CONFIDENTIAL HUMAN FACTORS INCIDENT REPORTS

FEEDBACK Nº12

This FEEDBACK marks CHIRP's fourth birthday, and is our first issue to contain reports from controllers. We hope that any of you who have ever bothered reading any previous FEEDBACKs will forgive us for restating the point of the scheme, but we need to remind ourselves from time to time - so here goes. CHIRP exists as a channel for you to report anything that you don't feel able to report to your company or the CAA directly - and that's about it. It seems to us that some such scheme is necessitated by a very simple and obvious logic, so if you are one of those managers who knock us because you don't think that you get enough gen from the scheme to do anything about a problem, please remember that without CHIRP you might not have known about the problem at all. CHIRP provides a route for you to see what pilots and controllers, without any pressure on them, are telling us. Surely information like that has to be valuable even if you find it inconvenient or disagreeable? We've had one manager dismiss all of our fatigue reports because he saw self discipline as the simple solution. He may be right, but he should now know whom he has to convince. Fatigue is still our most popular category.

You'll see that in this FEEDBACK we continue with the theme that rotten ATC starts at Calais. We don't think that we're being simply xenophobic (good eh) about this, and we hope that the international authorities that receive FEEDBACK will pick up and run with this particular ball without us having to make a nuisance of ourselves. Equally, we get quite a few anti-smoking-on-the-flight-deck reports, and we think that there is probably enough feeling about this for someone to do something. How about it? We can't change anything, and neither, by and large, can our reporters. But if you can, why not give the reports that follow at least a second thought, or maybe give us a ring? We'd be delighted to help. As in all previous FEEDBACKs, the items which follow in italics are, as nearly as possible, in the reporters own words.

Happy Christmas, and safe flying.

DECEMBER 1986

STILL ZZZ..ING

Our aircraft was approaching Gatwick airport and had been cleared to descend to flight level 80. On approaching the cleared level it became obvious that the autopilot would not level the aircraft as required. The autopilot was then disconnected and the aircraft then returned to the cleared level. I can confirm that we infringed the lower airspace by approx 250 feet. During the return to the cleared level I noticed that a Boeing 737 was passing beneath as we were then required to complete a turn to conform with a Willow STAR. I feel positive that we would have hit the 737 had we not taken the positive action in time. All the crew members had missed the non selection of the Autopilot Alt Sel switch.

I BELIEVE THAT THIS INCIDENT WAS CAUSED BY CREW FATIGUE DUE TO THE FOLLOWING

(1) The crew are accommodated in a tourist hotel in the U.S. and it is not possible to get any sleep before a flight due to disturbances from children, cleaners etc. The best we can expect is a couple of hours of interrupted rest not sleep.

(2) The operation out of a hot airport causes additional fatigue.

(3) We had a delayed departure at airport due to traffic loading problems (this is in no way abnormal).

(4) A 8 hour flight to the UK over night when we have had little or no sleep since the previous night. (Always evening departures abroad.)

(5) A second sector (scheduled by the airline) after a long night flight and the second sector through very busy airspace (we are fortunate that this problem is generally in areas of good ATC).

(6) Fatigue building up over an extended period (I have often seen crew members nodding off during the type of flight outlined above).

I would also like to point out that on a couple of occasions I have been asleep whilst driving home although this is more of a personal matter.

SOLUTIONS:

(1) Rostering that takes into account the structure of a particular service as it will affect the crew's fatigue.

2) Hotels that are sympathetic to the rest needs of crews.

3) Long sectors that are followed by enough time off to combat fatigue built up over a long term.

4) Some form of rest facility at the home base to take care of fatigue on arrival.

I do appreciate that in long haul operations it is impossible to accommodate the total rest needs of the crew, however I do feel that the rostering system should be more sympathetic to our work pattern e.g. short sector followed by the longer sector is far less tiring.

I hope this is of assistance.

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DUTY PERIOD
DAY 1..A-C-D-A 0715-1800Z (10.45)
DAY 2...A-R-A...0710-1815Z (11.05)
DAY 3.....SBY...1500-0100Z
DAY 4...A-T-A...2000-0440Z (08.40)
DAY 5...A-B-A...2115-0320Z (06.05)

After two long tiring day flights rostered for Night Standby. Both days requiring rising from bed at 5.30am local. Arrived home after Day 2 at 20.20 local (having been rummaged by customs). Having been out of the house for 14hrs 20mins slept soundly until 0930L on Day 3. At 16.45L on Day 3 called out to operate A-R-A 1855-0445. Since I confess to only being human I beg somebody to tell me how I could be adequately rested for any flight during that Standby let alone another bloody R-----. The final landing was made on Day 4 at 0540 local 20hrs 10mins since I was last in bed! To say I was tired is a gross understatement.

