

FEEDBACK

Issue No: 38

April 1996

Editorial

As part of the revitalisation of CHIRP, a significant capital investment has been made in the procurement of a new secure computer operating system and data base on to which all of the CHIRP data has now been transferred. The application software for the new system has been developed by Dr David Burgess MIEE, C Eng who was formerly Deputy Director Engineering and Flight Research RAF Institute of Aviation Medicine. David, will join me in CHIRP with effect from 1st September 1996 to assist in processing and investigating reports. David's specialist expertise is in the field of Bio Engineering.

The third person in the organisation is Mrs Claire Chesneau MA, who joined CHIRP in January. Claire has a wide business background that will be most valuable as the CHIRP organisation develops in the coming months.

On the question of organisation, following discussions with representatives of the principal groups in the UK air transport industry and the Civil Aviation Authority, the CHIRP Management Board has determined that the interests of the Programme and user groups would be best served by establishing CHIRP as a Company limited by Guarantee. The Company's Board of Directors will be elected from the membership of the present Management Board, thus ensuring the continuing independence of the organisation. A further initiative that is currently under consideration is the extension of the programme to other professional groupings. We will continue to keep you advised of progress in future issues of FEEDBACK.

Peter Tait

PLEASE NOTE: To assist in updating the mailing lists for FEEDBACK an address card has been enclosed with this issue. For those of you who are holders of professional flight crew/ATCO licences the card, which is addressed to the Civil Aviation Authority, is to be retained for use when next changing your address. For those of you who do not hold CAA Licences, please complete the enclosed CHIRP address card and return to this office to register your continuing interest in receiving copies of FEEDBACK.

A Reminder on the magazine format.

The following type fonts are used for:

- Disidentified reports - printed with minimum text changes
- *CHIRP comments are italicised*
- Verbatim Third Party Responses are printed in SWISS type

Inside This Issue

1	RTO - Who / When	P2
2	FEEDBACK 37 Comments	P4
3	ATC - Ops / Trg Stds	P5
4	Flight Deck Reports	P8
5	Melatonin	P9

Comments on FEEDBACK Issue

Rejected Take Off - Who and When?

CHIRP Comment:

The source of the debate concerning crew procedures for a rejected take off was a report in Issue 34, which questioned the effectiveness of the use of the word "STOP" as the executive statement in an SOP.

Subsequent contributions have expanded the debate considerably to include other aspects, such as whether the decision to reject a take off should remain that of the Captain and, in the item titled "When to stop" in FEEDBACK 37, the relative safety of stopping against that of continuing the take off.

The disparity of views expressed on this subject in previous issues has prompted a significant number of comments on the wider aspects. The following responses have been selected as providing some balance in their consideration of the various and sometimes conflicting influences, which other readers may find to be of benefit.

(1)

I apologise for writing in response to a letter printed in the last issue of FEEDBACK as I am certain that you do not wish to have 'Ping Pong' matches in your pages. However the 'When to Stop' item was very arrogant and showed so little understanding of the reality of rejected takeoffs that I feel forced to respond.

I am a Training Captain with a major Airline, flying Boeings for the past seventeen years. I am only in my late thirties and hope therefore that I do not yet fall into the old Colonel category !

Your correspondent asserts that a stop from before V1 is automatically a safe option.

Unfortunately this is only the case if all reject actions are completed both correctly and quickly, and secondly if the aircraft retains its fully stopping capability. There have been numerous rejected takeoffs over recent years involving overruns and sadly, on occasions, loss of life. These rejects have generally been initiated below V1, but either drills have been

slow or incomplete, or aircraft have failed to stop in the scheduled distance for technical reasons such as tyre failure. On the other hand, very few accidents have occurred just after takeoff as a result of getting airborne with, for example, a failing engine.

In the airline for which I work, rejected takeoffs at speeds over 80kts are not recommended for Cautions or lesser problems, such as LOW OIL PRESSURE which

your correspondent cites. Also, as copilots' experience and knowledge is variable (as your correspondent) and the reject decision is such a critical one, only Captains may reject takeoffs.

This policy was in effect before CRM was a twinkle in Clay Fouchee's eye !

(2)

Statistics indicate that STOP is not the safe option. (FEEDBACK 37 page 2). I did not read the letter to which your correspondent refers, but more aircraft and lives have been lost due to abandoning a take off unnecessarily than continuing.

