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Front cover:
A pair of Robin DR401s
Photo: Frank Herzog

Chairman's message

IAOPA on the world stage

This issue of *General Aviation* devotes several pages to the 27th IAOPA World Assembly that took place in Beijing in September. The aim of such meetings is for delegates to seek solutions to the challenges facing general aviation and identify ways to promote it worldwide. Through resolutions adopted at the World Assembly, delegates will shape the future priorities and efforts of IAOPA on the world stage. These resolutions carry considerable weight, having the backing of 73 country affiliates, and are worded so as to be readily useable in lobbying ICAO (at which IAOPA has its own representative), state government and national authorities. They translate into statements contained in the IAOPA Policy Manual, which endeavours to provide bases for the more specific issues that arise in the various country affiliates of IAOPA. This Policy Manual can be readily accessed from the IAOPA website, www.iaopa.org. Two important resolutions submitted by the UK to the 27th meeting concern the need for regulatory systems to be proportionate and risk-based, and for continued representation, including at ICAO, of aerial work and small commercial operators. All of the resolutions may be found on the AOPA website.

At the time of writing, and far removed from the discussions in Beijing, the referendum on Scottish independence is impossible to ignore. The result will be known by the time this copy of *General Aviation* drops through your letterbox, but right now, the outcome is too close to call. It is hard not to speculate on what might happen on the aviation scene in the event of Scotland leaving the United Kingdom. Political matters intrude rarely into the topics covered in these pages, but I must confess an interest, having spent 15 years living and working in the beautiful city of Edinburgh. Would we see a Scottish CAA with its own Air Navigation Order? Maybe a Scottish aircraft registry, as in the Isle of Man? Aircraft on the G-register currently operating from Scottish soil becoming foreign registered overnight?

Less speculative is the sad closure of Panshanger, a delightful aerodrome with an ultra smooth grass runway, a warm welcome, and excellent café. This was a good place to visit from White Waltham in the Cub with a fellow co-pilot in the winter months of shorter daylight hours - although the flight back west into poor visibility and low setting sun could be a trifle hard going. This adds to the list of aerodromes I have used in the past that no longer exist of Filton, Dunsfold, Leavesden, Ipswich, Radlett and Woodley. The last two were connected with my employment at Handley Page Ltd, firstly as a member of the gliding club and secondly as a passenger in the company runabout, a DH Rapide. Moves are afoot, however, to increase the additional protection afforded by Sport England for sites where some aspect of sports aviation can be identified. Steve Slater, acting on behalf of the GAAC (General Aviation Awareness Council), which receives strong support from AOPA and other associations, is currently engaged in discussions to spread this particular safety net more widely. Steve is a tireless campaigner for aerodromes that are under threat of closure or curtailment of activity, keeping the aviation community updated through his many articles for *General Aviation* and other publications.

Another well known campaigner, Charles Strasser, AOPA Vice President and past member of the Board, came to mind during a flight in July to Ledbury airstrip from White Waltham in a friend's C172. Having passed abeam Gloucestershire Airport, we flew into poor visibility and low cloud west of the Severn causing us to divert to Gloucester, where we were welcomed with a cheerful "No landing fee for you, we're in the Strasser scheme!" Although no longer involved in the management of AOPA, Charles continues to play an active role in the maintenance of the scheme, under which more than 200 civil and military aerodromes in the UK waive their landing fees for genuine diversions. The weather, incidentally, improved a couple of hours later and we were able to complete our mission.

Flight safety benefits, of which the above is clearly one, and the provision of a viable network of aerodromes to serve general aviation and aerial work are just two of the many areas covered in the aforementioned IAOPA Policy Manual. Part of your annual subscription to AOPA helps to fund IAOPA activities, including those of IAOPA Europe. I hope you agree, this is money well spent!



George Done

Letters to the Editor

Farnborough

Sir,

I have only recently had the time to read your June publication of *General Aviation* magazine and have read in depth your argument for the ineffectiveness of Farnborough's new airspace classification.

I would just like to express my sincerest thanks for your support of us VFR pilots and those as you state in E7 who do not yet have Instrument Ratings, but who still fly frequently. I myself fly out of Shoreham as often and when financially possible and am broadening my horizons as a newly qualified pilot. I note how the new proposal could severely limit my potential for broadening my experience with greater range cross county flights, and especially the funnelling that you mention of traffic from the already congested glass G southern airspace.

I just wanted to show my appreciation for your support of pilots like myself and would offer any assistance that you may require. Please continue all you are doing,
Dan Binstead, PPL (SEP)

RMZ communication

Sir,

Flying in the vicinity of Southend on a regular basis, I feel that I can contribute to the debate (on two-way communication in the Radio Mandatory Zone). Whether flying past, overhead or simply operating in the area now bounded by the RMZ (including two general handling practice areas much used by local flying schools, one within and one just outside), it has for some time been normal for many local pilots, students and instructors to request Basic Service. Southend ATC positively encourages this, doubtless in the interests of its commercial traffic, and I have yet to overhear any tardiness in responding to the initial call. As might be expected, Southend controllers have proved both efficient and courteous in handling local traffic and although not yet Class D airspace, they are quick to request actions by pilots for deconfliction purposes, without, to my knowledge causing ill feeling. This applies even well outside the RMZ, when aircraft will be offered a Squawk, if appropriate.

Whatever the legal answer to the question may be, I consider the sensible and pragmatic solution should be to simply give call-sign and request Basic Service in the initial call. In my

experience Southend controllers can get quite busy on good flying days even during the week, when a substantial proportion of pilots will be students. I shudder to think of the effect on two-way communications, especially when an easyJet Airbus is inbound, if the first communication includes all the info that the controller will himself be expecting once communication has been established. At least he will have asked for it, rather than be faced with an extended message, the timing and duration of which may not have been ideal.

I would be surprised if controllers at other places where RMZs are contemplated would be any less tolerant.

David T Scrutton

**The CAA has issued its own clarification in response to the AOPA Members Working Group's concerns about RMZs; see 'AOPA Working For You' pages*

Llanbedr

Sir,

I have just read with interest the article in this month's *General Aviation* magazine on Llanbedr Airfield. I must make it perfectly clear that the people running Llanbedr are nothing to do with Cotswold Airport (Kemble).

Nick Howard

**Operations Director
Cotswold Airport ■**

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MID-CONT

Gold-plating – it's your turn

AOPA and the Civil Aviation Authority have joined in an all-out assault on gold-plating and need your help to tackle the problem.

We are asking that wherever you believe CAA requirements go beyond those of the European Aviation Safety Agency (EASA), let us know and investigations will be made. If gold-plating is highlighted, action will be taken.

CAA Chief Executive Andrew Haines and AOPA Chief Executive Martin

Robinson have written a joint letter to the general aviation community asking for evidence of gold plating that needs to be tackled.

In the letter Mr Haines points out that the CAA has already tackled the issue and has made a large number of significant changes, many following requests from AOPA. Martin Robinson adds: "The CAA is genuinely committed to reducing the burden of red tape on the GA industry and to rooting out gold-plating wherever it is found. This is a golden opportunity to make regulation proportionate to the needs of the GA industry."

AOPA has already begun collating data for this new round of gold-plating attacks, and is finding that most concern CAA ops inspectors over-engineered interpretation of regulation. One issue that has come to light concerns 'complex ATOs',

Right: an imported Agusta 109 required up to £100,000 worth of work before the CAA would put it on the register.



Andrew Haines

quarterly meetings are taken seriously, but equally it's a ham-fisted safety-by-numbers issue – it's gold plating, and it should go.

As Andrew Haines makes clear in his letter, AOPA has already identified a number of areas where gold-plating was a problem, and the CAA has removed these requirements. One was the number of questions in the PPL exams; EASA asked for 120, the CAA demanded 180. They have now adopted the EASA

figure. Similarly, the requirement to submit the Qualifying Cross Country Certificate as part of PPL or LAPL training has been removed.

Prospecting

Prospecting for gold-plating is not as simple as it seems. First, you have to know what the EASA regulation says – and as we have demonstrated before, it's sometimes necessary to consult seven separate EASA documents to find out what a GA pilot is allowed to do. Then you must compare that with what you're actually being required to do by the CAA. The difference is gold-plating.

Ironically, the advent of EASA has led to much less gold-plating by the CAA. In the

pre-EASA days the Authority had a gold-plating bible called the Special Requirements for Import, which listed the additional work that had to be done on aircraft before they would be accepted as safe in the UK. In the helicopter world, for instance, that meant up to £100,000 worth of work on an imported Agusta 109 before the CAA would put it on the register. Since EASA came along, that is no longer required – and safety has not suffered one bit.

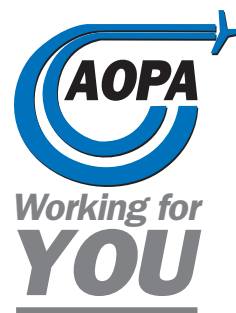
But there are still dragons out there to be slain, and we need to know their whereabouts. If you have a gold-plating issue, please email Martin Robinson and the CAA's Better Regulation lead Philip Clarke at the email address: nogoldplating@caa.co.uk.

The CAA is allowing a fairly broad definition of gold-plating and is applying this challenge to every facet of regulation, including the Implementing Rules (IRs) themselves, Acceptable Means of Compliance (AMCs), and Guidance Material (GM). Andrew Haines adds: "In the case of general aviation we have said

that we would refine the definition to say that we will not impose higher standards than those consistent with EU rules."

The email address will initially be open until Friday 17 October after which all responses will be assessed and possible solutions identified.

Martin Robinson urges all AOPA members to engage with the CAA's de-regulation agenda. "I very much welcome the CAA's proactive approach to eliminating aviation regulatory gold-plating," he says. "I look forward to hearing from fellow general aviation enthusiasts where they believe the CAA may have gone further than European Union rules require. Excessive regulation harms the UK's general aviation sector and I am pleased to be able to assist the CAA develop a more proportionate approach while still maintaining safety." ■



the training organisations that teach for more than the basic PPL. They now need internal safety officers and must hold quarterly safety meetings at which 'findings' of possible safety problems must be discussed. But they have been told by the CAA that "at least ten" findings must be brought to each meeting. EASA makes no such stipulation. Martin Robinson says: "This requirement for ten findings may be an attempt to ensure that the

RMZs – the CAA's guidance

The Civil Aviation Authority has issued a statement intended to clarify the use of Radio Mandatory Zones following concerns expressed by the AOPA Members Working Group that controllers could deny entry to RMZs simply by being

slow to answer pilots' calls.

RMZs are becoming popular as a 'quick and dirty' alternative to Class D controlled airspace, and a sizeable RMZ has been established around Southend. A pilot is required to make two-way contact with

ATC before entering an RMZ, but it implies no further restriction or control.



The CAA has moved to dispel fears that controllers can effectively turn an RMZ into de facto Class D by failing to answer calls promptly, leaving pilots unable to enter the RMZ because 'two-way communication' had not been established. It says it has ensured that Southend has enough controllers to handle the workload, and that saying 'callsign – stand by' is unacceptable.

The issue was raised at the July meeting of the AOPA Members Working Group, where members consulted the CAA's published guidance on RMZs which stipulated that two-way communication was said to have been achieved "once the pilot has provided the

following information on the appropriate communications channel: callsign, type of aircraft, position, level, intentions of the flight". Elsewhere, the CAA also includes "and any other information as prescribed by the competent authority" in the definition.

This raised the possibility that if a pilot made the common initial call – callsign and if required, request for service – the controller could simply deny RMZ transit by saying "stand by". The only way around the problem, it was thought, was to squeeze all the information required for two-way communication to have been officially established into the initial call, but even when rattled off quickly, this extended to more than ten seconds, and there was a serious risk of other traffic being shut out or urgent calls delayed.

In response to AOPA's request for

clarification the CAA has stated that in the case of RMZs, the pilot will have correctly discharged his or her responsibility to establish two-way communications by "alerting (ATC) to its presence and intentions". This would tend to indicate that an initial call on the order of: "G-XXXX, RMZ entry at (wherever)" would fit the bill, even if the controller did not reply. In its statement the CAA expressly discourages long initial calls, for the same reasons as those expressed by the AOPA Members Working Group.

Obviously pilots are cognisant of the spirit of RMZ imposition and do not gratuitously throw a spanner in the works, but we have enough experience of recalcitrant ATC to know that we need rights and responsibilities to be very carefully specified, and there is still room here for interpretation.

Chief executive's diary: Chinese puzzle

Imagine you were starting from scratch – building a general aviation industry with a blank sheet of paper on which to write your regulations and a few sketchy ideas about how the business should work. That's the situation in China, where we've just held the 27th IAOPA World Assembly, and where general aviation is struggling manfully to get off the ground. As you can see elsewhere in these pages, we covered a lot of ground at the Assembly and wrote a series of resolutions which will guide our strategy globally over the coming years.

The thing that struck me most forcibly about AOPA China was the relative youth of its members. In the West private aviators are predominantly middle-aged, but in Beijing the room was full of young, passionate would-be pilots, with money to spend and a dream of flying that will not be denied. China is determined to lead the world in general aviation, although it's got off to a

comparatively slow start. International AOPA produced a series of resolutions in Beijing aimed at the Chinese government, seeking the liberation of airspace, the provision of fuel and a responsible attitude to taxes and fees. Chinese GA grew by only eight percent last year – paltry compared

with, say, its 99 percent growth in e-commerce – and they need to work out how they can train enough pilots to create an industry in the first place.

The second most exciting thing about the World Assembly was the fact that regulators all over the world are realising they've served GA extraordinarily badly, and that they intend to do something about it. ICAO Secretary General Raymond Benjamin said that internationally, "general aviation regulation has not been done well", and that the wind of change is blowing through the authorities that govern our lives. He's the top man in global aviation, and to someone like me who's been banging his head against this particular brick wall for 25 years, to hear those words from his lips was nothing short of startling. This change of heart began in western Europe, with people like Andrew Haines in the UK and Patrick



Gandil in France, infected Patrick Ky's EASA and is now running around the world like a virus. We need to nurture it, promote it, keep it alive, and god willing, we'll see that the decline of our industry has bottomed out and we're once again on the up.

In the middle of this month we have EASA's General

Aviation conference in Rome, which I believe to be one of the most important events GA has faced in my time. This is where we can test the regulators' real appetite for change, and where we can establish how fine talk can be translated into action. But to step back for a moment to the last time I wrote up my diary for the members' magazine, on July 22 I attended the Airspace Safety Initiative Co-ordination Group at the CAA in Kingsway, London. This group continues to discuss issues around class G airspace, with a focus on electronic security with input from the Electronic Conspicuously Working Group which I chair.

On July 23 I went to the Department for Transport for a discussion on the upcoming review of the Basic Regulation EC216 and the EASA Advanced Notice of Proposed



Left: I gave the World Assembly a rundown on trends in general aviation training in the West



Above: an initial call on the order of: "G-XXXX, RMZ entry at (wherever)" would fit the bill

Amendment (ANPA), which is about the Agency preparing a document that will go to the European Commission with some recommendations as to where EC216 could be amended. IAOPA submitted its full response before the deadline.

Things get quiet towards the end of July with people going on holiday, so between July 24 and 29 July I was in the office catching up with members' correspondence and paperwork. On the 30th I had a discussion with consultants Helios and PPL/IR of the European EGNOS system, and how it might be possible to improve the number of GPS-based approaches into general aviation aerodromes in the UK and elsewhere.

On Friday August 1 I met with Melissa Rudinger, who is Vice President of Regulatory Affairs at AOPA US. Melissa was on vacation in London, and took time out for a general discussion about the way the general aviation industry is dealing with the current downturn in activity in United States. On the positive side, student starts are back up to where they were before the recession, and given that everything begins and ends with the student, so recovery must follow.

On Friday August 8 I had a conference call with our consultant Ben Stanley and Michael Erb, Managing Director of AOPA Germany, covering our continuing efforts on SESAR. Ben is taking up other employment, away from aviation, which is unfortunate for us – he has been a wise and knowledgeable advisor and has given us tremendous support. We wish him well in his new career.

On August 11 I was due to take Andrew Haines and Tony Rapson of the CAA flying, but as so often happens in general aviation the weather was not good enough so we have to rearrange. From August 13 I spent a week in Malta, and while I was

The text of the CAA statement runs:

"The purpose of an RMZ is to address, in a proportionate way, the need to safely integrate traffic, normally in the vicinity of an aerodrome where the dimensions of an ATZ are not adequate. Appropriate use of an RMZ can successfully mitigate against the requirement for a higher classification of airspace. As such there will always be an authority identified as the one that is indicated in aeronautical data publications and on charts as the 'controlling' authority for the RMZ – if only to identify on which frequency the call is to be made.

"The requirement is for the transiting aircraft to call the notified ATC unit alerting them to its presence and intentions; at which point a pilot has correctly discharged their requirements to transit the RMZ. Should the notified ATC

there I met with Pierre Travers Tauss and other members of the AOPA Malta executive committee. I also spent a couple of hours with Pierre meeting their new Aviation Minister. On August 22 I was in Barcelona, where I met up with our Spanish AOPA representatives, including Carlos, Rafa and Juan. It is pleasing to see that membership of AOPA Spain is increasing, and that we now have an office in Madrid as well as Barcelona. By September 1 I was back in the office, where I found several hundred emails waiting to be taken care of. From September 3 we had a meeting of the Industry Consultation Body in Brussels; the ICB deals with issues relating to the Single European Sky and is waiting for a response from the Commission with respect to 8.33 kHz radios. There was also a special meeting of the EASA Advisory Body which worked on a collective response to the ANPA on the Basic Regulation. Next day the full EAB met in Cologne, where we again reviewed the papers that the Management Board will be discussing. This equips the Chair and Vice Chair, who attend the Management Board meetings as observers, to provide an industry perspective to the Board if necessary.

