

# GIS

## Professional

Issue 34 : June 2010

... joining the geography jigsaw



Open source and an open local authority

Software as a Service: the future for GIS?

London's Magnificent Maps

GI and the surveying professional

Keeping track of the lonely sailor

GISRUUK: a day with the Saps and daydreamers

Google's serious business app

plus News | People | Products & Services | GiSPro's columnists



*Trainee yachtsmen will eventually go solo for the first time, a nervous moment. But geocasting can help keep a non-intrusive eye on their progress. Image: courtesy of Pelican Racing.*

PELICAN RACING IS A company that offers RYA training courses for yachtsmen and women, from beginner through to championship grade. They also charter boats to those who want to do their own thing or who want to take part

in races, but without the expense of owning a yacht.

Whilst undergoing training, the instructor is on board and able to make sure everyone keeps safe. But eventually students complete their training and they're ready to go solo for the first time. It's a nervous moment for all but, as **Ash Holmes** explains, Pelican Racing has solved the problem by using Geocasting. They use it to keep an eye on their probationer yachtsmen and provide effective help when it is needed. It is an obvious application for vulnerable new yachtsmen but it would be a mistake to think that the technology is just for probationers. It's a non-intrusive, sensible precaution available to everyone.

functions. Phil uses Microsoft Silverlight for this purpose because he says the integrated developer tools are way ahead of the competition. He has written the system backend and has standard user interfaces that can be adapted according to customer needs.

The system supports secure closed user groups, can be used for live GPS-only tracking without video and supports geofencing. In the yachting application an alarm can sound when the boat leaves a pre-defined area, or conversely if it goes too close to an area that it should avoid.

**Apps beyond lone-working** Phil is a man full of enthusiasm for a technology that has found applications in areas that he never originally imagined. Lone-worker and employee tracking are perhaps two of the more obvious uses. For health and safety, the video could be really useful if, for example, the lone-worker were unfortunate enough to be attacked whilst on duty. Other applications include reconnaissance observations along a route and social networking so you can let friends know what you are

## Geocasting: a non-intrusive monitoring system

From yachting to reconnaissance to social networking, geocasting is a simple, non-intrusive technology that can be adapted according to your needs, reports **Richard Groom**.

**Off the shelf components** The concept is simple. The yachtsman carries a GPS-enabled mobile phone with video capability that uses the Windows Mobile operating system. The phone is loaded with the Geocasting front end that sends GPS positions and video imagery to the client server back at base. Here, the track of the yacht is plotted against a background of Bing Maps and the video can be displayed in near real-time in a window. Pelican Racing can keep an eye on their whole fleet from one laptop – and that can be mobile too.

Not only is the technology great for non-intrusive health and safety but also all data is archived and available to playback later, so yachtsmen can review their performance when they're back on dry land. The company also has a website so that you can broadcast your experiences as they happen. It's a great way for people to follow the progress of yacht races online.

Unlike other tracking systems, Geocasting uses off-the-shelf hardware and the user can choose the hardware to suit his purpose. Clearly for yacht-tracking it is important that the hardware should be waterproof, so Pelican Racing uses high end mobile phones, but other applications could make use of standard phones from the high street.

**Developing with Silverlight** Geocasting is the brainchild of **Phil Bishop** of Inca X. He has developed the software to receive data from the mobile units, mash it with Bing Maps and add a number of other useful

doing. It need not operate in real time as the record and playback facility is suitable for many purposes, for example pipeline inspection.

**Dano DeBroux** is Director, Disruptive Business Technologies at the US Office of Naval Research (ONR). He effuses ideas for Geocasting. How about fastening a mobile unit to the uniform of each soldier in a unit that is out on an operation? That way, the folks at command and control know where each member of the unit is at all times and the video is an efficient way to see what's happening on the ground. The software can also track groups as well as individuals.

Geocasting can be used for physical security of personnel and equipment, for monitoring movement of sensitive material being transported along a route, using fixed and mobile sensors. The technology could also be invaluable during humanitarian disaster relief operations as a means of co-ordinating deployment of NGOs, local law enforcement and first responders and for sharing and analysing the information that they gather.

Dano sees the primary advantage of Geocasting as its use of standard hardware. If a mobile breaks, he can get a replacement easily and without breaking the bank. Running costs are also low – typically £1 per day for a mobile unit.

For further information visit: [www.incax.co.uk](http://www.incax.co.uk), [www.pelican-racing.co.uk](http://www.pelican-racing.co.uk), [www.silverlight.net](http://www.silverlight.net) and [www.bing.com/maps](http://www.bing.com/maps).

**Lone-worker and employee tracking are perhaps two of the more obvious uses.**