

OUTPUT EGATS

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MAASTRICHT

R.M.S. TITANIC

Traditionally, an editorial in this time of year should be cheerfully reflecting on the past year and looking ahead to the future. Whereas others choose to look optimistically ahead to the new millennium, it must be said that the situation we are facing looks far from promising.

During the past year, we can 'pride' ourselves again in breaking several records. I won't list them, but they are all a consequence of an increase in traffic of 7% on average. Apparently, when handling well over 1.000.000 aircraft this year, this 'milestone' has already become a major non-event...

Have we passed the stage where we can continue operating the way we do? More and more people have remarked that, despite the efforts of the technicians concerned, the display system in the operations room will not be able to handle next year's traffic load. Already this year, some serious cracks have started to show in what could still be the most advanced system in the world. It probably is software-wise, but saying the hardware on the floor is showing its age, would be the understatement of the Millennium. With spare parts no longer available for some key systems, the system should be seen as a major safety hazard and as a limitation rather than a tool for the control staff. Even more so when taking the limitations of the backup system into consideration as well.

Sadly, this is not the only thing failing. The quality of the voice communica-

tion system and its backup, is also of major concern: frequent interference, general low quality and lack of frequencies are being looked at, but in the mean time, controllers do not have the tools available to handle the amount of traffic they are presented with.

Sore issue number three are the 'published' procedures, or rather the lack of. The last update of Operations Manual Part II, arguably the legal reference for working standards in the UAC, dates from summer '98. The Flight Data part dates from 1992, and the oldest pages in the Ops Room copy (the operations room layout and a Level II contingency level allocation scheme) date from 1989. Note that the level allocation scheme in question is from before Brussels ACC took over the 195-245 level band!

People, trainees but also active control staff, have to distil procedures from dozens of Internal Notes, briefing sheets, Memo's and LoA's. Linked to that is the sad lack of briefings and/or refresher courses available to staff. Often last minute jobs, the briefings on new procedures often don't reach more than 2/3 of the control staff, with no other opportunity but to 'read up' afterwards. With projects such as the transfer to ODS and RVSM not too far away, it is high time this is seriously looked at, .

The last issue in my rant would have to be the wrong priorities that are set: a new system is introduced to monitor safety (ASMT), 'because it is an EATCHIP-EATMP requirement'. What about all the other EATCHIP require-

ments?!? Critical Incident Stress Management or harmonized licenses and training to name just two. What about urgent technical issues such as an improved height filter or dynamic collapse/de-collapse. These have been on the wish list of Ops for a good number of years; ASMT hasn't but can be implemented in less than one year.

The above is unfortunately by no means an exhaustive list of what in my opinion goes wrong. These and other issues need to be addressed as a matter of urgency though, before irreparable damage is done to the centre's reputation.

I'd like to end by explaining the title.

'The safety of all those on board weighs with us beyond all other considerations, and we would once more impress upon you and the entire navigation staff most earnestly that no risk is to be run which can be avoided by the exercise of caution; and by choosing, whenever a doubt exists, the course that tends to safety.'

The Management of the White Star Line'

It could be written as a mission statement by some consultancy agency, but it hung in a frame in the map room of the RMS TITANIC. It was written by the same people who suggested to Capt. Smith they could break another record....

I'll leave you with that thought and wish you a very merry Christmas and a happy and above all safe New Year.

BM

4TH INTERNATIONAL ATC & FLIGHT OPERATION SYMPOSIUM

One day, EGATS received an invitation for two people to go to Taiwan for the "4th International ATC and Flight Operation Symposium" organized and sponsored by EVA Airlines and ROCATCA (Republic of China Air Traffic Control Association), so Inge and myself decided to sacrifice ourselves and took a six-day break to attend.

Little we knew about the torrential rain, the air drills at 5 o'clock in the morning, the amount of slimy food we would have to eat rigorously with chopsticks, typhoon Maggie, an earthquake (*not the big one that struck Taiwan in September, Ed.*), the pollution and the smells we would have to put up with! But such is life.

So after a 22-hour journey we got to Keelung, situated on the coast north-east of Taipei: the biggest international port in Taiwan where "ocean view" from your hotel room means you will see military and cruise ships moving about and loads of stacked containers everywhere.

When eventually we tried sightseeing, we managed to get to one temple up the hill but we found it closed; so we walked towards a big holy statue which we could see sticking out of the trees and when we reached it, we got in touch with the "locals": a bunch of kids on their lunch break (so we assumed).

They greeted us in English, we smiled back and that was it: the language difference could not be overcome but we got the feeling they were taking the piss out of us. Oh well...such is life!

When we finally ventured downtown ... actually down the road... we got lost among dozens of roads which all looked the same to us, with loads of signs (all very pretty but completely useless to us being in Chinese) and the overwhelming smell of dodgy food until we saw something we recognize: Mc Donald's and Pizza Hut. And I shamefully must admit we went for it: pizza!

Back at the hotel all the other delegations were arriving and the PR job started by the bar!