We had to elect a new Chair due to the retirement of Vincent de Vroy, who has always been extremely supportive of general aviation's views, and we had two nominations for the position of Vice Chair. Candidates were invited to state their positions, and it was decided that the voting would be done electronically ahead of the next meeting of the group.

And so on Sunday September 7 I set out for Beijing to take part in the World Assembly, and you can now turn the page and see what a time we had...

Martin Robinson

unit ask if the transiting aircraft can accept an ATSOCAS, to better facilitate de-confliction from other traffic that they may have by potentially agreeing a form of co-ordination, the pilot is not obliged to accept/agree to this – it is still Class G. The ATC unit then has to work around the now 'known' transiting aircraft.

"The transiting aircraft should not enter if it does not have a radio or it is unserviceable, unless some form of prior notification (possibly by phone prior to departure) has been agreed.

"Established R/T procedures are designed to maintain safety and ensure optimal efficiency in the utilisation of ATC frequencies and, therefore, they have to be complied with regardless of circumstance (unless safety of life would otherwise be endangered). Therefore, blocking a frequency with a 15-20 second initial contact message is not helpful and could be counter-productive as a controller has to be prepared to record and absorb the information passed in order to be able to respond appropriately. Just because they are not using the R/T does not mean that they are in a position to absorb the detail as they may be engaged in landline co-ordination. Equally, a controller using 'call sign – stand by' and not coming back to the pilot as soon as possible is unacceptable. We have ensured that Southend ATC have adequate control capacity to hopefully avoid such occurrences arising and this point has been highlighted to the unit management; our ATS inspectors will be monitoring this aspect as we move forward.

"The provision of a RMZ in lieu of controlled airspace offers optimal airspace utilisation and efficiency for all airspace users in a balanced way without the need for the carriage of additional equipment on the aircraft. However, its primary purpose is to avoid aircraft coming into close proximity with the associated safety hazard for all those on board both aircraft by ensuring ATC knows about all aircraft within the designated zone. Therefore, un-notified flight within the zone would negate the effectiveness of the risk mitigation measure that it provides and consequently it is not viable to allow aircraft to enter either without having established two-way communications with ATC or not having provided basic flight profile details.

"If a pilot is unable to fulfill that requirement then they should route around the RMZ using the same procedures as they would do for controlled airspace as to do otherwise could unnecessarily endanger others and negate the purpose of the RMZ, ultimately (in some cases) potentially leading to a higher classification of airspace." ■

Jet A1 and tax

The EU is not supposed to dictate taxes in the UK, but by various means they do!

As all pilots know, there is a big difference between the price per litre for Jet A1 and Avgas, namely around 80 pence and £1.90. Much of this difference is because Jet A1 is sold without the excise duty of 58 pence per litre, for historical & international reasons.

In 2008 the EU issued their Energy Products Directive (EPD) which said that all EU governments had to charge tax on hitherto untaxed fuel. In the boating world this meant that Red Diesel became taxed, and in the aviation world,

that Jet A1 became taxed for private use. Jet A1 for commercial and business use remained free of duty. Those pilots using it for private use had to declare and to pay the duty to HMRC.



In Germany they impose a 'mineral oil' tax on Jet A1. A German bizjet owner thought he should not pay it for business use. He took the German government to court and won. The German government appealed to the European Court of Justice and had that ruling overturned, forcing the bizjet operator to pay. Consequently it is now EU law that business use is not eligible for duty-free Jet A1 unless there is 'consideration', as there is in charter arrangements. There are exemptions for aerial work, training, international flights, government and agricultural use.

The EU has now imposed that judgement on the whole of the

EU, and the UK is forced to implement it as of September 1, 2014. HMRC have issued Notice 554 which gives the details. Thus, business use of Jet A1 without 'consideration' attracts a duty of 58 pence per litre.

Because over 99% Jet A1 is used for flights for consideration (e.g.

airlines and charter) it will continue to be sold duty free at the pump, and HMRC will police the rule through inspection of records. — *Jeremy James* ■

Class F out the window

The CAA is changing the UK's Class F airspace – the 'advisory routes' – following an ICAO audit and the new provisions of the Single European Rules of the Air. Pilots should notice little difference; the advisory routes will be replaced either by Class E 'airways', which will be designated Transponder Mandatory Zones, or simple returned to Class G airspace.

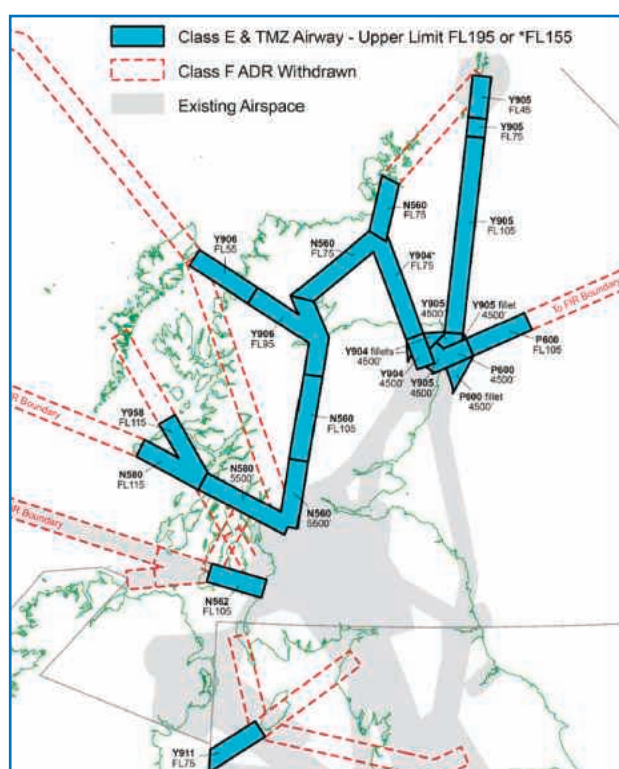
The authority says the dimensions of the new Class E airways will not necessarily mirror the exact dimensions of the advisory

routes they replace. In addition to some revised base and upper levels, the new airways include extra airspace in the vicinity of the Aberdeen CTR/CTA – in fact most changes affect the Scottish FIR.

Class E is controlled airspace in which an air traffic control service is provided to IFR aircraft only, but VFR aircraft may also operate in it and do not require a clearance or need to be in contact with ATC. They do, however, need a working Mode S transponder. VFR aircraft operating without a transponder can get access to the airspace but must establish

two-way radio contact with air traffic control before entering. VFR flights that request an air traffic service will get either a Basic or a Traffic service, subject to ATC capacity. Additional procedures are to be introduced to accommodate gliding activity through airway N560 between the Scottish TMA northern boundary and Inverness.

As the changes will have the greatest impact upon the Scottish FIR, the CAA has arranged for the next edition of the Scottish half-mil to be published on 13 November 2014 instead of the original scheduled publication date of 26 June 2015.



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Infringer school

AOPA has welcomed the CAA's launch of an online test that pilots guilty of airspace infringements can take to assess their airmanship skills. The test is preceded by an online tutorial which is available to all pilots, and well worth looking at. Both tutorial and test have been designed with input from AOPA.

In the past the CAA's approach to infringements was limited to either a telling-off or the big-stick option of prosecution, with little in between. The Authority used to mount what AOPA considered to be unnecessary prosecutions because it had insufficient tools to deal proportionately with infringements. Thankfully, those days are gone.

Infringements remain a serious problem – NATS reported 670 infringements of controlled airspace in 2013 – and pilots are often unaware of the effect of even minor infringements to other air traffic. The authorities have taken a multi-faceted approach to dealing with the issue, including education programmes and the establishment of listening frequencies.

Martin Robinson says: "I'm pleased to see the CAA using proportionate powers to deal more effectively with infringements. I have always maintained that they should throw the book at the worst repeat offenders, to the extent of taking their licences away. But they also need incremental steps such as this online tutorial and test as an option at the other end of the scale."

The CAA said some infringements were not down to poor judgment on the part of the pilot but could result, for example, from misunderstanding with an air traffic controller. In such cases, it was unlikely the pilot would be required to sit the test. Only where the pilot displayed poor judgment or insufficient knowledge will he or she be expected to undertake the assessment. In the most serious cases, criminal prosecution is still an option.

Phil Roberts, Head of Airspace, Air Traffic Management and Aerodromes, at the CAA, said: "Unfortunately, the number of infringements occurring in UK airspace remains stubbornly high. This represents an unacceptable safety risk for commercial, private and military aviation. This initiative, which has the full support of general aviation groups should increase much-needed awareness of the issue.

"Although we strongly recommend all pilots view the tutorial as a basic refresher on airmanship, our firm hope is that pilots who have infringed, and subsequently sit the test, will learn from their mistakes and become better pilots as a result and, as a consequence, be less likely to infringe again in the future."

The open-access tutorial is at <http://infringements.caa.co.uk> and reiterates the basics of good airmanship. Have a go – find out what you don't know, and it could save you and others from trouble in future. ■

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Roads lead to Rome...

The CAA expects to publish before the end of this month (October) its final policy framework on general aviation regulation, following the consultation exercise it has been conducting in recent months. The Authority has been busy wading through thickets of GA regulation and chopping or amending it all year, and has set down its past actions and future plans in a PDF that's available online at

<http://www.caa.co.uk/docs/33/CAP%201192.pdf>

The document covers the CAA's agreement with the Department for Transport to complete a review of all parts

of the Air Navigation Order that affect GA with a commitment to consult on where they think they can deregulate. A public consultation on initial concepts will begin in March next year, with a second consultation on specific proposals in September 2015. Changes to the ANO will come into force in October 2016.

The CAA continues to prod EASA to deliver 'simpler, lighter, better rules for GA'. The EASA national authorities' GA roadmap group, Chaired by the CAA's Tony Rapson, will deliver an action plan to the EASA safety conference on GA in Rome in October, where as well as AOPA's Martin Robinson, Tony Rapson, CAA's



Chief Executive Andrew Haines and Grant Shapps MP, the pilot responsible for the Red Tape Challenge on GA, will be speaking. ■

Hawarden clears diversion fog

A misunderstanding over the nature of a diversion which led to a microlight pilot being refused permission to land at Hawarden has been cleared up following the intercession of AOPA's Charles Strasser, but the incident carries lessons for all pilots.

The microlight pilot had been heading for Caernarfon when he decided to make a weather diversion because they were reporting sea fog. When he called Hawarden, he was told he could not come in because he was flying a microlight, and the airfield does not accept them. He had just enough fuel to fly on to Blackpool, where he landed without incident.

He contacted Charles Strasser – Hawarden is a member of AOPA's Strasser Scheme, whereby airfields do not charge for weather and emergency diversions. Hawarden's management confirmed the airfield's adherence to the Strasser Scheme and said it had not been made clear to ATC that the microlight was seeking a weather diversion. Notwithstanding its policy of not accepting microlights Hawarden routinely accepts aircraft on emergency or weather diversions free of charge, regardless of size. Reviews of the flight progress strip and radio exchanges showed that while the word 'diversion' was used, it was not clear whether this was due to a change of mind, or due to weather or other emergency, and it was not seen as a flight safety issue. Had it been otherwise, there would have been no question of landing being refused.

Charles Strasser says: "I'm sorry that this situation has arisen but pleased that it turned out safely. Hawarden has affirmed its commitment to the Strasser Scheme. The lesson we must all take away is that radio calls must be absolutely clear and unambiguous about the nature of the diversion. If necessary, pilots should be ready to declare an emergency." ■

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Introductory flights

By Nick Wilcock

As many of you will now be aware, a recent change introduced by EASA has eased the regulations which apply to the conduct of 'Introductory flights' by pilots who do not hold FI certificates. The CAA helpfully published Information Notice IN-2014/093 on the topic, which also included details of changes to 'cost sharing' requirements. These seem pretty clear to most people, but it seems that further explanation might be helpful to others.

The section of the Information Notice which refers to such flights is paragraph 4, which is reproduced below:

4 Introductory Flights, Sailplane Towing, Parachute Dropping and Aerobatic Flights

4.1 The holder of an EASA or UK PPL(A), LAPL(A) or NPPL(A) that is valid for the aeroplane to be used may act as Pilot in Command (PIC) on introductory flights, parachute dropping, sailplane towing or aerobatic flights performed either by a training organisation having its principal place of business in the UK and approved in accordance with Regulation (EU) No. 1178/2011 (i.e. an Approved Training Organisation), or by an organisation created with the aim of promoting aerial sport or leisure aviation, on the condition that:

- the aeroplane is operated by the organisation on the basis of ownership or dry lease;
- the flight does not generate profits distributed outside of the organisation; and
- whenever non-members of the organisation are involved, such flights represent only a marginal activity of the organisation.

4.2 The Guidance Material GM1 Article 6.4a(c) of the Operations Regulation states that:

An 'organisation created with the aim of promoting aerial sport or leisure aviation' means a non-profit organisation, established under applicable national law for the sole purpose of gathering persons sharing the same interest in general aviation to fly for pleasure or to conduct parachute jumping. The organisation should have aircraft available.

4.3 Article 2 of Regulation (EU) No. 965/2012, as amended by Regulation (EU) No. 379/2014, states that: *'Introductory flight' means any flight*

against remuneration or other valuable consideration consisting of an air tour of short duration, offered by an approved training organisation or an organisation created with the aim of promoting aerial sport or leisure aviation, for the purpose of attracting new trainees or new members.

4.4 GM2 Article 6.4a(c) of the Operations Regulation states that: *The term 'marginal activity' should be understood as representing a very minor part of the overall activity of an organisation, mainly for the purpose of promoting itself or attracting new students or members. An organisation intending to offer such flights as regular business activity is not considered to meet the condition of marginal activity. Also, flights organised with the sole intent to generate income for the organisation are not considered to be a marginal activity.*

4.5 The Guidance Material GM1 ARO.OPS.300 (Introductory flights) of the Operations Regulation states that: *'For introductory flights carried out in the territory of the Member State, the competent authority may establish additional conditions such as defined area of the operation, time period during which such operations are to be conducted, safety risk assessments to be accomplished, aircraft to be used, specific operating procedures, notification requirements, maximum distance flown, pilot qualification, maximum number of passengers on-board, further restrictions on the maximum take-off mass.'*

4.6 The CAA recommends that organisations conducting introductory flights ensure that the guidance is adopted within the organisation's Operations Manual, or equivalent. **Important Note:** The exemptions issued under the ANO for national licences and Annex II aircraft are not

valid outside the airspace of the UK unless validated or otherwise accepted by the relevant authority of the State where the flight is to take place.

There are some important points to note in these changes. Firstly and perhaps most importantly, an 'Introductory Flight' is not a 'Trial Flying Lesson'. If a flight is sold as such and the passenger is permitted to handle the controls, then the PIC would need to hold a valid FI certificate - and remember that a PPL/FI(A) without CPL-level knowledge may only conduct such a lesson for someone interested in a LAPL(A), so the flying school would presumably need to hold approval to provide LAPL training.

Note also that 'Introductory Flights' may only take place at an Approved Training Organisation or 'a non-profit organisation created with the aim of promoting aerial sport or leisure aviation' and may only be conducted as a marginal activity. Which clearly does not mean at a Registered

Facility - unless it coincidentally happens to be a non-profit organisation meeting the criteria of paragraph 4.2 of the IN. However, on the face of it the new regulations would seem to allow, for example, a group which operated something out of the mainstream for their own leisure pursuits to sell occasional introductory flights to others, without the need for the PIC to be

a flight instructor. Provided, of course, that the appropriate airworthiness requirements were met.

So there's probably little or no reason for AOC holders or RFs to worry about the effect of the new regulations on their business income. There's nothing to stop RFs continuing to sell 'Trial Flying Lessons' to the general public provided, of course, that they are flown with a qualified instructor as PIC. But for 'trips round the bay' introductory flights, the criteria of the Information Notice must be obeyed.

But why would anyone pay for an 'introductory flight' in a light aircraft when they could just as easily pay for a proper trial flying lesson with a flight instructor and have a much fuller experience for the same outlay? ■



Above: EASA says this is sport and leisure – right on!



China: GA struggles into the air

*Demand remains pent-up as China's progress bypasses general aviation, as **Pat Malone** reports*

A few years ago it would have been impossible; a generation ago it would have been thought a madman's fantasy. But today you can go to a privately-owned airfield in Beijing and hire a privately-owned helicopter or fixed-wing aircraft and fly over the Great Wall of China.

As a flying experience it's little short of stupendous – but ironically, it has the effect of illustrating just what a mountain China has to climb before it can attain the status of a general aviation nation. For the pilot is Australian, the helicopter European, the paperwork stifling, the pollution troubling and the freedom starkly circumscribed.

Forget about taking the stick; it took EC135 helicopter pilot Dan Heath more than a year to get his FAA and Australian commercial licences converted to the Chinese equivalent. At times it seemed like an impossible task – illogical exam questions with three wrong answers were commonplace, and Chinese translations of modified FAA rules betrayed a misunderstanding of the purpose of the rule or the principle it addressed. "Sometimes it felt like what they were just testing was my will to continue," Dan said.

But he got there in the end, and now he is flying the EC135 – or the AS350B3, the R44s or the R22, all of which are used for training or powerline patrols – out of Badaling airfield on the northern outskirts of Beijing for his employers, Great Wall Helicopter Tours. Delegates to International AOPA's World Assembly in the Chinese

capital in September had an opportunity to buy a ticket and didn't pass it up, and so we found ourselves sitting behind Dan and a former Chinese military pilot – they always fly two-up in China – and taking off from Badaling on an other-worldly flight over the world's greatest man-made structure.

