Confidential Human Factors Incident Reporting Programme

FEEDBACK

Issue No: 48 **October 1998**

Editorial

Understanding the Other Person's Problems - The recently published Air Accident Investigation Report into an AIRPROX (C) incident near Lambourne VOR on 3 July 1997 (Aircraft Incident Report 4/98) contains the following information in Paragraph 1.5.5 regarding Air Traffic Controller Familiarisation:

"ATC controllers are encouraged to familiarise themselves with the working environment of the modern flight deck. During training, students on the NATS Student Controller Training Course are given 15 hours of flying training in a two-week familiarisation module. In addition an Airline Awareness Course is also given to student controllers. It includes Flight Management System simulator experience and includes two European familiarisation flights. Training for a Private Pilot's licence is no longer available. NATS also provide a two-week Customer Awareness Course for more experienced controllers. During their service controllers may undertake familiarisation on a voluntary basis.

In practice a shortage of trained controllers combined with the requirements of their job means that few controllers manage to achieve flight deck experience on a modern flight deck. It is this type of experience which will be of most benefit to controllers operating within Terminal Control (TC) to give them an understanding of the problems which can be encountered as flight crews comply with ATC instructions. Equally, flight crews need to be familiar with the problems encountered by ATC staff controlling a busy segment of airspace.

Dissatisfaction with the existing arrangements and the need for improved familiarisation training was identified in a number of reports submitted by controllers to the Confidential Human Factors Incident Reporting Programme (CHIRP). Issues Nos. 42 and 43 of 'FEEDBACK', CHIRP's monthly (sic) publication, reported on the practical difficulties of arranging familiarisation flights for controllers and commented on the rare attendance of flight crew in ATC units. Most common obstacles were time pressures on work schedules, lack of status as supplementary crew members for the observing controllers, and lack of duty time combined with allowances to facilitate such activity. The reports commented on the mutual benefit both to pilots and controllers of a structured system of familiarisation training."

Safety Recommendation No 4.2 of the AAIB Report states: "The CAA, in conjunction with the various ATS providers, should ensure that controllers are familiar with those operating characteristics of the aircraft for which they are likely to be responsible and which affect the provision of ATS. Consideration should be given to suitable methods, which may include the use of simulators and familiarisation flights as a means of achieving this objective. [Recommendation 98-36]"

CAA (SRG) response: The CAA Follow-up Action Report states: "The Authority accepts this recommendation. It is considered essential that controllers are aware of the operating characteristics of the aircraft for which they are likely to be responsible and which affect the provision of ATS. The Authority's Safety Regulation Group will enter into a period of consultation with ATS providers to consider how current initiatives aimed at achieving this awareness can be enhanced."

CHIRP Comment: Whilst it is recognised that making this type of training more widely available may incur an additional financial cost, the opportunity to contribute to a reduction in human factors related accidents/incidents, by ensuring that individuals gain a clearer understanding of the other person's problem, provides an equally if not more compelling argument. It is to be hoped that both airlines and ATS providers recognise the potential safety benefits of adopting 'best industry practice' in this area of training.

INSIDE THIS ISSUE:

CHANGE OF ADDRESS?

Please notify us by:

- **POST:** FREEPOST, RAF SAM, Farnborough, Hants GU14 6BR

or **FAX:** 01252 543860

or **E-MAIL:** kirstyb@chirp.co.uk

A Reminder on the Magazine Format:

The following fonts are used:

- Disidentified reports. These are reproduced with minimum text changes
- *CHIRP Comments are italicised*
- Verbatim Third Party responses are printed in SWISS type

FEEDBACK - COMMENTS

Whose Discretion? (FB47)

A number of reporters queried the advice contained in NTAOCH 6/94 in relation to the requirements of the Air Navigation Order in the report 'Whose Discretion' that was published in the last issue of FEEDBACK. The two following reports reflect the range of views expressed:

(1)

Your comments on this disturbing report perpetuate a common misunderstanding. "All crew members are reminded that it is the Commander, on the day, who exercises discretion, after taking note of the circumstances of the rest of the crew" refers to CABIN crew.

The co-pilot who filed the report is a licence-holder and as such has an overriding responsibility not to fly if he "has reason to believe he is suffering, or is likely to suffer while flying, from such fatigue as may endanger the safety of the aircraft or its occupants." This is his decision and his decision alone.

It follows that a Commander cannot legitimately place his flight crew "under duress" to extend a Flying Duty Period and effectively he still requires his/her/their agreement, or at least non-objection, to an extension.

******

(2)

I was interested to read your response to the 'Whose Discretion' report in FEEDBACK July 1998. Your reply, I believe, rather misses the point.

