

WINTER 2000/2001

This issue of focus sponsored by:

TRW Aeronautical Systems

Lucas Aerospace

ISSUE 41

THE OFFICIAL PUBLICATION OF THE UNITED KINGDOM FLIGHT SAFETY COMMITTEE

IIIIII - IIII

amante (

ISSN 1335-1523

The Official Publication of **THE UNITED KINGDOM FLIGHT SAFETY COMMITTEE**

ISSN: 1335-1523

Committee.

Editorial Office: Ed Paintin The Graham Suite

Surrey. GU24 8HX

Andrew Phillips

39 Hale Reeds

FOCUS on Commercial Aviation Safety is published quarterly by The UK Flight Safety

Fairoaks Airport, Chobham, Woking,

Office Hours: 0900-1630 Monday-Friday

Tel: 01252-712434 Mobile: 0836-677377 email: andrew@phillips91.fsnet.co.uk

Printed by Woking Print and Publicity Ltd The Print Works, St Johns Lye, St Johns,

Tel: 01483 884884 Fax: 01483 884880

Email: wokingprint@compuserve.com

FOCUS on Commercial Aviation Safety is circulated to commercial pilots, flight engineers and air traffic control officers holding current licences. It is also available on subscription to organisations or individuals at a cost of £12

FOCUS is produced solely for the purpose of improving flight safety and, unless copyright is indicated, articles may be reproduced providing that the source of material is acknowledged.

Publication of an advertisement, letter or announcement in **FOCUS** does not

necessarily imply that the UKFSC endorses any

such advertisement, letter or announcement.

Tel: 01276-855193 Fax: 855195 e-mail: ukfsc@freezone.co.uk Web Site: www.ukfsc.co.uk

Advertisement Sales Office:

Phillips Marketing Associates

Farnham, Surrey. GU9 9BN

Woking, Surrey GU21 1RS

Web: www.wokingprint.com

ISDN: 01483 598501

(+p&p) per annum.

WINTER 2000/2001

ON COMMERCIAL AVIATION SAFETY

focus

contents

Editorial	2
Chairman's Column	3
Safety is the Survival of Error Capt. Harry Hopkins	2
Follow up on Safety Management Systems - It's the People that Count Capt. Russ Williams	5
Risky Business Bill Read	6
Aeronautical Radiotelephony Communications The Editor	10
The Beginners Guide to Scheduling	12
Legal Adviser's Column Peter Martin	16
UKFSC List of Members	18
Letters	20
(Almost) Everything you Wanted to Know about RAS and RIS but were afraid to ask - A Pilot's Guide Wg Cdr Mike Strong	21
Disruptive Passenger Behaviour Feedback	22

Front Cover: Computer generated image of A3XX



The Use of Valuable Information

Most businesses now operate in an environment which enables the rapid transfer of information and its daily analysis to improve business opportunities. It is accepted that the possession of accurate information is a key factor in the success of any business enterprise.

With flight safety, the sooner we know about an incident and its possible effect on the operation the sooner remedial action can be taken to eliminate that problem, thus ensuring that the incident does not reoccur.

For this reason the implementation of a safety reporting system is critical to the information gathering process. This system should be wider than for the mandated events as required by the Mandatory Occurrence Reporting (MOR). It should allow flight crew or ground staff to report any incident or observation that may affect the safe operation of an aircraft or, in an even wider sense, the service.

The recipient of this information, usually the flight safety officer/manager, must be responsible for ensuring that the necessary information is passed to the relevant manager so that corrective action can be taken as quickly as possible.

When the transmission of this information is, for whatever reason, either delayed or, worse, not sent on, then the safe operation of the service could be placed at risk. In the worst case this could result in an accident. Statistics show that smaller operators rarely survive a major accident. Even if they do, the expense incurred is enormous. If the management of an operator is truly committed to flight safety, it should be doing everything possible to ensure that vital information is collected, analysed and acted upon quickly and efficiently.

To do this management must ensure that:-

- The management climate is such that staff feel they can submit safety information without fear of retribution. Because of the nature of the information, staff may feel that they need to submit such information under confidential cover. If this is the case then they should be able to do so without reservation. If a company policy exists that says all personally addressed mail will be opened even if marked "Confidential" then a very important source of critical safety information may be lost. The management of any such organisation must then take full responsibility for what may follow.
- The necessary procedures and mechanisms are in place to enable staff easily to submit the necessary reports. Long reports and difficult procedures will inhibit the submission of reports. Short factual reports can always be followed up by telephone if necessary. Ask your flight crew what they think of the current reporting system and be prepared to accept their comments. They could well help you to improve the system.
- The information is analysed and acted upon as soon as possible. This information should be used as an indicator to a possible incident or accident, or conversely, to peace of mind in the knowledge that the operation is operating relatively safely.

- Action must be taken by the departmental manager responsible on every safety matter raised. Knowing that there is a problem and choosing not to take action is **not an option**.
- The Safety Officer/Manager checks to ensure that suitable action is taken and where action is not taken that departmental managers and the accountable manager are aware of the possible consequences of such nonaction. The task of the Safety Officer/Manager is to act as an alarm for the accountable manager.
 Please do not silence the alarm or shoot the messenger.

It is regrettable that we continue to hear of flight safety officers/managers being asked to relinquish their positions for company political reasons. It is disappointing that flight safety officers/managers ask to be relieved of their positions because of a perceived lack of support from senior management. It is a real shame that critical safety information is not being collected because company policies insist that all personally addressed post be opened centrally.

On a brighter note it is encouraging that many operators have been able to create a positive safety culture with open reporting systems and a strong safety philosophy. When their leaders say, "In our organisation we place safety on an equal level with profit", and when their actions confirm this, it is very difficult to have anything other than respect and admiration for them.

Flight Safety is more than just saying the correct words.





Repeating the Mistakes of the Past

by Captain Tom Croke

Over the years the management of aviation safety has seen many innovative initiatives. All have contributed to an improving safety record in what is a hostile environment. The industry itself considers that further safety enhancement is still the number one goal, if the current low level of accidents is to be improved upon while expanding significantly into the new millennium. The cost of, and commitment to this goal, is generally industry driven in partnership with regulatory authorities and other agencies.

However, over the last five years there has been a significant shift in how errors, omissions or incapacity are dealt with. On the one hand some regulatory authorities see regulation as meaning enforcement, with little discretion left to the regulators by their management and the legislators. While there have been relatively few prosecutions and even fewer convictions, this worrying trend continues to grow. The recent tragic accident in Taipei, where the crew were held in Taiwan with the threat of criminal prosecution hanging over them is but the latest in a line of threatened prosecutions of the operating crew involved in an accident or serious incident.

For many years the aviation industry had a very strict punitive approach to errors made by the crew involved in a serious incident or accident. This was mirrored by the investigative authorities who regularly found "pilot error" as the primary cause of most accidents. The realisation that this punitive approach and "blame" culture was having no beneficial effect on safety led many enlightened airlines to see that a radically different approach was needed. The establishment of a "retribution free" reporting environment and a co-operative approach between the Body Corporate and its safety critical operational staff has led many airlines to improved safety records. The thought

that those advances are to be reversed by forces outside the industry must be anathema to all of us.

Nobody in aviation feels that criminally negligent or wilful misconduct should go unpunished. Those guilty of such acts must be dealt with in accordance with the law. In most cases the accidents/incidents are caused by a series of contributing factors. Many of these contributing factors, while outside the "end users" (pilot's, engineer's, ground staff) control, are the responsibility of other agencies that should have addressed such deficiencies before the accident/incident happened. The current United Kingdom proposals to place on the statute books an offence of Corporate Killing seems to locate the ultimate responsibility for such events at the level where it should be placed.

All professionals involved in complex areas, doctors, lawyers, judges, pilots are subject to the same human frailty as other mortals. To prosecute Aviation Professionals for error is akin to saying that the judge whose judgement is overturned on appeal should be then tried for his error or that the doctor whose patient dies through error should be criminally prosecuted as routine. The investigative process in a "no blame" culture has served aviation and society well. The improvement in safety achieved by airlines using the "retribution free" cooperative approach has led to more open reporting of safety deficiencies leading to improved safety. Turning the clock back to the culture of criminal and civil prosecution for those who, through error, are involved in accidents/incidents will compel society to repeat the mistakes of that culture.