Beijing's notorious pollution was fairly half-hearted that day (it was nine-eleven) so we had visibility of perhaps five kilometres as we climbed towards the eight mountain ridges that meet near Badaling, one of which the Wall crowns. Unsurprisingly, there was nobody else on the frequency. We caught our first glimpse



Top: the Great Wall of China from an unusual perspective, 1,000 feet above
Above: pilot Dan Heath (right) talks to AOPA pilots from Greece, Russia, Luxembourg, Sweden, Canada and Holland
This photo: the EC135 approaches over a Cirrus at Badaling – note uncharted obstacle





Top: standing room only on the Badaling section of the Wall, close to Beijing
Above: older sections of the Wall further out are remote from tourists

of the Wall near Badaling, the closest it comes to Beijing and therefore the most crowded, then flew out beyond the madding crowd to the older sections – the new-looking parts were rebuilt in the 1950s – where there were no tourists at all. Height varied from 1,000 to a couple of hundred feet, and we often flew directly over the Wall when there were no people about. Dan kept up a steady stream of information... the workers who built the Wall were mostly criminals... the sentence for more than 200 crimes was to work on the Wall, and if you were sentenced “in perpetuity” that meant your son had to take over when you died. And contrary to urban myth, the Great Wall cannot be seen from the Moon.

We were back at Badaling – owned by the company that built the Birds Nest

Olympic stadium – within 20 minutes to give somebody else a go, and while the aircraft was refuelled we had a chance to talk to Dan, who’s from Melbourne. He’s open about the many challenges facing GA in China, one of which is cultural – he echoed the observation of AOPA China’s Secretary General Zhang Feng, who said that as much as anything, China needs “a liberation of the mind”. Dan says: “It goes right back to the way they learn the alphabet. There are 3,000 characters, so they learn everything by rote. That’s the way everything is taught, and rote-learning doesn’t lend itself to flying instruction. We’re teaching people to be pilots here, we’re not teaching them to fly.

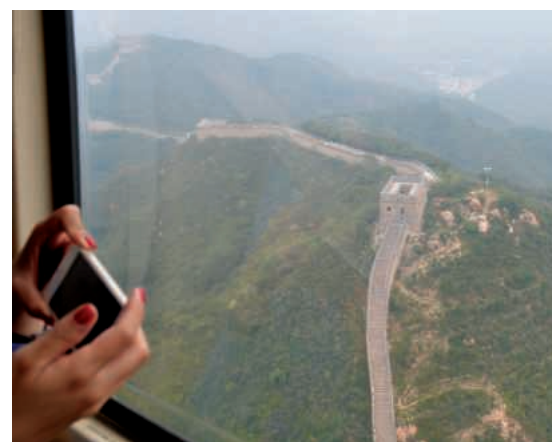
“They won’t take off in an R44 if they have to pull more than 24 inches MAP – they don’t understand why, they just know the number. They don’t do practice autorotations, and their commercial pilots never fly solo, always two-up. They can go right through their careers without ever flying solo.”

Flying beyond the 16-square kilometre “training” bubble of airspace is possible, but permission must be sought from the military; and if you cross within the third of Beijing’s six ring roads you’re likely to be shot down. There are no VFR charts, so obstacles can come as a surprise – there’s a 400-foot mast on the downwind at Badaling and an equally big tower north of the runway, often obscured by haze – and the last westerners who tried to make a VFR chart were not looked upon kindly by the military authorities.

But a start has been made, and such is the passion and enthusiasm for flying in China that it will take more than bureaucratic obstacles to withstand the momentum. A journey of a thousand miles begins with a single step, as we say in England, and China has taken that step. Only a thousand miles to go. ■



Above: Great Wall Helicopter Tours’ twin-engined EC135
Below: helicopter provides a new window on an ancient world
Bottom: the Great Wall will never look so great from ground level again



Getting China off the ground

There's never been a boomtown like Beijing. Leave for a year and you'll hardly know it when you get back, the pace of progress is so furious. Capitalism red in tooth and claw bulldozes bureaucracy like fire through ice, the world's most expensive real estate abuts dire poverty, the quick make billions while the pedestrian lose their shirts. China now uses more energy than the United States, spends more on e-commerce, and produces twice as many cars – all from a standing start in a single generation.

The International Council of Aircraft Owners and Pilots Associations met in Beijing in September for its 27th World Assembly as guests of AOPA China. IAOPA, the world's biggest pilots' association with some 400,000 members, meets every two years to plan strategy and make resolutions for presentation to governments, ICAO in Montreal, and national aviation authorities around the world – the only aviation organisation to do this. This year, the emphasis was very much on what global GA can do to help China.

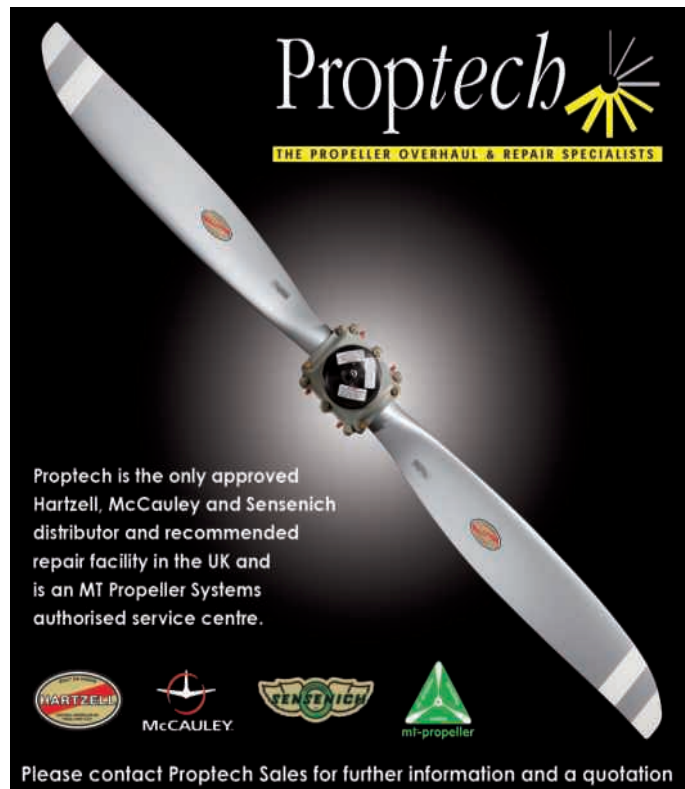
For the Chinese gold rush has so far missed the general aviation seam. Growth is hampered by lack of airfields, problems with access to airspace, inability to train pilots, bureaucratic inertia. Where e-commerce has grown by 99% per annum since 2006, Chinese GA increased the number of hours flown last year by only 8%. Tellingly, that's lower than fleet growth – there are aircraft sitting on the ground for want of permissions to fly.

But the potential is fantastic. The number of super-rich Chinese – with personal assets over £10 million – has topped 70,000. Those who would fly are young, passionate about aviation, and they have their own ways of dealing with logjams.

International AOPA's President Mark Baker used the World Assembly to bring home to the Chinese authorities just what they're missing by failing to give GA a fair wind. "General aviation in America supports 1.2 million jobs and pumps \$150 billion into the economy every year," he said. "That's a country of 360 million people – just imagine what is possible in China, with 1.3 billion people!"

The Assembly made a number of resolutions asking the Chinese government to allow GA more freedom, relaxing restrictions on airspace access, allowing fuel to be made more widely available, keeping taxes and fees on general aviation in check. There are signs that the government is listening and wants to see GA succeed in China – the World Assembly coincided with the Fourth Annual Low Altitude Economy Summit, to which some 350 Chinese aviation enterprises came to hear news of official encouragement. The investors are certainly not jumping ship – the potential is mind-boggling, and the benefits will spill out around the world.

For the non-Chinese delegates, there was also heartening news on the regulation and restriction which is stifling the industry almost everywhere outside North America. ICAO Secretary General Raymond Benjamin said it was clear that GA regulation had not been done well, and there was a mood for change. This awakening has its genesis in Europe, where national authorities and EASA are making positive changes that are aimed at reversing the decline of GA, the cause of which is over-regulation and over-taxation. In its 52 years, International AOPA has rarely met in more positive and uplifting circumstances. ■



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Freeing the tiger

They're young, they've got money, they've got the passion – watch out! Pat Malone looks at China's urge to fly

Advances in general aviation have not matched the phenomenal rate of progress seen in other parts of the Chinese economy, but the country has massive advantages that should allow the industry to explode once it begins to get a stable grip.

While the western world grapples with the problems of rewriting the rules and trying to get rid of legacy systems in favour of NextGen or the Single European Sky, China starts from here with space-based navigation – its GA needs little ground infrastructure beyond a place to land. It has the chance to make sensible rules for GA and get them right first time. It already owns a serious piece of the world's GA industry, including companies like Continental, Cirrus, Mooney, Enstrom and Brantly. On the evidence of the International AOPA World Assembly in Beijing there is a huge passion for flying, and it comes from young people. As IAOPA's ICAO representative Frank Hofmann pointed out, you wouldn't see a gathering like this anywhere else – young professional men and women with the means and the desire to fly, working to bring their dreams to fruition.

The World Assembly adopted a raft of resolutions aimed at helping to get general aviation established in China, urging the authorities to adopt Class G airspace, to allow avgas to be made available without restrictions, and to impose only reasonable taxes on aircraft. And it sought to encourage all governments to recognise the benefits that general aviation can provide to the economy if accompanied by minimum state intervention and control.

The first day of the IAOPA World Assembly incorporated China's 4th Annual Low Altitude Economy Summit, to which

some 350 representatives of GA-related industries in China had come. The "low altitude economy" is effectively a Chinese simile for GA and includes everything from engine manufacture to flight training to foreign jet sales and aviation insurance. Speaker after speaker reinforced the fact that there is enormous pent-up demand for GA in China, but aircraft that have been imported are sitting on the ground for want of access to airspace, and there is still virtually no infrastructure for GA.

The problems are the same as elsewhere in the world, only more so. The military

Top: Mark Baker makes his opening address to the 27th IAOPA World Assembly
Below: Brazilian manufacturer Embraer has some 2,000 aircraft in China
Bottom: Cirrus is one of many aviation companies now owned by the Chinese



owns the air and is reluctant to relax its grip. Regulation is a ball and chain on GA, and China's ball is perhaps heavier than anyone else's. Taxes and fees are disproportionate to the value of the industry – Chinese speakers made the point that more than 90 percent of the country's GA companies are unprofitable. But those companies exist, and their investors are sticking with them.

International AOPA was able to provide examples of what was possible in GA – or more precisely, the United States was able to illustrate how an active and profitable GA industry works. Europe looks a little sick, but the tide of over-regulation is on the turn there. Fernando Grau of Embraer used Brazil as an example of how much progress can be made when government truly gets behind the aviation industry in a large country with remote areas that cannot easily be reached except by air. A global success, Embraer now has some 2,000 aircraft in China, up from 500 ten years ago, and there had been enormous challenges providing pilots and engineers for them.

But, he said, in a similar period China had come from nowhere to be the largest car producer in the world, now making over 22 million cars a year, twice as many as the USA. It had surpassed the US with \$300 billion in e-commerce sales, a growth rate of 99% per annum since 2006. China is already the world's largest energy consumer. Some 25 million people are moving from the country to the cities each →

→ year – equivalent to the creating of a new New York annually. The number of high net worth individuals is increasing exponentially. “We just need to give them the bug and they will fly,” he said. There are 400 executive jets in China, up from 80 in seven years, but one third of the fleet is based in Hong Kong and Macau, and operators worked under significant bureaucratic burdens. The number of airports had grown, but remained minuscule compared to the population.

Gao Yuanyang, Director of GA Research at the Beijing University of Aviation and Aerospace, added that while GA was not developing due to the burden of restrictions, the good news is that the government is signalling the opening of airspace. “China is going to be the most important GA market globally,” he asserted. “Strong policy signals are coming from central government, and there is a passion in local governments for promotion. GA is developing in points, rather than in networks, and when we can link these points we can facilitate development. But everyone, from grass roots to government, needs to be active and make preparations.

The Lindbergh effect

Entrepreneur Chen Wei traded up from a Saratoga to a six-seat TBM700 with the American registration N168CW (168 is an extremely auspicious number in China) and in 2011 he decided to become the first Chinese private pilot to fly around the world. His motivation was threefold – to encourage the awareness and development of GA in China; to raise money for a children’s hospital; and to have some fun.

Getting hold of the 16 visas he required was no mean feat, and he faced obstacles that had little to do with aviation – the Arab Spring, political turmoil in Egypt, the Icelandic volcano – as well as those that did, like weather and maintenance issues. “I flew through a frightening thunderstorm in India,” he said, “but the biggest challenge was not weather or maintenance, but to get permission to access Chinese airspace and land at Beijing International Airport.

“Six months before I departed I applied to land there, but I heard nothing. This eventually required high-level support at the CAAC (Chinese aviation authority) and at AOPA China, but I was able to make history by flying the first single-engined aircraft ever to land at Beijing International Airport.

“When Charles Lindbergh crossed the Atlantic in 1927, the number of people in the USA who were learning to fly tripled,” Chen Wei said. “In China we need more pilots, more aircraft, more airports, we must cultivate a passion for flying. This is the new age for GA in China.”

With backing from AOPA China, Chen Wei is now offering a prize of one million RMB – about £100,000 – to the first Chinese woman to fly around the world. “I feel I need to do more to encourage everyone to learn to fly,” he said. “With fewer than 2,000 pilots in China we cannot support such an industry. It takes a long time to train pilots, and we must start now.” ■

Li Jinheng, Director of Beijing University’s Urban Planning Institution, said the urgent requirements were to regularise the air traffic management system and to focus on creating a new regulatory basis for development. China depends overwhelmingly on rail and road transport and the aviation focus is mainly on the commercial sector, but in future the low altitude economy will become one of the pillars for new economic growth. It had a role to play in agriculture, in alleviating urbanisation problems, in tourism, especially in remote western China, in cargo delivery, even in improving air quality, degraded by surface transport.

So the problems are identified, and thus can be addressed. In the meantime, AOPA China is working hard to promote what we in Britain used to call ‘air-mindedness’ among youth. Director Chen Wei, the first

GA by numbers

China has 129 GA companies, and there are 1,092 GA aircraft with 1,655 pilots, including 458 PPLs and 507 LSA pilots. According to the Civil Aviation Authority of China, the industry flew 510,000 hours in 2013, 75 percent of them in training. More than 90 percent of GA companies, however, were unprofitable.

Chinese private pilot to fly around the world – a successful entrepreneur, he used his TBM700 to visit 40 cities in 21 countries in 2011, and was the first person to land a single-engined aircraft at Beijing International Airport – is behind a prize of one million RMB for the first female to emulate his achievement and fly around the world. It’s only a matter of time. ■



Top: Chen Wei discusses his circumnavigation with IAOPA General Secretary Craig Spence and President Mark Baker
Above: Chen Wei makes his plea – ‘let every Chinese have an opportunity to fly’
Right: Chen Wei and his TBM – 168 is an extremely lucky number in China



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Know your enemy

Steve Brown, Chief Operating Officer for the National Business Aviation Association in America, said that GA across the world faced the same four main obstacles – airport access, airspace access, excessive and inefficient regulation, and high fees and taxes. These all stunt GA's growth and they apply everywhere; it's just a matter of degree.

IAOPA Senior Vice President Martin Robinson contrasted the technology of 1990, when he began working for AOPA, with today's world. Clunky green-screen computers, mobile phones like housebricks with briefcase-sized batteries, TVs you had to get out of your seat to change... we forget how much personal electronic devices have changed to our lives. But it took GA regulators more than a decade to acknowledge that GPS even existed, while students continued to be taught to backtrack NDBs.

The average age of GA aircraft in the USA is 39 years, he added, and the rules under which they were certificated date back to 1965. The NTSB and AAIB say that certification is almost never an issue in accidents, yet in Europe regulators are re-inventing the wheel on certification rules – why?

"When I started at AOPA 24 years ago my main concerns were 8.33 radios and Mode-S," Martin said. "Regulators move so slowly that they are still major preoccupations today. From composites to glass cockpits, improvements in GA have largely come from outside the industry, and regulators haven't a hope of keeping pace with developments. Many of the real advances in GA would be obsolete if they had to wait for certification. The iPad is ubiquitous, without the need for certification, and thank heavens we didn't have to wait for it. Google glasses could become the new head-up display for GA – but not if the regulators try to slow things down to their pace.

"While manufacturers like Cirrus make it easier than ever to trade up to better aircraft, the trend in Europe is to trade down – owners and pilots switch to homebuilts and light sport aircraft which don't suffer the same weight of regulation and are therefore cheaper. Unfortunately this takes value out of the GA industry, and the owner of a certified aircraft maintained by professional engineers, buying avgas and paying landing fees can not be equated one-for-one with a farm-strip pilot who uses mogas and does his own maintenance. Financially, over-regulation has thus forced GA into a spiral of decline. The pilot population continues to fall in the UK, with the annual number of PPLs issued down by about 1,000 a year to 2,500. In the USA, since 1990 the number of single-engine aircraft had fallen from 165,000 to 129,000 and the number of multis from 23,000 to 14,000.

"Our job is to get help regulators match risk, and we are finally making some headway in that. There is evidence that at national and international level, they realise they've unnecessarily beaten the GA industry into the ground." ■



The language may be fractured but the sentiment is absolutely clear



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Fixing EASA, and the world

A generation of over-regulation has been a disaster for GA, but times are changing. Pat Malone reports

Europe was held up as an example to the world of how not to regulate general aviation – but the situation is changing. In his video address to the IAOPA World Assembly, ICAO's Secretary General Raymond Benjamin indicated that all over the world there was an acceptance that GA regulation had not been done well, and there needs to be change.

