Confidential **H**uman **F**actors **I**ncident **R**eporting **P**rogramme

FEEDBACK

Issue No: 37 **JANUARY 1996**

Editorial

Previous issues have provided details of the review that was undertaken, and explained some of the changes that are being made within CHIRP. In this first issue, since responsibility for the Programme transferred from the Defence Research Agency, I have detailed the background to some of the recommendations and changes, and the aim of the new organisation.

Human Factors now form a significant proportion of causal factors in aircraft accidents and serious incidents. Since CHIRP's introduction in 1982, technical causal factors have progressively reduced as advancements in design, development and certification processes have contributed to improved system safety. The contribution of HF, on the other hand, has remained essentially constant, in spite of the introduction of new technologies and improved operating standards. If HF related causes persist at the present rate, with air traffic increasing as projected, non-technical accident causes will become dominant, reaching a level that is likely to be damaging to all sectors of the industry.

Historically, the air transport industry has not supported HF research or its application with the appropriate level of resource and funding in comparison with investment in other technical areas. Since its inception as a research project by Roger Green's highly motivated group within the RAF Institute of Aviation Medicine, further development of CHIRP has been limited by increasingly stringent financial constraints. It is largely through the dedication of my predecessors that the programme has achieved its successes and retained the confidence of its many users. More recently an increased awareness of the growing influence of HF in accidents and serious incidents has caused all agencies to review their support of HF research and analysis. In the case of CHIRP, Air Commodore Tony Nicholson and the members of the CHIRP Liaison Group (now reformed as the CHIRP Management Board) commissioned an independent review of the programme and decided to provide a more proactive service, through the appointment of a full-time director.

CHIRP's aim remains that of analysing issues raised through the reporting system and, while maintaining the essential precept of confidentiality, representing reporter's views with the appropriate agency. Organisational and funding processes are being established to ensure that, in future, we can work independently and effectively.

CHIRP remains **your** programme and will continue to meet **your** needs. Now is your opportunity - let me know any suggestions for improvements and changes, or any issues that you want CHIRP to pursue.

PCT

CHIRP's address has changed but ..... the Programme will remain at Farnborough and retain the close historical links with the Royal Air Force School (formerly Institute) of Aviation Medicine.

Inside This Issue

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Food for Thought?

I would like to reply to the article in Feedback 36 Page 12 which included the quote "...do the airline guys REALLY have so much to complain about?"

I have done long duty nights flying for a charter company and I know the kind of "macho" heroism that is involved when saying what work we did compared to the scheduled airline pilots; but does that make it acceptable? NO, there is room for improvement in ALL sectors of the flying business so let's stop decrying each other and channel our energy into obtaining better conditions from the companies and the regulatory authorities.

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When To Stop

I am staggered you printed the second report (Feedback 36 Page 11 "On the other hand...") although it is good evidence, as far as CRM is concerned, that you can lead a horse (or should I say ASS) to the water, but you can't make it drink! What your correspondent seems to have lost sight of is that the STOP call is the "safe" option. A failure before V1 (after which, of course, the T/O must continue) and a STOP call will result in the aircraft stopping safely within the remaining TODA/ASDA. Only if instead of calling "stop" I call (say) "low oil pressure, No1," and then sit and wait whilst some arrogant old colonel assimilates the information, draws his 30,000 hours of largely incident free flying to bear and then calls "stop" - by which time we are V1+10, will we run off the end of the runway! And so what if the T/O is rejected un-necessarily - hot brakes, burst tyres etc. perhaps, but everyone will walk away which is more than can be said if the T/O is continued when it should have been aborted. At least your correspondent doesn't work for my airline, thank God, because none of us are highly paid. There are times when I realise that money isn't everything. I am using your form for convenience, but have no desire to hide behind the cloak of anonymity you provide. By all means publish my name if you so desire.

CHIRP'S policy is to print all viewpoints in order to facilitate open debate.

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More on Fumes.

The following interesting observations on fumes were submitted by a holder of both pilot and engineering licences.

I was interested in "Fume Furore" (Feedback 35 Page 4). I offer the following as possible food for thought. It appears that once your reporting crew start their flying day, they spend as much time doing ground turnrounds as they do in the air. Major modern airport terminal areas have large number of parking stands crammed together side by side protected by encircling service piers. This creates large concrete cul-de-sacs which probably have very little ground-level wind flow to dissipate surface fumes.

