

# See and avoid UAVs?



aviation was starkly illustrated at Farnborough when one of the leading scientists in the field spoke of his ambitious hopes for a future when the skies are full of eye-less aircraft.

Dr David Vos, chief executive of Athena Technologies, gave a presentation in which he forecast that in years to come some 40 to 50 percent of everything airborne would be unmanned – but he seemed to find it hard to accept the "see and avoid" principle by which GA lives and dies.

When questioned about traffic separation requirements, Dr Vos said: "That's a red herring. Pilots do not spend their time looking out of the window. They're scanning the horizon for traffic maybe a tiny percentage of the time, and mostly following a warning from ATC. Even in the Open FIR, if you look at the amount of time spent looking for traffic, it's not

much – it's a fraction of total flying time."

Under pressure, Dr Vos – whose company makes the cigarette pack-sized guidance systems for UAVs – said he would be happy to substitute the words "see and avoid" for "sense and avoid" in his company presentations. "Every UAV would have a human operator on the ground with a field of view similar to, or

better than, that of a pilot in the aircraft," he said. But wouldn't that negate one of the singular advantages of the UAV? "However we resolve these problems, they will be resolved," he said. "In five years, UAVs and other air traffic will be sharing classified airspace. In five to ten years there will be commercial operations using UAVs. In 10 to 20 years there will be passenger operations. The rate at which culture adopts technology is quickening, and young people today are much faster to accept the benefits of technology.

"Already UAVs fly direct from their manufacturers' bases to delivery airfields on their own – they file IFR flight plans and they integrate into the system.

The Global Hawk surveillance UAV was to have flown itself to Farnborough, but lack of an available aircraft scuppered the idea. Airspace had been booked to accept the UAV, but Northrop-Grumman were unable to find a

## spare aircraft in time. Cirrus chute saves three



Three lives were saved by the ballistic parachute on a Cirrus SR22 after the pilot suffered an apparent stroke in the air. One of the passengers was able to deploy the chute and all three survived, although the pilot died.

The aircraft landed in a drainage pond near Indianapolis, and local people rescued the passengers. The airplane had taken off from Eagle Creek Airport in Indianapolis and was en route to Hilton Head Island in South Caroline.

The dead pilot, Robert Edesess, 66, had picked up the aircraft only two days before the incident. The passengers – Edesess's wife, son, and son's girlfriend, were all injured and received hospital treatment.

## Auntie joins the singles party

Mike Smith's Flying TV helicopter company has been awarded a three-year contract to provide the BBC with aerial filming services in the first-ever deal covering the whole of the Corporation.

The contract comes at the end of a fourmonth evaluation process, but in reality Flying TV has been under BBC scrutiny for the three years in which it has been operating, during which time it has provided ad hoc services to many BBC departments.

Few people thought Smith could make a go of providing airborne news and features material from a piston single when he started up with a dedicated electronic news-gathering (ENG) Robinson R44 helicopter in October 2003. However, in-service experience has shown that there are very few places where the R44 cannot go, its reliability has been impeccable - and it costs less than half as much to charter as traditional twin turbine machines. Flying TV has flown almost 1,000 hours to date, and this year the company

added a second R44.
Smith says: "In the last three years we have provided recorded and live output to BBC News, Sport, Factual and many other departments around the UK. We have developed a whole new system of helicopter newsgathering and provided top-quality aerial shots for such prestigious events as Glorious Goodwood and The Derby.

"The award of this contract will give us the excuse we need for a very good celebration. I can't tell you how proud I am to have succeeded - and I sincerely thank all those who have been booking FTV. Every mission we fly assists in proving what we can do. Our



pilots, camera operators and maintenance engineers should feel as honoured as I do.

Part of the attraction of the Flying TV is that it is a dedicated ENG machine, which is ready to go at the turn of a key. Traditional operators are often slow off the mark because they can't afford to leave expensive twins in ENG configuration when there is other charter work to be done, and so must mount cameras and systems almost every time.

Statistics from other countries in which single-engined machines are allowed to perform most commercial operations show that their safety rate is no different from that of turbine twins. Helicopters are much more prone to drive train or other failures than engine failure, and singles are often easier to land than twins in the case of total power

Some operators question the CAA's mandate to use twins as air ambulances - especially in the more remote rural areas - given that they are financed solely by voluntary contributions and jumble sales.

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#### MOR at 30

This year marks the 30th anniversary of the CAA's Mandatory Occurrence Reporting (MOR) scheme, which is reckoned to have made a significant contribution to safety over the decades.