IAOPA General Secretary Craig Spence said that across the world the tide of over-regulation was turning, not just at ICAO. This new reality originates with the European Aviation Safety Agency EASA, which has realised how badly it has served GA and is changing the way it makes safety regulation. Is there an effective way to educate regulators on what safety means in the GA context?

Jacob Pedersen of AOPA Demark outlined some of the problems we have faced in Europe, where every single GA regulation has been rewritten in the past few years. "During that process, EASA has made every mistake it is possible for a regulator to make," he said. "There has been a requirement to attain 'a high uniform level of safety'. That presumes that a man on a grass strip with a parachute and a motor strapped to his back must attain the same level of safety as a Boeing 747 crossing the Atlantic, and there must be regulations which apply to both. It is a nonsensical premise."

Jacob summed up the classic mistakes as:

- One-size-fits-all regulation. It manifestly doesn't.
- Lack of time and resources for tailor-made GA regulation.
- Lack of safety data. How can you make safety regulation without knowing what the risks are?
- Single-minded focus on a risk factor which ignores unintended consequences.
- Lack of understanding of GA. Many regulators have only ever worked in the airline world or the bureaucracy.
- Complexity. In

some cases European pilots must consult seven separate documents to work out what the law requires of them.

- Wrong-headed regulation, designed to promote national advantage or cover civil servants' backs.

Ignoring the law

Jacob gave the example of a pilot who had been caught short and used the device known as the Little John. "He is now carrying Hazardous Goods with the UN number 3373 in Dangerous Group 606, his aircraft must be properly labelled and



Above: Jacob Pedersen decries EASA's wacky dangerous goods rules for GA
Below: At last Europe seems ready to change its whole approach to GA regulation



he must have undergone special training to deal with it," he said.

"To find out what is dangerous, he must buy from ICAO a 1200-page technical manual which ICAO says is designed only for CAT. In Europe, despite all our work, EASA says a pilot should have his dangerous goods specialists look at it and enter it into his shipments declaration. It's been frustrating trying to get through to them the fact that we have neither dangerous goods specialists nor shipments declarations.

"IAOPA has spent two years trying to convince EASA that a bottle of engine oil was not dangerous goods. EASA finally responded by saying aircraft under 2 tonnes were exempt from Dangerous Goods legislation covering engine oil. Did the engine know how heavy the aircraft was?

"The fundamental problem is that this promotes indifference to regulation. Pilots ignore the law, and the people who make the law may even expect it to be ignored. But who decides where you draw that line? What can you ignore, and what not? "AOPA has all along proposed regulation dedicated to GA, or failing that, a blanket allowance for general items carried for operational purposes, like de-icing fluid."

Volte-face

EASA realised that we are heading in the wrong direction, as a result of which it has agreed with AOPA and others a European GA Safety Strategy and Road Map. "It could have been taken from the IAOPA policy manual," Jacob said. "It introduces the concept of a risk hierarchy. First, maximum protection needs to be afforded to uninvolved third parties. Then fare-paying passengers need protection. Then you have involved third parties – spectators at an air show, perhaps, where there's an acceptance that something could go wrong. Next comes aerial work participants, then the non-commercial passenger in a GA aircraft, and last of all, private pilots on non-commercial flights. Effectively you now have a personal duty to understand your risk.

"All new regulation is now subject to this. It aims to focus on main risks, as identified from reliable data, and to make proportionate regulation – keeping in mind the 'do-nothing' option. It says that grandfather rights must be respected, that training should be competency-based, and time should be taken to get the rules right first time. Responsibility should be delegated to an appropriate level.

"This is a document that Europe can commend to the world as the foundation of good regulation.

Some regulators don't like it. On something like runway minima for take-off, they ask, how can we let a less-qualified GA pilot take off in minima lower than those for a CAT pilot? And we say that the level of protection that each person needs is different. The CAT pilot, whose passengers need a high level of protection, will feel under commercial pressure to fly if visibility is at absolute minimum, but the private pilot usually has much higher personal minima and can make his own decision on risk." ■

Down to business...

The 27th IAOPA World Assembly adopted a number of resolutions which will guide the national Associations' work over the coming years. As is traditional, the Assembly begins by thanking our hosts, this time AOPA China, for their hospitality, and in particular President Li Wenxin, Vice President Hao Jianhua, Secretary General Zhang Feng, Deputy Secretaries General Angela Guo, Frank Yu and Chen Guohua; Director Chen Wei, and AOPA members Guo Pei, Li Zhen, Tony Xue, Wenny Zhang, Cui Wenli, Alex Bai, Cai Fei, Ren Tingting, Yang Yang, Yang Jiangping, Isabella Wang, Shanguan Qilin, Liang Wenguang and Roland Nissim. Any country that has staged a World Assembly – the UK did so in 2000 – knows the enormous amount of work and burden of responsibility the host AOPA takes on, and the appreciation is heartfelt.

Similarly, the Assembly expresses its gratitude to the event's sponsors, which included Jeppesen, Continental Motors, Cirrus Aircraft, Capital Helicopter Corporation, Air Union Insurance Brokers, Zhu Ye Qing Tea and Ifeixing Aero Club. It also recognises the representatives of the Chinese government and other organisations who contributed, including the Civil Aviation Authority of China, the

Beijing Municipal Government, Xiao Jing of the International Civil Aviation Organization (ICAO), Steve Brown of the National Business Aviation Association (NBAA), and Kai Duell, from the General Aviation Manufacturers Association (GAMA).

AOPA China proposed three resolutions that were debated and passed unanimously. Simple and to the point, they effectively asked for the building blocks of GA to be put in place. Resolution 27/9 requests that by opening airspace in line with the requirements of ICAO Class G, China will further the development of VFR flights. Resolution 27/10 calls for a fuel supply to be made available without restriction. The supply in China is controlled by the government, and most of what little there is goes to quasi-official users – private GA

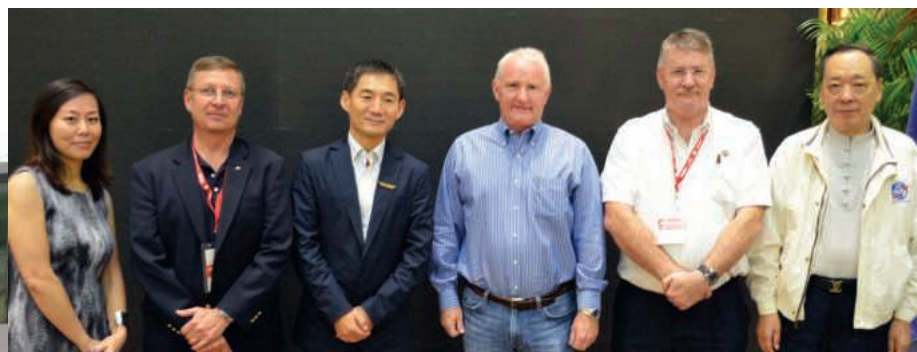
is at the end of the queue.

Resolution 27/11 says that taxes and fees on private aircraft should not be fixed at a level which restricts the individual's freedom to buy and sell aircraft, and should be fair and reasonable. And it doesn't just apply to the Chinese government – and neither does Resolution 27/12, which although proposed by AOPA China could be the *cri de coeur* of AOPA's everywhere: "to encourage all governments to recognise the benefits that general aviation can provide to the economy of a state where there is minimum intervention from the state, as fewer controls can speed up growth in this important sector of aviation".

Other resolutions reflected a broad spread of concerns. AOPA Netherlands successfully argued through a proposal that all AOPAs petition for the reduction of excessive touch-and-go fees, which adversely affect safety; the Netherlands also pushed through a resolution to seek a reduction in requirements for the PPL medical to the global 'Class 3' standard. AOPA UK, on behalf of all European AOPAs, sponsored the resolution that "regulatory systems need to be risk-based and proportionate to the activity, and that regulators understand the risks that they seek to address and regularly review their existing regulations". The UK also proposed

Below: IAOPA movers and shakers – Angela Guo, Craig Spence, Feng Zhang, Mark Baker, Martin Robinson, Hao Jianhua

Bottom: AOPA delegates and supporters from 21 countries and five continents at the private Badaling airport outside Beijing



a resolution that noted that as AOPA was continuing to represent the interests of all general aviation, including aerial work operations and small commercial operators; and ICAO should work with IAOPA to develop appropriate guidance in Annex 6 by creating a separate Part 4 that will address the operational requirements of this area of general



aviation operations. And a UK call for exemption for GA from some provisions of European controls on chemicals which although they may be hazardous are essential for aviation safety – Halon gas for fire extinguishers is

IAOPA General Secretary Craig Spence urges delegates to do some light reading

quoted – was adopted.

AOPA New Zealand reflected concerns in Australasia, where there is no WAAS system, that GA should be protected by the establishment for such a system, while AOPA Sweden sponsored a resolution demanding that regional and community aerodromes remain open when there is no scheduled traffic. Many airports in Sweden open for only an hour or two a day, when a CAT movement is scheduled, and are lost to GA at all other times.

The next AOPA World Assembly, the 28th, will be held in Milwaukee, USA, in 2016 – in the week before Oshkosh. ■

The last ditch

A rinori Yamagata of AOPA Japan enthralled his audience with a description of how his successful round-the-world flight ended in near-disaster when he ditched a Pilatus PC-12 in the Pacific and survived 15 hours on a raft.

He had chartered the plane from Boise, Idaho, and was returning it after his circumnavigation, flying towards Alaska in 2001. Two hours after take-off from Hakodate in Japan he ran into trouble.

"I was having a nap in the right seat and I was woken by a slight vibration," he told the World Assembly. "Mike Smith, a former US Army helicopter pilot, was in the left seat. Then there was a big noise, two bangs, and I saw the Turbine Inlet Temperature shoot up to 1144 degrees. It's normally 600, so it was far above the limit.

Mike Smith shut it down and we began to lose altitude. We put out a Mayday on 121.5 and it was picked up by a Delta crew flying to Narita. We gave out position and they wished us good luck. At a best glide speed of 110kt we had 20 minutes to ditching. I went into the back and put on my immersion suit, then got back in the front. While Mike Smith was putting on his suit I tried to restart the engine, but I had to lean right across the panel to touch the start button, and while I was extended like that I banked the aircraft at 45 degrees and we were going down at 3000 feet a minute. And the engine wouldn't start.

"I sat in the back and tried to buckle up but my suit and gloves were too big so I couldn't fasten my belt. Mike Smith had been shot down twice in Vietnam and he was hyperventilating. I calmed him down, told him to take it easy, and in a couple of minutes he was okay. He told me to open the emergency door but I couldn't do it with my gloves on. We got to 1,000 feet and I thought, only two minutes until we hit, but then there was a big impact, I was thrown up to the ceiling and fell unconscious. I woke up as the water came in.



Left: Japanese pilot Arinori Yamagata survived ditching a Pilatus PC-12 in the northern Pacific
Above: Yamagata describes the lead-up to his ditching to an enthralled Chinese audience



"We threw out the dinghy, which inflated automatically, but then it began to blow away so we jumped into the ocean and swam for it. It was very difficult to climb aboard, but we got in and were safe.

"We looked around at an empty sea and an empty sky, and it was getting dark. Usually that area has bad weather, it's called the Birthplace of the Wind, but the weather was good. We floated all night, then we heard the engines of a ship. When we could see the shape of it 300 yards away we fired off a flare, and we were picked up.

"The captain was Russian and he knew those waters, so he came to where he thought the current had taken us. It was a bog container ship, and a Kamov helicopter came from Sakhalin to take us to hospital. We had to climb up three levels of containers to get on board. Two hours later we were safe in Russia.

"All my beautiful photographs from round the world had gone to the bottom of the sea. Next time I make the flight, I'll take an underwater camera." ■

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MADE IN AMERICA

Meet the President

The World Assembly afforded international delegates their first opportunity to meet Mark Baker, who for the last year has been President of AOPA US, a position which effectively carries with it the Presidency of International AOPA. The previous President, Craig Fuller, was primarily a lobbyist and a politician – he had been George Bush Snr's Chief of Staff – but Mark Baker is a businessman through and through, having held executive positions in some leading American corporations, including Home Depot. Most recently he was Chief Executive of the major national retail chain Orchard Supply Hardware.

He's also a near-fanatical aviator. Since selling his van as a student to buy an elderly Cessna 150 he has owned more than



IAOPA President Mark Baker – businessman, fanatical aviator and incurable optimist

100 aeroplanes and helicopters and has flown over 7,500 hours. At the moment, he says, he has just four aircraft, including a Bell JetRanger and his all-time favourite, a Piper Super Cub. Until recently he owned a Jet Provost. "I try to keep my habit in check," he says. "When I get more than ten aircraft I know I have to sell a couple, but it's hard."

Heavily consumer-focused, he is a relentless optimist who sees opportunity where others see obstacles, and he has no time for the defeatism that creeps into general aviation. And in China he sees the greatest opportunities of all. "I've been travelling in China since the mid-1980s, doing business with Chinese companies, and it's difficult to describe the phenomenal progress I have seen in that time," he says. "It's hard to look out at Beijing now and imagine the streets full of bicycles, where just occasionally you'd see a car, maybe a truck. In just one generation the Chinese have become by far the biggest manufacturers of cars in the world. When I talk about optimism for general aviation, I think of two guys making bicycles in Ohio 110 years ago, and of what that has led to. General aviation has a bright future – and when I talk about a bright future, I mean in China and across the world." ■

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Oshkosh rocks

What do you mean, you haven't been to Oshkosh? Liz Moscrop's diary gives you a flavour of this remarkable event

Every pilot should go to Oshkosh at least once in his or her life. Fact.

The famous Experimental Aircraft Association's AirVenture show takes place every summer, and there is precious little that won't delight. From forums for homebuilders to the latest technology to still-flying warbirds, there is something for



owns a Mooney, so we flew in from New York and I was thrilled from the get-go as we crossed Lake Winnebago, directly behind runway 27. James did a sterling job of hitting his designated orange spot. For the period of the show each summer, Wittman Field tower becomes the world's busiest, so landing is a delicate operation. There are two circles to aim for – either orange or green, and you must be accurate.

I had prepared well for the show by not having a clue about what it's really like, and buying a tiny tent from Amazon, which I had delivered to my New York hotel. Slightly larger than one of my medium size handbags, it was small enough to carry in the Mooney. I'd also bought sleeping stuff from Target, which I was due to pick up when I got there. It was a far cry from rocking up to a gig with my usual suitcases full of lipstick and shoes.

We deplaned at the Weekes Museum apron and ogled the vintage birds waiting to be towed out or flown at the show. What I hadn't appreciated is that my home for the next ten days – Camp Scholler – was a couple of miles away, not really walking distance. James was



Clockwise from left – the portal of delight; 2014 Oshkosh poster; the airfield from the air; camping for homebuilts; a corner of the vintage aircraft section



everyone interested in aviation. Not to mention all-day flying, a spectacular evening airshow and the opportunity to try out NextGen simulators. Plus bags of entertainment for kids of all ages. Apparently founder Paul Poberezny, (who passed away last year) had three adages: pick up litter (the show attracts 500,000

visitors and the site is spotless); if you have transport and can offer someone a ride, do so; and lastly, be kind to others and enjoy yourself.

As I found this year, that spirit is evident everywhere. I arrived in what is definitely the best way to get there – by air. Friend and fellow journalist James Wynbrandt

staying at a nearby hotel. Fortunately Jeff Propson, an EAA employee buzzing around in a John Deere buggy, spotted us wandering, picked me up and ferried me there. He waited while I get registered, drove me around until we sourced a fabulous camping spot, handy for Wifi, almost-plush showers, and the store and

show site entrance. He'd eyeballed a lovely couple, whom he suggested would be great neighbours for the week. He was correct. Sherry and Clay Furst from Chicago helped me put up my tent, and stake out a pitch for another, in anticipation of the later arrival of my journalist friend Matt Thurber.

En route we drove past a couple of the infamous Camp Scholler South Africans, who generously invited me to pitch next to them. I declined, since I'd had strict instructions not to park anywhere near them. They are regular EAA campers and seriously hard partiers. They are also incredibly kind and great fun, and import live musicians and food and booze aplenty. They arrange gatherings every night, to which anyone is invited (it is the custom to offer a donation for your share). Visiting their campus is an absolute must if you

camp at Oshkosh – theirs and the coffin man's tent.

I still had to get my new purchases from Target. Jeff came back to give me a lift there since it was on his way home. Once there the employees couldn't do enough for me as I gathered my tent innards – sleeping bag, lantern, artificial pot plant etc. The young woman in Starbucks drove me back, spending fifteen minutes locating my tent. Which had a torch outside, left by the lovely couple next door. Who popped back over to check I was okay, and had eaten.

The loveliness continued. Wandering around the show site the day before the official opening I bumped into Rockwell Collins' marketing manager, Kelly Holland. We didn't recognise each other in our civvies, and she insisted I come along to some parties and to her booth for free hat and sunscreen (to add to the collection of three hats and five pairs of shoes I'd squeezed into my tent). I then met Jolie

Lucas and Mitch Latting, ambassadors for Mooney, who invited me to visit their Californian HQ to learn about the museum they just built with the auctioned profits from the sale of their first new production aircraft for decades, the Mooney Acclaim.

The eve of the show saw the launch of a brand new concept plane. Minneapolis-based MVP Aero played to a packed house at the media centre when it unveiled the mock-up of its new amphibious two seater. Spearheaded by ex-Cirrus stalwart and design genius Mike Van Staagen, the firm is developing a \$189,000 light sport aircraft that can morph into many fun varieties. It can land on water, and offers a hammock, a fishing seat and a method of moving the instrument panel out of the way among its many fun options.