Do your crew fly aircraft types with similar characteristics to the Shorts 360, where to monitor refuelling one has to stand virtually beneath the wing root fuel tank vents? Are your crew usually parked next to pressure refuelled aircraft with wings that are close to the ground, e.g. BAC One-Eleven, DC-9, F100 etc.? Aircraft such as the One Eleven can be pressure refuelled at quite a high flow rate, which causes considerable volume of jet fuel fumes to be expelled from vents below wing tips - fumes which are heavy and sink to the ground. The reasonably cold climate in the UK is not conducive to rapid evaporation of fuel spillage or fumes. Jet fuel evaporates much more slowly than AVGAS for example. When aircraft engineers are required to work inside aircraft fuel tanks (tanks that are completely drained and dried) they have to wear breathing apparatus to avoid becoming unconscious.

I personally have noticed that if an engineer gets even a slight jet fuel spillage on his/her overalls and then sits in a modestly warm crewroom, that person emanates fumes which cause one to become drowsy and fall asleep.

Could your crew be absorbing refuelling fumes from other aircraft into their uniform during turnrounds, and then be gently gassing themselves during flight? Exhaust fumes may not be the problem. I am of the opinion that the thick blue (NATO) jersey type uniform used by crew of some smaller operators absorbs more fumes than the airline type jackets of larger companies. Also remember that engineers and ground handling staff are working in fumes all day long and surrounded by close-parked ground equipment running almost continuously. Extreme concentration of enclosed parking stands were not so

common until about the early eighties, before which ramp pushback collisions (A/C to A/C) were virtually unheard of. Could drowsy staff losing concentration have started that problem, rather than sheer carelessness?

Dr Ron Pearson, Head, Medical Research & Human Factors, CAA Medical Division has provided the following comment:

The minimum concentration required to produce a detectable effect is 0.05%. However, the effects include nausea and frontal headache in association with dizziness or symptoms of intoxication. Higher levels, such as 0.25%, would produce irritation of the conjunctivae of the eye with weeping before showing restlessness, excitement and further toxic effects, but this would require exposure of about one hour.

In an outside refuelling environment it is possible to get a few breaths as high as 0.2 or 0.25%, but the normal air movement would be enough to dilute this very quickly and the individual would notice the pungent aroma and move away from the vicinity of a fuel vent. I think it highly unlikely that any flight crew could gain enough exposure during a walk-round to have any intoxicating or toxic effect. I would also consider that the fumes carried on clothing are so diluted that they would not cause symptoms.

On the other hand, any fuel spillage onto clothing should be considered a safety hazard. This is not only from the point of view of inhalation or skin irritation but also from the fire hazard point of view as the fumes evaporate....

I would consider that the increase in ground handling accidents are much more related to commercial and other pressures than to the intoxicating effects of fuel fumes.

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Rainboe Roundup

Feedback 35 (Page 5) carried a warning about the potential hazards of Rainboe Repellent. Since the comment appeared we have received a response to our request for more information on this subject from CAA(SRG) Systems Department. For pilots operating equipment with Rainboe Repellent systems, the following text is extracted from a report referencing the CAA investigation of a MOR on the same subject.

The FAA are well aware of the various reports of pilots being affected by RAINBOE fumes resulting from leakage from the container or the system in the flight deck.

The FAA were petitioned by ALPA in 1989 for a rule change to add a distinctive odour, provide shielding for the fluid containers and distribution lines and to require periodic inspections. The petition was denied in 1991.

The FAA conducted tests in aircraft flight decks where they concluded that the level of toxic contamination of air was insignificant, even with large spillages. The opinion of CAMI was that it is possible that certain people may be sensitive to certain chemicals such as those in RAINBOE but that the vast majority of the population would show no ill effects.

The FAA have taken no action and anticipate no further action.

Until the subject MOR there was only one recorded previous UK incident, on a B757 in 1988. This was closed as a random occurrence with no lasting medical effects on the flight crew.

RAINBOE and other similar products are, or will shortly be, banned from production because of ozone depletion effects. They can presumably continue to be used until stocks are expired.

The CAA have concluded that no further action is to be taken.

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TCAS

Re Feedback No 36 October 1995. Thank you for another interesting paper. I have one comment to make on Captain Tim Sindall's TCAS reply and your summary of TCAS Bulletin No 2 (*Pages 5/6*). I quite understand, with the latest fever for litigation, the need to say "and has no other approved role" and "it should only be used as approved and certificated".

However, in the real world fire-axes are used to open all manner of things not on fire; signalling flares are used to scare birds; ice cubes unblock toilets where coat hangers cannot reach and oxygen masks fix hyperventilating passengers.

I like the suggestion in (2) of increasing TCAS range temporarily to 100nm. This would save many requests for level changes in areas of 15 minute separation requirements. Anything that saves congestion of African HF has to be good! There is every point in TCAS displaying aircraft that cannot be seen. Do we turn it off in IMC? No. The only

time we turn off a working TCAS is when operating to parallel runways in USA and after engine failure. One of these is daft!

