# New Forest Aviation Group.

**website: www.nfag.info**


**Chairman:** **Steve Robson**
**Vice Chairman:** **Chris Gilbert-Norton**
**Hon. Treasurer:** **Roy Arnold**
**Hon. Secretary:** **Mike Collo**
**6, Blackdown Close, Dibden Purlieu, Southampton, SO45 5QS Tel: 02380 840139 / 07830 222872**
**E-mail: m.collo@btinternet.com**
**Speaker Secretary:** **Steve Robson Tel: 01202 300763 E-mail: stephen.robson10@btopenworld.com**
**Additional Committee:** **Phillip Arnold, Monty Ward.**



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**2014 TALKS**
14th November 'Palmair – Bournemouth Airline' by Mike Phipp
December – No meeting
**2015 TALKS**
9th January 'Britain's Last Airliner – the BAe 146' by Steve Robson
13th February 'London's Second Airport – Blackbushe' by Dave Ruffle

For our October talk Paul Marshall from the Ordnance Survey gave an overview of the Ordnance Survey Flying Unit. This included a look at how they acquired aerial photography since WW2, to the birth of the OS Flying Unit in 1966 when OS started to lease aircraft and pilots. This lead up to the current day with their base at East Midlands Airport and flying two Cessna 404s. Paul explained how aerial photography was used for updating the large scale digital mapping database, and the technologies involved. Flying at 7,000 feet across the UK to keep the maps current, the whole country (Great Britain) is re-flown completely over a 3 to 5 year period. Getting aerial photography is obviously dependent on the weather and clearance from Air Traffic Control and the Unit has to make the most of any bright, clear days to enable collection of the data. Also in addition to planning flight lines for each block of work a diligent analysis of CAA Air Charts is required to understand how the proposed flying fits in within controlled air space.


The 'digital revolution' during the past 20 years has seen film camera technology replaced by digital camera technology with the current 196 Megapixel camera. Although the digital systems are very impressive and efficient, these have come at a huge investment cost. The software is impressive too in that it takes the 60% overlapping parallel photo runs and checks every pixel to decide where to join the images taking into account variations in height angle etc, this can take 24hrs per job to process. It also calculates where walls are under eaves so as to draw an outline of the wall. Following this it can produce a height profile of the buildings and terrain to generate a 3D CAD view for planners. The outcome from this is terabytes of data. Alongside has been the introduction of GPS (Global Positioning Systems) giving exceptional position accuracy.

Paul also gave an insight into developments and future technologies, and he had recently attended a conference in Germany on image gathering and saw the next generation of UAVs fitted with cameras and lasers for height gathering. These UAVs are being used increasing by the press and for surveying the inside and outside of structures, power lines and railways. The Ordnance Survey has a small UAV of its own, about 0.5 metre wingspan, which, though small, cost a considerable amount of money. This has a small consumer digital camera and GPS and the propeller drive stops momentarily during the photo. The UAV navigates on its own and comes back when the mission is complete in theory, but once got stuck in a tree during the first demo to the management, which required a local tree surgeon to retrieve it.