DAY 1

Wednesday June 2nd, at 10 o'clock sharp, the "4th International ATC & Flight Operations Symposium" was officially opened by Mr. Peter Chen – President of ROCATCA. Mr. Chen was extremely proud and pleased to see so many overseas guests present and he expressed his deep gratitude to EVA Airways for their generous and full sponsorship of this event. Needless to say we were grateful too!

The conference room was beautifully decorated, the technical possibilities limitless, everything was just perfect. Even the most nervous speaker could relax, since a giant flower piece was carefully positioned on the pulpit to make sure eye contact with the audience could be avoided if necessary. Unfortunately for the average Asian person, who happens to be slightly shorter than his or her European counterpart, eye contact was usually not even an option... and quite often we found ourselves listening carefully to a talking bunch of flowers!

In the end this overseas guest found only one real short-coming: like in every other room in every other building in Taiwan the air conditioning was set to make us forget that we were in a tropical country (thank god we had an earthquake and typhoon to remind us). A suitcase full of light, short-sleeved tops left us no other choice but to have a really "cool" symposium.

In the next welcome address Mr. Chang, Director General of the Civil Aeronautics Administration R.O.C, highlighted the importance of mutual communication and guaranteed aviation safety for a smooth growth of air traffic. He described in great detail the meticulous measures taken by the CAA R.O.C. to deal with the Y2K problems, which resulted in Taiwan R.O.C. being the very 1st among 260 IATA members to be fully equipped to counteract all foreseeable problems.

After the coffee break the meeting continued with a number of presentations about the actual Y2K status and contingency planning in different ATC organi-

Claudia D'amico & Inge Vander Eyken Reporting from Taiwan

zations of the Asia/Pacific Region.

Mr. George Chao, IFATCA's former Executive Vice President Asia/Pacific Region and General Manager of the Air Traffic Management Division in Hong Kong is actively involved in ICAO meetings dealing with Y2K.

He explained us the "ABCDE" of Y2K:

- A Awareness(it exists!)
- B Believe (it will happen!)
- C Commit
(to solving the problem)
- D Do it
- E Evaluate

Following this line of thought the ICAO Contingency Task Force has held 7 meetings between November '98 and May '99 to ensure worldwide coordination of efforts made as far as contingency planning is concerned. Apart from the obvious system failure contingency plan every ATC organization has to create an ATS route contingency plan. This should be unidirectional wherever possible, international flights should fly at FL 290 or above and domestic traffic at FL 280 or below. The activation of these contingency plans will be according to time zone, starting in Fiji and New Zealand FIR at 10:00 UTC on December 31st. The subsequent de-activation will be dictated by the geographical flow of traffic. All these special measures are to be laid down in supplementary LOA's and official MOU's (Memorandum of Understanding) before August '99.

The ICAO office in Bangkok will function as the Regional Y2K Coordination Centre for the Asia/Pacific Region. It will collect and coordinate all possible Y2K related events within the Region and it will pass on information to other International Agencies like IATA, other ICAO offices and other Regional Y2K Coordination Centres. This will be very useful since the Asia/Pacific Region is the first

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The importance of contingency training, drills and procedural refresher training for controllers involved was repeatedly brought to our attention.

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to deal with the “bug” while the rest of the world anxiously awaits to find out what the impact of the Y2K problem will be!

Maastricht UAC will be linked with the Regional Y2K Coordination Centre located in the CFMU in Brussels.

To have a plan for the worst case scenario is great ... but the poor controller working that night has to know what it is of course. The importance of contingency training, drills and procedural refresher training for controllers involved was repeatedly brought to our attention.

Several delegates from ATC centres in the Region gave us a complete oversight of their Y2K contingency planning. We got examples from Taipei FIR, Naha FIR (Japan), Manila FIR and Hong Kong FIR. All came to similar conclusions: even though systems may be considered Y2K compliant, failures may still occur. Therefore detailed and internationally coordinated contingency plans are an absolute necessity to guarantee a safe roll over to the year 2000.

Some manufacturers were also present at this symposium. ARINC, Boeing and SITA representatives took most of the afternoon to explain us how very safe and Y2K compliant their systems were... A bit too technical, too commercial and too optimistic for me to keep up my concentration. By this time I was in fact quite pre-occupied thinking about a hot bath to warm up my shivering air-conditioned body!

DAY 2

Day 2 was about "Human Factor in ATC and Flight Operations" and about "Advanced Technologies and Operation Procedure for future Environment".

The first speaker was Mr. Batteau (American Professor of Anthropology), who has recently got involved in Flight Safety.

He believes that most incidents occur because of human behaviour, not human factors and more specifically due to culture, communication and situational awareness. The latter is difficult to maintain over a long period of time and that's why people need breaks or just a couple of minutes to ease their mind and maybe tell a joke.

To maintain situational awareness in a working environment, we use Meta-Communication (often unconsciously), meaning gestures, posture, and different tones of voice. The interaction between pilots and air traffic controllers occurs via the frequency, so the Meta-Com. consists of the stylisation and the twisting of words in read backs. An example of this could be a controller instructing a pilot to report when intercepting the ILS glide path and the pilot eventually calling in saying: "I'm on the glide and beginning to slide".