Since this is the last Chairman's column for this year I would like to thank you all for your support of the UKFSC and I wish you and yours a very happy and peaceful Christmas and a safe and prosperous 2001.





Safety is the Survival of Error

by Captain Harry Hopkins

The articles on Safety Management and CRM prompted me to reflect on some old ideas. They are not novel, but are basic to the attitude to safety.

They will, I am sure, not be lost sight of in the discussion of the organisation of safety management. But I hope that your readers will accept that they bear repeating.

1. The first is on the relationship between the probability of an event and the effect on aircraft and occupants. Is the possibility of a frequent or remote occurrence? Are the likely effects minor or hazardous?

When it comes to aircraft design, that relationship is formalised, given numbers and laid out as a table – as a clear guide. This can be found in the ACJ to JAR25.1309.

I have always felt that the concept could be given more emphasis in the conduct of flight operations and maintenance, albeit that it is difficult to set numbers to human performance.

One of the best ways of putting some numbers to human performance in the cockpit is to fully record the types of mistake made in simulator training – firstly, and most important, during conversion training. Further data can be added in respect of errors made during refresher training and in familiarisation with new equipment or procedures. Such data, logged globally outside the training records of individuals, is valuable.

Training is, of course, directed at producing the competent crew-member and at checking continued proficiency. But ensuring a "pass" is not enough. An overview of common errors across the trainee group, on the way to acquiring skill and performance, can identify a need to change procedures or cockpit management.

Where passing errors occur more sporadically, among otherwise competent individuals, but where the consequence in real operation could be hazardous, even a low frequency of such events could dictate changes.

2. The record of past accidents had shown three particular flaws in the historic management of safety:

 (a) the tendency for the report rate of uncorrected and chronic deficiencies to dwindle away, as existing pilots tire of reporting them – sometimes followed by a fatal discovery by a future pilot, new to the type or operation;

- (b) the concept of the "isolated incident"; such an interpretation can result in setting further action aside, without a deep examination of possible consequences.
- (c) the failure to recognise, in an incident, the fact that the avoidance of a fatal accident was purely fortuitous.

In the first case the do-nothing argument can be justified by saying: "look, the problem has gone away."

The second case is evidently inviting a further event, to establish conviction in a hazard. Perhaps that will be too late. Remember – death is an isolated event!

The third case, which might arise in airmiss occurrences, could apply to an event that was just an incident because of margins in time and airspace. Those margins could just as easily have not been present, with dire consequences.

As articles in the autumn issue have indicated, aviation safety is a matter of attitudes. The main ones for management are an insistence on being fully aware of all incidents and determination to make a full appraisal of risk, before any incident becomes an accident.



Follow up on Safety Management Systems -It's the People that Count

by Captain Russ Williams MRAeS

read with interest the article on Safety Management by Mike Overall, a former colleague of mine in the CAA. By way perhaps of adding to his theme, I would emphasise that the main aim in any company has to be to get the right safety people in the right job with, most importantly, the right Terms of Reference and the right Job Description. This is what dictates, for all to see, the level of autonomy bestowed upon the FSO and the safety culture flows from that.

In today's ever changing aviation industry, the FSO's have to be competent, knowledgeable, flexible, realistic, aware, suspicious, enquiring, a sympathetic listener, adamant and clairvoyant, to name but a few of their qualities! Additionally, they have to have a complete understanding of the pressures imposed on both crews and

engineering/maintenance staff and how, as human beings when the chips are down, those personnel are likely to react.

One of the main problems in promoting the company's safety culture is that whilst the personnel are all highly professional pilots, engineers, cabin crew etc, and extremely well versed in their own sphere of activity, they cannot possibly achieve that level of expertise across other disciplines. An 'expert' pilot cannot fully understand all the nuances and problems faced by an 'expert' engineer, and vice versa. That cross-disciplinary gap can never be fully bridged, obviously, but by constant liaison and by 'spreading the word', then a better mutual understanding and a narrowing of the gap can perhaps follow.

By way of an example, many years ago an aircraft returned to base with smoke and fumes in the cockpit. It was put down to the windscreen wipers when switched

to the park position. There was no spare readily available and since the problem only occurred when the switch was turned to the park position, engineering decided to carry the defect forward in the Technical Log. As an added precaution they stuck some Dymo Tape alongside the switch on the overhead panel reminding the crew not to use the switch in the park position.

Later that day, another crew took over the aircraft, noted the CFD, and launched into their multi-sector flight. Several hours later, in light rain, the Captain reached up and switched on the wipers momentarily. When the windscreen was cleared, he switched them off again and

automatically and instinctively turned the switch to the Park position, and yes you've got it, this was accompanied by smoke and fumes in the cockpit and an aborted flight again.

Several weeks later, as the company FSO, I met our Chief Engineer for our regular survey of MOR's. When we discussed this incident he was bemoaning the stupidity of the pilot for using the switch in the park position in spite of it being a CFD and the notice pasted alongside the switch. I tried to explain but, getting nowhere, resorted to setting an example. I asked the CE what hand he normally answered his telephone with. His left hand was the reply. OK, I'll put some Dymo tape on the phone to say "Answer with your right hand only". No need, I'll remember he responded.

We continued for a further ten or fifteen minutes going through the other safety incidents when, suddenly, the telephone rang. He excused himself and reached forward and automatically and instinctively picked the phone up with his left hand - as he always did! My imaginary loaded shot gun pointed at him between the eyes and fired. His conversation stopped and his jaw dropped open as it dawned on him. I had spread the word and he'd got the message! The gap had narrowed - it's the people that count and their understanding across the disciplines that can undoubtedly enhance the safety culture in a company.

focus



Airstaff Associates

in association with

Nigel Bauer & Associates

QUALITY MANAGEMENT FOR OPERATORS * JAR-OPS Quality Systems, documentation & auditing 5 days - LGW - 22 Jan, 19 Mar, 04 Jun

> SAFETY MANAGEMENT SYSTEMS SMS course for air & ground operators 2 days - LGW - 03 Apr

AUDITING IN AN OPERATIONAL ENVIRONMENT * Air & ground operations auditing 3 days - on request or 'in-company'

> AUDIT IMPROVEMENT WORKSHOP Experience sharing & improvement of audit process 2 days - LGW - 05 Apr

QUALITY FOR SENIOR MANAGEMENT NEW FOR 2000 - JAR Quality Management 2 days - 'in-company' only

* Incorporating Nigel Bauer & Associates IRCA certificated Internal Auditor Training course

For further details including In-Company courses and consultancy or auditing services please contact:

Airstaff Associates: Tel +44 (0) 1780 721223

e-mail: info@airstaff.co.uk www.airstaff.co.uk

Fax +44 (0) 1780 720032 Nigel Bauer & Associates: Fax +44 (0) 1243 789121

Tel +44 (0) 1243 778121 e-mail: nigel.bauer@nb-a.demon.co.uk www.nb-a.demon.co.uk

Risky business

by Bill Read

Aviation safety is not limited to the actions of air traffic controllers and pilots. Instead, a wide variety of individuals and organisations working on the ground and in the air are collectively responsible for ensuring that aviation accidents do not occur. A recent seminar on 'Aviation at risk' organised by the UK Flight Safety Committee examined the different perspectives of what constitutes aviation safety and what actions can be taken by decision makers to achieve it. Bill Read, Production Editor of the Royal Aeronautical Society, reports.

Introducing the seminar, UKFSC chairman Capt Tom Croke reminded delegates that aviation of itself is not inherently dangerous, but is terribly unforgiving of any carelessness, incapacity or neglect. There are no new accidents, only new people waiting for the old accidents to happen to them.

In addressing the problem of safety, he explained, the aviation industry is facing a number of different issues. The first of these is that, before risks can be managed and minimised, they must be identified over the whole spectrum of the air transport industry. Secondly, aviation safety is a popular topic with the public and the media, and safety personnel must ensure that their own response to air accidents must maintain a cool, analytical and measured approach. Finally, even if the probability of an air incident remains at its present level, the overall number of accidents will inevitably rise as the volume of air traffic increases. It is therefore vital not just to maintain existing levels of safety, but continually to increase them.

These issues were then developed further by MP Gwyneth Dunwoody, who warned the aviation industry of sometimes not looking beyond its own immediate environment. Aviation safety is dependent on a wide variety of factors and must be looked at in wider terms than just airports. Ms Dunwoody highlighted a number of anomalies and inconsistencies in existing safety regulations and stressed the need for an overall aviation policy. To be effective, safety standards must be recognisable, enforceable and consistent.