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And by a strange coincidence...!

During FL290 cruise on a random oceanic track a TCAS "other traffic" symbol appeared indicating 1000ft below and behind. The traffic gradually overtook and continued to pull ahead and at about 5 miles the F/O pointed out that it was turning right but nowhere near the next waypoint. I then noticed that TCAS was now showing the traffic at 400ft. We established VHF contact and asked if he had climb clearance.

He replied that they had suffered an autopilot trip but now had it back under control. TCAS then returned to displaying 1000ft.

As Captain Tim Sindall stated in his letter that was published in the last issue, the current certification basis for TCAS equipment is quite specific and is limited to short range advisory and collision avoidance.

There are probably a number of potential benefits associated with the availability of medium/long range TCAS information, particularly in the parts of the world you mention (and a few more!). However the present equipment is not so designed. Moreover, it is highly likely that the provision of an additional capability as suggested is unlikely to be either simple or cheap!

As previously stated, if anyone wishes to pursue this matter further please contact CAA(SRG).

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Practice Military Intercepts

Feedback 36 referenced an Alert issued by ASRS regarding "Practice military intercept of a jetliner in Brazilian airspace" and included a letter suggesting that similar operations might be conducted by the Royal Air Force.

Group Captain Peter Gooding Deputy Inspector of Flight Safety (RAF) has advised the following:

I would wish to clarify the impression that may have been gained from the article in Feedback 36 under the title - A NEW MEANING FOR "BREAK, BREAK ?" that the Royal Air Force conduct practice intercept manoeuvres against civil air traffic. This is not the case.

More Callsign Confusion

Still more call-sign confusion reports in "FEEDBACK" and my own experience confirms that it is a continuing and increasing problem. Indeed, as traffic increases, the problem must get worse unless the system is changed.

Before the present system of "Company Identification plus Flight Number", many operators used "Company Identification plus Aircraft Registration" call-signs. This was better because:

1. There are twenty six letters, as opposed to ten numbers from which to compose the identification. Thus, using only the last two digits, 676 call-signs are possible with letters (26 squared), only 100 with numbers (10 squared). Using the last three digits the advantage is 17,576 vs. 1,000 (26 cubed vs. 10 cubed).
2. Letters, using the phonetic alphabet, are more distinctive than numbers. Seven can sound like ten, three like two, etc.)
3. There are already too many numbers transmitted in R/T exchanges for optimum clarity. (Flight Levels, Headings, Speeds, Transponder codes, etc.

The reasons given for the change to Flight Number call-signs was that the ATC computers couldn't cope with letters. Computers have come a long way since then, as has air transport. Isn't it time we went back to letters

We didn't possess enough fingers and toes to check the arithmetic!

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Bring Back The Angels

Feedback 36 again contained its fair share of "potentials" resulting from mis-understandings and/or mishearings of flight level changes. Flight levels and headings share common 3 digit characters, and are often confused; especially with the myriad of accents involved.

So why not reintroduce the old war time "ANGELS" Climb Angels 25, Descend Angels 11, just two digits, cannot be confused with headings, and Angels' signals clearly, that we're going up or down. Nostalgia No, Common sense I think so, anybody else?

P.S. What about the 500ft. Between? FORGET/SCRAP THEM!

CHIRP is now represented on the UK Flight Safety Committee and will pass these suggestions to the UKFSC ATC Emergency/ Training Working Group for their consideration.

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To Prosecute or not to Prosecute?

The Air Safety Report (MOR CAP382) should be IMMUNE from prosecution as per FAA similar scheme in order to benefit fully. After all only idiots "self incriminate". That's why the reporting rate in the USA is 12 more than the UK (per pilot). "Every Incident/Accident no matter how minor is a failure of the WHOLE organisation" but in the majority of cases COURTS blame only the Commander at the end of the day. Hope this will be incorporated in the NEW CHIRP!!!! or JAR CHIRP.

As stated, CHIRP reports are not subject to the same legal protection as is legislated for the ASRS system in the USA.

It is principally for this reason that reports submitted to CHIRP are, and will continue to be, treated on an absolutely confidential basis. After a report has been validated, all means of identification including signatures are removed and, if necessary, reports are further disidentified to protect the identity of the reporter. On closing a report, the details are detached from the report and returned to the reporter. CHIRP does not retain any record of reporter's personal details.