This sort of message would indicate to ATC that the pilot is totally comfortable and aware of what he's doing because he's not giving routine answers. But then, of course, cultural issues come into play and maybe the controller could lose his situational awareness by thinking about such a bizarre call (or maybe "what a tosser...").

From many accident investigations it has been recognized that the situational awareness deteriorates 3-4 minutes before the event.

Mr. Batteau suggested that pilots spent some time in ATC environments and vice versa to get an understanding of what is going on at the other side and to improve this hidden team-work between the "airborne" and "ground" crews.

The next speaker was Mr. Kelly, head of ATC OPS in London Heathrow. In the UK an Airprox is defined as: A situation in which, in the opinion of a pilot or a controller, the distance between aircraft as well as their relative positions and speeds have been such that the safety of the aircraft involved was or may have been compromised.

A case recently occurred and studied was when a B757 departing rwy 27R came within 0.18NM and 200ft of a B737 that had just executed a missed approach from rwy27L. Both controllers (in charge of the 2 rwy's) were experienced and had managed missed approaches before. The initial investigation assessed that there had been a failure in coordination, hence the issue of instructions on the need of precise and unambiguous coordination.

The next step was the NATS investigation, which stated that procedures had dependency on coordination and that there will always be a need for it. but they also had to design a new Missed App. Procedure to reduce conflicts and reduce reliance in coordination.

For those who don't know NATS (National Air Traffic Services): it's a wholly owned subsidiary of the CAA and it's the sole en-route provider in the UK –externally safety and economically regulated.

The next step was the AAIB investigation (Air Accident and Investigation Branch, the external regulator), which agreed with NATS findings and also felt that VCR radar coverage should be improved for low-level coverage.

The bottom line was that ATC is a business where safety is a priority to ensure public and industry confidence. Human's make mistakes and systems and procedures need to be designed to minimize their impact.

Next speaker was Mr. Vandel who stated that to improve the safety in air traffic we need to work on 2 major aspects: communication and understanding of the two separate but strictly interlinked worlds (cockpit and OPS rooms).

Nowadays the accident rate is around 1.5 per million departures. However this is expected to rise proportionally with the increase of air movements.

From studies it has emerged that there are

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two types of human errors: active ones made by line personnel (e.g. wrong read backs or unrealistic instructions) and latent failures, which often lie hidden for many years and are caused by managers, regulators and system designers. In fact, poor management decisions or actions invariably figure as a contributory cause in virtually any accident. These two types of mistakes are very much connected. An example is lack of training for specific/emergency situations, which is a management responsibility.

Of course language plays a big role in human errors. But has to be noted that ICAO does not mandate the use of English for ATC communications. It recommends the language normally used by the station on the ground and English-language support should be available from ATC facilities serving international flights. This ambiguous situation has resulted in the use of English as the international language of ATC without being a mandatory requirement and without development of standards for training and testing. Again from studying accidents it has been realized that language training for both controllers and pilots must go beyond basic ATC vocabulary to respond to unusual as well as routine situations. Many advocate the use of data links to get around miscommunication, but the arguments are that reading and typing are time consuming and challenging tasks for non-native speakers and also discourages active monitoring of the rest of the voice communication.

Another problem is that the processes of both pilots and controllers are very complex. Many tasks are conducted during periods of stress, fatigue and task saturation and a major overlap of shared tasks and responsibilities also exists.

We could almost speak as one unique process altogether. Therefore the need for a shared mental model for ATC and crews which could be achieved by a cross-training experience to understand each other's limitations, workload and operational requirements (this has actually happened in the Netherlands in 1993, after the El Al accident in 1992 and many have declared to have learned a lot from it).

Conclusion: teamwork is vital in aviation but to achieve the best of it we need to share our professional experiences to then reach a common mental model: the first step is to bring pilots and controllers together on meetings, dictate a subject, get free beer and step two will automati-

cally follow!

Next speaker was Mr. Robinson (Deputy President of IFATCA) talked about the future development of CNS/ATM (Communication Navigation Surveillance/Air Traffic Management) in the Asia/Pacific area.

The CNS/ATM concept comes from the identification by ICAO that a fundamental change in the air navigation and air traffic services is required to maintain or enhance safety in the ever-increasing level of traffic.

Recognising that different states and regions of the world each have distinctive characteristics and objectives, the emphasis is on the development of interoperable systems in a co-operative and harmonious environment.

The Asia/Pacific area is divided into 2 ICAO regions extending from Saudi Arabia to the west coast of the American continent. This area has interesting characteristics:

1. It contains China and India, 2 of the world's most populous countries, but also large areas of sparse population like Australia, North and Central Asia;
2. The economies of the majority of states is middle-low range;
3. It contains the Pacific and Indian Oceans (2 of the largest bodies of water);
4. There are vast areas which lack radar surveillance;
5. In air traffic terms it's the fastest-growing area in the world.

