

Europe in harmony

IAOPA Europe held its 123rd Regional Meeting in Amsterdam in October, with delegates from 17 countries attending. These meetings are primarily designed to co-ordinate the work of the 23 AOPAs in Europe, to ensure that we speak with one voice and that messages that we send to national and European regulators do not conflict. In addition, problems that arise in one state can be dealt with before they become a problem in others. **Pat Malone reports**

EASA's funny old world

A single-engined aircraft cannot take off if its engine fails on the runway. This apparently obvious fact is not accepted by EASA, which continues to try to apply accelerate-stop distance and climb requirements designed for multi-engined aircraft to complex aircraft with only one engine.



AOPA Denmark's Jacob Pedersen, who is IAOPA's lead on the complex aircraft part of EASA Ops, said because commercial operators gave no thought to single-engined operations, no exceptions had been made for singles when it was clearly nonsensical to include them. But

unless exceptions were specified, those authorities which apply the letter of the law would make operations in complex singles impossible.

As things stand, a complex single flying in IFR will be obliged to continue to climb after an engine failure once it has reached a specified speed. Jacob said: "When we try to have singles excluded, people say the regulations will be less tight for single-engined aircraft, so they must be required to reach the same performance as multis. This has been a lengthy discussion, meeting after meeting, and it illustrates why AOPA has to be there even when the matters at issue involve largely commercial operations in complex aircraft."

Dr Michael Erb, Managing Director of AOPA Germany, represents AOPA on the Safety Standards Consultative Committee and agrees that if we take our eye off the ball, general aviation will be the loser. "We are living in two separate worlds, airlines and GA," he said. "When they discuss medicals for flight attendants we have little interest, but the airlines have little interest in GA matters. We have proposed a sub group of the SSCC for GA, but there are difficulties in agreeing where you draw the line."

One of the major problems Jacob's working group faces is that EASA put out half-baked proposals for consultation simply in order to meet its timetable, knowing full well that the proposals were rubbish and would never see

the light of day. IAOPA and other organisations spent hundreds of man-hours responding to the consultation, only to find that the real proposals bore no relationship to what they'd been given.

Jacob said: "We confronted Eric Sivel, the Deputy Head of Rulemaking, with a long list of stuff that was incomprehensible, and his reaction was that the consultation was rubbish, so all of us who spent time and resources to comment were wasting our time and money. It seems like a complete joke. EASA has admitted that the regulation was not ready for consultation, but they put it out anyway."

"Everything has changed. The whole structure of regulation is different. You need to study the EASA Ops document because if you don't understand the new acronyms now, you will be completely lost. We used to have an Aerial Work group; it's now SPO, specialised ops, not to be confused with SPA, which is 'specific approvals'. What EASA calls GA is now Part NCO, non-commercial ops. Then there's NCC, non-commercial complex aircraft, which is not GA as far as they're concerned."

"Jeremy James has been taking care of NCO, the light end of general aviation, and we have consulted each other on the main issues. We have pushed hard to have PLBs accepted instead of fixed ELTs, and EASA has said they will investigate whether PLBs will be acceptable. With the requirement to have a counter drum altimeter – which can be a €10,000 installation – they now admit you don't need it for GA as we're unlikely to confuse our altitude by 10,000 feet. On oxygen requirements, all our representations have been rejected, which is of great concern to pilots in Alpine areas. It looks like we will need oxygen above 10,000 feet, but can go to 13,000 feet without it for 30 minutes. EASA

Top: Delegates at the 123rd IAOPA Europe Regional Meeting in Amsterdam

Left: EASA seems to expect complex singles like the Pilatus PC12 to be able to continue to climb after an engine failure



simply says this is an ICAO requirement.”

IAOPA General Secretary John Sheehan pointed out that EASA was ignoring the qualifications in the ICAO recommendations. “It’s a performance based,” he said. “It doesn’t say you have to do it. It says the PIC has to do a risk assessment to ensure passengers are not affected. EASA has stepped beyond ICAO, and needs to be reminded of that.”