The scheme is only mandatory for AOC holders and turbine operators, but it is open to GA and many pilots and owners do in fact report on incidents from which they think lessons can be learned. The CAA has had almost 550 reports from GA sources in the last 12 months, and the scheme is both respected and trusted by the industry.

Since the scheme was launched in 1976 the CAA's Safety Regulation Group has catalogued over 160,000 reports, gathering vital information on safety trends and enabling safety-critical incidents to be followed up. The database now includes information on more than 700 different aircraft types, with some 10,400 reports processed last year alone.

While reports are often safety-critical in themselves, the cumulative data is priceless. Ben Alcott, Head of the SRG's Safety Investigation and Data Department, says: "A report detailing a minor incident may appear insignificant on its own, but once it is logged the database has the ability to identify any link between the report and existing data – revealing potential safety issues for the CAA to investigate and address.

"The increasing number of reports is a result of the increased openness amongst pilots, controllers, engineers and others in the industry, and the UK's excellent safety record is thanks in no small part to their involvement in the MOR scheme."

The MOR scheme is currently being

## Extra chart published

Decause of the large number of airspace changes made in the south of England since Edition 32 of the Southern England and Wales half-mil chart was published in March, the CAA has decided to issue a new version of the chart as Edition 32A, effective from the end of August.

This is a one-off extra, and the 2007 chart publication schedule published on the CAA's website remains unchanged.

There will be no interim quarter-mils – if you use these, check www.caa.co.uk/charts and the latest notams for chart amendments.

evaluated for possible adoption by several industries outside the aviation sector, including the NHS and gas companies.

Mike Bell, the CAA's Group Director of Safety Regulation, says: "The MOR scheme is an asset to the UK aviation industry and is recognised throughout the world as being one of the leading sources of air safety data. The strong safety culture of the UK industry and its willingness to register reports has helped the UK to achieve one of the best air safety records in the world."

There are thousands of examples of problems that have been addressed after coming to light through the MOR scheme. Obvious ones include carburettor icing in

piston engines, which has been has been a contributory factor in 14 fatal accidents and more than 250 other incidents in the UK in the lifetime of the scheme. The CAA has been conducting research using a specially designed carburettor test rig in conjunction with Loughborough University and an industry partner for systematic data collection, and will publish a report on the problem.

But many individual problems have also been solved. One involved Paris Le Bourget, where reports from a G-reg aircraft that a turning circle at a remote parking stand was too small and forced aircraft onto the grass led to action once the CAA approached the airport authority.

### Safety evenings

The nights are drawing in, and the CAA's David Cockburn is once again buckling on his seven-league boots for another marathon tour of the UK with his safety roadshow. Cockburn's CAA safety evenings are heartily recommended by AOPA. Attendance can qualify you for a reduction in your insurance premium, but better than that, you might learn something that will save your life. Even if you've been before, it's well worthwhile going again. There's always something new, and a lot you've forgotten.

Cockburn's problem is that he finds himself preaching to the converted. Those who can be bothered to attend his safety evenings are usually those with a high regard for safety – and they are already a low accident risk. It's the people who don't go that need to. Could that be you? If the prospect of saving your own life doesn't attract you, perhaps the free raffle and generous prizes from sponsors will. Here's a list of dates and venues.

Date	Area/airfield	Location	Organiser, phone
October:			
9	North Coates	Clubhouse	Mike Speakman 01652618808
10	Hucknall	Rolls Royce	Colin Anthony 07901574173
11	NW Microlights	Tickled Trout	Nick Hayes 01254 830851
18	Enniskillin	Airport	Ted Veitch 02866 322077
20	Prestwick	Aviators Lounge	Suzanne Wilson 01292 476523
31	Caernarvon	Terminal	Sam Betley 01286 830800
November			
1	Shobdon	Restaurant	Matthew Stocker 01568 708369
2	Leicester	Control Tower	Roger Partis 0116 2592360
6	Winchester	IBM	James Mason 07775 691439
8	Manston	TG Aviation	Mark Girdler 01843 823656
9	Headcorn	Staplehurst Village Centre	Mary Pearson 01622 891539
December			
5	Goodwood	Aero Club	Sally Elliott 01243 755066
13	Farnborough (please call) Flight Safety International Anthony van de Geest 01252 554 554		
14	Exeter	Stowey Arms, Exminster	Chris Howell 07970 251386
Spring dates in the next issue.			

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