I am aware of NTAOC 6/94, which I have always thought created the unacceptable situation where a Commander may believe he can disregard the fatigue of an individual crew member and extend the duty period for the whole crew. True, the Commander signs the relevant extension of flying duty period report, but he cannot ignore the Air Navigation Order, and CAP 371, which state that "a crew member shall not fly, and an operator shall not require him to fly, if either has reason to believe that he is suffering, or is likely to suffer while flying, from such fatigue as may endanger the safety of the aircraft or its occupants".

With this in mind, if a crew member informs his commander that he is too fatigued to fly, or will be so during the next sector, how can the Commander order him to continue? Your reply seems to regard this potentially hazardous situation as perfectly acceptable.

CAA (SRG) Flight Operations Department has provided the following statement, which clarifies the above points:

The term 'Crew' refers to both flight and cabin crew as per the definition in Article 118 of the ANO.

NTAOCH 6/94 Paragraph 2.3 is quite clear. All crew members are reminded that it is the Commander who exercises discretion, after having taken note of the circumstances of the rest of the crew. The only exception to this is, when away from base, where the individual crew member separates from the crew, or the crew as a whole splits up, then the use of discretion to reduce rest becomes a decision for an individual crew member.

ANO Article 64 (1) states A person shall not act as a member of the crew of an aircraft to which this article applies if he knows or suspects that he is suffering from, or, having regard to the circumstances of the flight to be undertaken, is likely to suffer from, such fatigue as may endanger the safety of the aircraft or of its occupants.

If this crew member felt that he would be too fatigued to complete, safely, the planned flight in the extended FDP but acted as a member of the crew, he may have been in breach of Article 64 (1). It therefore follows that the Commander, when told by a crew member that he/she is (or will be) too fatigued to complete the flight, must ensure that the crew member takes no further part in the operation.

****

Level Busts (FB 47)

I read with interest the ATC Report "Level Busts - A Novel Improvement" in FEEDBACK 47.

I recently had a height bust from being told to turn onto "Radar Heading 110",

which I 'heard' and read back as "Climb Level 110". The area controller did not pick me up on my readback, and as a result filed a MOR. Had he said turn onto 111°, I can virtually guarantee that the height bust would not have happened. I think it is a brilliant idea. Incidentally, a playback of the ATC tapes confirmed my readback of a Flight Level as opposed to the heading.

****

(2)

A possible solution would be, as suggested, to make heading changes to figures never ending in zero (i.e. hdg 251°).

However, to add to the confusion I now find that an increasing number of new First Officers pass flight levels on request as "passing FL76" or "FL251".

Is this new teaching in the training establishments or am I old fashioned in only using thousands of feet and five hundreds as flight levels?

****

RAF Incident Report (FB47)

I am a practising CAA Licensed Engineer, and I have considerable experience of the aircraft type referred to in the report reprinted in FEEDBACK 47 *(Pages 11-12)* both in RAF and civilian operations. I am also very familiar with the current maintenance arrangements. I therefore feel qualified to comment on what I regard as the following misleading note at the beginning of the report:-

"It is relevant to note that although this incident relates to a military aircraft a civilian CAA Approved maintenance provider maintained the aircraft in accordance with commercial documentation and procedures "

I believe that this statement is misleading and paints a false picture of the operation. Furthermore, it may unintentionally impugn CAA Licensed Engineers who have for years carried out this task i.a.w. the Maintenance Manual (MM) without incident, by inferring that the maintenance provider is a normal CAA Approved Civilian Maintenance Organisation, which it is not, for the following reasons:-

1. Although the maintenance provider may be CAA Approved in other operations these particular aircraft are maintained under an MOD Approval, using Service Documentation and a mixture of RAF and Civilian Publications, the glossary of which are different from each other.

2. The aircraft is maintained under a Customised Low Utilisation Maintenance Schedule compiled by the aircraft manufacturer and thus accorded CAA Approval.

3. Because of the MOD Approval, CAA AMELs *(Aircraft Maintenance Engineers' Licences)*, are not required. The majority of the workforce are ex-service and as such are not trained in Air Legislation and have no real understanding of the ATA 100 System as used in the MM, Illustrated Parts Catalogue, Minimum Equipment List, Maintenance Review Board document, Maintenance Planning Document and Service Information Leaflets etc.

4. The aircraft are not on the British Register and have no requirement for a Certificate of Airworthiness.

I feel that this needs correcting in your next edition of FEEDBACK, which, by the way, I find very enjoyable and informative.

We have received similar comments from several sources including CAA (SRG) Maintenance Standards and stand guilty as charged! We apologise for this error.

Notwithstanding this, we remain of the opinion that the Human Factors lessons to be learned from this incident in relation to maintenance practices, on what is basically a civil aircraft, should be brought to the attention of a wider audience in the civil maintenance sector.