These characteristics made this area ideal as the leader in the initial implementation of CNS/ATM trials and interim systems.

Part of the CNS/ATM philosophy is that the prime responsibility for separation remains with the ground based organisation and that the human remains at the centre of the loop. The development of automation must only assist to reach better decisions more quickly.

There are 2 CNS/ATM systems: FANS1/A (1=Boeing, A=Airbus airborne avionics) and ATN. The latter is supported by ICAO and promises to be a better system from an ATC point of view but its imple-

mentation is not as advanced as FANS1/A, which is the predominant system in use in the Asia/Pacific area.

Current thinking is that ATN will be the system implemented in Europe and North America, but some airlines that have already installed FANS1/A in their fleets are pressing for the expansion of this system.

The CNS/ATM concept envisages a collaborative approach between bordering states, which may be very difficult to accomplish because of political, social, military and financial reasons.

There are a number of trial ground systems operating in the Asia/Pacific area but not yet a fully functional one anywhere in the world. It also seems that little thought has been given to mandating regulatory requirements for either system design or performance, resulting in many work-arounds becoming de facto procedures. What is meant by "work-around" is something done to get around a particular problem instead of fixing it. This has great potential to leave a system exposed to failure due to human frailties.

The result so far is a lack of pilot and controller acceptance of the concept due to the just above-mentioned problem.

IFATCA has found that some of the ground systems are inefficient, in that whilst they may achieve efficiency in one area they increase workload in another with an overall increase in the controller workload.

FANS1 itself has some design features which expose to the risk of incident and accidents, like the 2 minute interval before the controller receives feedback that the message has not been received and the fact that acknowledgment of receipt of the data-link message is generated by the aircraft avionics with no guarantee that it has been presented to the pilot.

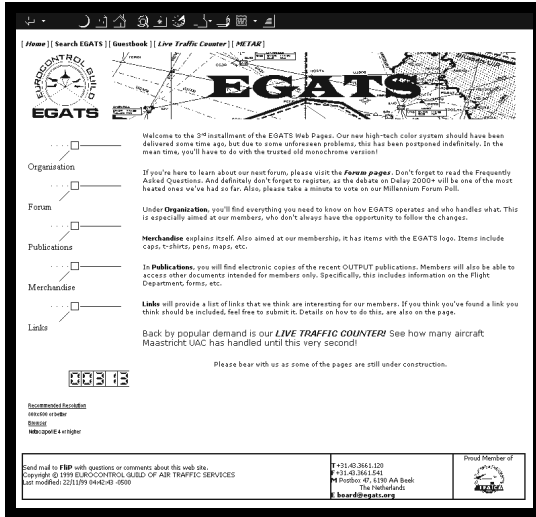
New products need to be proven better than the previous ones by the users, expanding the use of simulation of both the ground and aircraft systems and reducing live testing.

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BLIND TRUST?

COMPUTER systems designed to reduce human error in aircraft cockpits can have the opposite effect. A new study is the first to make a direct comparison between performance on tasks carried out with and without the aid of a computer. Rather than improving overall performance and decision making, the researchers found that in certain situations the computer prompts actually made people more prone to errors.

The study was conducted by researchers at the University of Illinois at Chicago, working with colleagues at San Francisco State University and NASA's Ames Research Center in Moffett Field, California. They used a basic flight simulator to examine 80 student volunteers carrying out flight tasks.

These volunteers were trained to use the simulator and given two practice sessions lasting five minutes. Then each had to fly eight "missions" involving a total of 100 tasks, such as pressing buttons when they passed beacons or when gauge levels dropped. Half the students were given automated cues—which they were told would be almost perfect, though not infallible—to remind them to carry out the tasks; the machine gave a false cue six times and failed to notify them of six events. The other volunteers just used instrument readings on the simulator's display, which both groups had been told would be 100 per cent accurate.

Are pilots lulled into a false sense of security by reassuring computer prompts?

Volunteers using automated cues on average carried out only 59 per cent of the tasks that the computer hadn't prompted them to do. But those who relied on the instrument readings were 97 per cent accurate in performing these tasks. The computer-prompted volunteers also carried out 65 per cent of the wrongly prompted tasks, despite contradictory instrument readings.

Overall, this meant that those prompted by the computer performed no better than those who relied on instruments alone. It is assumed that this reduction in vigilance stems from the human tendency to be a "cognitive miser". People delegate tasks that they think don't require their full attention—in this case to the computer.

Computer systems used in safety-critical situations should be more reliable than the ones used in the experiment. Pilots are also more highly trained. But given that any mistake can be fatal, the researchers say there's no room for complacency. According to one, there is some cause for concern, given that automated decision aids are often used where even one error can be catastrophic. This is not only so for pilots, but also for nuclear power plant operators or intensive care nurses.