Turning to the cost of safety, companies involved in aviation should always bear in mind the old adage that 'If you think safety is expensive, then try having an accident.' Not only did air transport companies face the risk of loss of confidence, traffic and revenue, but also soon would be confronted with the legal implications of the new 'corporate killing' legislation. Already there were growing concerns over the effect on accident investigations of the spread of 'sue first and ask questions afterwards' litigation. It should be the aim of such investigations to discover the truth without the need for lobbying from interested parties.

Ms Dunwoody summarised a number of recommendations to the UK Government provided by the Commons Select Committee's July 1999 Report into Aviation Safety. These included proposal for the incorporation of a safety regulator within a new independent safety transport authority; the public accountability of the Civil Aviation Authority (CAA) to reports from the Air Accidents Investigation Branch (AAIB); and the enforcement of safety standards over sub-contractors working within the air transport industry. She also expressed her concern over potential safety versus commercial decisions following the privatisation of Nats, the UK's national air traffic service.

An accident rate of zero is achievable, according to Jacques Berghmans of Du Pont, a chemical company with a particular emphasis on safety issues. Although the number of major accidents within the air industry is very low (one accident in every 2.1 million departures), the number of working days lost due to more minor incidents is one of the highest within industry. Although they are 'invisible' to the public eye, industrial injuries have a knock on effect on businesses as they indirectly affect employee morale, operations, production and profits. To reduce serious accidents, it is also necessary to reduce minor accidents.

The air transport industry is having to face up to a number of external demands caused by a rise in passenger traffic levels, consolidation among aerospace

focus



suppliers, increase in workload, calls for better service and quality and more government regulations. It also faces conflicting internal demands from management, shareholders, employees, customers and society at large. However, by concentrating on safety issues, many of these demands could be tackled simultaneously. Accidents cost money and by their reduction, everyone benefits.

The key to better safety is the involvement of employees. Safety is not just a matter for managers or regulators, but for everyone working within the air transport industry. Through a combination of managerial commitment, workforce participation, communication, responsibility accountability and training, everyone in a company assumes a mutual responsibility to improving the safety culture. As well as personnel, safety also needs to include the maintenance and updating of technology and facilities. In the case of airports, this 'total safety concept' covers process, occupational and product safety, encompassing airport authorities, carriers, ground services, air traffic control and police.

An overview of the UK's Health & Safety Executive's (HSE) regulatory style was provided by Clive Norris, principal safety advisor. After explaining that the HSE is mostly concerned with ground operations, Mr Norris outlined how its role is to set up a regulatory framework in which risks could be assessed and controlled. The Executive operates on four regulatory principles, namely proportionality (aiming at a good outcome); consistency; transparency (being open about its work); and targeting (looking for the biggest payoff. The aim of the HSE is to encourage industry self-regulation in which its role would be to set objectives rather than means and to advise on regulations in preference to enforcing them. With this in mind a memorandum of understanding (MoU) was signed with the CAA in April 1998 defining areas of responsibility.



However, Mr Norris issued a word of warning concerning the enforcement of aviation regulations. Echoing some of Jacques Bergman's comments, he pointed out that aviation's accident record, currently running at around 1,200 incidents per year, is actually worse that those present in other 'high risk' industries such as construction and agriculture. Operators are being pressurised to increase turnaround speeds and tighten deadlines. This was accompanied by an increase in the use of sub-contractors for certain tasks. Accidents on the loading ramp in particular are on the increase and penalty fines are not passed on to those who are responsible. Sub-contractors were not being properly monitored and that there is no clear indication of who is responsible for safety.



A contrary view to Jacques Berghmans was held by Matthew Day from insurance brokers Willis, who stated that absolute safety was impossible, and that the aim should be for reasonable safety. After reiterating the earlier points on the negative cost of ignoring safety and the link between higher risks and increased accidents, Mr Day highlighted the fact that safety improvements sometimes were prevented by organisational structures. Conflicting messages were being sent by managers who failed to communicate with employees and didn't lead by example. There was a need to apply the safety practices used for aircraft in flight to other aviation industries.

Safety audits are not always the answer, he cautioned, as having to cope with too many audits may overload supervisors, leading to apathy or a neglect of other duties. Quality assurance imposed from the outside is not the answer; the desire for safety and quality should come from within an organisation.

Representing National Air Traffic Services, Euan Black explained how NATS was addressing safety issues while facing an increase in traffic of between 4 to 6% per year. While quality assurance systems are important, what is also needed is quality management to encourage people to work in open and honest fashion. NATS is developing a business plan in which risk is managed through a safety management system (SMS). The operation of the NATS' SMS is controlled by safety steering groups and air traffic control safety committees reporting to a safety review committee. New procedures and support tools are being introduced with the aim of reducing complexity, increasing safety and avoiding overload on controllers. The new Swanwick air traffic control centre is currently being tested and is due to open in 2002.

Mr Black agreed with previous speakers that accurate monitoring of the effect of safety procedures in reducing accidents was difficult, particularly in certain European countries where there are incomplete statistics on the number of near accidents. However, he claimed that the number of incidents attributable to NATS had decreased, in particular action had been taken to reduce the incidence of 'level busts' (of which there were 450 reported cases in 1999) where aircraft failed to maintain the required altitude separation. He also played down recent media allegations that computer software 'bugs' are still causing problems at Swanwick and that the proposed privatepublic partnership of NATS would adversely affect safety.



The influence of airports in flight safety is a vital one. Paul Fox of BAA told delegates about the many risk factors that are faced at Heathrow. These include direct safety aspects, such as keeping runways clear and the prevention of bird strike hazards; and indirect hazards, such as the increase in passenger 'air rage'. It must be realised that, as far as passengers are concerned, the air journey was a continuous process whether they were in airport buses, terminals or aircraft and that any negative experience reflected on the whole air industry.

Heathrow is currently facing the problem of how to increase its capacity with its existing facilities, at least until a decision on the new Terminal 5 is reached. The objective is for growth - but safe growth. This will be achieved through changes in aircraft-terminal infrastructure and procedures, such as improved aircraft loading systems, minimum runway occupancy, more ground lighting and faster turnaround times. The aim is also to improve passenger facilities, through new baggage security systems, better direction signs and quality shopping. Whether the airport has yet achieved its objective of providing passengers with a 'stress free and enjoyable experience' may be subject to debate.

While taking off towards a stress-free future, Heathrow is still finding some obstacles along the runway. One of the largest of these is the problem of consistency of safety standards between different airlines and between different countries where airlines operate. Few air carriers are currently making profits and money is tight. Certain third-world airlines do not conform to the same standards as more prosperous ones. Different countries have different rules over the reporting of air accidents, so it is difficult to get accurate statistics concerning incidents. Added to this, the BAA is also affected by regulations from both the HSE and the CAA.

Although safety is good business, agreed Mr Fox, companies prefer the idea of safety to its actual enforcement. Incidents still occur, over 50% of which are caused by human error. Minor collisions between vehicles and aircraft on the ground is a particular problem. Once again, the need



is for a co-ordinated response from all the businesses working at the airport, to work



together and encourage a safety culture. Openness and honesty in admitting responsibility for accidents was essential in encouraging safety. While learning from mistakes was more important than who to blame, a 'no blame' regime could be equally problematic. One possible solution might be the setting up of a 'points' system for contractors working at the airport, with a certain level of infringements leading to the loss of a company's operating licence.

Richie Profit from the Safety Regulation Group of the CAA emphasised the need for documentation and traceability in safety management systems (SMS). 'If you can measure it,' he commented, "you can fix it." Effective safety management can minimise the risk of an accident occurring by detecting its sources in advance. However, to be meaningful, a safety policy not only should comply with safety standards, but also should include procedures for training and supervision of staff and sub-contractors; the reporting of results; and regular safety audits and assessments. Through this method, any deviation from procedures can be identified before it leads to an accident.

Although agreeing with much of what had been said by the previous speakers, Mr Profit disagreed with Gwyneth Dunwoody's proposal for a single unified regulatory authority. Air transport needs to be regulated by aviation experts otherwise there would be no synergy.