The CAA is required to investigate and if necessary prosecute any act of gross negligence or wilful infringement of the appropriate regulation(s). However, the most recent Aeronautical Information Circular relating to CHIRP(AIC 141/92) states:

The strict confidentially regarding reports will be maintained, but, as was pointed out when CHIRP was introduced, it is possible that an incident reported in confidence to this scheme may be reported independently to the CAA by a third party. Because of this, the CAA has agreed that, should it receive information from such a third party indicating an infringement of the Air Navigation Order and Regulations, it will not take legal action provided:

a) The infringement was neither wilful nor grossly negligent

b) the person involved forwarded a completed confidential report form within ten days of the incident concerned

c) the infringement was directly connected with the human factor incident reported

For flight crew a human factor incident is defined as an incident where:

a) a crew member's action or omission caused, or could have caused, a potentially hazardous situation, or

b) the operating environment, ie aircraft equipment or operating procedures, could have contributed to an error by a crew member

In the context of Air Traffic Control, a human factor incident is defined as an incident where:

a) an Air Traffic Controller's action or omission caused, or could have caused, a potentially hazardous situation , or

b) the operating environment could have contributed to an error by the controller

A revision to the AIC is currently in preparation to reflect the recent changes. It is not anticipated that there will be any changes in the CAA's position.

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CRM

It has long been recognised that a flight deck crew which is well trained, able to interact effectively and to recognise the importance of the effective allocation of flight deck duties is more likely to perform to a consistently higher standard, particularly when confronted with an abnormal and/or emergency situation.

In order to place formal emphasis on the less tangible of the above qualities, Crew Resource Management (CRM) Training has been introduced, with many airlines placing considerable importance on seeking to ensure that the CRM principles of effective communication, team working, task management and technical proficiency, are known, understood and practised by crews.

It has also become evident that the medium/long term effectiveness of CRM training is dependent upon the right organisational culture being achieved and reinforced. This change process requires that managers are seen to be effective role models for the culture, and must be supported by new/contract

employees being effectively trained in the principles of CRM and successfully inducted into the culture.

The following reports would suggest that continued emphasis is required on the latter aspects of CRM.

Rules are there to be .....!

Passing 1700ft QNH on ILS into our destination (Captain Handling) a master caution anti-ice illuminated revealing a probe heater failure of the F/O auxiliary static probe heater. The surface OAT passed was 25degC so I cancelled the master caution, considering no probe icing risk existed and we continued for an uneventful landing. The Captain and I confirmed that the probe heat had failed and consulted the MEL. We experienced some difficulty in contacting Ops on HF, eventually establishing contact via another HF station. We outlined the problem and pointed out that, given our ATC slot, we would not be able to complete the return flight to UK during daylight. (Sunset at Base 1950GMT) and therefore could not meet the requirements of the DDM.*(Day / VFR - No known or forecast icing conditions).* No engineer was available for consultation so we awaited a call back with the necessary approval to RTB the following morning, proposing split duty rest. The Captain attempted to obtain local engineering assistance and I stood by the HF. A subsequent call from Ops revealed that they had contacted the senior pilot manager for advice and that he would call us via HF. This call came some 10 mins later. To paraphrase my conversation with the pilot manager, I explained the problem and our inability to comply with the provisions of the DDM. He said that it was a perfect night for flying and that even when dark, (i.e. after sunset) there would be sufficient ambient light to comply with the spirit of the DDM. I explained that, in any event, on the outbound sector, we had climbed through icing conditions and that there were large areas of CBs along the route up to 33,000ft. I suggested he might prefer to speak to the Captain. To cut a long story short, he browbeat the Captain to ignore the day/VMC condition in the DDM. The Captain and I discussed the situation in light of the pilot manager's comments. I felt vulnerable as I am a senior FO in the Company and in line for command, not a good time to buck the management and I don't know what particular pressure the manager put on the Captain. In any event we agreed to launch and informed Ops that they would have to be prepared for us to divert in the event we encountered icing conditions. (We knew we could descend VMC over the UK and the departure presented no problem. The only danger would be if we were unable to secure a cruising level above the tops en route.) We eventually obtained an ATC slot and landed back at 2120 GMT having conducted the last hour of flight in darkness. It transpired that the aircraft was slated for an early departure the following morning and no alternative a/c was available.

I had heard of similar situations arising with the senior pilot manager, but this was my first personal experience of such. It is clearly detrimental to flight safety if the Company pressurises Captains to operate outside the constraints of the DDM, especially, as in this case, there was no suggestion of formal authority to operate in such a manner. Apart from the dangers that the constraints in the DDM are designed to avoid, this practice places a strain on crews and engenders an unhealthy attitude within the Company that is, of itself, detrimental to flight safety. I had thought that the CAA had acted to stop companies placing undue pressure on Captains for commercial considerations, clearly they have not.

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How much in Reserve ?

(1)

It is becoming increasingly worrying how some of the charter carriers are enforcing their policy of carrying no more than minimum required fuel, in order to gain a competitive edge in terms of cost reductions.