The reporter also raises several interesting points regarding the 'hybrid' nature of this operation. These have been passed to the Inspector Flight Safety (RAF) for his consideration.

****

Fatigue/Third Party Certification (FB47)

I read with interest the correspondence regarding excessive hours worked by engineers and that "... engineers must take responsibility ..." etc. Classic 'meat in the sandwich' stuff with pressure from management on one side (even worse I dare say if you're a contractor) and from the Regulator on the other.

I'm sure all of these self-regulation types of arguments applied to the *(road/surface)* transport industry at one time but deaths and injuries (surprise, surprise!) would not go down. Then came the tachograph to enforce the rules, with the result that if an employer demands excessive work you have an unbiased record of hours.

How long before something similar is required with maintenance engineers?

I find the comments by the CAA complacent and have a buck passing feel.

CAA (SRG) responded as follows:-

The correspondent will no doubt be aware that the European Union (EU) released a Working Time Directive in 1993, but the transport industry was initially exempt from the effects. Last Summer the EU announced that it wanted to further apply the Directive to the transport industry. The UK Government supported the proposal after a round of consultation with the aviation industry but advised it will still be at least a year before the extension can be implemented.

It would be incompatible in view of European harmonisation for the UK to develop and implement its own duty hour limitations scheme, and threaten the prosperity and jobs in industry (for no significant safety benefit) when there are already well established controls in place. JAR 145 requires that the company provides adequate resource to match its maintenance workload. This should not be based upon any significant degree of overtime working. The CAA currently monitors the adequacy of resources in industry, including manpower plans, as part of JAR 145. Without adequate resources, a company approval would be withheld or temporarily suspended, or, alternatively, where possible, increased downtime can be provided to complete tasks. The CAA certainly does not condone the use of excessive hours or pressure from companies upon individuals to work in such a manner.

There have however always been individuals who are only too eager to earn extra money by working excessive hours and give little consideration to the effects of fatigue. Airworthiness Notice No. 47 introduced some guidelines to support the legislative changes. Compared to the large number of personnel in the industry, there are few complaints about fatigue problems reported to the CAA. If the correspondent is seriously concerned, we would suggest that he speaks confidentially to the local CAA Regional Manager who can then assess the problem without disclosing the source of the information. CAA will certainly act if evidence is made available.

A number of recent serious human error incidents have identified fatigue as a possible causal factor. CHIRP will continue to assist in promoting the assessment of potentially unsafe working practices on behalf of individual reporters.

****

ATC REPORTS

Altimeter Setting Confusion

Aircraft departed ### (cleared on the SID to Flight Level 50). A few minutes previous to this departure the ### hold was occupied at FL60. The aircraft climbed to 5000ft on the QNH of 981 mbs. The aircraft reached this altitude by the ### hold and between transfer from Tower to Zone frequency, thus effectively out of contact. In view of the pressure setting selected, 5000ft and FL60 were as good as the same level.

I have noticed an increasing frequency of aircraft climbing to 5000ft instead of FL50. This may be because our transition altitude is lower than the more general 6000ft in other TMA's.

Most of the time the error is noted because of slower rates of climb than that of this aircraft.

****

Minimum Separation

Twin-jet seven miles South of the airfield downwind left hand at 5,000ft heading east, flight released to my control, on my frequency.

I had just instructed the flight to descend to 4,000ft when Area Sector controller phoned me. "Expedite the descent of ### due traffic in proximity - slow, climbing". SSR code of slow climber was passed and I identified the traffic. I acknowledged the request from Area Control. Conflicting traffic still at 5,000ft heading toward my flight. I instructed the twin-jet to expedite

descent then gave traffic information and avoiding action against other aircraft. Kept separation - just.

Captain of twin-jet was not unduly concerned. Momentarily I was very scared, then I was unable to maintain concentration but I had to work through the incident. No reports were filed, as separation was maintained throughout. Adrenaline flowed freely after!

Workload at Area Control had caused the incident. Thankfully the potential confliction was spotted.

If Area Control had not co-ordinated, by the time the SSR code of the other flight had appeared from the garbling of codes around ### VOR, it may have been too late for a reactive action by me.

This ATS Unit has no code call sign conversion for flights other than being manually converted at the Unit. The radar installation dates from the early 1970's and the processor for SSR became operational in 1981. There has been no further capital investment since! To this day I have no idea of the type of aircraft that I turned to avoid.

My gut reaction was to file an Airprox, but due to a similar incident occurring earlier this year, when an Airprox was filed and the individual was asked to downgrade it to an incident due to politics, I decided not to. The more overloading that occurs the more likely incidents will occur.