Boeing RTO (Rejected Take Off) training certainly encourages a "GO" mentality. A "STOP" call close to V1, on a limiting runway, will not necessarily result in the aircraft stopping safely. Reaction time of the pilot (Old Colonel or not!), the engines and brakes may take the aircraft through V1 and what for ? "Low Oil pressure, No 1". The engine may continue to give good thrust for minutes (even hours) after.

As far as CRM is concerned the decision to STOP/GO is one where there will not be time to call a meeting, read the minutes and decide in good time.

Next time your correspondent is working at MAX TOW on a limiting runway, take a good look at the red lights on the runway at V1 (preferably over the edge of a cliff!) and think about stopping for something as "trivial" as a LOW OIL PRESSURE warning light.

(3)

I am tempted to believe that your article 'When to Stop', issue 37 page 2 is a tongue-in-cheek effort to provoke debate on Rejected Take Offs. To quote Centre Court, "you cannot be serious". Your contributor would do well to read a well-known manufacturer's Flight Crew Training Manual. "After 80 knots and before V1, the takeoff should be rejected only for engine fire/failure, an unsafe configuration or other conditions severely affecting the safety of flight".

So opposed is this maker to inappropriate decisions to reject takeoff that part of the Warning and Caution System is inhibited between 80 knots and initial climbout. In my company, PNF should announce a serious engine malfunction (not the location). Your contributor's LOW OIL PRESSURE is not in this category, an engine seizure or fire is. His cynical impatience with "the arrogant old colonel" lends little credibility to his maturity or ability to accept that the decision to Reject must be rational as well as timely.

It would be reasonable to remind him that of the phases of Takeoff Performance, all are factored with the

exception of Accelerate/Stop distance. Simply put, if you continue you will be airborne by the end of the runway, Clear all obstacles and climb away with a fair gradient. The technical malfunction can be handled in a controlled manner using good CRM. Conversely, unless the run is begun at the start of the paved distance, should there be any reduction in friction coefficient due to rubber/oil/fluids etc. or to quote him, "so what if the brakes are hot or a tyre bursts", you are sure to over-run if TORA (not TODA) is limiting. Try that at Funchal.

Whether the author works for my company or not, I cannot tell. Perhaps I am one of his "colonels". My concern is his poor attitude to his flight deck colleagues, which may imply the CRM deficiency may lie with him.

(4)

May I reply to the letter in FEEDBACK 37 headed "When to Stop?" I take issue with your correspondent's statement that the "STOP" call is the safe option for a failure on every take off.

The first accident that comes to mind is the DC-10, 27R at LHR which suffered tyre failure, which the crew heard, but being unable to pinpoint the problem rejected the take off on de-graded tyres and brakes. Everyone DID NOT walk away and the industry accepts the safest option would have been to continue the take off. The accident report is available for your correspondent to digest

I suggest he reviews his company's procedures which apparently require a "STOP" call for LOW OIL PRESSURE close to V1. My company's (and my previous company's) take off procedures state; up to V1 Stop will be called for an ENGINE FIRE or ENGINE FAILURE denoted by TWO parameters or at the captain's discretion, for which guidance is given, ".....malfunctions will be called with sufficient detail to allow the captain to make a decision bearing in mind the POSSIBLE SERIOUS CONSEQUENCES OF A HIGH SPEED STOP".

Our conversion training amplifies further, low oil pressure indication alone does not mean an immediate catastrophic failure. Tyre failure will only have a small effect on continued Take Off performance but will REDUCE STOPPING CAPACITY, as braking efficiently is reduced by 10% for each burst tyre. The Flying Manual goes on to say a rejected take off for tyre failure is not recommended at speeds above V1-20. Food for thought ?

Finally, I am unsure what not being highly paid has to do with a debate on flight safety.

It is important to remember that the safe and expeditious execution of a rejected take off procedure,

requires absolute clarity of the criteria on which a decision to stop is to be based particularly in the high speed case and, if determined to be the appropriate course of action, demands a high degree of crew co-ordination in its execution.

Equally important is a clear understanding of all of the performance parameters and their influence on your specific aircraft type. The decision to Go or Stop in a relatively high speed event will not necessarily be easy or simple.

Remember, those who got it wrong in past accidents thought that they had made the right decision at the time!

En route Diversion

I was a fare-paying passenger on this flight. Your article "How Much in Reserve" in Issue 37 reminded me of this worrying (and then annoying) incident.

About 2 hours before landing ETA at destination airport the Captain announced that the aircraft could not reach the destination due to fuel shortage (no pins were heard dropping but a few knives & forks were!). After a short pause a further announcement declared that we would be diverting to an en-route alternate to refuel. The flight eventually arrived at destination two and a half hours late.