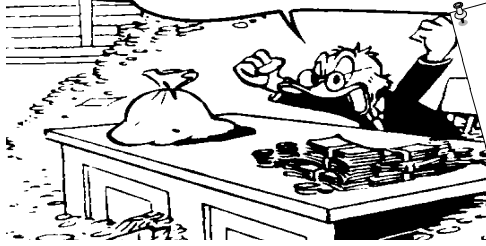
A prime example of a full scale disaster was Korean Airlines Flight 007. This airliner was shot down by Soviet fighters in 1983 for violating restricted airspace, with the loss of all 269 on board, after its crew apparently relied on an automated flight path that had been set incorrectly. Lack of vigilance meant that the crew failed to notice where they were going as they veered off course.

In light of this research, the fact that Flight Management Systems are assuming ever greater control in civil aviation is a disturbing trend. Removing the technology would not be the solution, but the use of computer prompts to situations in which errors are likely to be most dangerous, should be restricted. Previous research has suggested that continual prompting can add to the risk that people will lose concentration.

Convincing pilots to abandon their computer helpers may not be easy. "Pilots like new technology," says John Mazor, spokesman for the Air Line Pilots Association International in Washington DC. However, he says, the correct balance of control between the pilot and automated systems is an ongoing debate.

Source: *International Journal of Human-Computer Studies* (vol. 51, p 991)

A FEW MOVING WORDS FROM THE TREASURER



Reminder
 Membership fee is €55
 EGATS Bank account
 number is:
 46.86.12.254 ABN-
 AMRO
 Or contact your local
 branch

As announced at this year's AGM the EB has decided that 2000 will be the year of the Euro for EGATS. It means our primary operating currency will be the Euro.

Unfortunately, the ABN-AMRO is unable to handle transfers in Euro's from accounts in guilders. Therefore, the EB has decided on a transition period, at least for the members paying directly into our Dutch account. They can still pay in guilders, until they have their accounts changed to Euro's. As long as the amount that shows on our account is €55 or more (I.e. the equivalent of 125,00 Dfl) I'm happy. I'm sure you'll understand that we simply cannot refund the extra money if you still transfer the equivalent of 125 Dfl. That would be completely impractical and therefore I will consider the extra 3,79 Dfl a donation to the Guild.

As a reminder, the membership fees effective January 1st, 2000

are as follows:

- 1 year's Ordinary Membership:-----€ 55,-
- ½ year's Ordinary Membership: -----€ 27,50.
- 1 year's Associate Membership:-----€ 45,-
- Joining Fee: -----€ 25,-

Despite stricter application of the bye-laws this year there are still a few people who insist on using up my spare time by compelling me to send out payment reminders. Unfortunately the bye-laws oblige me to do that. However, next year, the reminders will be sent out as soon after January 31st as is practicably possible and you will then have thirty days in which to ensure that payment is effected. If your payment is not visible on a bank statement on the thirty first day the suspension procedure will implemented. This means that your next opportunity to rejoin EGATS will be as from July 1st, always assuming that the AGM has given its approval. This would entail having to pay the joining fee again, thus costing you more than had you executed a timely payment in the first place. You would, of course lose all facilities in the meantime. That may all sound very harsh but bear in mind that I didn't write the bye-laws and that they were approved by the membership anyway. Only a very small number of people will be concerned with this procedure, so the rest of you can disregard all after "good morning"!

I do recommend that you get your bank to transfer the money automatically every year to our account. Note that unlike the TUEM for example YOU have to arrange this: EGATS does not have the authority to access money on anyone's account, and we don't WANT it. So please don't come and ask. If money goes out of your account to EGATS it is because YOU arranged it.

PH



When?

Thursday, March 30th 2000
19.30h (sharp!)

Where?

Hotel Mercure, Maastricht-Aachen Airport
Beek, The Netherlands

Electronics In Flight

EGATS OUTPUT

A man has been sentenced to 12 months in jail for refusing to switch off his mobile phone during an international flight. Neil Whitehouse, 28, from Mansfield, UK, was convicted of "recklessly and negligently endangering" an aircraft.

The judge told him there had been a real possibility that the British Airways flight from Madrid to Manchester, which had 91 people on board, could have been at risk. The man had repeatedly refused to switch off his phone after being spotted with it on the Boeing 737.

Although he made no airborne calls, experts said interference from the phone could have sparked an explosion or affected the plane's navigational systems as it flew at 31,000 feet. It could also affect systems controlling the rate of climb, cabin pressures, landing systems, the automatic pilot, altitude and other instruments.

Flight attendants have a hard time convincing business-men, who paid a fortune to travel in business class, that they can't use their laptops until in cruise flight and that even then, the CD-ROM player in the laptop is off limits all the time! What's wrong? The laptop nor the CD player are radio's, are they?

Unfortunately, they are just that: transmitters that can interfere with on-board avionics. Never mind whether it is an electronic organiser, laptop computer, gameboy, camcorder, CD-player or any other Personal Electronic Device or **PED**. They all transmit on certain frequencies, and annoyingly enough, they all do it in an unstructured, unpredictable way.