This report is one of several that have suggested that, at one or more ATS units, there has not been a pro-active policy to upgrade ATC equipment to assist controllers in handling the ever-increasing traffic levels that the major ATCCs are accommodating.

The reliance on procedures, as an alternative to the provision of appropriate automated information / monitoring systems, will render safety management systems vulnerable to human errors, particularly as traffic levels and controller workload increase. This fact should be acknowledged when determining investment strategy, as it may be an avoidable weak link in the ATC safety chain.

****

FLIGHT DECK REPORTS

Musical Runways

We have recently received a number of reports of difficulties experienced by crews as a result of receiving late, unexpected runway changes. The following two reports are indicative of the problem:

The sector between DEF and ABC (UK Regional Airports) is busy even in good weather with a take-off to landing time of no more than 25-30 mins. In my 18 months of operating into ABC, I have come to expect that ATC often play 'musical runways' at short notice and frequent changes of runway direction, no doubt with the best intentions to assist with commercial interests of operators. However, in the following incident I feel that accommodating opposite direction IFR approaches to their single runway without sufficient contingency separation was reducing safety margins to an unacceptable level.

I make this assessment not only as a commercial pilot but also as a former Royal Air Force air traffic controller with more than 10 years experience.

The wind at ABC was virtually straight across the runway. The overcast cloud base was around 700' and rain was reducing visibility to around 6-7km. During our brief we asked the TMA sector controller which runway we could expect at ABC and were told that the westerly runway was in use. Consequently, the ILS approach was set up and briefed.

Shortly after commencing descent to 3500' QNH we were given an initial radar heading by the Area Controller to position downwind for the westerly runway. On the same frequency at that time was a twin-jet, which was also being positioned from the south, also for the westerly runway at ABC.

As soon as we were transferred to ABC Approach we were told that we were now to receive radar vectors for an SRA approach to the easterly runway. (The localiser/DME approach was not available, as we deduced a little later, because the ILS was set up on the westerly runway for the inbound twin-jet, although we were receiving the DME).

So, the SRA plate was retrieved, minimum heights reset and the approach was briefed as far as time would allow. We were now approximately 11 mi1es west of ABC, still at 3500' (only six miles from the descent point and too high), heading 90° to the inbound course and about to go through it. At no time had we been given the standard ATC phraseology for the SRA approach and, more significantly, in the flurry of action on our flight deck, we had forgotten about the twin-jet going for the ILS on the westerly runway 27.

The captain (non-handling) requested further descent, which prompted the controller to give us a turn back towards the centre-line. Thereafter, we received no instruction to commence descent, no ranges to touchdown, no advisory altitudes with range (in reply to a query as to what altitude we should be passing we were asked 'what would you like?') and only two heading changes. It became very obvious that we were on our own for this approach.

Coincident with our contacting 'tower' we broke cloud at around 2.5nm and left of the centre-line. We were told that there would be a late landing clearance due to an aircraft vacating. Sure enough, there on the runway or more specifically, approaching the threshold of the easterly runway nose-on to us, was the twin-jet on its roll out from its ILS approach.

As we taxied in, we realised that we had just been in a potentially serious scenario. If the twin-jet had carried out a go-around from runway 27, there was every chance that it could have collided with us, head to head, on our approach in IMC to the easterly runway.

The points, which I see arising from this incident, are:

a. The practice of allowing 'almost simultaneous', opposite direction approaches to the same runway, particularly in IMC, is patently not safe.

b. If at the outset of planning these approaches there was sufficient spacing but, as time progressed, it became increasingly obvious that separation was becoming unsafe, something positive should have been done about it rather than let the situation deteriorate.

c. The approach controller was clearly under pressure and never had the capacity, in terms of his own workload, to provide us with the SRA approach. His capacity may well have been reduced by the induced pressure of planning and controlling the opposite direction approaches.

d. One must wonder whether there was any ATC managerial supervision at all in the Approach Room during this period and, if there was, the wisdom of the planning and the accuracy of the execution of this scenario must be questioned.

e. The high flight-deck workload created by the late change to the approach and the resolution of the less than ideal ATC input caused the crew to lose situational awareness, or more bluntly, forget about the whereabouts of the twin-jet.

The practice of offering the option of the most convenient runway, when traffic conditions permit, is often of considerable benefit to pilots. However, the use of these procedures on the assumption that the preceding aircraft is going to land is fraught with peril, as there are many factors that might lead a crew to carry out a Go-Around manoeuvre, such as GPWS, Configuration, Windshear or TCAS warnings, as well as a non-stabilised approach.