POINTS:

1) Rostering take no account of our quality of life (nor safety) it would appear.

2) Crewing knew of change at least 12 hours before but did not inform me because they did not want to disturb the REST which preceded my Standby! (CAP 371).

3) I was still in hours to do the Athens (CAP 371).

4) CAP 371 is supposed to protect us, it blatantly DOES NOT.

5) Another 25 years of this does not appeal to me, I suppose I could always have an accident though!

You are our only hope.

This was our fourth night in a row, the three previous nights being of four sectors and up to ten hours duty, each. I had a co-pilot who was new on the aircraft and only used to flying moderate loads and low approach speeds. The load this night was nearly 20 tons, so VAT was 10 knots higher than he was used to flying. Just after the middle marker I fell asleep and awoke at 300ft above threshold to see that he had allowed the speed to reduce to 118kt, the usual speed for moderate loads, but 10kts below our VAT. I gently applied power and the landing was normal.

It is disturbing enough to fall asleep in-flight, but on approach the adrenalin helps. When that also fails to keep one awake it must indicate TOTAL fatigue!

* * *

MIND MY LUNGS PLEASE

I was flying the aircraft back to Luton at the end of a long and frustrating day where I'd been on duty for approximately 13 hours.

The Captain was a heavy smoker and the flight deck had been occupied for most of the sector by a third person who also smoked heavily. During the intermediate approach phase I'd noticed that my instrument flying was a little sloppy. I conducted a visual final approach in almost perfect, calm conditions. During the approach I had the greatest difficulty in maintaining a reasonable glide path on the VASIS and also in maintaining the centreline. My responses to deviations were late and sluggish. My landing was poor and well off the runway centreline.

After long deliberation I can only reach the conclusion that, as a non-smoker I had been adversely affected by the smoking to the extent that my ability and judgement had been seriously impaired.

We can see both sides of this one, but we'd put money on the fact that smoking on the flight deck will be dead even before some of its perpetrators. If the CAA doesn't feel able to follow the example set by London Transport and ban it (and it doesn't), the companies will start to do so anyway. A quick straw poll suggests to us that only about 15% of pilots smoke, and many of them recognise the unpleasantness caused to non-smoking colleagues. Some companies apparently won't even recruit smoking pilots. The writing seems to be on the wall, but if you want to speed up the inevitable, perhaps you should try pressing some action out of your management.

THE OLD ONES ARE THE BEST

The co-pilot was new on line and was flying this leg. Near the French coast I got up to make another cup of black coffee. Our auto-pilot had an aggravating snag, (in the book,) of rolling back and forth, but it was possible, by switching out certain channels, to dampen this down to an almost acceptable level. After coffee was served London ATC asked us what level we were cruising at. "FL200" said the co-pilot. "FL210" said I. And then sat back aghast! I had watched carefully as he had levelled off at FL200, how were we now cruising at FL210?

After profuse apologies and a return to FL200 the post-mortem revealed the following.

The co-pilot had indeed levelled off at FL200. When I got up to make the coffee he had decided to experiment with the auto-pilot to reduce the roll rate. (The auto-pilot can lose its height lock without an aural warning under certain circumstances.) He looked up after a while to see the speed had dropped and he had lost the Height Lock light. But the altimeter still read FL200. So he re-engaged and thought no more of it. Some FIFTEEN minutes elapsed between this, changing to London ATC and the query over our level. The altimeter, a type using digits and one needle was in fact reading

$$\begin{matrix}1000\\0999\end{matrix}$$

with the needle obscuring the 0. It looked both to him and I that we were at FL200, but we had climbed the extra 1000ft when the height lock had been tripped and the speed lost. He, on looking up again, had found the altimeter reading what he had expected and therefore re-engaged.

The lessons to be learnt are obvious to all, but what happened to our transponder height readout for the 15 minutes we were cruising 1000ft too high? It was spotted by London quickly enough on change-over from Paris!

TOWER OF BABEL

The items in the last FEEDBACK on multi-language ATC certainly stirred a few of you up. If you've experienced a similar incident, please let us have it, as we think that it's probably time to have a good go at this issue. Why doesn't everyone realise that English is best?

