

EECE Hexacopter Battles the Cornish Weather

Posted on Sunday 13th October 2013



of the hex platform.



The weather almost scuppered the latest HIT Team hexacopter flight trial over the gun emplacements of the Fort installations of Whitsand Bay in south-east Cornwall. With intermittent heavy showers and predicted winds averaging 16 mph, not to mention gusts of up to 31mph+, the prospect of launching and recovering this fragile craft looked very bleak indeed. Nevertheless, just as the Team – Prof Bob Stone and postgraduate students Chris Bibb (2013 MEng, now a BAE Systems-sponsored PhD) and Vish Shingari (MPhil) – was about to abort the mission, a brief window in the weather permitted the execution of two very “interesting” flights, including one where a sudden gust of wind almost introduced the hex to the wreck of the ex-HMS Scylla (a previous EECE Virtual Reality project) on the seabed of Whitsand Bay! The successful flights (and safe landings) were due in no small part to Chris’s piloting skills, plus a truly innovative and inspirational engineering solution by Prof Stone’s wife Dee to waterproofing the upper electronics assembly of the hex using a perfectly-sized £2.00 salad bowl from Tesco! In addition, the Team was able to obtain the high-def footage needed to evaluate the performance of the new gimbal-stabilised GoPro camera, which performed extremely well in the inclement weather, delivering very stable images, despite the rather unstable flight pattern

The aim of the flights focused on demonstrating the future potential of low-cost UAV technologies in the capture of high-quality imagery to support survey, planning and progress monitoring of industrial and military heritage sites. The visit to this particular site was hosted by Paul Diamond of Hidden Heritage, who is interested in working with the HIT Team to exploit remote survey technologies in future investigations, together with subsequent reconstructions using Virtual and Augmented Reality techniques. The Victorian Whitesand Fort was built between 1890 and 1894 and formed part of Lord Palmerston’s “Ring of Fire” which surrounded Plymouth, providing large calibre gunnery defence not only to the City, but to the naval assets based there as well. Further test flights were undertaken the following morning, this time along part of the remaining water-carrying route of the old Devonport Leat, once the main – only, indeed – water supply from Dartmoor to the town of Devonport and its growing naval dockyard.