Chinese entrepreneur Fang Tieji has the rights to manufacture and distribute the aircraft in Asia. He is a pretty cool aviation man in his own right. He owns many and diverse businesses in China and is building airfields throughout the country. He was more than happy to put up with my antics as I clumsily tried to video him. Like every CEO and big industry name I met at the show, he was wearing casual clothes and was completely relaxed and approachable.

Cirrus had a big splash, too, with two



Left: MVP Aero LSA in flight
Below: MVP Aero is developing a \$189,000 light sport aircraft with a hammock and a fishing seat
Right: Amphibious two-seat MVP's glass instrument panel can be lifted out of the way



SF50 Vision jets on display – one on the ground and one in the air. I was entirely grateful for its launch party, which provided warm food and shelter from gathering storm clouds. Matt and I mooched over to Redbird, which has remanufactured a Cessna 172 Skyhawk with a new interior, a glass panel and a turbo-diesel engine. Combined with time in its flight simulators, the firm is offering an attractive package for

flight training schools. It was also offering an attractive package for hungry and cold pilots who had missed the best part of the Cirrus feast...

And then we saw it – a TWISTER – actually a swirl of water droplets that vaporised as we watched. One of many storms that blew through during the week. But that did it. Sent us scurrying to one of the famous Oshkosh eateries – Ardy and Ed's diner for my first root beer float. Back at camp a ghostly campsite piano player started up. I was too tired to argue and fell asleep anyway, despite the cacophony. Which turned out to emanate from the "Theater in the Woods," one of Air



Venture's many free nightly evening entertainment venues.

Most days started the same with a bracing shower in 12-degree cold weather. The opener was tempered by a wonderful warming breakfast at Bendix King's chalet. I loved it that most of the major reps at the show were pilots themselves, or loved flying. Bendix had increased its offerings of affordable certified ADS-B systems with the introduction of new transceivers and receivers for flights below 18,000 feet. Indeed ADS-B was a major feature of many of the show booths, thanks to impending US requirements for its implementation in controlled airspace by the end of 2019.

Being the kidult I am, I had to have a go pulling a rivet at the 'One Week Wonder' booth, which transforms a standard Zenith CH 750 Cruiser kit aircraft into a flyable

Top: two Cirrus SF50 Vision jets on display attracted intense attention
Above: 'One Week Wonder' built and flew a Zenith CH 750 Cruiser in seven days, ably assisted by our rivet-pulling author; lower sequence shows the finished product

aircraft in seven days. The project shows thousand people exactly how an aircraft goes together, from start to finish. Brilliant for getting kids involved.

The first production HondaJet made its debut at the Boeing Plaza – the main showsite venue. Textron Aviation (nee Cessna and Beech) also had a slew of announcements, perhaps the most significant of which was the launch of the Turbo Skyhawk JT-A, which will join the Turbo Skylane JT-A as the latest diesel powered platform in its single-engine product line up. Lycoming also put on a

number of activities to celebrate its 85th year of Aviation Innovation. To date the firm has produced more than 325,000 piston engines that have powered more than half of the world's general aviation fleet. At a forum it said it had the capability to produce a diesel variant, but is waiting for a partner.

'Meet the Administrators' is another Osh highlight. What a fantastic idea. I wish they'd do more of this in the UK and in Europe. All the major association heads were there, including AOPA's Mark Baker, along with FAA Administrator Michael Huerta and his team. EAA CEO Jack Pelton led the discussion in front of a full house, asking in particular, about Class 3 medicals. EAA and AOPA are petitioning to exempt recreational pilots from needing Class 3 medicals and just use their driving licences. Mr Huerta also talked at great



Top: the first production HondaJet took a bow in the main show arena
Above: the Turbo Skyhawk JT-A, Cessna's latest diesel powered single
Left: AOPA's President Mark Baker was a key figure at 'Meet the Administrators'
Below: Red Bull pilot Nicolas Ivanoff joined in the author's video
Right: EAA Chief Executive Jack Pelton – 'we must keep the suits out'



length about the FAA's efforts (alongside those of the associations) to improve safety with a monthly online briefing for GA pilots. All on the EAA and FAA websites if you want to know more.

Afterwards Jack and Ed Bolen (National Business Aviation Association chief) kindly agreed to be interviewed for the spoof video I was making. I also roped my pal Kate Dougherty of Kestrel and her boss Alan Klapmeier into the film (online if you want to see it at www.lizmoscrop.com). I'm delighted to report that one of aviation's finest pioneers totally threw himself into the spirit of the thing, to the extent of arranging a ladder and directing me on exactly how to shoot it. The result was very funny, and if he ever decides to stop making aircraft, a new career in Hollywood beckons I'm sure...

The lovely Amelia Earhart also played along. I'm a big fan. I think she's doing a wonderful job promoting flying to young people. I watched her deal with the public and she really is a true ambassador for women in aviation.

At one point I hitched a ride with my new buddy Jeff up to the North 40 camping area for Warbirds to go and stand on the roof there and enjoy the vintage aircraft landing up close and personal. Then snuck into the Hamilton watches event at the fabulous EAA museum where we played flying simulators and were privileged enough to see the trailer for the new Harrison Ford film. Hamilton's ambassador, Red Bull pilot Nicolas Ivanoff, was also on hand and joined in my ridiculous video –





God bless him. Greg Gibson, director of business development at Sun-n-fun also joined in the jollities, as did Air Venture Race Director Jimmy di Matteo. Told you Osh was casual.

We had more fun at the famous Acey Doucey bar for the annual Gama event. The great and the good were on hand, and I spent a happy evening chewing the fat with Matt and Daher Socata's Philippe De Segovia and Wayman Luy, test pilot for the TBM types. I also checked with Boeing Business Jet CEO Captain Steve Taylor whether he'd brought a Dreamliner along to camp out under the wing. It would be remiss of me not to mention that I also attended two wonderful house parties, the first hosted by locals Pat and Steve Owen at their house. They run it every year, and God knows how Pat finds time to cook up a storm and turn her beautiful garden into a party place. But she does, and I'm entirely grateful for their hospitality.

The second was courtesy of Craig

Above: Amelia Earhart with the Pilatus PC-12 she flew around the world

Above right: Circumnavigator Amelia Earhart was a big hit with the next generation

Below: AOPA members took advantage of the shelter of the Association's marquee

Barnett, founder and CEO of Scheme Designers, which, among other projects, decorates the winning aircraft in the AOPA Sweepstakes each year. Craig's booth was constantly packed with people interested in his work, and it is a testament to him, AirVenture, and the type of attendees it attracts that he was courteous enough to give me airtime, and his customer generous enough to wait, while I talked to him for this article.

Surprisingly enough to all concerned (i.e. me) I carried on camping. Indeed I become almost feral. When hungry I insisted on eating. Anything. Donuts, unidentifiable meat in white soggy bread, bright coloured cupcakes. Since there's

sugar in everything cooked on sale (especially the vegetables) I became resigned to eczema on my face and a bloated stomach. I don't think I actually smelled bad. I showered and wore clean clothes every day (thanks to an emergency trip to Target as I couldn't be bothered to locate the laundry). Neighbours Sherry and Clay left midweek, informing me in passing that we had parked in the handicap area of Camp Scholler, which is why we got such a great accessible spot. Apologies to all concerned. However, the French saved me. On the last Friday of the show Philippe de Segovia gave me the keys to his trailer, as he was returning to France and the company had paid for two extra nights. Compared to my tent, it was like the Ritz. Therefore, in a journalistically unbiased way I'd like to recommend that any reader who can afford one should buy a TBM-900.

Fellow Brit Jude Borghi saw me struggling from my tent to the trailer with bags, so picked me up and helped me move. She is married to Facebook star Pilot Dean (see picture) and the family then shared dinner with me and took me to watch the wonderful evening airshow with them.

The only dark spot that marred Oshkosh for me was the horrible news that a Breezy had crashed on Thursday, killing the pilot and leaving his passenger in a critical condition. Very sobering. And sensitively handled by EAA media head Dick Knapinski and his press team. Without meaning to make light of such a tragedy, I absolutely loved the show. And there is so much I have yet to see. Jack Pelton summed up what makes it so special. "We tell the suits and ties to stay away."

That was evident. I'll be going next year. You should, too. ■





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Wood, fabric –

Robin takes a stride into the future with the Jet-A1, glass-cockpit DR401. By Keith Hayley



Let's start with a health warning – I'm biased. I've always liked Robin aircraft, and in particular the DR400. When I traded in my DR400 for a Cirrus SR22 I enjoyed the increased capability of the Cirrus, but I never bonded with it the way I had with the Robin. The Cirrus – faster, higher, further and all those Olympic superlatives – came and went, and I've been perfectly happy to fly the DR400 again ever since. I've flown her across the Sahara, and into Asia, and she's never let me down. She's as fast as I need, she's got an IFR fit, range is good, maintenance costs are reasonable, and importantly, she has that indefinable quality that we call 'character'.

But I have to admit that I do occasionally miss the Cirrus, with its glass panel and push-button piloting, especially when I have to go IMC. Now along comes the glass-cockpit Robin DR401, complete with its Garmin GTN750 or 650 panel and – at top specification – an S-Tec 55 autopilot, TCAS and other bells and

whistles that marry what I love about the Robin with what I loved about the Cirrus. Do we have the best of both worlds here?

I was able to experience the Robin DR401-155CDi with Steven and Jennie Bailey, who have imported the demonstrator, and I have to say it's a very impressive aeroplane. With the glass cockpit and other refinements, it's a significantly improved package over the DR400 and in many regards could give the Cirrus a run for its money. Okay, it's 20 knots slower than the SR22 and lacks features like de-icing capability, but it costs about £200,000 less.

There's more to the 401 than a glass cockpit, of course. The demonstrator has the 155hp Continental engine – there's also a 135hp version available – running on more economical Jet-A1 or diesel, and with a three-bladed propeller it feels smoother as well as being seriously quieter inside and out. The 401 is also available with a range of Lycoming engines, some with a Mogas STC. Then there's the new Oratex fabric cover – see

the sidebar for details. Robin has gone down the electric road for flaps, doing away with the handbrake-style handle between the seats in favour of a switch on the panel. That's allowed them to make best use of the cockpit width – the plane is 10cm wider than the DR400, the same width as the DR500. Best of all, they've got rid of the seat adjustment handles between the seats – the ones where you had to stand up in the seat, push the handle all the way forward then collapse backwards because it was so difficult to get the gradations of movement right, and that was if you hadn't got the seat belt buckle stuck in the works anyway. And they've put grab handles on either side of the panel so you've got something to hold onto when you're adjusting the seat. Bravo.

The big trim wheel has gone, replaced by an electric trim switch that was already standard on autopilot-equipped DR400s; there's also a rudder trim, which is useful for long climbs. The E2B compass has disappeared from the top of the coaming,

and glass



on the panel to tell you whether it's working or not. It's a fundamental building block of Robin's 20-year warranty offer on these aircraft.

I won't dwell too much on the flying characteristics of the plane. In recent times *General Aviation* has featured the Robin DR400, DR500 and EcoFlyer, and these flight tests are available in our online archive. Suffice it to say that I've never met anyone who has a bad word to say about his or her aircraft's handling or performance. From the helicopter-like visibility to the stability enhanced by the cranked wing to the extra knots Robin seems to conjure up from engines that perform less well in other airframes, the plane is a delight to fly – a real pilot's aircraft with an all-flying tailplane and a proper stick. You could say the high level of dynamic stability makes it a little heavy in roll, but that's only if you desperately needed something to prove you weren't working as a salesman for Robin. If you haven't flown a Robin it's worth having a go.

The DR401-155CDi is every inch a Robin as far as flying characteristics go, with a few little extras. Possibly because of reduced drag from the Oratex fabric she seems to get off the ground a little more quickly. At MTOW she can break ground in under 170 metres – she has the 140B wing, slightly more efficient than that of the DR400. Again, I have to say how impressed I was at the smoothness and quietness of the engine, and the noise of the constant-speed prop is lower too, and less snarly than a two-bladed equivalent. Flap deployment, instantaneous as you pull the handle in the DR400, takes a few seconds when

Below: three-bladed, square-tipped prop cuts noise level radically

blended into the panel, and the coaming itself is slightly lower, improving visibility. The diesel engine means there's a single power lever, no carb heat and no mixture control – the red vernier you see in some of the pictures is alternate air – so even without taking the three screens into account it presents a cleaner and less cluttered aspect. The standby horizon is digital and sits at top centre of the panel, with altitude and speed ribbons below; it has its own back-up battery and is perfectly adequate as a get-you-home system, whichever side you're flying from. Outside, you've got LED lights, which reduce the draw while giving you a stronger beam with less heat at the bulb.

One other feature worth mentioning is the 'Safety Plane' flight data recording system. It's a sort of mini black box, but its main functions are so your engineers can download your usage history and see if there have been any exceedences, and so flying clubs can keep close track of exactly what their aeroplanes are up to. It's an unobtrusive system – there's a tiny light





the electric motors do the job, so you don't get the degree of sudden pitch trim change you'd be used to. I'll also mention that the air-braking action from the three-bladed prop is noticeably greater than with a two-bladed prop when power is sharply reduced; you'd have to exercise caution near the stall on final approach.

The diesel engine, too, has been dealt with in these pages, but there have been changes since *General Aviation* profiled the EcoFlyer in August last year. In particular, Continental has announced that the TBO

on the 155 Centurion will go from 1200 to 1800 hours at the end of this year, which makes an already-compelling financial case even stronger. The cost saving is indisputable. It costs £228 to fill the main

Above: the Garmin set-up in the new Robin DR401-155 demonstrator. Garmin 500 PFD and MFD clear up analogue panel clutter

Right: for comparison, a traditional six-hole panel in a Robin DR400



Below: cowl bulges and cut-outs betray the presence of a diesel engine





They've got you covered

The new Oratex fabric has several advantages over traditional Diatex, one being that it weighs around 15 kg less on a Robin. This is largely because the paint is applied at the factory so you don't have to put on seven or eight layers after the fabric is stuck down. I'm particularly keen on the new stuff because however carefully-applied the paint is, you will get cracking, particularly where the fabric is attached to the woodwork. And once you have cracks, your mortal enemy, moisture, is going to get in. When I flew in the Sahara I was bemused to see how the fabric wrinkled as the moisture was driven out of the woodwork; it all straightened out perfectly almost as soon as I got back to Europe.

Oratex is a German product and it's supplied in the UK by the Light Aircraft Co Ltd at Little Snoring in Norfolk. It's been in use on microlights and kit aircraft for several years, and in Europe several Antonov An-2s have been running around with acres of the stuff for five or six years. According to Paul Hendry-Smith, the Light Aircraft Company's MD, there are several advantages to Oratex apart from weight. It's more slippery than Diatex – a Robin DR400 covered in Oratex achieved the same cruise speed for 100 rpm less compared to the same aircraft with Diatex. Stall speeds are reduced quite remarkably. The factory says that where the book value for a clean stall is 103.5 kilometres per hour, with Oratex it's been tested at 90 kph, and at 15 degrees of flap – POH value 97.7 kph – it comes down to 78kph. Full flap stall is 72 kph compared to 93.5 kph in the book. I've found the book values to be very close to the mark, so that's an impressive improvement.

Oratex is a much tighter fabric than Diatex, with every tightly-woven thread made up of 48 micro-fibres. It goes through 13 separate processes at the factory, culminating in the application of a sealant, a base coat, and top coat and a urethane protective layer. With Diatex, the fabric becomes brittle as you add more and more coats of paint, but Oratex remains flexible.

Unlike Diatex, Oratex is non-flammable, and it can more easily be repaired with iron-on patches. One other advantage accrues to the chaps who put the stuff on... Diatex needs the solvent methyl ethyl ketone – MEK – to help the glue stick, and it comes with dire health warnings for the people who have to lash it on. Oratex needs no such assistance. The cost of covering a DR400 with Oratex differs little from traditional Diatex (but it ain't cheap).

The Light Aircraft Co Ltd is at Little Snoring – www.g-tlac.com.

tank of the Lycoming-engined DR400, and if you fly high and lean off well you can spin that out to three and three quarter hours. Filling the same tank on the EcoFlyer would cost about £88 and at similar power settings it would last five and a half hours. The cost saving is somewhat offset by more expensive maintenance. The diesel needs a gearbox to reduce prop RPM, and it has a 600-hour TBO. The friction disk (effectively the clutch) is also 600 hours, as is the HP pump. But even at the current TBO, replacement parts will come out at around €5 an hour, which quickly vanishes into the fuel saving. The 155 burns around 23 litres an hour, and the price of avtur is currently around 40 percent that of 100LL.

The engine cowling has bulges and cuts

to accommodate the diesel – a power bulge for the alternator, extra air intakes to improve cooling – but in most other respects the plane is identical to the DR400. It's inside where you notice the big differences. The aircraft has a 'CED' – Compact Engine Display – instrument with digital fields at top and bottom, the top one for the prop RPM, the bottom one for percentage power. There are a series of bars, yellow, green and red, for oil pressure and temperature, and for coolant and gearbox temperatures. You've got the power lever in the centre console – you may find that a little strange as you usually fly the DR400 with your left hand on the throttle and right on the stick. But it's all very simple and intuitive.