The Captain's explanation for the shortage of fuel was that ATC had held the aircraft at FL290 instead of FL330 as planned for. (If I cut my fuel margins this fine I would probably be out of a job by now). Was this a case of using computed flight plan information? Did CAA get to know about this incident, as it originated in UK? I will not use this airline again - although it seems as if it might happen on other carriers.

If the carrier was an UK AOC Holder the Civil Aviation Authority would expect to be appraised of the diversion through the MOR scheme. There is no requirement for a non-UK operator, as was the case in this report, to notify the UK CAA.

More on Rules

Reference Issue 37: "Rules are there to be!"

As a retired CAA Flight Operations Inspector, I found this letter about the "bullying" tactics of a fleet manager to force an unserviceable aircraft back to base outside the provisions of the Minimum Equipment List interesting, but the implied criticism of the CAA for "allowing" this to be unfair. On the occasions where they have become aware of this happening the Authority would indeed taken action (sic), but this is

the point, they are not psychic. Was an MOR filed? Probably not because it has to be processed past the very fleet manager in question. Was a Tech-log entry made when the probe head failed? Probably not because the return flight would then have appeared "illegal". So this CHIRP letter is almost certainly the first they will have heard of it.

I was quite accustomed to receiving discrete telephone calls at Gatwick from crews who felt themselves to be pressurised and this enabled me to direct my "random" checking of the retained documentation. I can't promise that the Authority will jump up and down with every such item of information but I can promise that they will when it identifies an established pattern.

There is no easy on-the-spot answer for a crew placed in this bullying situation but one tactic that can pay-off is to require written authority to operate outside the Minimum Equipment List / Operations Manual / FTLs. This can be easily faxed to an airport anywhere in the world. When they find they have to commit themselves in writing they will often back off for, of course, they have no such authority to direct you to operate in contravention of the Air Navigation Order.

Mirror, Mirror...not so clear

In answer to FEEDBACK Jan 96 Page 11.

Wonderful idea that the BALPA AGA/AWO Study Group looked at in 1988. On the face of it would help crew, if they knew how the bag loading is going or if the Tug is there, to manage the aircraft to meet slots etc.

Against, it means you have knowledge with real responsibility but little power to go with it.

How much time during pre-flight would be taken up watching actions that are out of crews control.

Are we sure that this knowledge could not be held against events ?

We regrettably did not recommend any extra responsibility in this present unsure climate.

LOFT Training

FEEDBACK No 37: another interesting edition.

I could not agree more with the opinion of one correspondent when he talks of the difference between SOPs and the way we fly the simulator (Training for Real? Page 10)

I know that in these days of political correctness, it is tantamount to treason even to question the CRM empires that have been established. However, the

unquestioning use of the simulator for ongoing LOFT exercises must be at the very least, arguable.

Devoting a substantial part of a six-monthly simulator check to what is essentially a role-playing game, to me loses the some of the point of climbing into what is nowadays a very expensive machine. (I don't use the word 'game' to trivialise, but merely because I can't think of a more suitable word.)

I say this for two reasons:

- I think you get far more out of the simulator when it is viewed as an opportunity to use the many various systems and controls that are rarely if every used in real life - ie the alternate systems and emergency checklists. By the nature of LOFT a considerable proportion of the time is consumed in fairly routine operations. In addition, the notion that it is 'real time real life' is pretty dubious, given the restraints of the time available.
- I am not an actor either by nature or training. Pretending to communicate with cabin crew or passengers, company and the like, may sound like good CRM training, but in practice adds another layer to the simulation. You are ACTING a role, on top of PRETENDING to be airborne; I am frankly not happy in this part and do not get a great deal out of it.

I dread the Thought Police getting hold of my name - extra time in the box to allow me to see the error of my ways and confess to the crime of being a dissident would be the least of the penalties. I am, however, comforted by the knowledge that many of those to whom I've spoken agree with me !

ATC Reports

ATC Operations and Training Standards

A recent ATC report detailed several areas of concern in relation to Air Traffic operations and standards of competency. The issues highlighted were raised by CHIRP on behalf of the reporter with NATS and ATIS Standards Department CAA(SRG). The specific concerns expressed by the reporter have been summarised below, together with the relevant verbatim extracts from the responses received.

The principal concern expressed in the report was that, while the concept of using experienced operational controllers to staff management and training posts was fundamentally sound, it was deficient in that it is possible for some of these important positions to be filled by "low achievers" in relation to their ability to perform as operational controllers, who might be more

attracted to a non-operational career by the stability of the management / training / administrative roles.