It is a matter of judgement in seeking to satisfy the "customer" on the one hand by offering a straight-in approach, but on the other hand ensuring that safe separation can be maintained in all circumstances. The policy for permitting opposite direction approaches should be determined by local ATS management, taking into account local conditions, to ensure that such procedures reflect sound judgement and provide an appropriate margin of safety.

It is also important for ATCOs to realise that many airlines' Standard Procedures require approach briefings to be conducted prior to, or early in the descent, when the flight deck workload is low. A subsequent runway change will require a re-briefing to be completed at a less appropriate time when the flight deck workload is considerably higher and thus may be a potential cause for confusion/error. It is relevant to note that investigations into

several recent major accidents have identified inadequate or rushed approach briefings and poorly planned/executed approaches as contributing to a loss of situational awareness prior to the accident.

******

(2)

During a training flight, we requested a track to the ### NDB to take-up the hold with a view to completing a procedural ILS. The approach controller cleared us to the NDB, gave us the weather and advised us that the westerly runway was in use. We confirmed the ILS Ident was correct for the runway.

After several holds in IMC and at least another three ILS Idents, we proceeded outbound and were cleared to descend to 3000'. At the commencement of the procedure a further check of the ILS Ident was made and to our surprise the Ident was for the easterly runway.

The controller appeared to be unaware that the ILS had been switched over. (Both approaches are on the same VHF frequency.) Eventually the ILS was switched back to the westerly runway.

I would like to emphasise the importance of identifying the ILS code. Because of the IMC conditions we were flying in, a less experienced pilot could have found himself in a lot of trouble.

The ATS unit involved was notified of this problem and has undertaken a review of the relevant procedures to ensure that adequate notification of runway changes is provided.

The type of late runway change reported also represents a potential and avoidable threat to safety.

****

Frustration - A Lesson Learned

Descending into *### (Southern European destination)* we were given a radar vector from ### ATC *(Area Radar*) which we assumed was to make us No 1 for landing ahead of a B737 4000ft above and only one-two miles ahead. Maintaining 300kts we were transferred to Approach control. Told to go now to ### VOR and reduce to minimum clean (at FL260!!). Minutes later the B737 crossed our level on TCAS about 10 miles starboard. When he joined our frequency we now understood him to be No 1 for landing.

Later in the descent ATC made us maintain FL70 until the other aircraft was established on finals. We were now over the airfield VOR and were then cleared to continue visually avoiding the adjacent city. As PNF *(Pilot Not Flying)* I instructed the First Officer to configure now for landing and turn in at five miles. This would give us approximately 13-14nm to touchdown - with 40° flap and 135kts - not unreasonable.

In the event the First Officer (less than 500 hrs on type, and less than 1000 hrs total) was reluctant to reduce the speed and kept pushing the nose down to join the correct glide/approach path. As a result the flap load relief operated and returned the flaps to 30°, so reducing our Rate of Descent. We touched down slightly long (300-400m beyond the normal touchdown) and with 10kts excess speed with the engines just above idle. With over 3000m of runway available, this did not present a problem for stopping. (Thankfully!)

On reflection, I broke many of the rules I consider of the utmost importance, pressuring a new First Officer, rushing/inducing stress on the flight deck, descending below 500ft a.g.l. without being fully stabilised on the approach with power on, speed stable and checks complete.

This all arose because of my annoyance/frustration over what I considered the inadequacy of the ATC, delaying us in favour of a 'competitor' (fellow pilot) slowing us down, causing us to waste three or four minutes and probably 200kg of fuel. On reflection, the time and the fuel are worth less than the stress and pressure I induced unnecessarily and the potential for an unsafe approach/landing. All for the sake of two extra miles outbound!!

The willingness to review situations such as that described above, the circumstances of which will be familiar to many pilots, and to reflect on the lessons to be learned is an important element of CRM training, particularly when the process involves other crew members.

****

Tyre Pressure?

During completion of the exterior inspection prior to departure, I noticed that the right nose wheel tyre was bald with several cuts down to and in one case through the tyre cords. An inspection of the Technical Log showed that the maintenance checks had been signed off as satisfactory.

A verbal question to the ground engineer as to the serviceability of the nose wheel received the response "Oh that's OK for lots more landings". Only when I entered a defect in the Technical Log to the effect of "please confirm serviceability of right nose wheel" that a wheel change was called for.

It then became apparent that nose wheels were out of stock and that one needed to be obtained from an outside contractor (the airline has recently sold off its brake and tyre servicing function to an off-airport contractor). A two-hour delay resulted.

I am sure that commercial pressure played a strong part in the attempt to despatch the aircraft in this state. But two people had to sign the relevant checks and inspections in the Technical Log and I am sure that at least one of the signatories was signing for someone else's work.