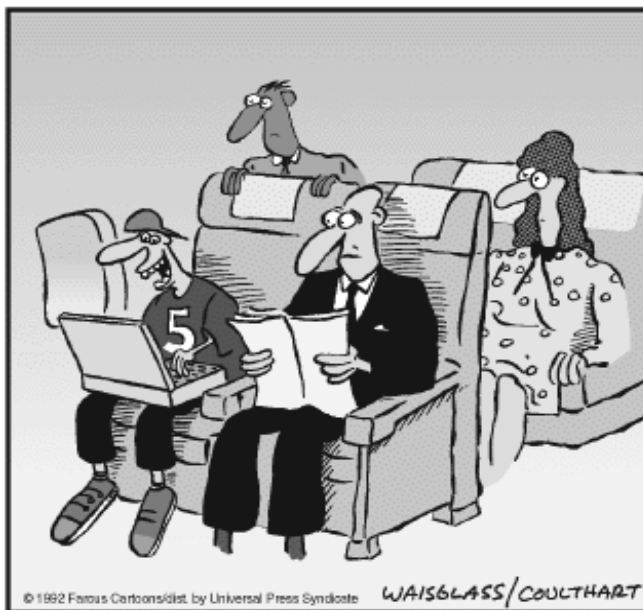
The problem is that all these devices use high-frequency **oscillators**. An oscillator is an electronic circuit that generates a 'clock pulse'. High frequency oscillators are defined as generating a clock pulse higher than 100 KHz, or 100,000 pulses per second. They use this clock pulse to time events, in milliseconds, and to see what they have to do next. In most electronic devices, such an oscillator operates in the megahertz (MHz) range.

An annoying side effect of high frequency oscillators is that they create **electromagnetic fields** that can travel well outside the device they are driving.

Shielding a PDA is difficult because it would require a metal casing (extra weight) preferably with proper grounding of that case. Not very practical on a portable device...

The oscillator can not only interfere on the frequency it generates. **Harmonics** is a property of electromagnetic waves that (weaker) signals are also generated at the multiples of the generated frequency. For example: the internal clock of most laptops works at 66 MHz. This means that it could interfere with other systems that work on that frequency, but its second harmonic, 132 MHz would directly interfere with an ATC frequency.

Modern aircraft use countless electronic systems, and all use very different frequencies, or frequency bands: voice communications (118-137 MHz), navigation (108-118 MHz), ILS (330 MHz), GPS (1227 & 1575.42 MHz), Transponders (1030 & 1090 MHz), etc. These last two are particularly close to mobile phone bands.



OK, how about Disneyland instead of Heathrow?

The clock of a CD-player has a frequency of 28 MHz. The fourth harmonic of that is 112 MHz, which is right in the VOR band. Suppose the gameboy of your son has an internal clock of 55 MHz. The 6th harmonic of that frequency is 330 MHz, the ILS localiser. Imagine a 747, with 400 passengers, all using their CD players, laptops, electronic games, etc. The electronic noise could have catastrophic effects.

But how about the avionics themselves? Do they not interfere with each other? The answer is no, they shouldn't. Each piece of equipment has to be **certified** before it is installed in a certain type of aircraft. This certification needs to be repeated for each type, because something that works fine on a 737/200, might not interact correctly on a 737/300.

How about certification of PED's? This is done on a limited scale (e.g. TÜV in Germany and FCC compliance in the USA). The problem is that the standards are not strict enough to allow use on board aircraft. Making them stricter would increase the price of the PED's and you'd have to get them retested after repairs for example.

Some companies allow no electronic devices during the whole flight, others prohibit them only during landing and take-off. The problems can occur at any stage during flight, but take-off and landing are the most critical, where a pilot has the least time to correct for erroneous systems. Ideally, PED's would have to be banned during the whole flight, but this is

usually commercially not the best strategy. The current situation is a **compromise** between the commercial department and the technicians. (International) legislation is urgently needed.

Mobile phones are another matter: while it is possible they generate interference, the other problem is that they would mess up the ground stations, if you were to use them while flying. In fact, in the USA, mobile phones are even prohibited on board balloons (even ones that have no avionics), because they would be in the line of sight of more ground stations than they would allow to normally log on to!

Some problems can even occur on the ground: SABENA noticed that two years ago, 737-200's that were at terminal C

in Brussels airport had serious problems with their radio's when they were at the gate. After pushback, problems disappeared. It was traced to people making last minute phone calls on their mobiles before boarding the aircraft. The increasing number of calls was jamming the ground frequency, but only on board 737-200's!

BM

IFATCA European Regional Meeting

Who complains about ATC delays? We left Brussels at 3.05 pm and arrived in Manchester at 3.10 pm. You couldn't be any faster, could you?

Marc Baumgartner, EVP Europe, opened the 16th regional IFATCA meeting on Saturday morning 9 am. Generally speaking it can be said that the IFATCA activities of the European Region are in a constant increase. The involvement in various working groups, task forces and even high-level groups like the Provisional Council is very much appreciated. Mr. Blunier, on behalf of Eurocontrol Board of Directors, stressed the importance of good relationship between Eurocontrol and our federation.

Although we didn't strictly adhere to the (ambitious) agenda, three main blocks of work had to be finished: the representatives' reports, the member associations' reports and some professional speakers who were invited.