Three specific areas of concern were detailed as being evidence of this prime deficiency. These were as follows:

- 1. The quality of the teaching at the NATS College of Air Traffic Control at Hurn as evidenced by the relatively low success rate of Cadets to eventually achieve a validated controller standard.*
- 2. The introduction of cumbersome and inappropriate new operational procedures, through a lack of appreciation of the operational requirements.*
- 3. The policy of permitting some Management / Operations / Training staff to fill operational positions on an infrequent basis, unsupervised, as a means of "keeping their hand in" and retaining their validations, without due regard to their ability as an operational controller.*

The principal response is that of Keith Williams Director Operations on behalf of NATS:

.....I do not accept most of the statements in the report. The air traffic controllers in NATS who work at the College and Operations/Training Departments are competent and highly motivated individuals who care greatly about their profession and the service given to aircraft operators.

However, I would like to give further comment on the report, starting with the NATS College of Air Traffic Control. The 40 instructors are all volunteers dedicated to passing on their knowledge and skill, gained over many years, to students starting out on an ATC career or subsequently adding to their qualifications. Staff are only accepted after stringent selection testing and subject to individual approval by CAA SRG, who issue annual approval for all aspects of the College including staff. A significant proportion of applicants to be instructors are assessed as not suitable.

Throughout their time at the College, instructors are required to demonstrate their ability to perform the most advanced exercises themselves and to that end carry out frequent continuation training on the simulators. Each instructor is also required to spend time annually at operational units to familiarise with current operational practices and is also checked annually in relation

to their classroom and simulator teaching skills. The whole process is overlaid with frequent CAA SRG Moderator attendance, course critiques and BSI QMS safeguards.

Turning to the issue of Student success rates, I agree that we must work harder to achieve greater success. Considerable effort is being spent in improving all aspects of selection, recruitment and training both at college and unit level. The achievements are too many to list here but represent a complete overhaul of ATCO training, spearheaded by the recent Review Group of ATC Training (RGAT). The benefits of the changes will only become obvious when the first RGAT graduates 'validate' in the coming months.

Turning now to the issue of operational competency in Ops and Training Departments. At ATC Operations Units it is essential for the staff responsible for defining ATC procedures and for ATC training to be fully aware of all aspects of the operation. Therefore, it is necessary for some staff to remain operationally competent as well as carry out their so called 'office' tasks. These people have to meet the same standards laid down by the CAA's Safety Regulation Group as all operational staff.

As Director of Air Traffic Operations in NATS I have a role to ensure the highest of safety management standards are maintained across the Company. My staff will continue to ensure that the criticism quoted in the CHIRP letter is not valid.

The following additional information was provided by John Dancer Head of Inspection and Licensing ATC Standards Department

...All major Aerodrome and Area Control Centres participate in the local certification of competence scheme. This scheme is a safety management measure whereby local ATC examiners, trained and tested by the Authority, certify the competence of the controllers at their units....

...The amount of time a controller who holds a non operational position needs to spend providing an ATC service, in order to maintain his competence, will depend on the individual concerned and the complexity and traffic loading at that unit. This is a decision that is properly made at unit level....

...Each ATC unit is audited or inspected by the Authority's ATC Standards Department once every 12 months to test the safety of the ATC service being provided as part of the procedure

for renewing the unit's ATS approval. This is a sampling process and not every controller will be seen....

...It is the responsibility of the unit management to ensure that all their controllers are competent; this is a vital, but by no means the only, area where the unit's safety management processes ensure the safety of the ATC operations...

On the issue of management competency - In a system which demands consistently high professional standards of competency from operational controllers, it is not unreasonable to expect that the same standards should be demonstrably applied to managers and trainers at all times.

There is no loss of face in being supervised, when 'slightly out of practice', as many pilot managers including myself will attest - there is a significant risk in not recognising, or concealing a known lack of currency and/or proficiency.

Not so Fast!

I am an ATCO at an international airport where inbound aircraft are not normally required to hold. Some of my colleagues and I feel under pressure from some pilots to allow them to keep their speed up (i.e. 250 knots until 10 miles from touchdown).

If there is a sequence and we are busy then speed control takes place and there is no comment or problem. However if we are quiet, and they are number 1 or 2 for example, then speed control is sometimes met with sarcastic sounding replies or complaints (e.g. "Where is number 1 ...If we had been allowed to keep our speed up we could have been number 1").