Whilst modern flight planning systems might well be able to compute required fuel loads extremely accurately, coercion by over zealous management is a dangerous way of trying to ensure unnecessary fuel is not carried.

I have been an airline Captain for many years, and have taken professional pride in loading a safe, yet not excessive, amount of fuel. Until recently my decisions on this have never even been questioned. I now find that if I dare to carry any more than is dictated by the computer I receive a nasty letter, or an "interview invitation" from my pilot management. Consequently, although still legal, I sometimes carry less fuel, and arrive with less, than I feel is really sensible under the prevailing circumstances.

I trust that in any action taken, and/or publication of this letter my anonymity will be strictly preserved.

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(2)

Checked in for the flight concerned when a management pilot approached the Captain, drew him

to one side and in front of us and other crews demanded an explanation for his monthly fuel average being in excess of minimum flight plan.

Capt. was very obviously upset by this, he is himself a management pilot, and having chosen to load minimum fuel for the flight. We continued normally. However the subject was aired extensively in the course of the flight.

Firstly our operation carries relatively low levels of extra fuel due to many years of extreme commercial pressure exerted by management.

Secondly there appears to be no allowance made for routes operated, weather etc when considering these "averages".

Thirdly I feel that the time for interviewing a Captain over this type of matter is not during the 10 minutes allowed for pre-flight planning.

Fourthly I am concerned that the CAA appears happy that the Captain is responsible if the fuel is insufficient but is fair game for management if he chooses to load more than the legal minimum.

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(3)

Please find enclosed a letter (the first of its kind in many years of a safe operation) from the airline management concerning excess fuel. I carried excess fuel on one occasion over the period stated, due to severe weather being forecast. If they had telephoned me or bothered to read the comments on the Fuel Flight Plan, then they would have found the reason. But no! I received this bullying letter inferring that big brother is watching and how dare I take any extra fuel. This has directly put intense pressure on my operation and I feel at the flight planning stage big brother is watching, when I make the fuel decision. I would be very interested to hear what the CAA safety officers comments are on these bullying tactics. Perhaps you could print them in the next Feedback, as no doubt these managers read it.

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The principle of using computerised flight plan fuel burns as the basis of calculating sector fuel loads is now well established in both the UK and elsewhere. Apart from the obvious cost benefits of operating at reduced AUWs, a sector fuel policy is commercially advantageous in the case of those aircraft types in which additional freight can be substituted for fuel not carried.

UKCAA have judged minimum sector fuel policies to be acceptable in principle, ***provided that airline management do not place individuals under undue pressure and accept that the adoption of such a policy may increase the attendant risk of diversion****.*

The implementation of a company sector fuel policy in no way affects the aircraft captains rights and obligations under Article 35(e) of the Air Navigation Order.

Reports received by CHIRP indicate that the manner in which some airlines manage this policy is the real problem. It would seem to be entirely appropriate that, where an airline wishes to take advantage of the commercial benefits of a fuel load policy, a company procedure, which details the process by which the policy is to be managed, is defined and promulgated.

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CHIRP has received a number of reports relating to situations in which new hire/contract employees have either been ignorant of, or have ignored CRM processes, but which cannot be printed because of the ease with which individuals and airlines might be identified. Each of the specific concerns, which include incorrect procedures / handling techniques and inadequate crew co-ordination, is being followed up by CHIRP. We would be interested to learn of any further examples of this type of problem.

FTL - A Different Viewpoint

At present I am a CPL/IR holder with approximately 800 hours. I am currently working for a charter airline as a steward, until some flight deck jobs come up.

The following describes a rather concerning sequence of events. I recently operated a short-haul flight, flight duty time of 10.22 hours. This duty concluded at 2207 UTC and was followed by my 50 mile car journey home. I knew all I was going to do was to go to sleep and get up for my next rostered duty, the following morning at 0915 UTC, preceded by the 50 mile car journey. At 0700 UTC, just prior to me leaving home, I received a call from crewing advising of a possible delay. At 0745 UTC crewing called back advising of a new report time of 2330 UTC, and to phone before leaving home, in case of any change. Clearly this wasn't a good revision to a roster having just had a full sleep. However I phoned crewing at 1715 UTC to enquire of any change and of my intention to sleep. No change was expected. At 2050 UTC I received another call from crewing advising further delay, report now 0050 UTC. This call interrupted my sleep 3:35 hours after I had advised that I was going to sleep. I reported for duty

at 0050 UTC and discovered my colleagues had also been re-rostered, and were also exhausted.

The flight operated, and it was on our final approach into UK Base that being able to sit in my crew seat led me to falling asleep. I was only woken by a colleague telling me the crew bus was waiting. In the event of an emergency, I feel that I probably would not have opened the door I was sitting next to.