The Operator concerned acknowledged that there was an initial short-term supply problem in the initial stages of the changeover. This was recognised at the time and steps were taken to improve the supply of serviceable wheels. It is understood the stocking situation is now satisfactory.

With regard to the reporter's comment on signing for someone else's work, this is allowed as per Airworthiness Notice No.3.

****

Incorrect Flap Setting

I was the First Officer on the first of three night sectors.

During taxy the captain called for FLAP 'XXX' (take-off setting). I inadvertently set FLAP 'YYY' (leading edge slats only). Later the Flight Engineer read the take-off checks and both the Captain and I responded "FLAP 'XXX' SET". Fortunately, some moments later, the Captain noticed the error and called for the correct setting.

Hopefully the TAKE-OFF CONFIGURATION WARNING would have alerted us when the thrust levers were advanced, but it was a worrying lapse in the performance of vital duties on my part.

It was my fourth successive night on duty, the days had been spent in two hotels, both in which I have always had difficulty getting adequate sleep. One is located on a busy international airport and is not air-conditioned, so that in warm weather the room becomes uncomfortably warm if the windows are closed. But even with the windows closed and ear plugs fitted, I'm frequently woken by the intense non-stage three jet traffic.

The other hotel is an overseas location and is also not air-conditioned despite very high temperatures in summer. Additionally there are no floor coverings anywhere, so that one is constantly woken by the staff and guests clattering about on the tiled floors.

I know that complaints have been made to management about these two hotels, but with no acknowledgement or result.

The standard of accommodation provided for crews during stopovers varies considerably across the industry. Most airlines recognise that the hotel environment is an essential factor in ensuring that crews are adequately rested. Regrettably a small minority do not ensure that the hotel environment is compatible with its intended purpose.

****

Where to Go?

As a pilot for an IT operator, I spend my fair share of time in Southern European airspace, often at night, facing the usual implied challenges. Some of the most common are the last minute changes to the return routing by the local ATCC. If you are very lucky, you will get them on the ramp before departure. The most likely case is that you will only find out *(about a route change)* upon copying the departure clearance whilst taxying. The worst case is being given significant route

changes when airborne at a very busy time in quite difficult airspace.

Whereas I accept that the above will always be routine and part of the job, the quality of the airways chart needed to implement and monitor these route changes will significantly affect the resulting workload. For UK aircrew, the scale of the most likely chart used to cover most of Greece and the Aegean along with much of the Adriatic, the Balkans and Eastern Europe is too small. The density of information covering the Balkans and South Eastern Europe especially, make it very difficult to use at the best of times. In a darkened flight deck, with the lightest of chop, this chart is unusable.

Could gentle pressure be applied to improve this situation?

This information has been passed to the chart manufacturer.

****

A Common Aeronautical Language - C'est la vie!

The following text is taken from the CAA (SRG) Occurrence List (ATC) 1 Jun 98 - 30 Jun 98 and merits particular attention.

OccNum 9801510J

Pilot states that during approach, non-standard R/T (French) was used and that his *aircraft* was on very short finals without having a clearance to land. A previous a/c had landed on the R/W and called clear, but was not. Go around flown. On second approach, the crew again found it difficult to call "LOC established" due to continuous radio transmissions in French.

CAA Closure: The French Authority's report indicates that the reporter's a/c failed to follow a reduce speed instruction and this, combined with the previous a/c's slow clearance from the r/w led to ATC instructing a missed approach.

With regard to the use of French the report stated: "English and French are used jointly at Paris-Charles de Gaulle in conformity to the Ministerial Order of 7 September 1984 relating to radiotelephony procedures for the use of general air traffic. **It states in particular (in paragraph 2.4) that "French must, except in special case, be used between French flying personnel and French ground stations".**

****

ENGINEERING REPORTS

Lucrative Employment - But at What Cost?

I work four-on four-off 12-hour shifts as an avionics and radio CRS *(Certificate of Release to Service)* Holder (often the only such qualified person in the hangar). On night shift we have only one avionics CRS Holder working Monday to Thursday, on 10-hour shifts.

An Avionic Engineer was bragging to me, and the rest of the hangar, that his gross pay for that month was some three times the norm and indeed he was showing everyone his payslip to prove this.

This alarmed me because having previously done the same job myself, I realised that he must have worked every night of that month to get this salary. This meant in order for him to get paid several members of management encouraged or condoned him working excessive hours.

There has always been a shortage of Avionic CRS cover here, but the measures being taken by management to make up for these shortcomings are dangerous.

The manning level aspects of this report and another related incident were discussed with the management concerned.

It was acknowledged that there was a shortage of suitably qualified engineers in this area and that the problem had already been recognised. An accelerated training programme had been introduced to resolve the situation, the results of which should now be apparent.