It is very difficult to vector an accurate pattern with an aircraft at 250 knots. Quite often pilots who insist on keeping their speed up don't consider the wind and find themselves going through the Localiser, too high too fast with a very high workload. If two aircraft are a similar distance from touchdown then, with restrictions on vectoring airspace, it is easier to slow one of them down to provide a proper sequence, and surely 210 knots at 35 miles from T/D is not too restrictive !

One further point, it would be helpful if pilots advise any major change of speed as part of another transmission, but please state the target speed rather than just saying "We are slowing down".

So come on chaps, please accept speed control as a positive step not a restriction.

It is worth noting that some Autopilot/Flight Management Systems are not optimised to cope with intermediate range Localiser Capture manoeuvres

from significant intercept angles at high speeds and may cause an overshoot.

More Communication

Whilst on duty as the offshore controller an outbound helicopter, which had notified the tower controller that his destination was not where we believed it to be, departed on his changed clearance. Due to the weather conditions at the time the helicopter was outbound at what is normally used as an inbound level. This clearance change was not passed to all of the appropriate sectors.

When the helicopter reached the limit of radar cover he was transferred to the information sector, whereby the pilot on transfer only stated his range and not his actual position. As the controller on duty for the sector, and not having received the change to his outbound routing, I believed him to be routing outbound to the North east and not as in fact later transpired out to the South east. The pilot then reported at the next two reporting points, again only stating his range and not his actual position, which would have alerted me to the fact that he was approximately 100nms further South than I believed.

At approximately 120nms the pilot requested descent to the rig and was passed the traffic in his vicinity including all the current positions and direction of travel of all the conflicting traffic. This traffic was obviously irrelevant to the helicopter pilot as he was much further south. Instead of bringing this to my attention and again alerting me to his correct position the pilot acknowledged the traffic and after reporting two-way with the rig transferred frequency.

The helicopter's actual position and the position of his destination were only notified to me by the departure of another helicopter from one of the south eastern rigs who asked for confirmation of the rig position and then stated that he didn't believe the information to be correct as he was just passing overhead the rig. At this point the first helicopter returned to the frequency and announced that he could confirm that position - he was in fact on short finals to the rig. Remembering that he was outbound at an inbound level in icing conditions this could have been potentially very dangerous.

As a result of this occurrence we have made our own reminders and adjustments to procedures to ensure that a helicopter cannot get so far from his point of departure and still be believed to be in a different location to his actual position.

So the message to pilots is to help us avoid incorrect traffic information please state your position clearly and that if something does not seem to be correct or relevant query it !!

Flight Deck Reports

Tired, Distracted, Pressed for Time?

Distraction, often in combination with fatigue and/or time pressure, frequently leads to errors of omission to which even the most diligent individuals can become prone.

(1)

This is the closest I hope I will ever come to departing with insufficient fuel.

Forty minute turn round prior to the third sector of the day. Not long after disembarking, the fuel bowser arrived, the refueller connected the hose then got back into his cab.

When the cabin was ready, the dispatcher asked for permission to board passengers. Normally at this point I check if the refuelling is complete, as boarding while refuelling is not desirable, but for some reason I did not check on this occasion. With the passengers on board I checked and signed the loadsheet and thought to myself "I don't remember signing the Technical Log". I opened the Technical Log and noted that the fuel section had been completed by the engineer, I had signed the captain's acceptance and the engineer's copy had been removed. What I did not notice was that I was looking at the previous sector's page (ramp fuel on the previous sector was the same as required for this sector); nor did I look at the fuel gauges. Doors closed and requested pushback: only then did we realise that the fuelling panel was still open, the bowser still connected and no fuel had been uplifted !

I suggest the following causal factors, the absence of any one of which would have prevented this incident:

- Complacency on my part combined with "seeing what one expects to see".
- Poor design and use of the checklist. The item FUEL CONTENTSCHECKED occurs in the Turn Round checklist. The F/O had actioned this checklist early in the turn round (as is common practice) and had skipped over the FUEL item assuming the fuel would be uplifted later. Our company lacks a well thought and clearly communicated philosophy on checklist design and use, which might help eliminate such problems.
- The engineer who should have supervised the refuelling never showed up (reason unknown).
- The refueller seemed uninterested in doing his job of refuelling. Rather than sit in his cab for 25 minutes, when the engineer failed to show he could easily have come and asked me to supervise the refuelling, had he been motivated to do so. There are marked differences between the fuel companies in their staff attitude to "customer service".

(2)

Whilst checking the instruments taxiing to the hold, the RH HSI & No. 1 RMI "turned" right when the aircraft turned left and vice versa, as this was happening I'd set the FLAPS to LAND to check lift dump. I was told to complete the taxi checks whilst "he had a fiddle".