Continuing the theme of safety management systems, independent advisor Mike Overall examined why many companies have failed to make progress with safety management systems. One of the major problems is that SMS is not treated seriously at board level with a lack of management commitment to safety, insufficient resources and poor organisation. Three requisites are required for an effective SMS: a comprehensive approach, effective organisation and robust systems. Safety should be treated like any other company division, with a proper manager, planning, targets, budget and results. As well as leading, the role of managers is also to set up effective corporate organisations and systems in which a safety culture can thrive.

The final speaker Peter Martin outlined the progress of new legislation on 'corporate killing' and how it will affect companies and their managers. First suggested by the Law Commission in 1995, this new legislation is currently at the proposal stage and is due to become law around the end of 2001. The final form of the corporate killing legislation is still under debate, but it could include company executives being held to blame for accidents caused by 'conduct falling far below from that which can be reasonably expected.' If this proves to be the case, then companies involved in fatal accidents will run the risk not only of paying compensation but also of having their employees being prosecuted. In such a situation, accurate and measurable records of a company's safety policy would become important evidence.

This article was published by the Royal Aeronautical Society in the December 2000 edition of Aerospace International and is reprinted with permission.



Aeronautical Radiotelephony Communications

by The Editor

During the past few years the concern expressed by flight crews about the use of languages other than English in controlled air space has been on the increase. The main geographical area of concern has been centred on South	States agree, as part of their Convention obligations, to collaborate in securing the highest degree of uniformity in regulations, standards, procedures, and organisation and they do this by means of international standards and	Note - The language normally used by the station on the ground may not necessarily be the language of the State in which it is located.
Western Europe. However, reports on this issue have also been received from South America and Africa.	recommended practices and procedures which are set out in the many technical Annexes to the Convention.	5.2.1.1.2 Recommendation – Pending the development and adoption of a more suitable form of speech for universal use in aeronautical radiatelephony communications, the
Many pilots have asked why no action has been taken to rectify this matter since, after all, if the non-use of English constitutes a safety risk then offenders should be forced to do so.	At the first meeting of the ICAO Assembly, as long ago as 1947, definitions summarised below were adopted:-	English language should be used as such and should be available on request from any aircraft station unable to comply with 5.2.1.1.1 at all stations on the ground serving
	Standard means any specification the uniform application of which is necessary for the safety of air pavigation	designated airports and routes used by international air services.
In order for us to better understand why the use of English is not universal it is necessary to look at the sovereignty rule of Article 1 of the Chicago Convention and to look then at the wording contained in ICAO Annex 10, Volume II, Chapter 5, Page 39.	Recommended practices means any specification which is recognised as desirable in the interests of safety.	Note 1 - While the Contracting State designates the airports to be used and the routes to be followed by international air services, the formulation of ICAO opinions and recommendations to contracting States concerned is carried out by Council ordinarily on the basis of
Article 1 of the Chicago Convention provides:-	Now let us look at the relevant wording of Annex 10:-	recommendations of Regional Air Navigation Meetings.
"The contracting States recognise that every State has complete and exclusive sovereignty over the airspace above its territory."	" Chapter 5	Note 2 - In certain regions the availability of another language, in addition to English, may be agreed upon regionally
	5.2.1 General	as a requirement for stations on the ground in that region.
This means what it says, namely that in the absence of agreement between States derogating from this complete and exclusive sovereignty, what a State says, goes and there can be no argument about it.	5.2.1.1 Language to be used	Note 3 - The development mentioned in 5.2.1.1.2 is the subject of continuing
	5.2.1.1.1 Recommendation – In general, the air-ground radiotelephony communications should be conducted in the language normally used by the station	study are laid down in Attachment B.

on the ground.

- 5.2.1.1.3 **Recommendation** Pending implementation of 5.2.1.1.2, and when the aircraft station and the station on the ground cannot use a common language, arrangements should be made between the competent Authority and the aircraft operating agency concerned for the provision of an interpreter by the latter.
- 5.2.1.1.4 When provided, such interpreters shall be permitted to have access to and use of radiotelephone channels under the supervision of the controller on duty.
- 5.2.1.1.5 The language normally used by and other languages that may be used on request on the ground shall form part of the Aeronautical Information Publication and other published aeronautical information concerning such facilities.

Thus, it may easily be seen that the crux of the matter lies in the sovereignty rule and the use of the word "recommendation" in the ICAO Annex. This is a very delicate matter and it is clear that complaints of the non-use of English cannot always be justified.

Under the sovereignty rule each State has its own applicable aeronautical legislation and this may include the aeronautical language to be used within the borders of that State. Out of courtesy and in the interests of good international cooperation most of the States parties to the Chicago Convention have accepted the recommendation of ICAO and facilitate the use of English as the aeronautical radiotelephony communications language. Some apply this to a lesser or greater extent than others and so the use of English varies throughout the world but in the main works satisfactorily.

Where English is not the national language of the country concerned air traffic staff have to work in a second or third language, which is not easy. The quality of the speech therefore is at times not as good as it might otherwise be. We should however be grateful to them for their efforts, as otherwise pilots would need to speak many languages other than English.

focus

While the UKFSC understands the concerns of the flight crews and the risks involved we need to be aware that such matters as these will only be resolved by negotiation. Trying to force change on unwilling States will only lead to greater resistance.

So, be grateful, be patient, but most of all be aware and be careful!



NEED TO SUB CHARTER? TAKE OFF WITH BWA BWA are able to cover any sub charter or leasing requirement ... 17 W 08 TRITISH LACK OF AVAILABILITY LAST MINUTE AOG COVER MARKET TESTING MAINTENANCE COVER Our fleet is available, long or short term to support your airline operation worldwide. B 737-300 148 seat BAe ATP (QC) 66 / 68 seat Freight 6,600 kgs BAC (BAe) 1-11 (500) 114 / 119 seat 99 seat club class 87 seat business class BRITISH AIRLINES Please contact Mike Sessions, Sales Director • Viscount House • London Southend Airport • Essex SS2 6YL • England • www.british-world.com • Sita. Senscv//SenopyF TEL: +44 (0) 1702 354435 +44(0)1702 350194 FAX:

The Beginners Guide to Scheduling

Scheduling can be a bit of a mystery, not helped by the fact that scheduling systems can often be more complex than they need to be. New members joining an airline and even those transferring from one fleet to another can be confronted with a totally new system, and a steep learning curve. In addition scheduling systems are coming under increasing change with the impact of new technologies. Our Sage of Scheduling, Scheduling Officer Trevor Phillips and I attended a recent conference on scheduling and crewing issues. John McGurk writes:

We felt that the conference provides an appropriate point to review some of the key issues in pilot scheduling. In this twopart article we review the main types of scheduling system used in flight deck crewing, examine some of the new technology which is being brought to bear and the industrial and bargaining issues which are developing.

To provide an introduction and update on scheduling and rostering to those who may know very little we've decided to pool our combined experiences of that conference. We will walk members through the main issues in scheduling, briefly describing the different systems and procedures.

Trevor will then expand on some key developments within the area of scheduling and their consequences for flight deck and run the slide rule of the scheduling officers experience over these issues, pointing out the benefits, problems and conundrums to be encountered. Lastly we will finish with some key industrial issues around the scheduling area.

Scheduling Systems, The Good, The Bad and The Ugly

So why is scheduling so important? Well, as many of you know, scheduling can make the difference between whether you stay or go, its that simple. The airline which has a chaotic, unpredictable and arbitrary scheduling system usually has a higher turnover than the average premier league football club.

The Good: How to (Almost) Keep Crews Happy

A good rostering system would try to utilise the aeroplane and the crew in an optimal way, making sure that both were well utilised and efficiently rostered. That would entail the maximum productive time for the crew but consistent with decent crew rest. A good system would also have built in buffers to allow, for example, planned and short notice days off. The good rostering system would almost certainly by definition better the "statutory" or regulatory limitations of CAP 371 and the JAA, and would be incorporated in an industrial agreement. This system would also have equitability, efficiency, simplicity and transparency. In that sense it would be based on some premise of equity however agreed Seniority is the most common it would be efficient in that it would schedule the maximum number of available productive and training hours within the agreement. It would have simplicity in that it should be easily understood and have good, well understood rules, and transparency. It would be clear to everyone what everyone else was getting and it would also be made clear through good communications what was happening. The benefits of such a system are

obvious. Crews feel that they can get that day off or roster change when they need it. Such systems are normally preference based meaning that crews can "bid" for certain types of work and days off. The company gets the flexibility and efficiency to allow optimal utilisation of its aircraft and both should benefit. Such a system can also of course be fully computerised. More of that later.