The new proposals, Jacob continued, left a great deal to the discretion of the national authorities – good news for the UK, bad news for countries like Sweden and terrible news for countries like Italy. “Acceptable means of compliance are open to interpretation, and NAAs should take into account the scale and scope of the operation,” he said.

“From a technical perspective, the regulation is a hundred times better than the original

consultation, but the process has been a complete mess. Originally we were told that the Acceptable Means of Compliance would be binding on the operator, who’d have to pick one that suited his operation. EASA was absolutely firm on that, but at the last meeting, EASA has changed its mind on AMCs so it would no longer be binding – he will be free to write his own AMC, and won’t even have to tell the authority! That completely changes the whole structure and scope of the regulation, and makes nonsense of everything we’ve discussed since the original consultation. It doesn’t make sense to have a working group working for a year dealing with these issues, then at the end turn everything on its head.”

Lennart Persson of AOPA Sweden is IAOPA’s representative on the working group debating EASA Task 66, which is proposed avionics

requirements. One of the main objectives, he said, was to make it possible for avionics engineers to get their licenses in half the time without reducing the knowledge base. “We have put together a core of knowledge that every mechanic should have, then put modules on top,” he said. “Then you can work on aircraft, and sign off aircraft, as long as you were signing for a speciality for which you were qualified. Then you can add on modules – autopilots, nav-com and so on – to reach a full B2 licence. Today it takes four to five years to get a full B2, and while you’re studying sometimes you don’t get paid. Small companies have a problem keeping B2 mechanics because once they’re qualified, they’re drawn off by the airlines. Unless we make major changes, it will be very difficult to find avionics engineers for GA in the future.” ■

SESAR maps out your future

Everything you needed to know about SESAR but couldn’t be bothered to ask explained by Pat Malone

SESAR – no, stay with me, this is interesting – has been running for five years and is halfway through creating an air traffic management system that will rule your life if you’re still flying in 2020. It is of the first importance, yet many GA pilots say they haven’t even heard of it. We’ve run a lot of SESAR stories in *General Aviation* down the years but it’s time for a recap. Please read on.

SESAR, the Single European Sky Air Traffic Management Research programme, is one of the most important projects in which IAOPA is involved. It hasn’t intruded much on the consciousness of GA pilots and indeed it won’t begin to affect us for a decade, but if we are not closely involved at every stage we will wake up one day to find that GA has been cut out of tomorrow’s airspace and the airlines have taken the lot. SESAR is dominated by the commercial sector – the airlines, the ATC providers, the big manufacturers like Airbus and Thales – but IAOPA is in there fighting to ensure that GA is not forgotten.

SESAR is nothing less than a complete rewriting of the system for handling air traffic in Europe. It aims to sweep away national boundaries and artificial airspace constraints and make it possible for aircraft to get from A to B by the most efficient route possible. That means taking a clean-sheet approach to every aspect of air traffic management, and the scope of SESAR is breathtaking – it already has 143 work packages under way and is starting another 43; ultimately there will be 450 projects in train. It covers everything from take-off to touchdown and beyond, including airport, TMA and en route operations, avionics, information management, airspace management and ATC operations. It is a hugely ambitious undertaking. It’s nothing to do with EASA; the Single European Sky is a Eurocontrol project, and it includes countries outside the European Union. IAOPA has been working on SESAR since 2005, when what was called the ‘definition phase’ was set up. There are three of these phases and we’re now in the second one, the ‘development phase’. The third will be the ‘deployment phase’, which starts in 2014 and runs to 2020. Something as complex as SESAR cannot be run with occasional volunteers turning up for

the odd meeting; participants must pay their way and must provide a specified amount of work to the programme. IAOPA is contracted to provide 460 man-days to the development phase in the next year. For the definition phase, IAOPA hired the former head of the Danish CAA Val Eggers to represent general aviation. Ultimately the first phase cost us €400,000, although a lot of that was recouped from Eurocontrol when the work was completed to its satisfaction. In the development phase we are represented by Dr Michael Erb, Managing Director of AOPA Germany, and Ben Stanley of AOPA UK.

