

The Ordnance Survey

Earlier this year, the **Ordnance Survey** - Great Britain's national mapping agency - and Leica Geosystems signed a partnership agreement. This contract involving Leica System 500 GPS is one of the most significant orders ever won by Leica Geosystems.

This newsletter outlines the history and describes some of the work of the **Ordnance Survey (OS)** and the next newsletter will focus on the use of System 500 GPS within the OS.

A Little History

The history of the OS goes right back to the year 1791 - a time when Britain feared invasion from Europe after the French Revolution. As in many other countries, the foundation of mapping agencies was linked with the military need for good maps (publication of first map by the Board of Ordnance was on 1 January 1801).

In 1983, Ordnance Survey became an entirely civilian organisation, even though the original military title remains. Today, the OS is a free-standing UK Government Department, an Executive Agency and, on 1 April 1999, became a Trading Fund.

Workforce and What They Do

In total, 1880 professional staff are involved in many fields, including geographical information systems (GIS), capacity building, and database development and surveying and mapping.

The majority are based at the Southampton headquarters where surveying data is converted, products for customers are developed / marketed and support services are provided for the agency's work. One quarter of the staff looks after 71 local field of-

fices across Britain. It is here where most of the surveying and data collection is done.

The OS is a £100 million-a-year-business generating a small profit to sustain the trading fund. The OS sells products (maps, education material), services and licenses. They also supply information to customers which they use to convert Ordnance Survey National Grid coordinates to WGS84 coordinates.

Internationally, the OS is known as the master agency for surveying and cartography. It is the only governmental organization which was awarded the "Citizens Charter Mark" three times certifying its extraordinary services to the public and its innovation in creating new customer orientated products.

But that's not all! The OS is also the first organisation worldwide with one complete **National Topography Database (NTD)** for all large scale maps. This "electronic endless map" consists of over 200 million objects of the British landscape (e.g. telephone boxes, private garages, 800,000 street names and half a million kilometers of streets).

From the NTD basic information is derived for water quality overview, counting of population, building plans, underground pipelines etc.

GPS at OS

The OS sustains an **Active GPS network** over the whole UK (see picture). The 31 permanent GPS stations have ISDN links to a server where the data are stored online for 30 days with full public access via website. Surveyors may download RINEX data in order to tie their GPS work into the OS network.



Additionally, a passive network of 1000 accurately coordinated points exists. The points are monitored every 5 years. The public can fully access the searchable database for the 1000 passive GPS stations via Internet including their full station description. A further service allows WGS84 co-ordinates to be converted online to and from National Grid.

Other projects focus on the development of a definitive National Grid transformation, a National Geoid model and on an active RTK network.



Remember

- For more information look to the excellent OS web site – this also includes some very useful general information on the use of GPS
<http://www.ordsvy.gov.uk>
<http://www.gps.gov.uk>