On departure, with both HSIs set to No 1 system, allowable under the Minimum Equipment List, gear warning horn sounded on gear retraction. The flaps had been left at LAND instead of the correct position for take-off.

The distraction of the instruments turning the wrong way caused me not to complete the taxi checks correctly and the captain "having a fiddle" caused him not to check what I had done.

(3)

The sortie before the one in question was busy: burglary FLIR search, vehicle pursuit/offender FLIR search, burglary FLIR search and RTB. Whilst on the ground closing down, we were asked to attend a high-speed vehicle pursuit, so we carried out a quick rotors-running refuel. The vehicle was lost before we arrived, but we were re-tasked to a nearby burglary. I checked in with Radar for "flight information - not above 2000 ft", and was asked to ident my SSR - first error ! I had left it on standby ! ATC then asked me to check my altitude as I was registering 2400 ft. Second error - I had reset my altimeter to read off the pressure altitude for the Tech Log entry at base, and hadn't reset it.

There were no problems with any of this, because I was not in controlled airspace and the controller was a lot sharper than I was. Of note, though this was my first of a block of 3 night duties (hours 1730-0330) and despite an afternoon snooze it must have been telling. Secondly, the rushed turn-round/running refuel is not an everyday occurrence.

This was a very minor occurrence but I report it as a self-disciplined lesson to myself and for those in any doubt that fatigue plus out-of-the-ordinary events are likely to equal mistakes and or inaccuracies.

(Note: FLIR = Forward Looking Infra-Red equipment)

Transatlantic Fatigue

(1)

About an hour after top of climb the captain had a snooze in his seat. Just before 30 degrees West he woke up and told the co-pilot he could now take his rest. Just as we were approaching 20 degrees West, I

looked up from doing my fuel heating to find they were both asleep.

I find this is more a reflection on the company's policy of keeping us on multi trans-atlantics than the individuals concerned. The 24 hour rest period proceeding each return flight whilst fitting in well with the company's schedules, just does not allow sufficient rest, especially when you are doing 6 transatlantic trips a month.

(2)

I am writing to CHIRP while still in a state of shock from what nearly happened after a long night sector back into LHR yesterday.

Crew experienced on type, with a very good working atmosphere on the flight deck, we all dialled up and identified 09L (the initial clearance) and not one of us noticed the mistake (we had been changed to 09R) until the controller's question "which runway centreline are you intercepting ?" That alert controller saved the day.

The reason for this mistake: in my case a series of 24hr night stops after long sectors; in the same week a diversion after a long night flight home; not having slept before pick-up; no facilities for in-flight rest.

We didn't just run out of brain cells on the drive home - it happened on final approach.

As indicated in both reports, the cumulative effects of irregular sleep patterns, which can result from some roster schedules, is often a significant contributory factor in cases of mental lapse and napping. This aspect is being further investigated.

Melatonin

A number of enquiries have been received on the use and effects of Melatonin, a hormone-based substance that is claimed to provide some alleviation of the effects of jet-lag by assisting in the re-adjustment of endogenous circadian rhythms. Melatonin is available "over the counter" in USA and some European countries, but is not approved for sale in the United Kingdom.

The following information has been provided by Air Commodore Tony Nicholson Commandant RAF School of Aviation Medicine:

Current aeromedical opinion is extremely cautious toward the use of Melatonin by air personnel both with regard to its usefulness for coping with disturbance of the body clock

associated with world-wide operations and with regard to its safety. Melatonin has some sedative activity and may even possess mood elevating properties. Subjective feelings of well-being may well be due to these effects, and air personnel should be aware that there could be adverse effects on performance.

Whether Melatonin can hasten the shift of body rhythms to a new time zone is a moot point. It must be appreciated that with current air operations the main issue for aircrew is to obtain adequate sleep against a background of rapidly changing time zones.

Much more needs to be known about the activity of Melatonin in man before it can be endorsed. It does not appear to have had the benefit of a detailed drug development programme which is essential for the introduction of ethical products by the pharmaceutical industry. This is particularly important from a safety point of view. Melatonin is known to modify sexual development and may lead to gonadal regression. It also has endocrine effects in man. Until the potentially toxic effects of Melatonin, or drugs like Melatonin, are sorted out we cannot be certain of its safe use.

In view of its endocrine effects a wise approach at present is that females of any age and males below the age of 25 years should not use the compound. Indeed, an even wiser approach would be simply not to use the drug at all.

Essentially, air personnel are urged to consult their company medical officers before contemplating the use of Melatonin.

