database. As a next step of integration, real-time updates will be possible by using the Bluetooth function of MobileMapper in conjunction with a GPRS enabled phone.

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