Some companies have established procedures for limiting working hours. Such initiatives are clearly beneficial, but many permit considerable discretion, which can defeat the purpose of the procedures if used indiscriminately. See also CAA (SRG) comment on Page 4.

****

Blame or Train?

I am employed as a Licensed Aircraft Engineer on ramp operations.

Management has been collecting data concerning aircraft technical delays and

allocating individual engineers' names to the delays. This information came to light only accidentally.

While it has not been used to pressure individuals to date, it has been admitted that the information may be used in the future if the management feels the need.

We now have a situation where, if an engineer stops an aircraft due to a safety related defect (and what other reason would there be other than safety?), that engineer's name will be assigned against that delay on a computer file. It would appear that the unstated *(sic)* aim of the management is to put pressure on engineers to turn a blind eye to defects in order to depart the aircraft on time.

Quite apart from the sinister nature of this practice, there is also the fact that the information is seriously flawed. I am, for instance, identified as an Avionics LAE *(Licensed Aircraft Engineer)*, when I am a Mechanical LAE.

I should also tell you that at least one individual has gone to the CAA over this matter. Investigation of the delays apportioned to him showed that all had been delays due to airworthiness significant items.

When apprised of this report, the operator concerned was anxious to refute the allegation that there was any 'sinister' motive for the practice. Similar personal information attached to delay reports has been available to management for some considerable time.

The particular objective of this initiative was to determine whether additional training might be beneficial in helping some individuals improve their performance, and thus contribute to an associated improvement in the operator's overall delay performance.

It would appear that LAEs were not adequately briefed on this initiative.

****

Sign of the Times

I was the only A&C Engineer on duty on the Line Station with an appropriate Approval. The Line shift at the time had three members missing with one substitute.

I received a phone call from the Station Engineer to request a final CRS signature to a work-pack that would be sent across from the Hangar for me to sign and that it was urgent. Due to Air Traffic delays, the aircraft was required for service almost immediately.

I declined this request on the grounds that I had taken no part in the Maintenance that had been carried out. He was not happy with my reply and I was told that by signing the final CRS I was "... only certifying the work-pack being in order." Further pressure followed, I was accused of being unhelpful. I again refused which led to a very strained atmosphere and have since been told that I was being negative in my attitude.

The aircraft involved had also suffered a flying control problem at an outstation prior to the Maintenance Input in question. On a subsequent sector after the Base input it again suffered a second similar failure resulting in the aircraft returning to Base.

While I am not able to speak for other Engineers, this is not an isolated incident, as most are not prepared to speak out for fear of retribution at a later date.

The reporter is to be commended for maintaining his integrity in standing by his responsibilities as a Licensed Engineer in the face of less than subtle pressures.

****

To Fix...or Not To Fix

On new generation aircraft with centralised maintenance computers (CMC) to aid maintenance, I have noticed, since working the aircraft, that there is a discrepancy between what the aircraft records as maintenance defects, what the aircrews report as defects and what the engineers consider as defects.

Firstly the crews. I do not know what their training suggests with respect to writing defects in the Tech Log, but on many occasions significant defects are not reported in the Log even though EICAS advisory/caution/status messages were present in flight and logged on the CMC/CMCF *(Centralised Maintenance Computer File)*.

Secondly the engineers. Speaking to all my colleagues, nobody who holds CRS

(A&C and EIR) knows exactly what defects we are supposed to investigate on return to base. Some people ignore non-flight deck effects (i.e. defects which, due to system redundancy, do not cause a flight deck effect, or are not correlated to a flight deck effect).

Recently an aircraft was called back at the runway holding point with a status message that according to the MEL *(Minimum Equipment List)* was a non-dispatch item. When investigated the defect had been in the CMC fault history for the last 15 sectors, but no one had investigated it. The crew promptly erased it and the aircraft continued on, only for the message to re-appear at top of climb.

When asking for advice on which message to investigate, no one was interested in giving a reasonable answer. My immediate managers told me just to work the crew reports as to work unnecessary defects could jeopardise the operation, i.e. Technical dispatch rate and deferred defect figures.

The relevant technical services engineers failed to respond and training personnel stated that by experience I'd get to know the messages which stop dispatch.

Even looking through the relevant troubleshooting manuals does not clarify the situation, as every message has a guide to rectification, but the introduction does not state clearly what defects you should investigate i.e. current existing defects, crew reports, CMC messages.

With older generation aircraft with flight engineers, a lot more defects were identified by the crew, mainly because of the additional knowledge of the systems possessed by the flight engineers. All the glass flight deck aircraft have done is mask any defects from the crew and confuse the situation with regards to faults which is probably why they carry less deferred items in the Tech Log and their technical dispatch rate is greater than the Classics.