Crediting the Flight Deck: Bidline Systems

Bidline systems when considering the USA in particular, are the most popular type of rostering system in large airlines. Although people disagree upon what basis they should be organised, they provide many benefits to both employers and crews. A key aspect of these systems of scheduling is the concept of credited hours. Each line of work will have a value which is set against the hours actually worked. Different values are allocated for, say, training and seat time, with the amount of these hours combined deciding whether an individual pilot or engineer is under or over their rostered hours. The system can then maximise the roster giving more to those who have worked fewer hours and taking away hours from those who are at or near limits

One drawback with bidline systems according to their detractors is the long lead-time, and the fact that one set of bids cannot in theory be easily altered. Neither of these problems is exclusive to bidline; commonly they are being addressed by technology. Long-lead times mean stability in between times in any case. People know what the "bids" are for the coming period and can plan accordingly. Obviously this stops management from rostering crews on the spot without their prior authorisation. Nevertheless an efficient bid system should be able to "build" crew pairings from those who are available.

More to the point many companies do not like the fact that bidline systems offer a largely anonymous system of work allocation. Managers cannot in effect reward favourite flvers and punish prickly pilots via the scheduling system, which is no bad thing. This is principally because systems are seniority based. Seniority based systems have their drawbacks but they are understood and everyone gets their turn. Again that's fair and transparent. It is probably as Churchill said of democracy the worst possible system apart from anything else, which exists! Many argue these systems are inefficient and costly to run. Again they may not allow instant freedom and flexibility for managers but that is not necessarily inefficient. It could just as easily be efficient by "freezing" the schedule with an element of flexibility and stopping unnecessary moves and disruptions. Yes, a good bidline system requires computers and, yes, these as we know can be expensive to run. but arguably the system pays for itself by allowing effective scheduling. Another view is that bidline is too complex as it tends to be in the hands of experts, namely scheduling reps and scheduling managers. Well any decent system has to have some rules and some hidden corners, but most people know they can learn it if they want to, and what's more much of the complexity comes from the airlines.



Sharing The Rough and The Smooth: Equitable Distribution Systems

Yes, it sounds like the latest government policy initiative but the equitable distribution/fairness system is another form of scheduling system. These systems tend to predominate in small to medium sized carriers, where there is not a great deal of variety in types and routes. The system allocates every line of work equally, So if you got too many trips to the developing oil industry location of El Hole this month. you may get the coveted one week layover to Hedonism Bay next month. According to the crewing consultants RM Systems, these scheduling systems are present in 95% of airlines worldwide. However they are fair only in the general sense that they allocate work fairly but do not recognise individual requirements and lifestyles. Some form of crew request aspect (Please can I avoid trips to El Hole!), often supplement these. Again though these are not formalised and whether vour request is granted can depend on anything from the training situation to whether the Chief Scheduler's team won that weekend. In other words its a top down system. where the employee can in the way of Oliver asks for more but if Captain Micawber the Chief Pilot needs some jackets, you may well find the response disappointing. There is little staff involvement again according to RM for whom we are indebted for much of this information: only about 20% of crews make a request. This will obviously differ according to the grade concerned but does show the limitations. We have touched on some variant of preference systems by introducing the "crew request" aspect. We will now look in some more detail at preference systems.

Preference Systems: Falling Between Two Stools?

focus

Preference systems allow staff to input their chosen types of work and their days off by using sophisticated computerised algorithms to deliver a "solution" which optimises the needs of both management and employees. They guarantee schedule coverage for management and can be combined with seniority and/or equitable distribution formulas. They also allow the flexibility to offer different variants within different options within different fleets. The preference system does recognise individual preferences but it is often marred by management insistence on roles etc. The preference system can, like the bidline system, also allow crews to be paired or crew combinations to be avoided. Co-pilots at Bounty Airlines, for example, might wish to avoid Captain Bligh who accuses you of mutiny for waiting till the Monsoon subsides before doing the walk round inspection. On the other hand First Officer Sergeant may like the disciplinarian nature of Bligh and prefer to fly with him than one of the CRM orientated nice guys. Either way they can meet or avoid the people they prefer. There are many variants such as the "day off" preference system which operates in some Scandinavian carriers. In many ways, though, the bidline and preference system are the best forms of scheduling system. What about the rest?

The Bad: It might be Legal but is it Decent?

Far from pursuing these sorts of system many airlines scheduled to operational need only, making sure they stay within the rules as laid down by the CAA in the shape of Cap 371 (the avoidance of fatigue in aircrews, guide to requirements). Some operators only work to these prescribed legal limits. It would be an accurate description of such scheduling systems (if worthy of the name) that as long as the rules permit they will in effect tie an aeroplane to a crew's backside. Where it goes they go until they run out of time. That of course means that for the aeroplane to be utilised effectively, the crew have to have many nightstops, unnecessary layovers and positioning Man becomes the slave of the machine and in guite a few circumstances, especially when that man or woman is inexperienced, might infringe even the legal ceiling. In such a system crews might find themselves unable to take time off because of scheduling problems. They will also find themselves subjected to a form of blackmail in order to ensure that their own colleagues get time off, or even their rostered days off. This is essentially a failure of management but there is much that a company council and BALPA reps can do to alleviate the situation. We'll address it later. Sometimes companies say "well we are up to the nominal limits but we will have a proper crewing system that affords you time off when you need it and respects your roster regardless of operational SNAFUs" Beware of this creature which is neither fish nor fowl, the half-baked hybrid which we will now examine.

The Ugly: How to Lose Staff' and Irritate People

Arguably the worst system is that which tries to maximise utilisation to the statutory limits or limits of an agreement, whilst at the same time purporting to introduce some element of choice and preference. Such systems are the result of a horrible mating experiment between the gods of short-term efficiency and longer-term flexibility. Since they purport to afford some choice and discretion but invariably disappoint by, for example, refusing days off or suspending promotion because of crewing difficulties they are despised by crews who often vote with their size nines by toddling off to pastures new. This roster disruption is something which has been fairly apparent in a number of airlines. Some airlines have compounded these problems by relying too much on complex automated scheduling systems. But as with any IT issue there has to be a balance. A bad scheduling system won't be rescued by a top of the range IT solution. However, IT is increasingly featuring in crew scheduling.



Gone of course, are the days when a scheduling officer sat like a Dickensian clerk scribbling away on sheets of paper trying to keep track of the system. Now both airlines and their crews benefit from technologies such as Crewsolver[™] and Carmen [™]which allows complex crewing and scheduling decisions to be made in a matter of seconds. Indeed such are the capabilities of these systems with there combined "suites" of programmes, that they are automating many personnel and operational processes. Thus they are integrating everything from fleet selection monthly staffing projections through to absence trend analysis. Indeed it's a wonder any managers are required at all. This is of course a facetious remark, as the technology needs human input and human insight if it is to function properly. Nevertheless the claims made for some systems would suggest that a way has been found to take human beings out of the loop altogether. However no matter how clever and multi-functional the computerised system, some scepticism

(without of course Luddism) needs to be observed. Some companies claim that their software can do everything, repair crews after a major traffic disruption, make sure all allowances and hotels are sorted out and read your children a bed time story when you can't get home. We made that last bit up, but with a bit of work an automated Harry Potter tale could soon be broadcast in your own synthesised voice directly to your little ones!

The general aim of such systems is to reduce deadheading, eliminate unscheduled layovers, facilitate swaps and the use of standbys and reserves in a cost effective way and eliminate idle time. This will give you a clue that many are not exactly designed to make your life easier, but to reduce costs.

For example, Continental in the US using one such system saved 65,000 block hours per month, reduced recruitment by 10 per cent and saved over \$10 million dollars. These systems obviously provide serious savings for the airlines, whilst that is desirable and even necessary in a competitive industry, there is a need to guard against the idea that they are the "silver bullet", Ultimately a sensible and fair scheduling system will require the input of staff, and that's not just the staff that input the data!

Reproduced with acknledgement to THE LOG August/September 2000 volume 61 no. 4



ITEC FULL PAGE AC

Legal Adviser's Column



Trouble on the Tracks Hatfield October 2000

by Peter Martin

The Hatfield train disaster in mid October has, once again, highlighted public concern about railway safety, not least as there have been 8 major UK accidents since March 1989.