Now we come to the main event – the



Left: tests show the Oratex fabric cover improves performance

Above: bright LED lights reduce battery draw and bulb heat output

Below: flamboyant DR401-155CDi logo may not suit every taste



screens. You can upgrade a DR400 with steam-powered clocks to glass cockpit for about €45,000, depending on which Garmin you choose. The GTN650 fits into the same tray as the Garmin 430, but if you opt for the more capable GTN750 you're going to need a man with a hacksaw – it's slightly larger than the tray that holds a 530. The 650 is all well and good, but to my mind the display is on the small side and I'd want to go the whole hog and choose the 750, as Steve and Jennie have done with the demonstrator. They've coupled it to Garmin G500 screens – the Primary Flight Display and Multi Function Displays that are becoming more and more mainstream in IFR-equipped light aircraft. Transitioning to a glass cockpit should not be done without proper thought, but neither should it be considered difficult. Like many pilots, I form a picture of the traditional six-instrument display which tells me at a glance whether everything's as it should be; when I moved up to the Cirrus I thought the Avidyne glass panel would rob me of that situational awareness, but it simply gives you a different picture with the same end result.

The GTN750 is touch-screen operated, and because of that it's more intuitive than the 430 and 530 – you no longer have to scroll through pages and subpages to find what you want – just tap the screen and



it's right there. The old idea of the button functions changing depending which page you were on no longer applies. Radio frequency change is also touch-screen. Some people say it's difficult to use in turbulence, but I think the shaking would have to be extreme – you can rest your

Left: touchscreen use is easy, even in moderate turbulence

Bottom left: touchscreen rubber-band track adjustment makes nav easy

Above: digital standby instruments have separate back-up batteries

Below: Garmin GTN750 icons are more intuitive than 430 buttons





Left: 'Safety Plane' stores exceedence data for engineers and flight schools
Right: stick has been redesigned, simplified and cleaned up
Below: flying characteristics are very similar to those of the Robin DR400
Bottom: fully loaded the DR401 can break ground in just over 170 metres

feature of the 'Nav' function is the SkyDemon-style click-and-drag system for your track. If you want to input a new waypoint, just tap the screen at that point, then rubber-band the magenta line across the screen with your finger to the symbol that crops up where you touched the screen. And if it's coupled to the S-Tec 55 via Gamin's GAD 43e interface, the aircraft will take you there. Those of us who can remember how technically advanced VORs seemed can only shake our heads in awe and admiration.

fingers either side of the screen for support, and you can also turn the buttons instead. The icons are nice and big, so they'd be pretty hard to miss.

There's no end of brilliant stuff in this plane – flight plan on your iPad, for instance, then load by Bluetooth. A great

So – what are the options? It looks like re-covering with Oratex is a no-brainer when you think your fabric is due a change; it would be sensible to err on the side of earlier rather than later in order to protect your woodwork.

Then you could upgrade the analogue panel in your existing aircraft to glass. I'm



ambivalent about this one. First, I don't think the improvement would be fully reflected in the resale value of the aircraft. Second, I fly the Robin VFR and only occasionally go IMC. If I was predominantly an IFR pilot I would consider it money well spent, but while it would be nice to modernise, for my type of flying there's not enough of a return to justify the expense.

But undoubtedly, if I was buying a new Robin I'd go for the 401, and with as many bells and whistles as I could afford. Glass cockpits are the way of the future – of the present, some might say – and analogue instruments are already looking like the stuff of the Vintage Aeroplane Club. For us old and far-from-bold pilots, the capabilities of modern light aircraft like the Robin DR401 are nothing short of astounding, and unless you want to spend up to a quarter of a million pounds more and get an all-singing, all-dancing, all-composite airways machine, the 401 represents all you'll ever need. ■



Transatlantic microlight

The intrepid **Eddie McCallum** describes how he got to Oshkosh and back the hard way



Planning for this trip took a very long time and the bureaucracy involved sometimes seemed insurmountable. It was vital however to have the correct permission to be able to fly over the high seas and into Iceland, Greenland, Canada and the USA. Getting the plane ready was also a big ordeal but with help from Master Gary (Air Masters) we managed it and the CTSW looked in good shape.

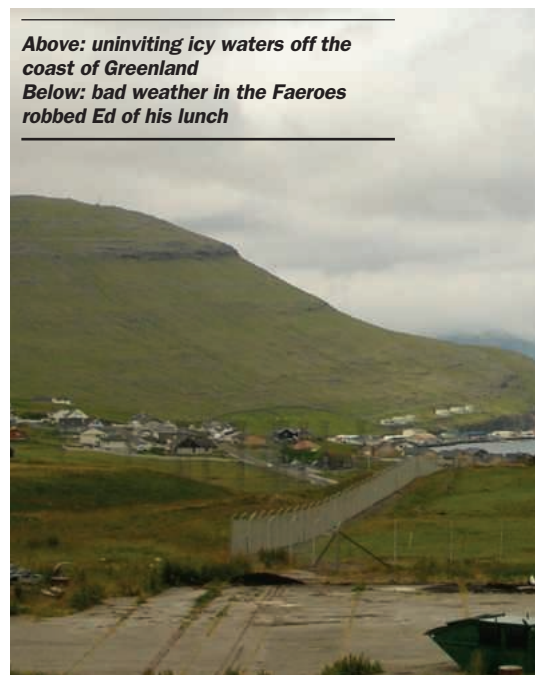
Early June was my leaving date and, from my strip at Athey's Moor in Northumberland, I flew up to Wick, luckily having fantastic weather all the way. There I was met by flyers William, flying a Robinson R44, Kelvin and Brian in a PA46 Matrix, with Sam and Gaetano from Prepare2go in support. They would be flying part of the route with me though only as far as Quebec.

The following morning the R44 left, then myself 30 minutes later, and finally the Matrix a good while afterwards. Our

airspeeds differed quite a bit – I flew the CT at 105-110 knots, the R44 was around 80-90 and the Matrix 170 plus. Our rendezvous was to be lunch in the Faroes. I flew low along the Pentland Firth to get a few pictures of the Old Man of Hoy before starting to climb, but when I got overhead the Faroes they were not there – or least I couldn't see them, cloud cover and fog being quite common in that part of the world. I decided to skip lunch and carry on to Iceland. I landed at Egilsstaðir in the south-east of the island after a flight of just over six hours and was pleased that I had had a waterproof groin zip fitted in my dry suit – what a relief! Eventually the others turned up and, by all accounts, it had been an eventful approach into Vagar.

Next day we flew through the middle of Iceland, a barren and bleak landscape but also a very beautiful one, passing dormant, snow-capped volcanoes resembling wedding cakes. It was three hours flying

Above: uninviting icy waters off the coast of Greenland
Below: bad weather in the Faeroes robbed Ed of his lunch





Above: a dormant volcano somewhere in deepest Iceland
Below: six hours out, Ed reaches Egilsstaðir in Iceland



time from end to end and not a single building did I see. Isafjordur, in the top north-west, was the next airfield. The approach was most impressive with good visibility and the runway near to the southernmost side of the fjord. The downwind leg took me close to the opposite side, with its steep mountains disappearing into the blue waters. The town boasted a couple of bars and a hotel, with fish, fish, fish and fish on all the menus.

It was an early rise the day after, but not for the fog, which was right down to the runway. With time on our hands we waited and watched it roll slowly up the mountainsides. Taking off towards the open end of the fjord I turned left out to the sea and the Denmark Strait. There were large patches of low fog and cloud but at 6,000ft I settled down to a smooth flight, destination Kulusuk in Greenland.

At about 70 miles out from Iceland, William and Sam reported that they were turning back to Reykjavik as the weather at their level was deteriorating. I pressed on over the sea, and three and a half hours later the magnificent ice pack and mountains of Greenland came into view. I had chosen the shortest water crossing so I was left with a 30 minute flight down the coast, a flight I will remember for a long time for the stunning scenery.

Kulusuk airfield is well-protected from the sea with high mountains that keep those nasty elements slightly at bay. Now you may be thinking Greenland... this time of the year... unlimited sunshine means unlimited flying time. No, not at all. The rules for landing at all their airfields are very strict. No flying before 9am or after 5pm and no flying on a Sunday. Heavy fines are dished out for any breaches of these curfews. Anyway, the Matrix was on

the ground well before me and they had sorted out digs in the hotel close by. And that was Kulusuk – an airfield and a hotel, although there was a small Inuit village a mile and a half beyond.

Sunday was the next day, a day of rest, and of course we had had the England-Italy World Cup game the previous evening. It just so happened that one of our flyers, Gaetano, was Italian so, after a couple of beers before the match, me and my big mouth asked him if he fancied a bet on the game. It involved no money at all but, if England won, he would go for a swim in the nearby fjord and, if Italy won, it would be me. Well, no prizes for guessing who took the plunge on the Sunday morning! Much to the amusement of the local Inuit kids. Luckily, it said nothing in the bet about which suit to wear for the swim – birthday or survival. I



Above: Eddie pays the price of a lost football wager and tests his survival suit
Top right: Inuit children in Kulusuk, all smiles despite the hard life they lead
Above right: the Inuit village close to the airfield at Kulusuk
Right: Kulusuk airfield, the tower brightly painted for visibility in snow

obviously opted for the latter and actually, apart from the fun, I did find out some invaluable information on taking a cold dip so, if any of you are contemplating a long flight over cold water, get in touch.

Our destination on the Monday was to be Paamiut but the weather wasn't too good. The direct route was straight over the icecap where 13,000ft was needed to clear it. We couldn't leave it too late due to the airfield closures. The west side of Greenland was looking OK but we had to get past the east side first. Leaving around 11.30am local time I decided to fly down the coast. I had ruled out the icecap but had to cut a good corner off southern Greenland if I was to make Paamiut in time. 80 miles down the coast and climbing through layers of cloud I decided to push inland. Freezing levels were given



at 7,000ft. I was at 6,000ft and needed more height for the mountains I would be passing over. With full power, the climb rate was not so good and, on reaching 8,000ft, in cloud and rain, ice was starting to build on the windscreen and leading edges of the wings. I had a long way to go to Paamiut which lay way over on my right. At 8,500ft the CT was not climbing and the windscreen was getting more iced up. I was too scared to look out at the wings. I made the decision to try for Narsarsuaq instead, but first I had to get rid of the ice so turned left towards the sea

and lower mountains. Back down at 6,000ft the ice cleared. I still had rain to contend with but at least that was not wanting to hang around my plane.

After three hours of hell, the clouds parted, sunshine appeared and that, plus the scenery, cheered me up and after five hours I was on the ground at Narsarsuaq. I can tell you that I wouldn't fancy trying to land there in the sort of atrocious conditions I had encountered on the way. I was still a bit short of my intended destination, but would make that up the following day. The hotel restaurant had a

*The pack ice had barely broken up off Canada
Below: the town of Sisimiut, in inaptly-named
Greenland*



buffet special so I tried whale for the first – and probably the last – time.

A bright and early start next day had me passing by Paamiut and on to Nuuk, the largest town in Greenland, population 16,000. I caught up with the Matrix here and we had a relaxed lunch then it was panic stations when we read the Notams saying that Sisimiut would be closing at 3pm. It was then 12.30 and I was supping my last drop of green tea when we got the news. I was off the ground at 12.45 and I think that was the fastest I had ever flown the CT. There were some high mountains to clear just out of Nuuk but, once up at 6,000ft I trimmed off and was on the ground at Sisimiut with five minutes to spare. The overall flight from Narsarssuaq to Sisimiut took five hours and the weather was great, much better than the east coast of Greenland had been the day before. On the next leg I would be having a respite from the mountains as the flight would be two and a half hours over the Labrador Sea, destination Qikiqtarjuaq, Canada, via Cape Dyer. Another hour and I was fiddling my way through the fjords and headlands for Qikiqtarjuaq (old name Broughton Island).

There was a notable drop in temperature on the Canadian side and all the waterways I saw were solid with ice. Care was needed on the approach to the airfield since there was a lot of broken cloud around. I was met on the ground by a couple of Mounties – minus their mounts – but I had all my paperwork ready for them. Their main concern was whether or not I had any alcohol. I did have a hip flask with some brandy in it but they weren't really interested in that, apart from telling me not to sell any to the locals. Accommodation and food were a couple of stars below average that evening but, because the temperature was below as well, the stew that the nice Inuit lady made



Eddie the Eagle

Ed McCallum has been flying for 21 of his 56 years, having learned to fly on flexwings at Eshott airfield in Northumberland. In that time he has amassed some 2,500 hours, all on microlights. But far from being a local flyer, Eddie has built time making long-distance journeys across the whole of Europe and beyond, flying over the North Sea to Norway and up to the North Cape, down to Gibraltar, or following the entire length of the Danube to Ukraine. Last year he took a nostalgic trip to Grömitz on the Baltic coast of Germany, where he worked as a builder in his 'Auf Wiedersehen, Pet' period. He now has a building company operating in the Newcastle area.

Fog-shrouded Cape Dyer on the northern Canadian coast

Below: Ed with EAA's Tom Charpentier, who helped get permissions to fly in the USA

Bottom: Ed tries Paul Poberezny's P51 Mustang at Oshkosh

Below right: Ed with his CT in front of the B17 at Oshkosh

was very welcome indeed.

Day 8 of flying was breathtaking to say the least. Soon after leaving Qikiqtarjuaq we reached the Akshayuk Valley. I have never seen the Grand Canyon but if any place on earth resembles it, this valley must be the one. For over an hour I flew down it, weaving above the frozen water with the cliff faces and glaciers approaching from both sides. Then came the highlight – Mount Thor – with its magnificent, sheer, vertical cliff, the highest in the world. That day however, sadly a lot of it was in cloud cover.

Next was a stretch over the waters off Baffin Island then the 150 miles to Iqaluit, during which time I spotted the DC3 that went down in the 60s, luckily with no fatalities. The plane lies on the ice and from 300ft looks as good as the day it crashed. Iqaluit airfield is a sort of hub, a very busy one, for the few airfields in the north and I had a lunch and fuel stop and a quick look inside a US Air Force C130.

Leaving Iqaluit the weather was good as I passed Frobisher Bay but close to Resolution Island the cloud increased. From the high, sharp, jagged mountains we now had smaller, rounded hills but still with no trees or vegetation. Our destination airfield was Kangiqsualujjuaq and the inflight weather reports via satellite from Prepare2go in Brussels weren't too promising. Although there was low, broken cloud, many of the runways round those parts were tucked up narrow fjords and inlets and it was a case of following the sea until you caught sight of the runway.

Kangiqsualujjuaq is a small town with a predominantly indigenous Inuit people, seemingly living quite harsh lives. Considering this was the height of summer, I dread to think what it must be like in the grip of winter. The following

day's flying was through a huge variety of tundra, mountains, forests and lakes, with a stop at Warbush before, after nearly 800 miles, reaching the dizzy high temperatures of Quebec, having flown over the St Lawrence River. It was here that I parted company with the lads in the PA46, but not before seeing how impressive the city itself was.

Next there was a short leg to St. Hubert, Montreal, where I was to park the CT up for a while – not that I was sick of it or anything, it was just that my wife Wendy came out from the UK to join me for a holiday. When I eventually left St. Hubert – a good size airport with two runways – I loaded up and headed for Burlington, Vermont. I'd been warned by several people that, when you land in the States, customs go through you like a dose of salts. I was duly told to wait with my plane and after about quarter of an hour a very solemn customs guy came along. I was looking forward to showing him all my documentation that I'd got out ready but he just walked round the plane once, asked for my passport, popped his head in the cockpit, asked if I had really flown all the way from England then pointed to my GPS. I told him it was a Garmin 795 and all he wanted to know was if I could get the Yankees game on it! And that was it. My passport was stamped and I was on my way again.

I pressed on over the Adirondack mountains and into New York State. There were lots of CBs building so I had to do a bit of dodging around them but finally landed at Griffiss, luckily having missed a huge deluge they'd just had. Next day I flew through Pennsylvania to Cuyahoga in Ohio then another longish leg to West Michigan airfield, close to the town of Holland in Michigan State. The town is



famous for its tulips, hence the name. The last leg, to my final destination, would take me over Lake Michigan, 120 miles of it – a lot of water for a lake! After two and a half hours I was downwind for Oshkosh, then a 20-minute taxi to the Kermit Weeks Hangar.

I was met by the EAA boys and they sure did look after me during my two-day stay there. I got the grand tour of the airfield and museum, and of course the B17. It would have been ideal to stay at Oshkosh for the main event, but that would have meant hanging around there for an extra two weeks.

So, the return journey now. I left Oshkosh on the 13th July inbound Sault Ste Marie, the Canadian not the US one, and had a peaceful flight up the Great Lakes, passing between Lakes Superior and Huron, though the weather further north in Canada wasn't looking too good.

My next legs took me to Chibougamau and Warbush, seven hours flying, with the landscape and temperatures changing the whole time. After a night in the mining town of Warbush I filed a flight plan for Kuujuaq and there were apparently good conditions up there. En route however, over endless forests and lakes, the forecasts were reporting cloud bases of 400 and 700ft. Although it appeared a bit like grizzly bear territory, that was the last thing on my mind. There were huge patches of fog and the tops of the trees looked as if you could just reach out and grab them. There was one thing I was not concerned about though, and that was the possibility of having a mid-air collision with someone else flying in the opposite direction!

I could never have endured another two hours of that so I turned back for Schefferville and a helpful tail wind got me there in 55 minutes. Schefferville was another iron ore mining town with no pubs as such, but fortunately the local cafe sold

quite out of the blue. He told me to follow him and led me behind the depot to where there were half a dozen barrels of the stuff and told me to help myself for free, as it was what other people had left.

Back in the air, the flight to Iqaluit was wonderful and the blue skies stayed with me all the way over Ungava Bay up as far as Akpatok Island in the Hudson Strait. Amazingly, I also got the same deal on avgas when I got to Iqaluit. Turning east next, I was on a direct track to Nuuk, Greenland with a vast stretch of water to cross, the Davis Strait. I stayed overnight in Nuuk, an interesting town, but by this stage I had developed a severe case of 'get-home-itis'. From Nuuk I flew down the coast back into Narsarsuaq for a quick fuel stop then over the mountains to Greenland's east coast, with cloud cover for the last 150 miles into Kulusuk.