We would be interested to learn of any similar difficulties experienced with the interpretation and rectification of defects recorded in CMC memories.

****

Acceptable for Despatch?

The Flight crew had reported an intermittent defect in a warning system. The inititiaI engineering investigation showed that the problem was an obscure one and would take time to identify and rectify.

Maintenance Control was contacted to inform them that the aircraft was 'Technical'. I was asked to work on through the night but regrettably had to refuse as I was feeling too tired to undertake the type of investigation required. No other duty Engineer was available either.

The Duty Controller then said he would get one of their Engineers to look at the problem.

I subsequently learned that the defect had been entered as an ADD *(Acceptable Deferred Defect)* and the aircraft had flown out on a revenue flight to another Station where it continued to operate with the defect unresolved.

My management told me in no uncertain terms that they had had a bad time with Maintenance Control over the problem.

I presume the aircraft is still flying with this defect. This concerns me as I can find no allowances in the MEL for this defect. The aircraft has been recently added to the fleet and with the crews not being familiar with the aircraft the defect could be missed with potentially serious consequences.

This report was received in time for the matter to be discussed with the operator, without implicating the reporter.

The operator took prompt action to discuss the defect with the aircraft manufacturer, who issued a clearance to permit the aircraft to fly with the defect for a short period to enable it to position for rectification. This was subsequently undertaken.

It is worth restating that if an item does not appear in the MEL, the aircraft is not permitted to operate under the ADD system, unless a specific engineering clearance is issued by an appropriately Approved organisation, as was issued retrospectively in this case.

****

"Engineer Out of Hours"

Due to an acute shortage of certifying engineers I found myself working a "ghoster" *(An unplanned night-shift duty immediately following a day shift).*

During the daily inspection on a night-stop aircraft the No 1 mainwheel tyre was found to be "Worn to Limits". The mainwheel was replaced by myself and the paperwork completed. A mechanic then took the unserviceable mainwheel to the Goods Outwards area. It was then that he noticed a locking spacer still attached to the unserviceable item which should have been transferred to the replacement mainwheel.

The situation was quickly rectified with the spacer being fitted to the aircraft. If the spacer had not been fitted the mainwheel would have been free to move along the axle and disengage from one of the rotors on the brake pack.

I had not noticed my error and, with hindsight, was too fatigued to safely certify the task and the aircraft. Unfortunately, "Engineer out of hours" is not an accepted reason for delaying an aircraft or losing a sector.

The consequences of tired engineers will make the headlines just as much as tired flight crews.

When will the industry learn?

This operator has advertised for more engineers, but is having difficulty in recruiting suitably qualified people. It is interesting to note that another operator of the same aircraft type lost a wheel as a result of a missing spacer, although the cause of this subsequent incident is not known.

****

Towing Training

We are concerned that personnel from a Ground Services organisation are, when engineers are not available, operating an APU for the purpose of riding the brakes when it is towed from a jetty to a parking area and back again between flights.

The personnel involved are not trained/instructed by a JAR Approved instructor or operate to an Approved checklist.

During some towing operations, a crew of cleaners has been carried on board but without being given a safety briefing, in case of a problem on board.

The operator was apprised of the situation. In response they stated that staff were trained and approved in accordance with the operator's procedures. The practice of carrying cleaners on board during towing operations has ceased.

****

CAA (SRG) Flight Operations Department Communications

The latest CAA (SRG) Flight Operations Department Communications have been issued since July 1998:

6/98

Helicopter Feeder Sites for the 1998 F1 Grand Prix, Silverstone

The Avoidance of Fatigue in Aircrew - Silverstone Variation

7/98

Visibility of Cabin Safety Signs

Carriage of Cargo in Cabin Areas

Dual Flying Controls - Removal and Installation - Certification Requirements

Safety Critical Management Tasks

8/98

Leasing, by UK-based Operators, of UK Registered Light Aircraft During the Period of Transition to JAR-Ops

9/98

Letter of Consultation: Military Flying Hours

10/98

Scheduling the On-Board Rest of Aircrew

Aircraft Loading Problems

Operations and Manual Amendment Summary Sheets

Overhead Bin Survey

Emergency and Abnormal Checklists

JAR-26 Additional Airworthiness Requirements for Operations

Melatonin: Recommendations Concerning Its Use by Aircrew

11/98

Aircraft Safety on the Ramp

12/98

Aerodrome Operating Minima (AOM) Calculations

Approved Maintenance Schedules/ Programmes - Compliance With BCAR Chapters A6-2 and B6-2 - Appendix 1

Flight Data Recorder Readouts - Data Frame Layout Documents

13/98

Letter of Intent: Carriage and Use of an Airborne Collision Avoidance System