This situation clearly is not acceptable, but is not easy to overcome, since none of the temporary summer staff such as myself have received a copy of the flight duty times booklet. This is however available to "look at" on specific request. Additionally most staff feel they cannot complain since they are concerned the senior crew member could be assessing them, and that their line managers are rarely in the building when they are.

CHIRP has received a further report relating to cabin crew FTLs. This is currently being researched and will be included in the next issue.

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Going Down.....Going Up.

In the descent we had just levelled at FL60, so I called for further descent. En route ATC then cleared us to FL40. Just levelling at FL40 we were handed over to Approach ATC, who then cleared us to descend to 4000ft on the QNH of 985mb. This meant we were already at approx. 3500ft, the Captain asked me to climb to 4000ft. It was not stated by either en route ATC or approach, what type of service they were providing. The published transition altitude was also 4000ft.

This was one of several reports on the same subject. The relevant agencies have been made aware of this problem.

The Manual of Air Traffic Services provides guidance on the lowest useable Flight Level for the appropriate Regional QNH to ensure a minimum of 500 ft separation from traffic in transit on QNH (MATS Part 1 Chap 3 Para 4)

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Hopefully it may never happen.... however, if it should.....

Although I retired as a Flight Engineer in 1994 after 18,000 hours of long haul operations, I think that it is just possible that you might be interested in a medical problem, and the implications that it raises, that has recently come to light.

On April 29 1995 I had a Transient Ischaemic Attack (TIA) sometimes known as a "Mini Stroke" - suffered a temporary loss of speech due to a temporary blockage of blood supply (probably a clot) to that part of the brain which controls the speech. I saw a Specialist who carried out flow checks on the blood supply to my brain (carotid scan - OK) followed by a head scan. I was advised that I had suffered two TIAs - not one. I WAS NOT AWARE THAT I HAD SUFFERED A TIA PREVIOUSLY.

So not having any snags on a Jumbo to investigate anymore, my curiosity was aroused and I bought a computer program called Doctor Schueler's Medical Adviser. According to this computer program and cutting a long story short, if part of the brain loses its blood supply, a partial brain failure occurs (stroke). If that bit of the brain dies, it is a proper full blown stroke. If, however it does not die and recovers, it is called a TIA. The program then describes some typical symptoms of a TIA, one of which was like looking through frosted glass for a TIA on a vision problem. That rang a bell with me. I remember about 1986, (in Japan) waking up one morning on my day off, with a fogged up left eye. I phoned up operations and the duty officer (most efficiently) sent me off directly to an eye specialist in the city where my eyes (now fully recovered) were tested. They were OK and I carried on with my duties and operated two legs back to the UK. At no time did I consult a doctor, or indeed realise that I needed to do so. So the TIA was not recognised as such. Nor did I realise that I was now at risk. Had it been recognised, maybe the CAA would have pulled my licence. I don't know. Once the "Eye Man" in Japan had cleared me - I just forgot about it.

With hindsight, now I know that I could have had another TIA or even possibly a stroke because I subsequently found that my cholesterol was high. I do feel that crews could be made much more aware of things like TIAs especially these days with all the two man crews around. Maybe there ought to be blood cholesterol checks at medicals. Hope that I have not bored you.

CHIRP passed this most interesting report to CAA Medical Division, with the reporter's permission. Dr Tony Evans, Head of Medical Standards & Certification, has provided the following additional information

This letter concerning a "transient ischaemic attack" (TIA) describes very well the effects. As he says, they are caused by a transient reduction in blood flow to part of the brain. The symptoms are determined by the part of the brain which is affected,

and can be diverse, including visual disturbance (as described, when the artery supplying the light-sensitive part of the eye, the retina, is affected), speech problems, dizziness, weakness or paralysis. The usual cause is a narrowing in one of the main arteries supplying blood to the brain resulting in a turbulent blood flow and this in turn predisposes to the formation of a small clot (embolus) which breaks away from the arterial wall. This travels into the brain itself and eventually lodges in a narrower artery, effectively blocking the blood flow to a portion of the brain. The body's clot removal mechanisms then come into operation and remove it within a short space of time, normally within an hour or so. The reduced blood supply creates an oxygen shortage or "ischaemia" (hence transient ischaemic attack). Since brain cells require oxygen for proper functioning, if they are deprived of this then symptoms will ensue.