The Defence Research Agency on behalf of the Civil Aviation Authority is conducting an assessment of the scientific literature that is available in order to make a recommendation on the use of Melatonin by flight crews. The report is expected to be available later this year.

Note: Nothing in the foregoing is to be taken as contravening any Company Drug Policy, which in all cases is overriding.

Wrong Code

Conducting a helicopter flight similar to literally thousands undertaken in the past 20 or so years. Saturday afternoon, good VMC, 1500' cloud base, cruising at 1000' - absolutely no pressure whatsoever.

Leaving Southampton SRA northbound told "Squawk 7000, clear en route frequency." My track passed close to Lasham so I call to see if there is any gliding activity. No response after 3 attempts so I try Farnborough LARS without much expectation of a response as it is Saturday. I'm right - 3 calls without response and by now I am 20 nm west of Heathrow and 20 nm from my destination. I decide not to talk to Heathrow as experience tells me that are usually too busy to be bothered by VFR traffic outside their Zone so call Wycombe Air Park, my destination.

On contacting them I am told, "You are squawking 7700. Recycle immediately." Much abashed I do so and continue the flight uneventfully.

I was mortified by this fundamental, beginners error. I called the D & D cell after landing expecting a frosty reception at best. In fact they were charming and thanked me for bothering to call saying it happens "all the time" since the VFR squawk code changed from 4321.

I'm sure I'm not alone in, occasionally, selecting an incorrect transponder code although I have not got that one wrong before. On another day it would have been rectified very quickly by the next ATC agency but on this occasion D & D were put to a lot of unnecessary bother. Surely the fact that the 7000 code is just one digit away from the distress code and, as D & D confirm, is frequently selected in error is good reason for considering a change back to 4321 or some other convenient code for VFR traffic outside of controlled airspace.

The following information was provided by NATS/INT 3 which is responsible for IFF/SSR code allocation policy and procedures:

The VFR Conspicuity Code was changed from 4321 to 7000 some three years ago for two principal reasons.

First, as part of the European harmonisation process there was pressure for the UK to adopt a common VFR Code for use throughout Europe. Secondly, codes in the 43## series were allocated to Paris Centre for use by IFR traffic in the Paris area and increasing interference had been experienced from UK VFR traffic operating close to the UK southern FIR boundary.

Following the introduction of the 7000 code, the frequency of mis-selections was monitored and was found to be less than anticipated.

Subsequent inadvertent mis-dialling of the Emergency Code (7700) has not been reported to INT 3 as being a significant problem.

FTLs - Flight Attendants

(1)

I know that FTLs are up for discussion with respect to European standardisation. But how come nobody has ever put forward the flight attendant's case ?

E.g. today. Re-rostered start time from 0700 to 0400 to retrieve diverted aircraft. I (Captain) can only do 2 sectors owing to finish time 1340, and my FTLs allow only 9 hours duty for 4 sectors. Cabin crew can do an extra hour, so they have to stay on the tour. (Co-pilot joined me at *** so he stays also).

In general, cabin staff hours are 1 hour longer than flight deck, and they can be required to take one hour less rest. Their job, at the end of the day (literally) is as stressful as ours.

Also, two further points:

1. Most of them are female and have to awake earlier than us males to present an attractive image to the passengers (not their assigned role which, of course, is SAFETY).

2. They tend to be on short term or temporary contracts and are far less likely to "rock the boat" by refusing to work ever longer hours for fear of the job.(sic)

Any chance that we may all be treated the same in the future?

(2)

Arriving late at European destination at midnight local with one and a half hour delay we noted a severe brake fluid leak even in the dark. We (the pilots) had a generous rest period, but as the cabin crew had a split duty I suggested to the senior attendant that the a/c would most likely be grounded in the morning (no engineering cover) and she might consider her options, plus some advice. The (am) operating flight crew naturally were in bed. It became obvious that she had no idea of the rules of split duty and duly went off to "rest". Some one and a half hours later we (pilots) got a query from hotel reception that our airline Operations had phoned from base to cancel (split duty) and wake up our colleagues T F N (ie in the middle of rest/night/sleep). Naturally I advised him of my view to put notes under the doors at best.

I consider this to be a breach of the Scheme rules in principle and due to the relative inexperience of even supervisory cabin staff this lack of clarity is 'allowed' to continue. Of course, the cabin crew management's version is different. Remember that many cabin crew members do not have English as their first language, are on short initial term contracts. Fear is the key. CRM, dream on.