The following day, Saturday, the weather was showing a 20-knot headwind all the way to Reykjavik. I took off, climbed and trimmed off to 110 knots. I glanced at my

cold fronts over the Denmark Strait. I got a good start but my ground speed was not much better although it did improve when flying lower. After an hour I hit the first of the fronts – rain and fog. I climbed, but soon hit the second, which was a lot worse. I was down to 250ft, madness, but I had no intention of turning back and thankfully, 80 miles from Reykjavik it all cleared.

On Monday I was off on a direct flight to Egilssadir, passing the large southern glacier of Iceland. I had a quick turn around there, then it was on to Wick in bonny Scotland, five hours fifteen minutes. It was late when I arrived there but Far North had booked me into the hotel at John O'Groats. I was hoping to be back in Northumberland by mid-day on Tuesday but, just my luck, early on Wick was fogged in. Eventually I caught a glimpse of the sun so took off. It was the first time I'd been asked by a tower to let them know when I was airborne! Two hours and forty minutes later I was back at Athey's Moor to a great welcome from family, friends and even the



Budweiser. There was no room in the hotel but the guy there kindly phoned some elderly couple he knew and they put me up for the night and gave me one of the best full English breakfasts I have ever had. I got dropped off at the airfield next morning and, despite another poor forecast, my goal on this day was to reach Iqaluit, 600 miles away.

The first leg was to Kuujuaq, dodging the rainstorms, and then, about 50 miles short of my destination, the clouds lifted and the sun, which I hadn't seen for a few days, appeared. Once on the ground I asked for fuel, to be told that they only sold Avgas in 45 gallon drums. I said that all I wanted was about six inches from the top but was again told I'd need to take a full drum, and I shook my head when he said that would cost me 1500 dollars. Considering the nature of this conversation, what happened next was

ground speed and it read 64 knots. I even tapped the screen like you would tap an old analog gauge to see if it would move, then I put my second GPS on and that read the same. It was going to be a long leg over water, that's if I made it to Iceland at all. After 40 minutes I turned back to Kulusuk, put more fuel in the CT, went back and booked into the hotel then went and climbed the big mountain on the east side of the runway. I was away for five hours altogether but it was great at the top, not a breath of wind as I looked out to the sea where, only a few hours earlier, I was in gale.

Talking to the controller afterwards, I found out that the airfield was in fact open on a Sunday during the month of July so I could leave the next morning. The wind chart for the Sunday showed simpler direction winds, slightly less on the Iceland side but I would be passing through two

local TV.

I would love to be able to thank everyone I met, and all who helped me both prior and during my adventure but space here does not permit this (and some of the Inuit names are extremely long!). Huge thanks are due though to the support of friends and local villagers where I live in Longframlington since, to date, we have raised over £7,000 for UNICEF and, with several more events planned, we hope to make the £10k mark by Christmas. Anyone wishing to make a donation to this worthy cause can do so online via: supportercare@unicef.org.uk at www.unicef.org.uk or by phone: 08448012414 and should quote ref: 1001893968 – Microlight Adventure.

*If this has whetted your appetite, Prepare2go is organising a Trans-Atlantic flight in June 2015 - more information from www.prepare2go.com ■



Fiddling while Rome burns?

*Joined-up government is conspicuously lacking in the matter of airfield preservation, reports **Steve Slater***

A lot of attention was given last month to comments made by Conservative Party Chairman Grant Shapps MP talking of the commissioning of future Department for Transport evaluation “of the full scale of the contribution made by general aviation to our economy”, and “an evaluation of the need for a strategic network of general aviation airfields in order to support more jobs and growth in the UK.”

However the fact is that his comments point to an effort to update of the findings of the AOPA and GAAC-initiated Lober report of 2008, which demonstrated precisely those facts, which were built into the National Planning Policy Framework in 2013. It states: “*When planning for ports, airports and airfields that are not subject to a separate national policy statement, plans should consider their growth and role in serving business, leisure, training and emergency service needs. Plans should take account of this Framework as well as the principles set out in the relevant national policy statements and the Government Framework for UK Aviation.*”

The update mentioned by Grant Shapps was in fact initiated the best part of a year ago when AOPA Board member and GAAC Chairman Charles Henry proposed to Grant that this should be done, and that the general aviation community could play an active supporting role. However, despite the support of Grant Shapps and the Cabinet Office, DfT progress is proving painfully slow and they are not apparently

open to offers to help speed their process.

A cynic on the sidelines (like me) could easily assume that due to his direct interest in general aviation as a pilot and aeroplane owner, and by his creation of the Red Tape Challenge, Grant Shapps has been something of a thorn in the side of some civil servants in the Ministry. With a General Election just a year off, could it be that their glacial progress is because they hope such Government irritation may go away? Certainly it appears likely that any assistance from such research will come too late to meaningfully assist a number of threatened airfields.

As Grant Shapps is painfully aware, his aircraft is based at one of the blighted airfields (and no doubt he read the airfields article in last month’s *General Aviation* magazine). The past months have seen a worrying increase in the number of aerodromes facing direct threats of closure, due to the sites’ landowners seeking a change of use from an operational airfield to potentially more lucrative roles as housing, mixed use or industrial

development.

As I wrote last month, airfield sites in many cases offer an enticing ‘quick fix’ in terms of available land for local authorities who are being pressurised by Government to increase housing allocation. While the National Planning Policy Framework (based on that 2008 AOPA/GAAC research) officially supports airfields as part of the national transport and economic infrastructure, the overall trend of Government planning policy is to prioritise on housing ahead of other previously stated priorities.

Here are just a few of the recent cases of airfields lost, and some we are fighting to keep:

Manston

Events following the closure of Manston in Kent on 15th May are a sad reflection on the impotence of less well-organised opposition groups. The “Save Manston” campaign appears to have imploded into various warring factions, while the local Thanet Council appears ineffective at best in their response to requests to consider compulsory purchase (always unlikely) or

Thanet Council contributed to the failure of the business model for the airport

committing to block changes of use in planning permission. It is noteworthy too, that Thanet Council contributed to the failure of the business model for

the airport by refusing to allow the night freight operations which the airport deemed necessary to achieve profitability.

Hucknall

Following the reallocation of Rolls-Royce jet engine testing away from the area, the land at Hucknall was sold to a consortium of housing developers and the local council. This delightful grass aerodrome, despite its long history and one of the friendliest flying clubs in the country, will close at the end of September.

Panshanger

Although the official review of Welwyn and Hertford District Council’s Emerging Core Strategy proposal to redesignate the airfield as residential land with the potential for 700 houses is expected to continue well



Top: Grant Shapps’ base airfield at Panshanger falls victim to government housing ‘quick fix’

Right: despite its long history, Hucknall closed at the end of September





Left: Wellesbourne's owners face a hard fight to force through their lucrative housing plan

into 2015, site owner Mariposa Developments served notice in July on its tenant and airfield operator, the North London Flying School, that their current agreement will not be renewed upon its expiring on 21st September. This was clearly a tactic to force the airfield's closure and make a case for planning reclassification as redundant land.

Around 40 aircraft are based at Panshanger and will therefore need to be accommodated elsewhere. The Save Panshanger group (www.savepanshanger.co.uk), which includes many of these owners as well as local residents, is continuing to lobby both Mariposa and WHDC to attempt to maintain the site's status as an airfield.

Save Panshanger has done an exceptional job of raising funding to commission planning consultants Peter Kember and York Aviation to work on their behalf. We also prepared at their request a paper on "Aircraft Parking in the South East" which demonstrates both the important need for on-airfield parking such as at Panshanger, and the strong commercial viability of this aspect of the airfield's operation.

Wellesbourne

In late July, the owners of the Wellesbourne airfield site presented a 'Scoping Consultation' document to Stratford District Council, presenting their plans for mixed housing and commercial development on the airfield site. The "Wellesbourne West" proposal includes housing and a 'village centre' on the site of the airfield's runways.

An active lobbying group 'Wellesbourne Matters' is already hard at work and a GAAC objection to the proposal has been filed with Stratford District Council, reminding them of their commitment as part of their core strategy plan that: *"the established flying function of the airfield should be retained due to its importance to the local economy"*.

It is also noted that the Council Policy recommends against housing development on the airfield site as the Wellesbourne area is already overcrowded. It states: *"The capacity of transport infrastructure, including roads and public transport, is a key concern for Wellesbourne's residents. It also notes: "The overall number of*

dwelling has increased between 1981 and 2011, by 74%."

Other locations have been designated in the Stratford District Council draft strategy as a preferred location for housing ahead of Wellesbourne, and so far at least, there is no council support for the airfield owners' bid to reclassify and sell the land. However, even when a development has not been included in a county strategy we need to be wary. Current government policy is to encourage councils to take advantage of 'windfall' land allocations to boost housing sites.

Some good news

We do have some good news to report this month. The initial planning applications for the two large wind turbine developments at Bullington Cross and South Woodmancott, which would directly affect Popham aerodrome and other flying in the area, were both refused by all three local council planning committees during July. However, given the scale of the developments it is inevitable that both applications will now move to public enquiry and they may be 'called in' by the Secretary of State for direct decision. It was

noted that the refusal letter for Bullington Cross named effects on aviation safety regarding the MoD and Lasham Airfield, but there was no mention of its impact on Popham Aerodrome, which is even closer to the proposed site. A GAAC letter raising this was forwarded to the head of planning at Basingstoke and Dean Council, the lead planning organisation involved, and it was noted that effects on Popham were included in the South Woodmancott decision. This therefore should register Popham as a formal 'interested party' should an inquiry go ahead. The GAAC has also offered all three councils assistance in preparing supporting submissions on behalf of the GA Community.

Significant areas for sport

There is more good news, in that work continues on the future classification by Sport England of a number of flying sites as Significant Areas for Sport (SASP), based on sport flying and areas such as competition aerobatic activities. This will give them added safeguarding in council and regional planning strategies.

It is hoped we will be able to nominate a short-list of 12-15 locations for consideration by Sport England before the end of 2014. Does your airfield, in your opinion, act as an important regional or even national centre of excellence for any aspect of sport flying, whether competitive or otherwise? If so we'd love to hear from you. Please drop an e-mail to info@aopa.co.uk, marked for my attention, and they will pass it on to the team. ■



Popham airfield seen from a glider launched from Lasham; both airfields would be affected by large wind turbine developments that have been refused planning permission

An incident

Peter Barker sets out details of a misfortune from which lessons can be learned



A boat in the background suffered a minor paintwork scratch

So what happened? Well... having enjoyed a terrific day at HeliExpo at Sywell, I finished off with a cup of tea in the Hayward Aviation Insurance double decker bus (whilst all around me who were staying the night enjoyed other thirst quenchers) then wandered off to fill up with fuel.

It was early evening, the refuelling crew had departed and so it was a do-it-yourself job. I have refuelled at Sywell before and I should have remembered that their hoses are quite long. But I am very used to parking quite close to pumps, as so often there can be a bit of a stretch to fill the outward facing tank; no problem – we are

used to landing on a sixpence all the time.

As I landed I remembered being told that it is only the pump closest to the refuelling kiosk that works out of hours – so this is the one to land at. As I gently lowered the lever to land there was a series of huge bangs, GIDUP leapt about rather violently – I am told that it looked pretty dramatic

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from the outside too. I kept flying, putting it firmly down on the ground, pulled the fuel cut offs and switched off the electrics.

At the first impact, and while I was containing the situation, my brain was very clearly assessing the problem – a mental picture flashed up of what I had seen as I flew close to the pumps before turning 90 degrees to line up. The clear picture was that there was absolutely nothing behind me. The next though was – what had broken?

The rotors, which had been turning at 300-odd rpm and supporting a ton of helicopter, had come to a stop in just a few rpm. As I jumped out I could see some significant damage to them, and as it turned out there was minor damage to a nearby yacht, an R66 and an EC120. It was only as I looked behind that I had the 'Oh dear' thought, coupled with a certain feeling of embarrassment. The rotor blades had hit the refuelling kiosk roof!

It was then that all the friends who I had just had tea with came running up. Mathew Day from Haywards was a star. Looking round at the devastation he said: "Don't worry Peter, we are here for you – we cover everything here... except for the boat."

My overriding thought was thank goodness no one was around to be hurt. The amount of energy being dissipated, more or less instantly, is bomb-like. As it happens the blades held together amazingly, shedding only a few pieces of debris – but each piece has the energy of a bullet, and to have injured someone would have been difficult to live with. God was very fortunately on our side, and with no one hurt I am able to make a more light-hearted analysis of the event.

Stepping back from the debris, and running my mind through the train of events, the cause was immediately clear to me. The refuelling kiosk is very obvious, but what is not so obvious when in a hover with your eye level on the same plane is the large overhang of the flat roof which projects out very



significantly. I had simply not seen it.

The result? Whilst GIDUP remained solidly upright and apparently intact apart from damaged blades, the shock damage was tremendous and so my trusty helicopter of eighteen years is no more. The Sunseeker yacht had a little paint damage, the R66 had a slightly damaged tail fin, the HeliAir caravan sprang a leak in its roof and the EC120B that I had on my list as a possible new helicopter had a chip in one door (they were gracious enough to offer me a little discount because of the damage if I were to buy). Oh, and the refuelling kiosk needed a re-trim.

The lessons to be learned?

1. Well, I would certainly suggest that if you are to have an accident it should be in an Enstrom – the engineering might weigh a little more but it is way more robust than more modern designs.
2. Always think a manoeuvre before doing



Above left: Peter has that 'Oh dear' moment as he realises what has happened

Above: very few metal shards shredded from the Enstrom blades

Left: Blade damage is spectacular but shock loading writes off the Enstrom

Below: Peter's new EC120B, the positive result of his accident

it; I had in fact done so, but I should have done it better.

3. Allow a little more margin than you estimate you need.
4. Make sure that absolutely all your paperwork is in order because there is an awful lot of form-filling after an incident such as this, for both CAA and insurance.
5. Think positively; with nobody injured and limited damage it was an interesting experience – it also spurred me on to buy my new helicopter.

Finally, I have to mention Hayward Aviation's Matthew Day, Guy Holland-Bosworth and the claims team. There is always a certain amount of healthy competition in the insurance world – premium should not be your only consideration. From fortuitously being on the spot and offering immediate reassurance to following through and assisting with the necessarily detailed claim process, Hayward's service was exemplary – no aspect of the process was too much trouble and the speed of settlement remarkable. I received the full insured value, with no deductions, in eighteen days! ■



Briefings



Hats off to young Jack

Pilot Jack Frodsham has made history by becoming the first person to be issued with his PPL (A) and his PPL (H) on his 17th birthday.

Jack, from Saddleworth near Manchester, achieved this distinction on September 17th and is believed to be the first person in the world to have qualified on both fixed-wing aircraft and helicopters at the youngest possible age.

Jack – who unsurprisingly wants to be a professional pilot – has been flying since he was 12 years old and has accumulated 250 hours, with 50 hours being on the Robinson R44 helicopter. The remainder is on single and multi-engined fixed-wing aircraft.

He has just started in the Sixth Form at Rishworth School in West Yorkshire where, he says, the headmaster Mr Gloag and the heads of the geography, maths and physics departments have strongly supported his goal of achieving his licences on his 17th birthday.

Jack says: "I've flown into many UK aerodromes ranging from Carlisle to Bournemouth, including Oxford, Hawarden, Blackpool, Caernarfon, Welshpool and Wolverhampton. I've also landed on short grass strips at Barton, Tarn Farm and Bagby in North Yorkshire. My long-term goal is to fly professionally, either fixed or rotary winged aircraft.



In fact, Jack is an all-round action man who gives the lie to the notion that young people today live in a virtual world, stuck to their computer screens. He is interested in power-boating and scuba diving – he is a PADI Master Scuba Diver, and he holds an RYA international qualification in offshore power boating.

"The satisfaction and exhilaration of flying solo in an aeroplane, and the sense of freedom that I now experience is very similar to that of open water diving," he says. "I'm living my dream, and perhaps one day I will be given the opportunity to fulfil another goal, which is to fly solo around the world." ■

Davidson Scholarship PPL

John Harrison, winner of the first Nick Davidson Memorial Flying Scholarship, has gained his PPL after completing his training with Surrey & Kent Flying Club at Biggin Hill. He was presented with his licence by Squadron Leader Jim Turner, leader of the Red Arrows, at a special ceremony at the airport.

John, 21, was selected from more than 40 aspiring applicants for the first scholarship when it was inaugurated in 2013. "I felt privileged to be awarded the scholarship in honour of a dedicated pilot who tragically died so young," he said.

Alina Davidson, Nick Davidson's widow, said she was thrilled that



John Harrison (left) receives his PPL from Red Arrows leader Jim Turner

the first flying scholarship scheme had reached a successful conclusion, and a second scholarship recipient had already been identified by the selection committee – Steven Inch, a Flight Ops officer at Biggin. "Many congratulations to John Harrison, and we wish him good fortune for his career in aviation," she said. John has applied to join the RAF as a pilot.

Nick Davidson was a captain with the British Airways Airbus A320 fleet died of cancer in 2012. He was 49. His first flying job had been as a flying instructor with Surrey & Kent from 1989 to 1993. The scholarships are encouraged and supported by Biggin Hill Airport Ltd and by Surrey & Kent.

One year to an ATPL

Student pilot Lawrence Hardisty has completed his entire modular pilot training programme from first flight to full commercial pilot qualifications in just over a year.