Statistics published in The Times on 19 October 2000 show that Britain is 9th out of 12 in the listings of European railway fatalities with 0.36 deaths per billion passenger kilometres. This compares poorly with the record of Spain with 0.09 and better with Portugal, bottom of the league, with 1.55.

How do these figures compare with the ICAO 1999 fatal aircraft accident statistics? Is rail safer than air travel or do they compare well? Are we not always told that rail is the safest transport medium?

According to the preliminary 1999 figures published by ICAO, there were 20 fatal aircraft accidents in scheduled services worldwide in 1999, a statistic unchanged since 1998. ICAO data reflects only fatal accidents in aircraft of 2250kg MTOW or more.

Although the number of fatal accidents did not change, the number of killed fell in 1999 to 489, significantly less than the 905 killed in 1998.

Thus, the rate of passenger fatalities decreased in 1999 to 0.020 deaths per

100 million passenger kilometres from the 0.035 of 1998.

If my mathematics is correct, these figures demonstrate, rather surprisingly perhaps, that the passenger deaths in both transport media are broadly similar if the railway figures are extrapolated to match the aircraft accident figures – by dividing by 10. Thus, the Irish railway accident figures at 0.25 per billion passenger kilometres most nearly match the ICAO figures for the worldwide industry!

But comparisons are odious, as we all know, not least as the aircraft safety figures vary greatly for the various types of aircraft operated on scheduled passenger services. In turbojet aircraft operations, which account for 95% of the total number of scheduled services, there were 8 accidents and 347 passenger fatalities in 1999. In turboprop and piston-engined aircraft operations, representing only 5% of scheduled traffic there were 12 accidents with 142 passenger deaths.

It is worth recording that non-scheduled passenger operations in 1999 showed 22 fatal accidents resulting in 129 passenger deaths compared with 20 fatal accidents in 1998 and 191 deaths.

Railway, aviation, road transport and maritime accidents are, self evidently, each very different in character. What is more, these transport media are regulated and managed in very different ways and operate in very different commercial environments. The investigation of accidents, and the followup, from these is also very different. Would it make sense for there to be greater cross-fertilisation of ideas from experience? Do we know how safety is managed on the railways and at sea in the UK industry? Is there a case for a UKFSC sponsored conference of safety officers from all UK transport media, coach and bus included, to see what we can learn and what we can impart?

I leave the idea with you. But in these days of aviation SMS and the risk of corporate killing prosecutions (however remote) the more we know the less we risk.

The Saudia Hijacking – October 2000

Were you as surprised and mystified as I was at the very pointed refusal, widely reported in the media, of the Foreign Secretary, Robin Cook to thank the Iraqis for the speedy release and repatriation of the hijack victims? He cited as his reason the proposition that Iraq was doing only what it was obliged to do and that there was no need to thank a state for meeting its international obligations. Well, up to a point, Lord Copper, I suggest.

Iraq, the UK and Saudi Arabia are all parties to the Hague Convention 1970,

focus

also known as the "Hijacking Convention". Iraq since 1971, Saudi Arabia since 1974 and the UK also since 1971.

Article 11 of the Convention provides, very clearly, that the Contracting State in which the hijacked aircraft lands shall permit the passengers and crew to continue their journey as soon as practicable and that it will return the aircraft and its cargo to the persons lawfully entitled to their possession. Thus, it is clearly the case that under international law lrag was obliged to do what it did: there can be no question about that. But does this also mean no thanks are due? I suggest they are, if only to encourage such good behaviour from others in the future, whether we like them or not. Aviation exists on reciprocity and a few diplomatic words of thanks cost nothing. We may all suffer for this neglect of elementary good form in some other case.







Full members

Chairman Aer Lingus Capt. Tom Croke

Vice-Chairman Airclaims John Dunne

Treasurer CAA Tony Ingham

Communications Officer RAeS Peter Richards

Aerostructures Hamble Dr. Marvin Curtiss

Airtours International Capt. Tim Cheal

Air Contractors Capt. Tony Barrett-Jolley

Air Mauritius Roy Lomas

Air Seychelles Capt.Alasdair Liddle

Air Transport Avionics Colin Buck

Air 2000 Capt. Martin Pitt

ALAE John Sawyer

BAA plc Francis Richards

BAC Express Capt. David Smith

BAE SYSTEMS Reg A/C Dan Gurney

BALPA Carolyn Evans

BIH Capt. Terry Green

Bristow Helicopters Capt. Derek Whatling Britannia Airways Peter Naz

British Airways Steve Hull

British European Stuart McKie-Smith

British Mediterranean Capt. Peter Chinneck

British Midland Ruth Clark

British Midland Commuter Capt. Steve Saint

British Regional Airlines Capt. Ed Pooley

British World Airlines Capt. Shireen McVicker

Brymon Airways Capt. Martin Jezard

CAA Chrys Hadjiantonis - Safety Data Dept Keith Wilson - Intl . Services Brian Synnott - Flight Ops.

CargoLux Capt. David Martin

Cathay Pacific Capt. Richard Howell

Channel Express Rob Trayhurn

City Flyer Express Capt. Nigel Hitchman

CityJet Capt. Sean Burke-Daly

Delta Airlines Evan Parsons

EasyJet Capt. John Broomfield

Emerald Airways Capt. Roley Bevan

EVA Airways Alex Reid Ford Air Capt. John Sarris

GAB Robins Aviation Rob Burge

GAPAN Capt. Chris Hodgkinson

GATCO Richard Dawson

GB Airways Capt. Mike Smith

Gill Airways Capt. Ben Hastings

GO FLY Ltd Capt. Michael Orr

HeavyLift Cargo Capt. Mike Jenvey

Irish Aviation Authority Capt. Bob Tweedy

JMC Airlines Capt. Graham Clarke

KLM uk Peter Walton

LAD (Aviation) Ltd Martin Matthews

Libyan Arab Airlines Eng.Mahmud Ali Tekali

Maersk Air Capt. Robin Evans

Manchester Airport Plc Peter Hampson

Manston Airport Wally Walker

MoD Gp. Capt. Bill Cope - RAF Cdr. Dave Lilley - RN Sqn Ldr Jeff Collier - HQSTC

Monarch Airlines Capt. Gavin Rowden

NATS Paul Jones

PrivatAir

focus

Capt.Francisco Agullo

Ryanair Capt. Gerry Conway

Sabre Airways Gordon Wright

SBAC Peter Holtby - Secretariat Bryan Cowin - BAE SYSTEMS Vic Lockwood -FR Aviation

Schreiner Airways Arnoud Schreiner

Scotia Helicopters Capt. Jide Adebayo

Servisair Eric Nobbs

Shell Aircraft Cliff Edwards

TAM Brazilian Airways Capt. Marco Rochas

The Boeing Co. Edward Berthiaume

TRW Aeronautical Systems Keith Joyner

Virgin Atlantic Airways Capt.Jason Holt

Willis Aerospace Ian Crowe

Group members

Eurocypria Airlines Cyprus Airways Capt. Nick Kotsapas

FLS Aerospace (Ireland) FLS (UK) Frank Buggie

Lufthansa Cargo

Lufthansa AG Lufthansa Cityline Condor Condor Berlin *Capt. Nigel Ironside*

Maintenance members

Britannia Airways Peter Pope

British Airways Colin Evered

British European Technical Services Chris Clark

British Midland Peter Horner

City Flyer Express John Park

Ford Motor Co. Stuart Yeomans

GB Airways Terry Scott

Gill Aviation Warren Storey

MOD EIFS RAF Wg.Cdr.Dave McCormick

RAeS Jack Carter

Scotia Helicopters Ian Davies

Co-opted advisers

AAIB Richard Whidborne

CHIRP Peter Tait

GASCo John Campbell

Legal Adviser Peter Martin

Royal Met. Society Dr.John Stewart

FOCUS Subscription Application

UK Flight Safety Committee				
Chobham, Woking, Surrey. GU 24 8HX				
Tel: 01276-855193 Fax: 855195 email: ukfsc@freezone.co.uk				
Name				
Name				
Job Title				
Company Name				
Address				
Address				
Tel/Fax No				
email				
Nature of Business				
Please enter my subscription to FOCUS from the next issue. I enclose a sterling cheque made payable to Flight Safety Committee				
Plus P & P £2.60 for UK - overseas P & P on application.				