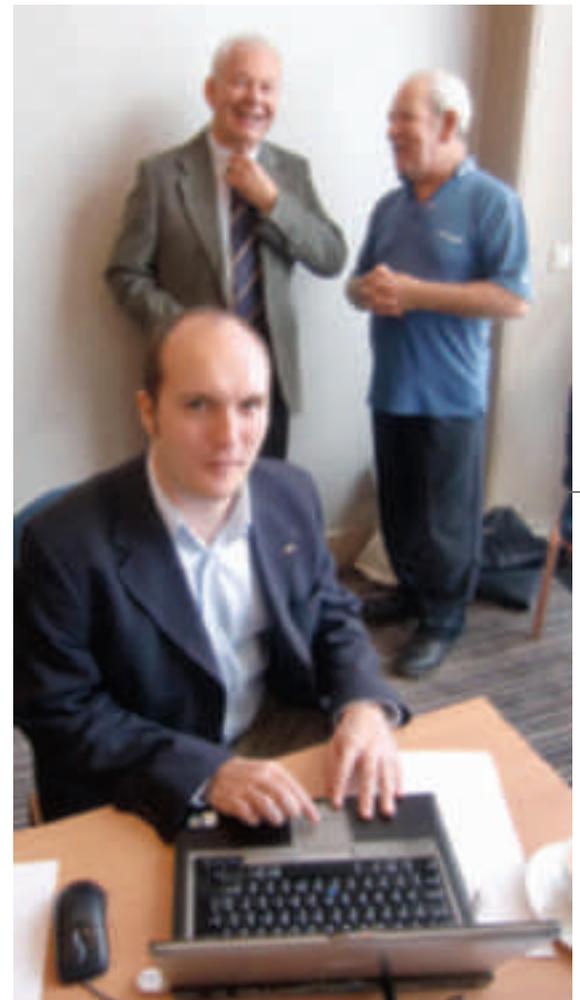
While AOPA members pay for the work – IAOPA is the only GA representative at SESAR – all of general aviation will get the benefit. So if you can persuade a non-AOPA member to join and make a contribution, that would be helpful. You can tell them they also get a really interesting magazine...

So what are you getting for your money? Here’s a brief overview of what SESAR is all about.

The problem

Europe is conscious that it doesn’t make a good fist of handling air traffic. It looks with envy at the USA, where roughly twice as much traffic is accommodated in a given space. The problem is, of course, that European air traffic grew up in 31 separate nations, each of whom did things differently – different categories of airspace with different rules, and artificial national boundaries made everything infinitely more complex. What worked okay in the Viscount era doesn’t answer at 600mph if you’re flying far out of your way and twiddling the radio dial like the bloke who shuts the submarine hatch in the films. Europe has been trying to improve the situation piecemeal, but Eurocontrol decided to start all over again and build an air traffic management system the way you would if aviation had been invented today. The first thing was to define exactly what was needed. Then that framework was given to something called the SESAR Joint Undertaking (SJU), which is researching how it might be implemented. IAOPA is part of the Joint Undertaking.

The SJU also includes the air traffic service



Above: AOPA UK’s Ben Stanley (seated) with Blazer Krupa (Poland) and Jim Brennan (Ireland)

providers, their staff associations, the military, airport operators and other ‘stakeholders’, but it is dominated by the commercial end of the business. Airlines have a huge amount to gain from SESAR, and not just in terms of fuel and delay costs – from 2012 they will have to start paying emissions charges, which is concentrating a few minds at this time of penury. Airbus is a major player at the SJU, while companies like Thales are there because they will have to provide the avionics which will allow aircraft to stick to the trajectory accuracies SESAR will require. Now a lot of these guys don’t have much time for GA, and →



Left: time-based trajectories are fine for sophisticated aircraft like the Airbus A380, but what about those without dual FMS?