The definition of a transient ischaemic is that it is "transient" and the individual will make a full recovery within 24 hours. Given suggestive symptoms, a doctor will listen to the neck arteries for turbulent flow and also to the heart since an embolus can develop here, for example from turbulent blood flow through a narrowed heart valve which may be heard through the stethoscope as a "murmur". However, in a pilot in whom a TIA is suspected, referral to a neurologist (specialist in diseases of the brain and nervous system) is required since he has the experience to determine from the history whether or not the episode was a TIA: this is sometimes not easy. Investigations such as ultrasound of the neck arteries or scanning of the brain may be required, but can be entirely normal and the diagnosis then has to be made on the history alone. The risk to flight safety is that, having had one TIA, the statistical chances of having another (or indeed from suffering a more long-term effect, i.e. a "stroke" which occurs when the oxygen shortage is prolonged and a portion of brain tissue "dies") can be significant. Also, if an individual has a narrowed neck artery it is possible that arteries in other parts of the body will be affected, including the coronary arteries. Aspirin is sometimes prescribed in someone who has had a TIA since it reduces the tendency of blood to clot and form an embolus.

If a pilot suffers any unusual symptoms such as those described above, or anything which is out of the ordinary for him or her, he should discuss these with a doctor before flying. Symptoms of a TIA can mimic other problems, and it is sometimes difficult to make a diagnosis, but all a pilot can do is take medical advice and be guided by that.

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In Control?

Unbelievable: classic/typical/textbook. Row with wife. Did pre-take off checks. Forgot to set flaps for t/o. Field length such as to make flaps essential to comply with good, safe practice.

Actually deployed flaps during t/o run and became airborne without further incident.

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Training For Real?

It disturbs me that we continue to brief for one thing but in training, do something different. Our EFATO brief is to put our auto-pilot in at 250ft and use the spare capacity to sort out the problem. Because of CAA/Company requirements we actually hand fly throughout. Who's to say that we will repeat that under duress in reality, (shades of Kegworth?). With increasing automation why are we using differing techniques? The CAA will have to come into the 1990's sometime! It has been proven that in a stress situation a pilot will revert to what he knows best i.e. what he has been consistently trained to do, NOT what he has said he will do. "As monkey does, so will monkey do." I hope this isn't too trivial a matter as it hasn't yet manifested itself operationally; or has it??

Captain Paddy Carver - Head, Operator Training Standards, CAA has provided the following information.

The issue raised by the reporter has been recognised by CAA and a number of proposals to address the problem are currently under consideration.

Two issues must be addressed in any solution:

- The requirement to provide proficiency training and to confirm a pilot's ability to maintain the appropriate aircraft type rating/licence.
- The Public Transport operator's requirement to ensure that the operator's proficiency standards are met.

In comparison to the view expressed, a number of pilots who fly advanced aircraft have complained that their pilot handling skills have been degraded through lack of practice, in areas such as IFR procedures and basic (raw data) navigation. Also, there is some evidence to suggest that incident/accident reports may indicate a growing weakness in these 'traditional" areas.

The Flight Crew Licensing and Flight Operations Departments of CAA are actively considering the best options to blend these two requirements together, however it should be noted that the handling skill test requirements, as currently scheduled, are no greater than would be necessary if an operator required a pilot to operate to the relevant Minimum Equipment List (MEL) standards.

The problem is that more advanced aircraft probably require more recurrent training. However, increased training incurs an associated cost. Hence there is pressure from some quarters to remove the basic handling skill elements in favour of the more technical emergency/abnormal procedures.

Notwithstanding the increase in cost, the solution may be to include use of the autopilot as well as manual flying in recurrent training to demonstrate proficiency in the different CRM techniques required in each case.

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A Sorry Tale!

The goodwill street is One-Way! The elastic band has been stretched to its limits over the past 3 months. A step by step slide down the slippery slope due to various factors:-

a) Normal annual increase in summer activity

b) Long-term policy to reduce crew numbers

c) Contract price-war caused by Customers awarding contracts "politically"

d) Incredible number of roster changes and loss of days off at short notice

e) Automatic agreement (by management) to clients poor ideas "to keep the contract"

f) Total lack of "shop floor" input due to weak Manager

Stalwart Company Men are now considering their positions, and the Company attitude is that they are always free to leave!

Would The Last Man Out Kindly Turn Off The Lights?

The difficulties of operating in an increasingly fierce commercial market-place are readily apparent in several aerospace business sectors. Notwithstanding this unpleasant, but unalterable fact of life, it is essential for the continued health of the industry and the safety of customers that the necessity to maintain a proper balance between operating safety and commercial performance is recognised by the "Decision Makers".

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Spare A Crust, Guv ?

INCIDENT: Night departure from gas rig. Cyclic Stick Guard left in incorrect UP position, thereby restricting forward movement of cyclic control during take off phase.

BACKGROUND: I had been on continuous duty from 1330 Local which involved a base check prior to revenue flying. In the period before the incident occurred no rest or break had been scheduled by my Company Operations Department. A request for a rig meal (food supplied offshore by the Oil Company) to be organised, by my Company Ops Department was refused. A recent memo prevented me asking the rig directly for crew meals. During my FDP (9hrs 3 mins), I had acted as a flight crew member on 17 sectors and participated in approximately 28 landings (including base check). I had been working for 6hrs 40mins without a break before the occurrence.