Our aircraft cleared to the UK routing direct "ALT" (Alicante) VOR Flight Plan Route, FL140 request level change en-route. Aircraft departed RW26 Almeria, left turn out, and passed abeam the field, climbing through 3000ft, established on track 050M to "ALT". Further cleared FL260. Another aircraft was heard on frequency, but was speaking Spanish. Upon passing 5,000ft (Transition) and at a position approx 1NM NW of "AMR" (Almeria) VOR, we were instructed by Almeria ATC to "leave AMR on the 080 Radial". No mention was made to us of a traffic confliction. We turned to track the 080R, and the Captain, suspecting conflicting traffic, asked Almeria ATC for its height and position. A conversation then took place in Spanish between the controller and the other aircraft, and someone (hard to tell who) replied that he was on the 058R AMR. No height information was given. The Captain, having picked out an Iberia call sign, asked the aircraft directly for his altitude. A reply came "passing 80", or "85" (hard to tell which). We were passing FL70. Captain told me to keep a sharp look-out. Almost immediately I spotted an Iberia DC-9, 12 o'clock, slightly higher, and in a descending right turn. We immediately took avoiding action and, approx 7 seconds later, the DC-9 passed down our starboard side, same level, at a range of approximately 3-400 metres. The fact that he was still in his descending right turn suggests he had not seen us. We reported to Almeria that we had had an air-miss. The Iberia pilot replied by telling us not to worry!

The exact reasons for worry are as follows:-

1) The controller had elected to try and effect separation by using VOR radials. Obviously when close to VOR overhead, such separation is, to say the least, inadequate.

2) Had we carried out Almeria's instruction, and religiously tracked the 080R without taking avoiding action, WE WOULD HAVE HIT THE DC-9.

3) and most disturbing of all, is that Spanish pilots and controllers insist on speaking Spanish to each other. (The same applies to the French, Italians, Greeks etc.) If English had been spoken throughout, we would have known the DC-9's height and position much earlier and realised that a serious confliction existed. Whilst realizing a Spaniard's right to speak Spanish over Spain, isn't it about time that Pilots and Aviation Authorities got together to insist upon the use of English at all times - FOR SAFETY'S SAKE!

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We were level at F220 under Atheni Control approaching RIPLI and had requested a higher level. Atheni advised that there was conflicting traffic westbound at F230. Then began the usual request for DME distances from KEA for us and to KEA from the opposing traffic. Nothing wrong with this, except that we were communicating in English, whilst the exchange between Atheni and the opposite traffic - an Olympic Airways Airbus - was in Greek. It would have been nice to have been able to monitor the exact position of the other traffic for safety reasons and I feel the proliferation in the use of languages other than English by International Air Traffic Control is eroding flight safety.

The French are the worst offenders followed by the Spanish and now increasingly Greek and Turkish controllers.

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Only one of the NDBs was working, no approach lighting, no VASIs, no centre line lighting - all this NOTAMED.

On arrival cleared for ILS approach. Fairly good VMC - the odd patch of cloud. The ILS indicators were normal but no ident. The conversation, starting overhead when no ident heard was as follows:-

"TAN---- Tower this is ..... there is no ident on the ILS."

"Say again".

REPEATED.

"A/C calling please say again."

REPEATED VERY SLOWLY.

"A/C calling I am unable to read - say again."

(There was nothing wrong with our radio - we were turning inbound by this time)

REPEATED.

"You are established on zee ILS - yes?"

"Negative" REPEATED.

"There is something wrong with the ILS?"

We were visual - "Disregard" landed.

On taxiing in tried again -

"TAN---- Tower this is ..... did you copy - there is no ident on the ILS."

The words were practically spelled to him.

No answer.

"TAN---- Tower this is ..... did you copy."

"..... Roger I copy."

I shudder to think what would happen if I called "TAN---- Tower engine fire request assistance." "A/C calling say again?"

*

Having operated for 16 years in the Spanish/Italian/Greek environment, the use of foreign language (to us) is only annoying when it affects you! What is more worrying is the use of non-standard ATC phrases by pilots and controllers alike. Use non-standard phrases in Greece and you cause chaos by all the "DAxxx say again"'s that come from the perplexed and overworked controller who only speaks standard ATC English. Then there is Milan ATCC where one Airways controller is also responsible for approach control into Malpensa as well as his sector! Or the pop music on Venice app. freq.

*

Having changed from Belgrade ATC to Athens on 134.15, the communications became almost non existent. The controller had the usual "bucket" over his head and shouted into it as loud and as fast as he could. This route was very busy with A/C both North and South bound. Everyone complained to the controller that he was totally unreadable, adding from time to time advice on how to improve his transmissions. I discussed the situation with crews from four other UK charter carriers when at Rhodes, and we all decided to file Air Safety Reports. We have with Athens ATC a serious accident waiting to happen.