→ given free rein they'd cut us out altogether. IAOPA is there to make sure GA gets a fair crack of the whip.

Undoubtedly, GA will be the loser from SESAR. The airlines will get the benefits, we'll get stuck with upgrading our avionics and so forth for little identifiable advantage. Being branded a loser, believe it or not, is partly a good thing; the European Union provides for compensation for those who are proven losers in such circumstances. If, for example, there is a requirement for certain avionics to be installed by GA in order to conform with SESAR, then the law requires that the cost be ameliorated by the provision of positive services, or even tax breaks and subsidies. How this works in practice is yet to be established.



When Dr Erb started working on SESAR in 2005 it was called SESAME, and then as now IAOPA was the only GA representative. We were lucky enough to engage the services of Val Eggers during the definition phase; some of the airlines wanted to hire his consultancy and indeed tried to poach him, but he stuck with us.

We were able to get 28 amendments accepted at the definition phase, mainly dealing with GA access to airspace, airports and services such as weather information, notams and traffic en route. While all this is agreed, there is no common technical vision as to what it might entail. As Dr Erb says: The airlines do not want to discuss anything but Mode-S Extended Squitter or ADS-B under NextGen in the United States."

Val Eggers has retired, and Ben Stanley of AOPA UK has taken over for the development phase. In a presentation to the IAOPA Europe Regional Meeting in Amsterdam in October he outlined the enormous potential impact of SESAR on GA operations. "SESAR is a little less near-term than some of the other problems we face but it has the potential to have the most impact on our flying," he said. "It's a whole new means of organising European airspace and it affects us at every level – capacity constraints, costs, environmental issues, ATC, equipment, nothing is excluded.

"The large manufacturers like Airbus and Thales on the SJU have a certain focus, and we seek to influence what they are doing. SESAR is a research programme, backed by a plan of action covering about 15 years during which they will develop every technology to a point at which it can be deployed. They want

prototypes, flight trials, ground equipment, airborne equipment... but while it's a research programme in name, in character it slips into policy because it is developing standardisation and effectively producing a regulatory road map."

Trajectories

Access by general aviation to the IFR environment poses particular questions. "We are talking about time-based operations," Ben says. "An IFR flight plan will require an aircraft to be at a certain point at a certain time, plus or minus one minute. For an airline with a Smiths 10.6 FMS that's not an issue – they can give you seven seconds – but for someone hand-flying in IFR it may be rather more difficult.

"The next step is trajectory-based operations, where instead of filing a flight plan you file a trajectory and promise to maintain a certain path and altitudes to within very tight constraints. There must be room for the aircraft which is flying IFR without dual FMS, and we are fighting for that at the moment.

"The ultimate goal is to move to a performance-based system where if you want to fly direct, you can do that... but GA doesn't want to have to fly outside of huge chunks of airspace because you're required to have dual FMS inside it. We are working to identify ways of being interoperable. We don't want to have to adopt VDL-2, or ACARS, but 4G may be a possibility if it's secure.

"Having a scope of regulation that doesn't

respect all user requirements is not in the spirit of SESAR or the European Parliament, but SESAR struggles to understand where GA fits in. They are committed to finding ways to create benefits for GA. SESAR is going to look at financial incentives, tax incentives, fees, route charging incentives, equipage incentives, even subsidies. Within six months I expect there will be more clarity."

And what about VFR traffic? Or as SESAR might say, what is VFR traffic? "Anything that can't give them a flight schedule two months in advance puzzles SESAR," Ben says.