The FTL's for Cabin Attendants, as detailed in CAP 371 Section B Para 24, permit a one hour longer duty period and a one hour shorter rest period. These periods were determined following wide consultation.

As a result of the narrow interpretation that some operators were applying to the provisions of the CAP, the CAA issued Notice to AOC Holders No 6/94 containing points of clarifications. (NTAOCH 6/94 incorporates all previous NTAOCHs related to FTLs). Para 4 of the NTAOCH details clarifications on Crew Members Rest - including Cabin Attendants.

Responsibility for CAP 371 matters is held by CAA Flight Operations - Policy. Captain Russ Williams is the Head of Section.

Am I Human?

The following incident has troubled me for some time. With hindsight, I should have submitted a report earlier, under the possible heading of "Am I Human?"

As a human being, I obtained my ATPL(H) and was subsequently tasked to fly from shore to an offshore oil installation. The client held the flight on account of inclement weather. It appeared the client felt the sea state was above that judged safe for rescue of personnel from the sea. After some two hours delay, Ops reported that the client was contemplating sending the flight with only the crew and freight, as the freight was considered essential. I queried the suitability of the sea state for rescuing the crew, (human beings). However the client felt that that sentiment was inapplicable as the crew were not passengers.

The point at issue is not necessarily the sea state itself, per se, as we fly in conditions over the North Sea which are certainly worse than those I remember on the day in question. The situation would appear to beg the question: When does a pilot (crew member) cease to be a human being ? Is it perhaps when he puts his immersion suit on, or starts the engines/rotors; maybe when he gets out of bed or perhaps it is when he first obtains his pilot's licence? The implications of the client's "thought process" are worrying.

Drift or not?

Airborne on a day with a crosswind, change frequency to radar.

"Maintain runway heading" says ATC - but I **think** he means "Maintain runway track".

So why does he not say so ?

Or am I wrong ?

The Air Traffic Services Standards Department, CAA(SRG) advises that the term "Maintain Runway Heading", if used, assumes that the pilot will maintain the runway magnetic heading without making an allowance for drift.

If required to maintain runway track, the more usual phrase "Climb Straight Ahead" will be used.

Neither phrase appears in the List of Standard Phrases in the Manual of Air Traffic Services, however "Straight Ahead" is defined in RAC 0-4 List B, and for the departure case is stated to be "Track extended runway centre line".

Winter Footnote

Rarely does a Winter season pass without an accident occurring in which snow / ice accretion is a significant and avoidable causal factor. Now read on...

(1)

I boarded this delayed flight, taking care of my footing as I did so due to the ice on the apron walkway and the moderate snow that was falling. I sat in the middle of the cabin with a clear view over the starboard wing. As the front door was being closed I could see some crystalline ice formation on the inboard leading edge and further outboard substantial snow deposits such that the vortex generators were almost covered. I presumed that the crew were waiting for door closure before de-icing. Not so. We continued with push back. I pressed the call button and was greeted by a bubbly young flight attendant. I showed her my ID explained that I was a pilot with a major airline and told her that the captain must be informed of the following "the wings are contaminated with ice and snow". I stressed the importance of the phrase "contaminated" believing that this would help convince the flight deck that I was not some mis-informed busybody. The attendant told the No 1 who, in turn, informed the captain. Thereafter, we simply started engines and took off. The wings did not blow clear of the wet snow until the aircraft was cleaned up and accelerated through 210 kts approximately.

I wondered if my umbrage was nothing more than a bruised ego and so talked subsequently to the handling agent ramp supervisor who confirmed my feelings in that he had fully expected a de-ice request and had duly prepared for it. Furthermore, he had expected a return to stand.

I know the crew was faced with a multitude of problems; crew duty times, imminent runway closure for snow clearance, night jet bans and the cost of de-icing. I mention the last as this was a low budget operator and question how much these costs are starting to play in the 'cost is king' airlines of the nineties.

I hope the answer is nil, but overall this incident is a classic example of the failure of CRM. I have now decided that if I am ever in a similar situation I shall unstrap, stand up and demand to get off.

(The incident was reported to the airline's Chief Pilot)

(2)

A BAe 146 parked adjacent pushed back with significant amount of snow on forward fuselage and engine nacelles. Difficult to see if significant snow on upper surface of wing, but certainly there was snow on the wings and stabiliser. Informed ground to contact the a/c which he did and the a/c said he was happy!

De-icing rig then came across to our aircraft and informed us that "his mate who'd just de-iced the aircraft had taken exception to what we'd just said "Because he'd been de-icing a/c for 20 years".

We did wonder whether to let him near us !
