



Photo credits: Vulture (Hannah Williams at SLAM group; Turtle (Nicole Esteban at SEACAMS) both based at Swansea University

Specialist PCBs from Newbury Electronics assist with ground breaking animal tracking research programme

*** Entire tracking mechanism weighs 3 grams and is the size of a postage stamp**

Newbury Electronics has used its considerable expertise and experience to help Dr Mark Holton and the Swansea Live Animal Monitoring (SLAM) group, led by Professor Rory Wilson at Swansea University, to design and produce an innovative range of extremely light weight but robust tracking devices to aid their research into previously unknown animal behaviour.

"We first approached Newbury Electronics with our initial designs back in the spring. Since then they have worked closely with us to design the circuit boards in the most compact way possible but in a way which still enables us to combine information from multiple sensors. We have trialled different designs from several different manufacturers, but Newbury Electronics' products are of a higher quality, the company is far more responsive and more competitively priced," said Dr Holton, also MD of Wildbyte Technologies Ltd, a spin-out company from Swansea University. To date Newbury Electronics has supplied approximately 200 of these sensor logging devices along with several dozen bespoke GPS logger, and timed release modules. "We have been working hard on data analysis algorithms which, together with these quality devices, will certainly place us as a significant competitor within the animal research market place."

Philip King, MD at Newbury Electronics, said; "This is another exciting illustration of how our bespoke engineering skills can be harnessed to provide hitherto unknown data and information. In the past 12 months PCBs from Newbury Electronics have been used in an unique art installation, a ground breaking medical diagnostic tool, oceanography research buoys and in the latest consumer electronics product, the Touch Board. I believe this is an exciting time for the electronics industry and for UK manufacturers like ourselves who have proving themselves in a global marketplace."

The lightweight, robust trackers have been fitted to a range of animals including, badgers, beavers, camels, eagles, vultures, condors, whale sharks, and even people (aiding psychology, and sports injury recovery, through movement analysis). The most recent project has been to tag and monitor the movement of turtles off the west coast of Africa, in conjunction with Dr Rebecca Scott, a Future Ocean researcher at GEOMAR (based in Germany) and was supported by the Turtle Foundation, and the Future Ocean Cluster of Excellence. The sensors detect micro-movement and heading from accelerometer and geomagnetic sensors, along with a number of other on-board and plug-in modules for light, temperature and depth information. For turtles, the resulting data set, often approaching 75 million data points over a period of 3 weeks, gives a unique insight into their behaviour both under (movement and orientation, and depth) and at the water surface (+GPS), including duration of dives, the number of breaths taken, foraging patterns at depth etc. These measures and other observations provide scientists with an abundance of breath-taking data for future analysis.

For more information on the animal tracking programme and the specialist equipment please visit <http://www.wildbyte-technologies.com/>

For more information on Newbury Electronics visit <http://www.newburyelectronics.co.uk/>

Background

Newbury Electronics Ltd started trading in 1956. A management buyout took place in 1987 and Philip King took on his role of Managing Director in 2011. The company offers a full electronic design, PCB design and layout service alongside PCB manufacture and assembly in Newbury, West Berkshire. It employs 65 staff and is dedicated to small and medium batch PCB assembly, specialising in electronic design and manufacture

incorporating SMD, SMT, surface mount, BGA, through hole, box build, soldering, test, & rework. Customers can select from electronics design and CAD layout through to printed circuit board design and fabrication, assembly and test, and the company is happy to undertake single, bespoke projects through to the design and supply of manufacture lots of up to 10,000 pcs on its automated SMD assembly lines.

As a contract electronic manufacturer (CEM), each year, the company produces in excess of over 15,000 different PCB designs for its clients, who benefit from the economies of scale built from the volume of orders processed. For more information visit www.newburyelectronics.co.uk

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* High quality jpeg available on request

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