In early October John Sheehan, Michael Erb and Martin Robinson met with the Executive Director of SESAR Patrick Ky and his Chief Economist to ask for a work programme that concentrates solely on the needs of GA. Michael says: "There was originally one project on navigation solutions for GA but this was suspended, probably because it involved only one company and one technology. At the meeting we produced a paper and said we wanted our own project, which we are driving, doing a segmented analysis of what GA needs. We quoted from the European Parliament's resolution supporting general aviation. This was accepted, and we have made proposals on how such a project for GA could be structured. We need to bring in our own avionics companies, like Airbox, Butterfly, makers of the FLARM, Funkwerk, who make a low-cost transponder and radio, Jeppesen, and others. The meeting was fruitful – we didn't get any signatures on contracts, but they know that this is a problem for the SESAR JU, because everything develops very slowly."

Martin Robinson added: "One of the areas where we are weak, and SESAR is weak, in not understanding fully the different segments of GA. IAOPA needs to think about where GA fits into SESAR and produce a draft working paper to support this workshop. We need to invite other GA organisations to come for a discussion – find out where the sports parachutists, helicopters, gliders, ultralights fit in. What we want out of SESAR is better access to airports, better access to airspace, more direct routings without increased distance and fuel burn. Without IAOPA pushing for these things, SESAR will not do them. It's a long road, but we will keep the pressure on." ■



Executive desk at the RM, from left, Pam Campbell, Martin Robinson, John Sheehan and Ben Stanley

Unleaded avgas spreads

Robust discussions on the future supply of aviation fuels set some European AOPA members against their American counterparts as the issue was classed as a battle in the continuing trade war between the two continents. While unleaded avgas has been available in parts of Europe for more than 20 years, America wants to “reinvent the wheel” in order to dominate the global market, according to AOPA Sweden’s Lars Hjelmberg.

Lars owns the Swedish oil company Hjelmco Oil, which pioneered unleaded avgas 30 years ago and has 70 percent of the Swedish market. The US Environmental Protection Agency’s recent demand that the lead be got out of avgas in short order has caused a frisson in America, but they are not prepared to look at what has already been achieved beyond their shores, Lars said.

Unleaded avgas was spreading across Europe, he added. “This year it will be produced in Poland, Sweden and France. Total in France has decided to launch a 91 octane unleaded, a similar fuel to that which has been produced in Sweden for 20 years, but slightly less quality. That is based on a US military standard used for UAVs with Rotax engines, which have problems if they use 100LL.

“In Sweden we produce unleaded avgas to a US civil standard, while Poland is producing 91 octane, too. So we’ve got three producers, one in the south, one in the centre of the continent and one in the north which can provide for the entire European Union. Swedish fuel has approvals for use in Continental, Lycoming and Rotax engines. The military grade as yet only has Lycoming and Continental approval, but others will come.



Louis Rousseau

Above: engines like the Continental IO-240B can run on unleaded

“The problem has been that you are required to follow the Pilots Operating Handbook on which fuel you use, regardless of what the engine manufacturer approves. If Piper or Cessna say in the POH that leaded avgas must be used, then it doesn’t matter what Lycoming allows. Quite often the POH and the engine plaque disagree on what you can use. The aircraft manufacturers have not co-operated to change the fuel requirements in their POH. Piper says they don’t have the resources to change all old POHs, Cessna says the same.

“But EASA is going to take a lead in this, and will soon issue a special Airworthiness Bulletin in which they will say the Swedish fuel is useable in all aircraft with the approval of the engine manufacturer, regardless of what the POH says. This is also assumed to apply to

the Total unleaded, and I presume in time to the Polish product.”

(See separate story on EASA’s fuel SIB.)

Some countries were also looking at encouraging the switch to unleaded avgas with tax incentives, he added. “The Swedish Environment Agency has been trying to get lower taxes on unleaded – today the tax on both fuels is the same. Because the military standard is classed as a new product, there is the possibility of having it tax-free for five years because of its environmental benefits. I have tried to co-ordinate this with Total in France, but they seem little interested in end-user taxes and they have directed me to the French finance ministry.

“But the Swedish Environment Ministry requested a report from the Swedish CAA, which is now out for comment, and it looks like at least in Sweden, we are making good progress.”