Signature

Letters

Dear Sir,

At a recent Services Resettlement Seminar JAR66 was, not surprisingly, referred to by some of the participants as a potential stumbling block. Both civilians and servicemen have to work for it; the serviceman, however, hardest. This is to the detriment of the industry and dissuades many servicemen from pursuing a career in aviation. I have argued that the contribution made to civil aviation by the ex-servicemen has never really been recognised, and probably could not be quantified, but it is very apparent that the shortfall in servicemen joining the industry is being felt. One of the reasons industry has never invested extensively in training is that there has always been a readily available, basically trained source in the ex-serviceman, needing a minimum of fine-tuning; this has been the case with most of the industrialised nations.

The problem we have today is that since the 1980s, with armed forces standardising on fewer types of aircraft, with fewer overseas postings, some servicemen have served their entire time on one unit and one aircraft. This does not produce the well-rounded person previously recruited. To meet the needs of the times is always a financial consideration and in an evolving industry technology demands change. The problem comes when a person who has no experience of aircraft operations other than say Harriers on a flightline, looks at the requirements of the civil industry. Not surprisingly he is dismayed to find his undoubted skills devalued overnight, and management skills in other areas of commerce, usually with great success, but at a loss to the aircraft maintenance industry.

This divergence of military and civil requirements has contributed to this situation, not so much a shortage of aircraft engineers from ab initio sources, but a shortage of mid career, skilled managers with an appreciation of airworthiness brought on by the Service traditions, providing a mature and experienced balance. The sooner the Services concentrate their efforts and view the License with a less jaundiced eye the better. In November 1978 I wrote to 'Air Clues', the flight safety magazine of the RAF, suggesting that when a person reached the rank of chief Tech. or equivalent, they should be allowed to become dual skilled in order to enhance their employment chances in civilian life. This was rejected on the grounds that retention rates would suffer, and servicemen would leave in droves; something that was never proven, although the 'super tech experiment', i.e. triple trades, was dropped. I believe this was for financial and operational reasons, rather than for reasons of retention. The Services have effectively discouraged people from seeking employment in the industry by reducing the transferable skills available to the servicemen.

As reflected at Farnborough 2000, most of today's youth expect to be managers by the age of 23, and we are up to our eyes in managers, yet desperately short of skilled, motivated people of the sort the Services discard at 9, 12 and 22 years exit points, intimidated by the complexities involved in continuing their chosen profession. This is a waste of resources and taxpayers' investment which should have been addressed at least 10 years ago. The possibility of the Services training to JAR66 standards is a step in the right direction, giving civil industry back some of the investment in manpower.

Yours faithfully, John Sawyer General Secretary - ALAE



Mobile Phones

Ave you got a mobile phone? They are often a target for theives. As well as marking it with your house number and post code using a UV pen there is also something else you can do to stop its use if it does get stolen.



Find your mobile phone's serial number by keying in the following digits on your phone: *#06# (start hash zero six hash). A 15-digit code will appear on the screen. This number is unique to your handset. Write it down and keep the number somewhere safe (i.e. not on your mobile!).

Should your phone get stolen or lost, you can phone your service provider and give them this code. They will then be able to block your handset so even if the thief changes the SIM card your phone will be totally useless.

focus

(Almost) Everything you Wanted to Know about RAS and RIS but were afraid to ask - A Pilot's Guide

Wg Cdr Mike Strong RAF - DAP6

controller tells you he is too busy with

called this Catch-22!

other traffic to provide you with the radar service you want and need. Joseph Heller

AVAILABILITY	APPLICATION	you would be well-advised to follow
Radar Advisory Service (RAS) and Radar Information Service (RIS) are only available outside controlled airspace.	RAS will only be provided to flights under IFR.	the controller's advice without delay. The threat is immediate! Under a RIS:
This is not the same as saying that RAS and RIS are available everywhere outside controlled airspace.	IFR is not the same as IMC and, outside CAS, relates only to the Minimum Height Rule and the Quadrantal Rule. Any pilot can elect to comply with these rules.	• The controller will tell you about conflicting traffic. It is then entirely up to you what you do with the informa- tion. The controller will not offer any avoiding action.
Availability depends upon radar coverage and upon the ATC provider being open and having the capacity to provide the service.	However, if you are not qualified to fly in IMC, you should only take a RAS if compliance with ATC advice enables you to remain VMC.	 You remain wholly responsible for maintaining separation from other aircraft whether or not the controller has passed traffic information.
At some civil units, controllers provide RAS and RIS as an extra, on top of their primary responsibility for controlled airspace. However, if they get too busy with the latter, they may have to discontinue or change their RAS/RIS provision.	 Under a RAS: Although the controller may pass you information in the form of an instruction, it is only advisory; if you choose not to follow his advice, you become responsible for any subsequent 	 You must ask if you want the controller to update you on a confliction. Otherwise, he will assume you have seen it. Although a controller may provide you with radar vectors, these will not be for the purpose of achieving or maintaining separation.
Most military airfields shut over weekends and Bank Holidays. Although this reduces the likelihood of bumping into warplanes, it also means fewer radar units available to provide you with RAS or RIS. You have hereby identified a significant	 avoiding action. But please let the controller know. A controller will aim to provide you with safe separation against other traffic in receipt of a RAS. Life gets more difficult if the other traffic is unknown because he cannot be sure of its intentions; he will try to obtain minimum separation of 5nrn or 5000ft 	If you are receiving a RIS and decide that what you really want is a RAS, ask for it. The controller will often accept such a request if his workload permits, and will tell you that you are now under a RAS. Under both RAS and RIS, please advise
defect in the UK air traffic system in that radar coverage is not universal and your air traffic service of choice is not always available. However, to remedy this would cost megabucks.	 (using Mode C) but circumstances might make this impossible. If time permits, the controller will call traffic and suggest action to resolve the confliction. However, if the other traffic is unknown and appears 	the controller before you change heading or level, unless he is already aware that you are manoeuvring. He cannot help you if you do not help him.
Equally galling - because everyone tends to ask for a RAS in bad weather - solid IMC could be the very time when the	suddenly, he will normally reverse this sequence and pass advisory avoiding action first, followed by information on	

• If the first words you hear are your callsign followed by 'Avoiding action',

the traffic.

21

Disruptive Passenger Behaviour Feedback

By Supt. Tim Burgess, Greater Manchester Police

Under both RAS and RIS you remain responsible for terrain clearance.

CAVEATS

If you want a RAS or a RIS, you must request it. You will not receive any kind of a service until the controller actually confirms what he is about to provide. In effect, what you are establishing with the controller is a 'contract'.

The act of identification does not imply provision of a radar service.

Under a RAS or RIS, ultimate responsibility for collision-avoidance remains with you because Class F and Class G airspace is not a known traffic environment and because the controller is only allowed to pass advisory information. This is not a cop-out.

The controller may not be able to provide you with a full RAS or RIS for various reasons, perhaps due to workload or maybe because there are too many other aircraft in your vicinity. He will then limit the service. Once again, this is not a cop-out by the controller. Rather, he is simply being honest with you so that you can take due regard, including increasing your lookout.

IF YOU INCLUDE CONSIDERATION OF ALL THE ABOVE IN YOUR FLIGHT PLANNING, AS WITH EVERYTHING ELSE, YOU ARE LESS LIKELY TO BE CAUGHT UNAWARES.



Numerous flightcrew have commented that they never hear the results of the disruptive passenger incidents that they report and therefore do not feel that it is worth the trouble involved in reporting them.

With this in mind we hope to feature regular feedback on incidents that are made known to us. In this way we hope to get the message through to flightcrew that we are getting results.

I urge flightcrew to continue to report all such incidents. Only by gathering sufficient evidence will we be able to have the law changed. Currently a working group is moving to have the law changed to enable the police to have the power to arrest disruptive passengers as they leave the aircraft. Without your support they will not be able to accomplish this.