*

I listened several times to the "Tenerife" tapes, and I am convinced that the Spanish ATC controller knew full well in his mind the dangerous runway situation building up, but simply lacked sufficient command of the English language to issue a timely warning. Added to this no doubt was the aspect that a feeling of inadequacy (in English) always leads to a lack of confidence in one's self.

There are many places in the world where the spoken ATC English is poor, but most of them are TRYING hard to do better. They are thus going in the right direction. However, in places like Spain (and in a large part of Central and South America) they are DELIBERATELY going the other way. Spain is now in the EEC, and the very first thing which needs to be done is to have legislation (possibly EEC legislation) which requires all IFR ATC to be conducted in English. The Dutch have this for all ATC.

Only when people speak sufficient English on ATC (controller to controller as well as controller to pilot) will they develop a SAFE adequate command of the language. Some Spanish controllers are in my view very good, but the rain in Spain .....!

AND SPEAKING OF TENERIFE

I've sometimes wondered how Tenerife could have happened. Now I know.

Departure clearance has been copied and we are no.1 for take-off at holding point for 22L at a tropical airfield. ATC (can be) notoriously slow and capricious. Delay drags on with no take-off clearance. No other traffic taking off or landing. Queries elicit either no response at all or the terse reply "awaiting radar release". Tempers and temperatures rise -- "cooling" in this unpressurised aircraft is practically non-existent on the ground. Passengers sweating freely.

At long last, ATC comes up "XP-ADA recleared to XXXX 3,500ft, request level change en-route, after departure left turn on course". As ATC is talking and co-pilot reading back, I am already releasing brakes, taxiing forward and initiating runway checks. Just prior to entering runway, it suddenly occurs to me that this is a RE-clearance (change of height). I ask co-pilot to confirm that we have actually been cleared for TAKE-OFF. ATC replies "negative - hold position". At that moment inbound traffic comes up on tower frequency and calls "long finals 22L".

Viz is rather hazy and tower is a long way away, so no one notices as I 180 and return sheepishly to holding point.

Now very aware how frustration and expectation can lead one to interpret "re-cleared to --" as "clearance to GO"!!

THIS AND THAT

Start up normal, on schedule, no mention made (to me at least) of a departure slot time. Lined up, we were cleared to take off by ATC and with full power selected were rolling, when the controller said "if it isn't too late, cancel take-off, your slot isn't until 0640, and five early is a bit much". I closed the power levers and stopped from a low rolling speed. There was a protesting whine from the inverters and alternators as RPM fell, and horror of horrors, TGT rose. I had been talked into nearly falling for one of our company's favourite firing sins - NO GROUND FINE PITCH! Within seconds the excellent F/O slipped in GFP selection, no one fortunately had touched the throttles and TGT had stopped within all limits. The lesson (for me) - the abandon take-off drill must apply from even the lowest forward speed once take-off power has been selected. The lesson (for ATC) - don't ask a chap to abort a take-off unless safety is jeopardized.

1/10 for Captain, 10/10 for F/O, 5/10 for ATC (Technical Merit).

*

I've had another interesting experience of the 1.11 cockpit. On approach to autoland in poor weather (on CAT I limits) we were requested to change freq to tower. I did this, but knocked with my thumb the adjacent Nav receiver, which because its knobs are shaped not round, jumped off frequency. Since Prime Land had been selected this caused the autopilot to disconnect. In worse weather this could cause an overshoot! (No re-engage after prime land).

I've mentioned this to colleagues, and many admit to similar problems, usually the other way round, i.e. loss of VHF contact after VOR selection, so many people have done it, it surprised me.

*

We were approaching 26R (visual circuit) when turning baseleg on visual circuit the tower offered us 26L (shorter taxy to apron). The Captain was flying the approach for my landing. I took control at app 800ft as we turned finals. The VASIs seemed to show all white but I ignored them as we appeared to be in the "slot" and the runway is very long for our type anyway. As we neared the threshold I realised that the VASIs were switched off and the white appearance was caused by the sun reflecting on the top of them.

ON THE ONE HAND....

As the person responsible for changing and introducing the runway crossing procedures at Heathrow post Terminal 4, may I comment on the first item in the ATC column on page 3No.11 Feedback.

Your report describes the new runway crossing procedure and is correct. It then continues with a description of the conditional runway clearances which have been in use at Heathrow, from personal knowledge, since at least 1959 and are NOT related in any way with Terminal 4. The procedure is necessary because ATC is committed to a scheduled movement rate of 71 aircraft per hour and time wasted by slow crossers is a luxury not available.