Mogas as a substitute is not promising, partly because power is compromised by Europe’s stipulation on ethanol content. Blazej Krupa of AOPA Poland, himself an oil industry executive, said: “Mogas in Germany has high content of ethanol, which is forbidden in other countries, and by Rotax for use in their



Above: Lars Hjelmberg (left) of AOPA Sweden with IAOPA Senior Vice President Martin Robinson

engines, so they are withdrawing mogas in Germany and will be refilling mogas tanks with 91 UL.”

The main difference between Europe and America is the relative number of aircraft that can use unleaded without modification. In Europe, the JAA largely killed off the high-performance light twin and more than 90

Green light for unleaded from EASA

EASA has authorised the use of unleaded avgas in all engines where it is permitted by the engine manufacturer. EASA Safety Information Bulletin No 2010-31, issued in November, concerns Hjelmco 91/96 UL and Hjelmco 91/98 UL and reads:

“This SIB is published to inform all owners and operators of aeroplanes powered by spark-ignited piston engines about the use of unleaded Hjelmco Avgas 91/96 UL and unleaded Hjelmco Avgas 91/98 UL produced by Hjelmco Oil Inc.

“Hjelmco Avgas 91/96 UL and Hjelmco Avgas 91/98 UL meet the requirements of MIL-G-5572 and ASTM D910-07 for grade 91/96 and 91/98 fuel (except of colour), as well as the requirements of ASTM D7547-09. Hjelmco Avgas 91/96 UL or Hjelmco Avgas 91/98 UL may be used, if approved for the particular engine types. No additional approval is required for the aeroplane, provided the aeroplane is already approved for operation with Avgas (according to ASTM D910, Def Stan 91-90, Mil-G-5572, GOST1012-72 or equivalent) and the engine is already approved to use Avgas 91/96 UL, Avgas 91/98 UL, Avgas 80/87, Avgas 80, Avgas 78 or, for Kalisz engines only, Avgas 91/115. This is information only. Recommendations are not mandatory.”

The SIB warns that use of unleaded avgas in non-approved engines could lead to damage or ultimately failure due to the lower Motor Octane Number of the fuel compared to avgas 100LL. It makes a number of recommendations:

- Verify that the engine is approved for use of avgas 91/96 UL, Avgas 91/98 UL, in certain cases Avgas 91/115 or lower octane.
- Verify that the engine has not been modified or altered and meets specifications of the original engine type certificate.
- Check the engine data plate for octane requirements and confirm stamped 91/96 or less.
- Check the temperature limitations in the engine operating manual.
- Check the engine temperature limitations in the POH or Aeroplane Flight Manual. These values should be equal or lower than the temperature limitations of the engine operating manual.
- Install on each fuel cap a label from Hjelmco Oil or make your own placard identifying that Hjelmco Avgas 91/96 UL and Hjelmco Avgas 91/98 UL are acceptable fuel for the aeroplane.
- For Lycoming engines only, when using unleaded avgas, update POH and engine manual specifying that engine oils must be used as detailed in Lycoming SI 1409A.



Above: Lars Hjelmberg’s company has 70% of the Swedish market

→ percent of aircraft can take unleaded. In America, however, high-performance twins are alive and well in large numbers. And even though aircraft which need leaded avgas make up only 30 percent of the fleet, they burn 70 percent of the avgas.

Craig Spence, Vice President of Regulatory Affairs for AOPA US, detailed the current moves by the EPA, prompted by Friends of the Earth, to outlaw leaded fuels. While the amount of lead in the air is a minuscule fraction of what it was when all cars ran on leaded fuel, general aviation now produces about half of that fraction, and AOPA in the US is pushing an industry-wide replacement initiative.

Craig said: "There are a number of alternatives, but the bottom line is that an agreement with industry to move towards a drop-in replacement, not requiring modifications, is what is needed now. The industry is committed to work with the EPA, and we hope to forestall any finding of 'hazard' which would cause major problems."