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Mirror, Mirror .....

Could airport terminal designers be encouraged to mount mirrors, or at least window glass, in front of nose-in stands? Then we can see our ground handling as it happen

Thanks for your good work.

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Practice Makes Perfect

Due to the company having insufficient crew, I was asked to help out by acting as FO for the day. I left the company in question on July 14th '95, but I was in BASE and LINE check everything current except me. The a/c had an electric elevator trim problem, (intermittent) having done one circuit to familiarise myself with the a/c again, I was handling on the departure, cleared to 3000 ft straight ahead, passing 2000 ft selected the Autopilot. All seemed OK altitude capture worked on the annunciator, but the a/c continued to climb through 3000 ft to 3550 ft before I disengaged the A/P and corrected. I was definitely well behind the a/c.

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What The Man Really Said .....!

For a variety of reasons, we managed to "bust" an altitude by 3,000 ft on initial climb out. On taxi out, clearance was given by ATC as follows "Cleared to Bahrain, Flight Plan Route, via SID 6, FL 310, Squawk XXXX". The SID was ahead to a beacon approx 8 miles away and then a left turn to track 340 degrees. The engineer and I wrote down the clearance and FL 310 was set in the "Altitude Window".

It was a hazy morning and while we lined up for departure, a light aircraft was given clearance to take off to transit to a nearby airfield with a left turn after take off. The aircraft took off and began a left turn just as it disappeared from our view into the haze.

Tower asked him to call when clear of the departure lane, which he did, and then tower said to us "Clear take-off, climb 4000 ft before turning left, once airborne contact Departure"

I interpreted this as a "No left turn till passing 4,000 ft" clearance- which seemed sensible with a light aircraft transiting somewhere off to our left but hidden in the haze.

Just before we began the take off the engineer said "shall we set 4,000 ft in the window". I replied that we were cleared to 310, with no left turn till past 4,000 ft. The captain thought about it then agreed with me.

Once airborne, the captain asked me to keep a good lookout and we all kept our eyes peeled till out of the haze at about 3,500 ft. The after take-off checks were then completed and finally I checked in with Departure saying that we were "in the climb, passing FL 70 for 310". His reply was "Negative, maintain 4,000 ft". We stopped the climb and negotiated levelling at FL 70, and were reprimanded for climbing above a "clearance" of 4,000 ft. We queried this "clearance" once but were told that Tower should have said we were cleared to 4,000 ft on take off. Further climb was swiftly given and we continued on our way - somewhat subdued.

It seems to me that there were several factors involved in this infringement

1. An element of poor English by tower controller giving our take off clearance
2. Pre-occupation with hazard of other departing traffic - (leading me to make assumptions about our clearance to take off ?)
3. CRM - I was fully confident that my interpretation of the clearance was correct, and when the engineer queried it I thought he'd misunderstood the clearance. My confident statement, to his unassertive question led to what was, in hindsight, a poor decision. If I had thought for one moment there was any real doubt as to our exact clearance I would have requested clarification from ATC. As it was, we missed this opportunity to prevent this incident happening.
4. Late check in with Departure meant we were through our cleared altitude before we spoke to him. If I had checked in sooner after take off and said we were climbing to FL 310 then he could have picked up the problem before it occurred.

In summary - I blame myself for misinterpreting our clearance and not checking in with Departure much sooner after take off. The problem was compounded by an ambiguous ATC clearance.

Subsequently, the Flt Engineer repeated that he believed we were only cleared to 4,000 ft. If he had only been more assertive then we might have resolved the problem prior to take off.

Fortunately, once out of the haze we were good VMC but if there had been poor weather and arriving traffic (the arrival beacon is the same as the beacon we were climbing towards on the SID) then the potential for an accident would have been there.

I have learned from this incident, perhaps there is a useful lesson for others too.

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Best Practice

You publish frequent reports commenting on commercial pressure tending to affect “best practice”. I am not sure if CHIRP is the forum, but one recurring theme (amongst many) troubles me and a number of other controllers. Not in-frequently we have a/c, under our control, report sick passengers (heart-attacks etc.) and request priority landing and an ambulance. We immediately offer them diversion to the nearest large, suitable airport with good hospital facilities and this is always refused. The a/c proceeds to destination, often keeping that passenger in the air for maybe 45-50 minutes longer than necessary. Is this “best practice” or commercial pressure?

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Fast talkers

I have been operating around Europe and the Middle East for many years but have suffered with Istanbul volmet very badly this year. My hand cannot copy that fast!

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