This is the first issue available to controllers and for it to be credible to this section of the aviation community it MUST be factual.

....BUT ON THE OTHER

May I congratulate you on the idea of introducing ATC into the Feedback system. I would like to endorse other complaints of the increasing tendency of Local Controllers to qualify a clearance to enter or cross an active runway with ".. after landing (a/c type) .....". To my mind permission to enter a runway should be a specific instruction by the controller to the waiting aircraft, it requires no other qualification.

"Clearance to Line Up after the landing Sky Eagle Mk3-9 series" is all very well if I know that the aircraft on finals is a Sky Eagle etc. or were you referring to the second aircraft on long finals. Being rather sharp I can tell the difference between a 747 and Concorde but the world of general aviation and executive aviation is a complete mystery.

Please ATC stick to "Hold" "Line Up" "Take Off" "Cross XX". used as an executive instruction. No more - no less.

THE AIR TRAFFIC SLOT

On this occasion we were (we thought) privileged to receive a proper inbound release from TMA S, which is a very rare occurrence, on an inbound HS 25 from the Detling direction. The release was agreed direct to Point X-ray at 2400ft QNH. The A/C duly called and I instructed it to report passing X-ray which it did some 2 or 3 mins later. As soon as the pilot had completed that report, the next RT report came in from a SD 360 about whom I had no warning, "just passing X-ray 2400ft, with the Light Jet in sight". This A/C had been on the airways system as had the HS25 and had been working TMA N. Yet I received no warning of its presence, no estimate - nothing and it was indeed fortunate that we were CAVOK. I instantly provided the necessary and instantly forgot about the incident. This brings up two very major points in my view.

Firstly. There are no proper procedures either inbound or outbound for Biggin Hill despite numerous pleas to CATO ONE and the above incident is typical of regular occurrences here because of the lack of Radar or procedures at what can be an extremely busy unit.

Secondly. These occurrences used to provoke lots and lots of paperwork from us eg MORs but because of the continuing unwillingness to react by the powers that be to prevent an accident, they have now become somehow pointless, because nothing is ever done about them. To the relevant Authority, Biggin Hill is a pain in the .....

This is surely a dangerous situation which would be significantly worsened if the proposed regulation of G.A. into Heathrow and Gatwick is imposed.

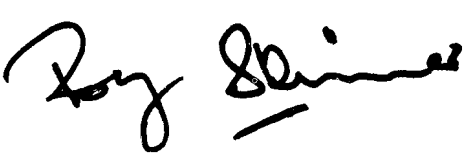
One aircraft inbound to Heathrow heading West descending FL350 to FL130. Military crossing traffic FL150 South to North not noticed on Radar until 15NM away despite radar return/label and flight progress strip in display. No loss of separation but I had no knowledge of strip being placed there, no advice by other sector of doing so and as the aircraft was not transferred to me when it should have been it was potentially very dangerous. I had already transferred the civil traffic to the next sector and had to telephone them to stop descent. I believe the practice of non executive controllers approving clearances then placing strips in display without any other co-ordination is wrong although I did have adequate data to work from.

I am an area radar controller, ATC Centre, night shift, around midnight, plenty of traffic around, crowded radar screen, 16 inch diameter, displaying 200 mile RADIUS (what's this sectorization game, then?). 747SP going to JFK cleared straight up to 260 by yours truly, after looking at strip display and talking to non-radar ATCO. Didn't see the estimate at FIR boundary of the 230 traffic until much later. No reminder from non-radar ATCO. SSR returns very garbled due traffic density so lost ident on 747SP in question. Next thing, I see 747 label has passed the 230 opposite direction. No one says anything, but I realize I've climbed him straight through without any attempt at track or level separation. They missed, but I'm shocked at my error and what may have been.....

WHAT COMES IN

TOTAL NUMBER OF REPORTS SINCE FEEDBACK 10 (APRIL 86)	149
FATIGUE/FLIGHT TIME LIMITS./COMM. PRESSURES	45
OWN ERRORS	31
ATC RELATED	29
ATC - REPORTS (SINCE AUG.'86)	23
TECH	6
CREW CO-ORD	3
ERGONOMICS	2
MISC	5
SMOKING ON FLIGHT DECKS	5

Have a Chirpy Christmas



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HOURS ON TYPE

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No. OF CREW

THE FLIGHT
DATE
FROM :-
TO :-
IFR/VFR
TYPE OF OPERATION

THE INCIDENT
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