Left: AOPA delegates from Italy, Ireland, Greece, Germany and France

about 100 octane, we tested it in Switzerland in 2005; it's been stalled by the US oil companies, and by some aircraft and engine manufacturers. There is already an alternative, but it's not American, and they want the global market. The coalition in the US that is working towards a solution excludes non-American refiners. Unfortunately, all engine manufacturers are in the US, which means solutions

from elsewhere will come to nothing because they're 'not invented here'. But Europe will make its own decision."

Martin Robinson suggested a European task force led by Lars Hjelmberg and Blazej Krupa, both oil industry executives, but there was little appetite for the idea; instead, Lars Hjelmberg has been asked to report to IAOPA on developments in Europe. Blazej Krupa will also provide a position paper which IAOPA will take to the EC. ■

Who's got the frequencies?

Dr Michael Erb, Managing Director of AOPA Germany, updated delegates on the situation with 8.33 radio across Europe. Little has changed, with countries like France, the UK, Netherlands and Germany pushing for the reduced channel spacing to be brought down to ground level – it is currently used over FL195. IAOPA has long argued that the change is unnecessary as the objective could more easily be achieved by centralising frequency allocation. Currently each country allocates its own frequencies, which leads to duplication and waste, and there are countless 'hidden' frequencies held in reserve by companies and organisations which are never used. The European Commission has accepted IAOPA's argument that the 27 frequency allocation offices in Europe should be replaced by two guys in

Brussels. IAOPA points out that NATO has done this, and has solved its perceived frequency shortage at a stroke. But many countries claim this is a matter of national sovereignty and they are backed by vested interests with empires to protect. So the easiest solution they see is to force all general aviation aircraft



Dr Michael Erb

to re-equip with new radios, a billion-euro programme which won't cost them a penny.

Dr Erb said: "The airlines have already equipped with 8.33 for use at the higher flight levels so general aviation is on its own on this one. Eurocontrol, which is run by the member states, is pushing for 8.33. But there is no complete file of all frequencies, who is using them and where available in Europe. Not even the European Commission can get one. We are

pinning our hopes on the EC, which supports our view, but we have no guarantees of success. So if you are upgrading your radios, be sure you go for 8.33. Don't believe the salesman who says it's not going to come – spend the extra and be on the safe side."

Martin Robinson added that the current thinking would require forward-fit of all new aircraft sold after 2012, but the situation on retro-fitting was fluid. The date spoken of was 2018, and if they left it any longer than that, they might find themselves mandating 8.33 after they'd mandated digital radios, so you might be forced to re-equip twice in a short time. "In the meantime, if you're upgrading radios make sure you have the 8.33 option," he said. ■

ICAO move on LSAs

IAOPA General Secretary John Sheehan reported that as the Regional Meeting was going on, IAOPA's representative to ICAO Frank Hofmann was presenting a paper advocating one of the resolutions that came out of the World Assembly in April, namely that Light Sport Aircraft be accepted as real planes for which real licences are required, so that their pilots and engineers could amass credits towards private and commercial licences. "It's getting increasingly expensive and difficult to qualify as pilots and engineers," John said, "and anything that could make it easier and less expensive is going to have a positive effect."

Lebanon bound

The next IAOPA Europe regional meeting will be held in Beirut on March 25th and 26th 2011. As often as possible IAOPA attempts to hold regional meetings in countries where general aviation faces the greatest challenges, inviting national aviation authorities in order to show them what healthy general aviation could do for their economies. While the GA situation in Lebanon has improved in recent years and AOPA Lebanon has a good rapport with the aviation authorities, it still faces significant hurdles. In particular, Lebanese pilots find it almost impossible to leave the country. IAOPA has been working to open Cypriot airspace to Lebanese pilots and has won some concessions, but much more work needs to be done.



Right: AOPA Lebanon's Hadi and Haytham Azhari, hosts of the next Regional Meeting