Court Results for Disorderly Passengers Manchester Airport Between 1 September 1999 and 31 August 2000

Date of Incident: 06/09/99 Airline and Flight No.: AIR 2000 -AMM37D Departure Point: Unknown Destination: Manchester Brief details of incident: Reported by crew for being drunk on board an aircraft

Court result:

Drunk on board an aircraft -Conditional discharge for 2 years **Public order offences -** Conditional discharge for 2 years and £25 costs

Date of Incident: 09/09/99 Airline and Flight No.: KLM UK - UK 2027 Departure Point: Unknown **Destination:** Manchester **Brief details of incident:** Interfering with the crew

Court result:

4 males charged and bound over

Date of Incident: 25/09/99 Airline and Flight No.: Unknown a ground incident occurring land side Departure Point: Manchester Destination: Unknown Brief details of incident: Offender had been drinking heavily and was drunk, as he went through a security check point he became abusive to staff

Court result: Fined £85

Date of Incident: 02/10/99 Airline and Flight No.: American Airlines - AA110

Departure Point: Unknown Destination: Manchester Brief details of incident: Male and female performed sexual acts whilst in flight

Court result: Adjourned for committal to where they both received fines

Date of Incident: 29/11/99 Airline and Flight No.: Lufthansa -Unknown

Departure Point: Manchester **Destination:** Frankfurt

Brief details of incident: The offender has a history of mental instability and when he was about to board the aircraft became abusive and had to be restrained

Court result: Fined £50 and bailed over for 12 months

Date of Incident: 06/01/00 Airline and Flight No.: Virgin - VS076 Departure Point: Unknown Destination: Manchester

focus

Brief details of incident: Offender was drunk on board aircraft, threw his breakfast over his 4 year old son and then became verbally abusive to fellow passengers and the crew. At Manchester used 3 year old child as shield to stop police from arresting him

Court result: Received a 12 months custodial sentence

Date of Incident: 09/01/00 Airline and Flight No.: AIR 2000 -AMM37c

Departure Point: Unknown Destination: Manchester Brief details of incident: Offenders was caught smoking in toilets of aircraft whilst in flight

Court result: Cautioned

Date of Incident: 06/02/00 Airline and Flight No.: Unknown occurred land side Departure Point: Manchester Destination: Unknown Brief details of incident: Smoking whilst in a no smoking area, when requested to stop refused. Offender had been drinking. On Police arrival became abusive and was arrested

Court result: Cautioned

Date of Incident: 12/02/00 Airline and Flight No.: Ryanair -Unknown Departure Point: Unknown Destination: Manchester Brief details of incident: Drunk whilst on board aircraft

Court result: Cautioned

Date of Incident: 05/03/00 Airline and Flight No.: Unknown as incident occurred land side Departure Point: Manchester Destination: Unknown Brief details of incident: Had been drinking and when waiting to board became abusive to ground crew and then to Police when they arrived

Court result: Fined £350 and £50 costs

Date of Incident: 24/03/00 Airline and Flight No.: British Airways -BA 1695 Departure Point: Unknown Destination: Manchester Brief details of incident: Drunk whilst on board aircraft

Court result: Cautioned

Date of Incident: 07/05/00 Airline and Flight No.: Canada 3000 Departure Point: Calgary Destination: Manchester Brief details of incident: Whilst in flight was abusive to air crew said that this type of language was acceptable in Canada

Court result: Cautioned

Date of Incident: 17/05/00 Airline and Flight No.: Britannia Departure Point: Manchester Destination: Paphos Brief details of incident: Before boarding the 2 passengers had been drinking heavily, the Captain then refused to allow them to board, they became abusive to crew were arrested for drunk and disorderly

Court result: Cautioned

Date of Incident: 01/06/00 Airline and Flight No.: Airtours - AIH 317 Departure Point: Manchester Destination: Palma Brief details of incident: Prior to boarding aircraft the passenger had been drinking and was drunk, the Captain refused to let the passenger board who then became abusive and was arrested for drunk and disorderly

Court result: Cautioned14/06/00

Date of Incident: 14/06/00 Airline and Flight No.: Sabena Departure Point: Italy Destination: Manchester Brief details of incident: Passenger had been drinking his own alcohol in flight but was no problem. On leaving the aircraft urinated his trousers. Arrested for drunk and disorderly

Court result: Cautioned

Date of Incident: 24/07/00 Airline and Flight No.: Royal Airlines -QN 770 Departure Point: Toronto

Destination: Manchester **Brief details of incident:** 2 passengers had been drinking heavily in flight one then pulled an emergency torch from its holder snapping the attached safety wire the other was caught smoking in the toilet

Court result: Both were cautioned

Date of Incident: 31/07/00 Airline and Flight No.: Airtours Departure Point: Unknown Destination: Manchester Brief details of incident: Whilst sitting in the departure lounge drinking repeatedly banged glass on the table refused to stop and was arrested for drunk and disorderly

Court result: Cautioned

Date of Incident: 08/08/00 Airline and Flight No.: Virgin - VIR 8214 Departure Point: Malaga Destination: Manchester Brief details of incident: Drinking heavily whilst aircraft in flight

Court result: Cautioned

The Case of John Robert McMurray -Air Rage Incident, Newcastle Airport

On Tuesday 14 March 2000, McMurray (29 yrs) was on board a British Airways 'City Flyer' ATR 72 aircraft, flight number 8077, from Gatwick to Newcastle. the aircraft had 29 passengers and 5 crew members. during the course of the flight he became abusive and aggressive towards passengers and crew, clearly interfering with the duties of the crew. He claimed to be a 'Terrorist' at one point and threatened to assault a passenger. His behaviour and the increasing effects of alcohol (presumed taken before departure) had escalated to the point where crew had to lock him in the toilet to allow the other passengers to leave the aircraft on landing at Newcastle. On leaving the aircraft McMurray was violent and aggressive threatening to punch the Captain. McMurray was proceeded against for the following:

1. Affray Air Navigation Order 1995

- 2. Article 59a (threatening abusive behaviour toward staff)
- Article 59a (C) (intentionally interring with duties of the crew)
- 4. Article 57 (drunk on aircraft)

On 14 August 2000, McMurray appeared Newcastle Crown Court and on count number 3, was given a 9 month custodial sentence. He had entered a guilty plea previously and sentence was deferred for reports.

I would make the following observations

in light of this case:-

- Interesting to note that McMurray had appeared at Crawley Magistrates on the previous day before this incident for an offence of drunk and disorderly and had been given a conditional discharge, 12 months to pay £55.00 prosecution costs. An incident at Gatwick Airport complex which by all account had McMurray acting in a very violent manner.
- Following discussion with CPS it was felt that the Affray offence allows the better court venue. Although in reality the magistrates in these high profile cases relinquish responsibility to the higher court to deal.
- McMurray put forward a defence initially that he was a "nervous" flyer and had undergone some form of fit or seizure. To rebut this, enquiries were

made to City Flyer where it was revealed that he had flown since the Newcastle incident on three occasions, 1 x charter flight and 2 x internal flights, these even logged as being changed dates to coincide with his Court appearance at Gatwick. Evidence that staff/crew are trained to a recognised CAA approved standard in recognising symptoms of panic stress attacks and fits and seizures (McMurray suffering from neither) was also very useful.

 The help of the airline in providing such evidence was instrumental in receiving a subsequent guilty plea.

The case received high media interest and was the first custodial sentence of this nature at Newcastle Airport.



EMBRAER RJ 145: WELCOME TO THE FUTURE.



In 2000 Crossair renews its fleet and introduces a totally new aircraft type: the Embraer RJ 145 regional jet. A modern-technology 50-seater.

Two high performance jet engines give the RJ 145 the ability to fly at the same altitudes as long-distance aircraft, up above the clouds where the ride is smooth. Added to this are all of the Crossair in-flight services, like luxurious leather seats, spacious hand baggage bins, and an in-flight New jet services. galley for warm menus.



For information or reservation contact your local travel agent or Crossair at phone +41 848 85 2000 or www.crossair.com



Structure The Qualiflyer Group

passion

TRW Aeronautical Systems (Lucas Aerospace) provides the global aerospace industry with high integrity systems and equipment in engine controls, flight controls, missile systems, power generation and management, cargo handling, hoists and winches, and flexible shafts and couplings, all backed by a world-wide customer support organisation.

To deliver the requisite standards of product reliability, airworthiness, quality and safety, organisation approvals held include JAR-21 for design and production and JAR-145/FAR 145 for maintenance and repair, all being supported by ISO 9001 Quality Management System certification.

passion for excellence

TRW Aeronautical Systems

Lucas Aerospace

www.trw-aeronautical.com