Mr. Sam Parkin (Eurocontrol) explained the EATMP document (previously EATCHIP). Within the various domains 14 programmes have been defined and another 8 stand-alone programmes. The action plan is based on the ATM 2000+ Strategy. Major issues in these are safety, airspace organisation and the delay issue. Some interesting topics were touched. The ACAS II, version 7 includes reduced horizontal miss distance and the recognition of RVSM. Another EATMP programme was the 8.33 kHz implementation. Although a significant number of pilots were unaware of the 8.33 status of their aircraft and in many instances incorrect flight planning was noted, France, Germany and Switzerland confirmed

the 8.33 capability of every flight. Another challenging EATMP programme is the 8 States Free Routes Airspace Project (FRAP). A Free Route Airspace (FRAS), within which users shall freely plan their routes between an entry point and exit point without reference to the ATS route network, would potentially increase capacity through a reduction in conflicts by 30%.

The danger is, in our opinion, that when actual practice is institutionalised flexibility will rather decrease than increase.

Some important remarks on RVSM following Mr. Joe Sultana's (Eurocontrol) presentation will have to be considered seriously. If Rhein or any other neighbour suspends RVSM operations, due turbulence, CBs or any other reason, will the CFMU be able to protect our sectors from overload?

'Airports, airlines and controllers working in harmony' is the keynote for an improved ATM environment, according Mr. Phil Hogge, vice-chairman of the Performance Review

Commission (PRC). Although sometimes challenged by economic pressure, safety is still considered paramount! The priority is set however to improve safety, the reduce delays and to increase cost effectiveness. To support this aim studies will be done on aircraft operators' actions that have an influence on ATM (filing multiple flight plans, lack of coordination between operators and 'clash delays', delays due to bad scheduling of departures). Philippe Domogala proposed to do a performance review on the airlines as well. Prices can be won as 'best FPL cheater', 'have-to-call-you-twice airline' or 'bust-your-level-again crew'. Interest-

ing to hear was that the Kosovo crisis, and specifically the North Italian situation, learned that operational flexibility is so much easier with a bit of political courage.

Most of the Member Associations report ATCO shortage, increased traffic and delay in the deliverance of new systems. Some MAs have been privatised some years ago; others face this process in the near future. There is no doubt that a good business mind is of great importance also in the management of our 'business' but reading the comments of Germany on the past 6 years is not too charming. Still too many projects and activities are performed. It is the opinion of the German controllers to focus on the real challenges and give more priority and manpower into those projects that deal with questions of demand, capacity and safety in a growing Air Traffic Market.

The EVP Europe gave an overview of IFATCA's representation in the various working groups in our region. Next to the RVSM, FRAP and 8.33 groups IFATCA is active in the ANT (Airspace and Navigation Team) where Philip Marien is our rep. From the AIRSAW group he informed us on IFALPA policy to keep separation as an ATC task. I myself represent our federation in the Licensing and training groups, both working under HRT (Human Resources Team). The licensing project, defining a harmonised European Licensing scheme, is almost finished. In the training area our contribution is most appreciated in the 'continuation training' domain.

We finished the meeting Sunday afternoon around 4.30 and left Manchester with a bit more than an hour delay, caused by

EGATS Millennium Horoscope



ARIES (March 21-April 19)

WORK: You'll be busier than last year. In fact, you'll handle the equivalent of the first 5 years of operation of the UAC in just one year. The winter will feel like summer, but only traffic-wise, unfortunately.

LUCKY HEADING: 012°

LUCKY PHRASE: "Climb immediately".



TAURUS (April 20-May 20)

WORK: You will start to dream about flights to GCLP. All 37 wanting FL370, with the fastest one behind. When you wake up, you notice that luckily there's only 36 of them, and that the fastest one is number 35 in the sequence.

LUCKY HEADING: 348°

LUCKY PHRASE: "STATIC!"



GEMINI (May 21-June 20)

WORK: Days are getting longer, and nights sleep are getting shorter. Strangely enough, this doesn't change after June 21st, on the contrary...

LUCKY HEADING: 024°

LUCKY PHRASE: "Expedite your turn"



CANCER (June 21-July 22)

WORK: Your sector group will be overstaffed. No, really! You'll have enough people to cover all sectors, all the time! You'll be able to take leave whenever you like, it won't matter! Honestly. Oh, and ODS will be online earlier than predicted. I swear... and it might also be a bit busier than last year.

LUCKY HEADING: 247°

LUCKY PHRASE: "BLOKJES!"



LEO (July 23-Aug. 22)

WORK: You will break your tongue trying to pronounce Channel one three three point three five five for the 17th time to the same pilot. Traffic's up from last year, your pay isn't...

LUCKY HEADING: North

LUCKY PHRASE: "Do you have TCAS?"



VIRGO (Aug. 23-Sept. 22)

WORK: Airlines will have to start flying great circle routes between Paris and Hanover in order not to exceed the fuel range of their aircraft, after the 12th CFMU rerouting, now via Frankfurt, Berlin and Moscow.