The 28-year-old, who worked in the medical field, had never flown before the summer of 2013 when he started his PPL course with Aeros Flight Training. In August he passed his final theory exams with flying colours with a pass mark of 89% and is now an ATPL qualified pilot awaiting interviews with leading airlines.



Lawrence says: "The Aeros' modular training programme was ideal for my requirements and allowed me flexibility to plan my time. The Company's policy of two trainees per instructor also meant that I received lots of one to one training. Further, there was a cost saving over other integrated courses, with the entire programme costing me well under £50,000."

Aeros' Head of Training Captain Paul Freestone said: "Lawrence was a model student who worked hard to achieve his goal of becoming a pilot with a leading airline."



Moth scholarship for Harry

The Worshipful Company of Coachmakers and Coach Harness Makers inaugural Sir Geoffrey de Havilland Flying Scholarship has been awarded to 19-year-old technical apprentice Harry Measures, who now gets the chance to learn to fly on a Tiger Moth at Cambridge Flying Group.

The Coachmakers have offered the scholarship in order to help to ensure a supply of Tiger Moth pilots and engineers in

the future. The London Livery Company raises and distributes charitable funds in the aerospace, automotive and coach making industries for deserving disadvantaged members of society.

The scholarship is a flying award open for applications from young people of up to 30 years of age who have not previously been awarded any such bursary with the aim is to make a significant difference to



the applicants' opportunity to learn to fly. The selection of the shortlisted applicants took place at the Cambridge Flying Group, where they all flew the Moth.

Group Captain Marcus Wills CVO OBE, Chairman of the Coachmakers Aerospace Awards Committee said: "The Coachmakers Company is delighted to play a part in helping a young person to achieve an ambition when otherwise they might not be able to do so. I am sure that learning to fly a vintage aircraft will make a significant contribution to a more widespread general knowledge of airmanship and flight safety."

Tecnam P2010 certified

The Tecnam P2010 has been given EASA's seal of approval and deliveries are to begin throughout Europe. The

cost and complexity of certification means the P2010 is the first new single engine, high wing, four-seat aircraft to be certified in Europe in decades. Tecnam has not revealed how much certification

cost, but says the certification programme included over 200 hours of test flights, more than 100 spin configurations, lightning tests on full scale assemblies and much more. The trend down to ultralights and LSAs has been driven by the cost of over-regulation and excessive taxation.

The P2010 is the most advanced high wing modern single engine aircraft in the marketplace, and comes with three avionics options – analogue IFR, a Garmin G500 IFR or twin-screen Garmin G1000 IFR with integrated GFC700 autopilot.



Mooney rises in the east

Mooney, now Chinese-owned, is back in business and handed over the keys of its first newly-built aircraft in August, marking the return of high-performance single-piston Mooneys to the market after a five-year break. The M20TN Acclaim Type S retains its (also Chinese-owned)

Continental TSIO-550-G turbo-normalised engine but is equipped with upgraded Garmin G1000 avionics.

The first aircraft has the registration 242 MR, which Mooney says stands for “242 Knots Mooney Rises”.

CEO Jerry Chen says: “In less than a

year we reactivated the manufacturing facility, hired more than 150 people, implemented state-of-the-art technological advancements and introduced many new systems to improve our business.”

Mooney is planning a slow increase in production of one per month in 2014, building up to two per month in 2015, with increases beyond that, and it will be building both the Acclaim and Ovation. It has 10 orders from China. The company is opening a new office in Beijing. ■

The GA Airbus?



Airbus is entering the GA market with a new all-electric aircraft that they say could make its debut in 2017. The company accepts that battery weight may keep electric planes from becoming

mainstream in the near future, but says the E-FAN 2.0 will nonetheless find a market in flight training.

The E-Fan 2.0 weighs 1100 pounds and has two electric motors with a total

power of 60kW – around 80hp – driving two pitch-adjustable fans. With a conventional 120-cell lithium polymer battery, it can fly for about one hour before a reserve. ■

Manston's loss, Lydd's gain

Lydd Airport has snapped up the CEO of nearby Manston, forced to close down by the Scottish bus owner and property speculator Ann Gloag.

Charles Buchanan will now work with Lydd's senior management team to promote the airport's multi-million-pound development plans.

During his time at Manston he introduced scheduled passenger flights to Amsterdam with KLM and increased cargo traffic to make Manston the fifth largest cargo airport in the UK. Before that he worked for 10 years at London City, ultimately as Strategy and Communications Director, where he gained planning permission to increase the number of flights by 50% and delivered infrastructure projects worth £30 million.

Charles said: “I've joined Lydd at a very exciting time and I'm now working with the rest of the senior management team and staff to bring the airport's development plans to fruition.”

Work on Lydd's runway extension is expected to begin later this year.

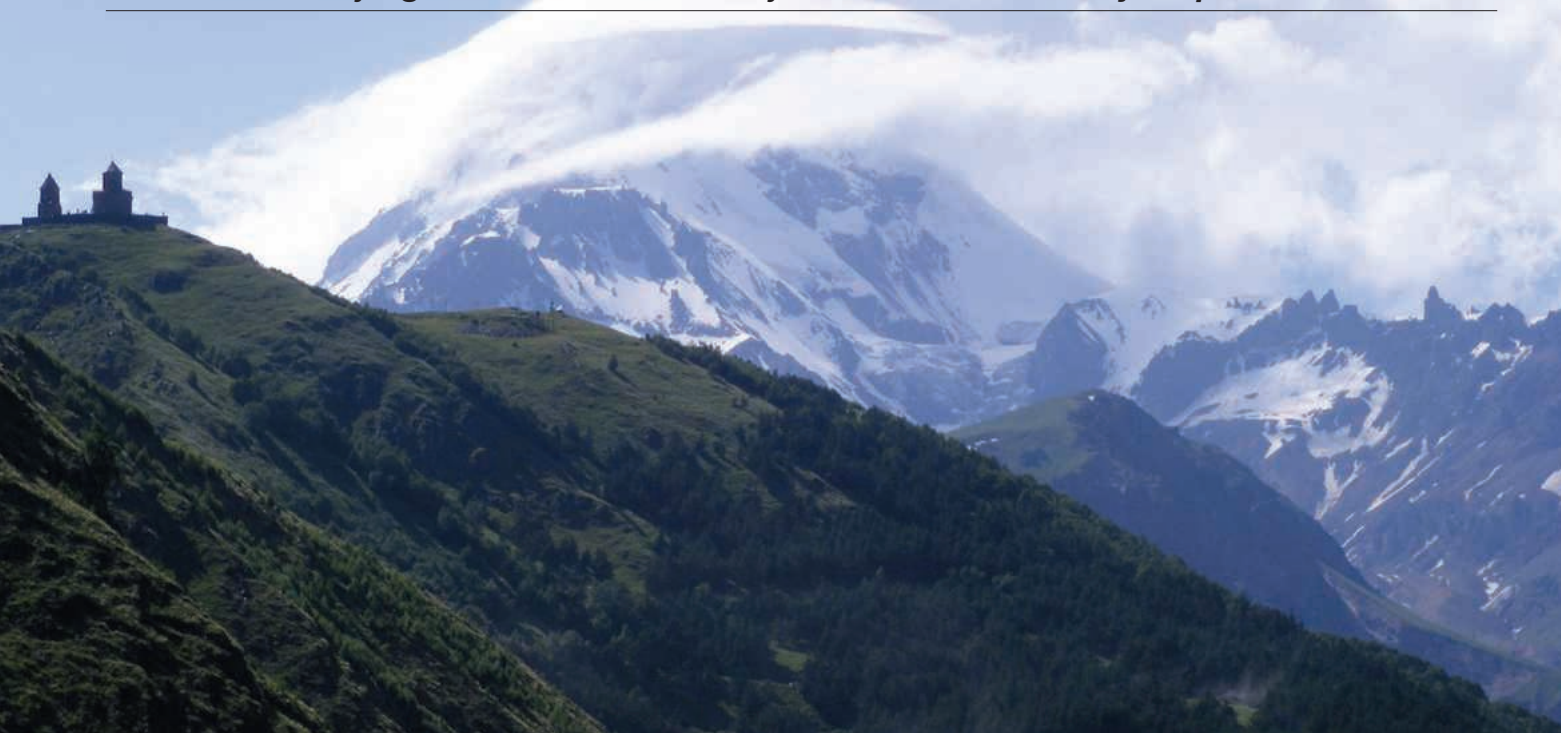
Buyer's market

Some 16.5% of the UK's 381 private jets are currently up for sale, giving Britain the highest number of for-sale GA jets of any European country. Anything above 10% tends to make it a buyer's market, according to Hangar8, the UK-listed aviation management and charter company. Hangar8 has launched a new repaint facility at Oxford airport because it says owners looking to sell their aircraft could dramatically increase their chances of finding a buyer if they have it re-sprayed. It costs around 1% of the value of an aircraft to get it re-sprayed but it could increase its value by up to 10%.

The situation is exacerbated by sanctions on Russia, currently the biggest market for bizjets. Because of onerous taxation, most Russian jets are kept in other European countries. US officials are actively hunting for aircraft 'owned' by shell companies on behalf of 140 named individuals and 60 Russian companies under sanction.

Flying in the other Georgia

*An exotic new flying destination extolled by AOPA Poland's **Blazej Krupa***



Looking for somewhere different to fly? I think I've found "the pilot's dream" in the former Soviet Republic of Georgia, where there's an airfield with a 1,000-metre concrete runway and every facility the general aviation pilot could hope to find – all in a fascinating country with fabulous scenery, a remarkable history and a warm and welcoming population.

A company called Vanilla Sky runs a private airfield at Nataktari, 20km from the capital Tbilisi, where you can rent aircraft and helicopters to suit most tastes. They have Cessna 172 and 182, a Bekas ultralight, an Antonov An-2, an Alouette, hot air balloons, even a Mi-8 and an Agusta 109 for taxi work. They have a brand new hotel, a restaurant with fantastic food, a swimming pool, and 12



Top: the Caucasus mountains in Georgia rise up to above 16,600 feet

Above right: the hotel swimming pool lies within yards of the Nataktari runway

Right: the tower at Nataktari airfield, centre of the private holiday complex

horses, for those who are that way inclined. And the prices are as competitive as anything you'll find in Europe.

Vanilla Sky runs a tourist complex that is not just for general aviation pilots, but attracts people from all over the world. The emphasis, however, is on GA, and in my experience there's nothing quite like it anywhere else. It incorporates a flight school, and an aero club which organises





Alouette helicopter, noted for excellent hot and high performance

**Vanilla Sky's Antonov An-2, the world's largest single-engine biplane, and lower right a view of Georgia over the wing of the Antonov
Right: Cessna 182 and 172 can be hired**



flying tours of Georgia, as well as a charter operation. Contact the manager Mrs Nina Laurent – she's on (+99532) 428 428 or 429 429 and her mobile is 00 995 574 482 121.

Georgia lies on the east coast of the Black Sea, between the Caucasus to the north and the mountains fringing the Turkish border to the south. You can either choose to fly commercial to Tbilisi or Batumi and hire an aircraft, or if you fly to Georgia Vanilla Sky can arrange all the permissions and information you need for touring the country. From sea level to




11,000 feet, Georgia has some magnificent flying conditions, and the skies are relatively free and empty. I can't recommend it highly enough.

See www.vanillasky.ge ■

**Left: the Old Town of Tbilisi, unlike any other city in Europe or Asia
Below: trips can be flown in a hot air balloon and a Bekas Ultralight**



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Keep your rear to the ground

Have you thought of trying something new? How about dragging your tail, says David Ogilvy

Many years ago I was a flying instructor and I made a habit of asking people why they had chosen to take to the air. I received almost as many answers as the number of students to whom I had posed the question. A few were hoping to become professional pilots, but most had no such aims. Responses from this majority ranged through a search for something different to a life-long desire to be a pilot; among the latter was one who had served as an observer/gunner in the Royal Flying Corps during the 1914-18 war and who had been saving throughout his later life to achieve his aim. Eventually, by the age of 72, he had the cash and was determined to obtain his PPL. As expected, progress was slow, but he 'made it' and became an exceptionally happy man. Part of his pleasure had been in looking forward to what was to come, with just one fear – that he might not be able to afford the course before he was too old to cope. He was fortunate, just. As you will realise, this was a long time ago.

At that time it was almost fashionable to wait a long time to achieve an aim or ambition. Today (with the possible exception of awaiting a mortgage) that is not the case and with the general tendency towards wanting things now, most people who wish to fly either are able to afford it (if only just!) or they tend to move on to something more easily within reach of their pocket. I am assuming that you have a Private Pilot's Licence, so what I am suggesting now is not such a major bank-buster.

Firstly, much must depend on why you

fly. Many people do so primarily as a means of travel, for holidays, business or just day outings. The comfort of closed cabins, the availability of GPS, the very valuable IMC rating and relative ease of flying most modern light aeroplanes combine to make this very practicable, but may lessen the attraction of flying an aeroplane purely for its own sake. Some people even find that this becomes boring and let their licences lapse, but there are several ways in which this little problem can be overcome.

Most probably you have learned – and continue to fly – on a nosewheel aircraft. From a purely functional angle this is fine but, if you seek to enjoy the fruits of flying, there is one move that can enable you to fulfil that. Before you read any further, you may know what this is – a tailwheel conversion – but there is more than one way in which you can tackle the task and here I hope that I can help by offering a few thoughts.

Before poling and pedalling a tail-dragger there are a few simple facts to digest. At least two of these are essential to long-term success, although I have met at least one person who completed a course and later suffered a bad landing swing without knowing the reason.

For an aeroplane to sit with its back end on the ground the centre of gravity must be behind the main wheels, whereas on the nosewheel machine the reverse must apply. This means that if a swing starts it must be corrected instantly, before the diversion develops and the mass of the machine moves forward and sideways to take control. If this is allowed to happen, a ground-loop is very likely to occur, by which time the pilot's input may have no useful effect.

The overall situation may depend on whether the aeroplane has brakes. If so, a balanced action between these and the rudder can save the day, but a newcomer to the tail-down art must be ready to use his or her feet far more energetically than before. If the aeroplane is brakeless, the footwork must be even more active and often may lead to use of full rudder, especially towards the end of the landing run, by which time all controls are losing their effect.

Another – equally important – aspect of flying a tail-dragger concerns engine handling. I have felt most uncomfortable when a nosewheel pilot has lined up for take-off and slammed the throttle fully open from a standing start. To keep straight from a tail-down attitude, it is essential to



Top: with tailwheel and brakes, the Chippy offers a benign introduction to taildraggers
Right: Chipmunk's enclosed cockpit is a step up from many older tailwheel types

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A surprising 193 Tiger Moths remain on the British civil register, 91 airworthy

increase power steadily to counteract the engine torque and propeller slipstream effects with appropriate use of rudder.

It is important to consider, too, that when the tail is down the rudder may be out of the slipstream and to have any effect will need generous action. Also, most earlier power units – including the famous Gipsy Major – demand respectful treatment and vicious handling will lead to an instant cut.

An early move to make the transition pleasant and not too demanding may be to receive some instruction in a Chipmunk. With a tailwheel and brakes, the jump is not too great. An additional bonus is that it is an exceptionally pleasant aeroplane to handle, with light, responsive and well-balanced controls. With an enclosed cockpit, it can be flown with the hood shut or one notch open. An added option is that it is fully aerobatic, but this is an entirely separate exercise and may not appeal to everyone. Certainly, despite possible temptation in such an aeroplane, it is important not to attempt to indulge in these manoeuvres without serious specialist instruction.

Although several other types are suitable, perhaps the ultimate in available choices is the Tiger Moth. This offers traditional flying at its best. With fully open cockpits and the

wind in the wires, the summer is the best time to try it. It provides more challenges than does the Chipmunk, for it has no brakes and, as a biplane with a low wing loading, is more sensitive to wind strength and direction. Taxying, in particular, calls for special care, for to change heading you may need full rudder and a burst of throttle to provide the slipstream effect, but if you use power too generously the aeroplane will pick up speed and you have no brakes with which to stop it! Also, as you open the throttle the tail will tend to lift so, especially into wind, you must keep the stick hard back; conversely, when moving downwind in some conditions, the stick should be eased forward to provide a download on the drooped elevators. In other situations, such as when taxiing across wind, it is appropriate to move the stick towards the wind to prevent that wing from lifting. In very confined spaces, a wing walker is advisable.

This may seem complicated, but when settled into the cockpit with the reality of

the wind around you, it fits into place and the logicity of these actions will come home. Landing in a crosswind is a task to be tackled with care and today's tendency to have single-runway aerodromes is no help. The Tiger Moth, of course, was designed when most aerodromes were grass and omni-directional, but it is less critical on the ground than its earlier siblings, for helpfully, the tailskid on the Tiger moves with the rudder, whereas on the original DH60 Moth the skid is fixed to the sternpost. The difference on ground manoeuvring is quite noticeable.

Although these historic types are less plentiful than in their heydays (both as very successful RAF trainers), more remain than you might expect, with 121 Chipmunks and 193 Tiger Moths on the UK Civil Register. According to CAA records, 92 and 91 respectively are currently airworthy, so you should be able to find the specimen of



**Below: Moth's tailskid turns with the rudder to aid ground handling
Right: you can learn to fly the Tiger Moth with Cambridge Flying Group**



your choice. In particular, Cambridge Flying Group specialises in providing tuition on Tiger Moths.

If you wish to add a spot more colour to your flying, there are many fresh aviation activities to tackle. Among these are rallying, aerobatics, night flying and even air racing, but for upgrading your standards of handling and judgement and for sheer satisfaction, a dose of tail dragging takes a lot of beating. Even for an experienced pilot, there can be considerable pleasure from achieving a really neat 'greasy' three-pointer. Try it! ■