LUCKY HEADING: 312°

LUCKY PHRASE: "I say AGAIN..."



LIBRA (Sept. 23-Oct. 22)

WORK: More aircraft than you've ever seen before, are everywhere, including places and at levels they shouldn't be. Days that end in 'Y' are busier than last year.

LUCKY HEADING: 225°

LUCKY PHRASE: "disregard"



SCORPIO (Oct. 23-Nov. 21)

WORK: More aircraft than ever before will enter your sector. They will all exit your sector as well, ... barely... Pilots using strange call signs and even weirder accents will insist on talking to you...

LUCKY HEADING: 181°

LUCKY PHRASE: "You have the choice between FL 260 and 470"



SAGITTARIUS (Nov. 22-Dec. 21)

WORK: Formations of civil aircraft in your sector will start resembling United Airlines' commercials. Pity the only video footage available are PAMPLAYS and ASMT replays...

LUCKY HEADING: Left 10 will do

LUCKY PHRASE: "No details"



CAPRICORN (Dec. 22-Jan. 19)

WORK: Saturn is in a triple conjunction with Mars and Jupiter, within your antecedent, Gemini. Unfortunately for you, the airlines do not know about this and will continue flying... Maybe someone should warn them when you are working.

LUCKY HEADING: 256°

LUCKY PHRASE: "UNKNOWN TRAFFIC, point 3 Nm out same level".



AQUARIUS (Jan. 20-Feb. 18)

WORK: The weather will clear up as you drive to work. When you leave, it'll start raining again. Rain clouds migrate south with you as you go to Spain on your holidays. Oh, and it might be a bit busier than last year, especially during January till December.

LUCKY HEADING: 071°

LUCKY PHRASE: "Who wants coffee?"



PISCES (Feb. 19-March 20)

WORK: Mysterious voices will regularly announce themselves to you on the frequency. This is because you will have no idea who's calling and where the hell he/she is...

LUCKY HEADING: None... Sorry.

LUCKY PHRASE: "EUHHHH...."

Crash Cure?

New research shows that surviving an airplane crash is a healthy experience. The Old Dominion University in Norfolk, UK, dis-

credited the wide spread opinion that traumatic experiences have serious psychological consequences. They interviewed a number of people that survived an airplane crash, arguably one of the most traumatic event one can go through. The people in question scored better on mental tests

than a so called control group. They had more self confidence and showed improved managerial skills. Even more striking is that the ones that refused professional counselling after a crash, were even better of than the ones who hadn't. Dare we suggest an activity for the next Management-Away-Day!?

These signs and notices were found across the world...

TOKYO HOTEL

Is forbidden to steal hotel towels please. If you are not a person to do such thing is please not to read notis.

BUCHAREST (ROMANIA) HOTEL

The lift is being fixed for the next day. During that time we regret that you will be unbearable.

LEIPZIG (GERMANY) ELEVATOR

Do not enter the lift backwards, and only when lit up.

BELGRADE (YUGOSLAVIA) ELEVATOR

To move the cabin, push button for wishing floor. If the cabin should enter more persons, each one should press a number of wishing floor. Driving then going alphabetically by national order.

PARIS HOTEL ELEVATOR

Please leave your values at the front desk.

ATHENS (GREECE) HOTEL

Visitors are expected to complain at the office between the hours of 9 and 11 a.m. daily.

YUGOSLAVIAN HOTEL

The flattening of underwear with pleasure is the job of the chambermaid.

JAPANESE HOTEL

You are invited to take advantage of the chambermaid.

MOSCOW HOTEL

You are welcome to visit the cemetery where famous Russian and Soviet composers, artists and writers are buried daily except Thursday.

SWISS MENU

Our wines leave you nothing to hope for.

AUSTRIAN SKI LODGE

Not to perambulate the corridors in the hours of repose in the boots of ascension.

POLISH MENU

Salad a firm's own make; limpid red beet soup with cheesy dumplings in the form of a finger; roasted duck let loose; beef rashers beaten up in the country people's fashion.

HONG KONG TAILOR SHOP

Ladies may have a fit upstairs.

BANGKOK DRY CLEANERS

Drop your trousers here for best results.

PARIS DRESS SHOP

Dresses for street walking.

RHODES (GREECE) TAILOR SHOP

Order your summers suit. Because is big rush we will execute customers in strict rotation.

SOVIET NEWSPAPER

There will be a Moscow exhibition of Arts by 15,000 Soviet Republic painters and sculptors. These were executed over the past two years.

GERMAN CAMPING SITE

It is strictly forbidden on our Black Forest camping site that people of different sex, for instance, men and women, live together in one tent unless they are married with each other for that purpose.

HONG KONG AD

Teeth extracted by the latest methodists.

ROME LAUNDRY

Ladies, leave your clothes here and spend the afternoon having a good time.

CZECH TOURIST AGENCY

Take one of our horse-driven city tours. We guarantee no miscarriages.

SWISS MOUNTAIN INN

Special today - no ice cream.

COPENHAGEN (DENMARK) AIRLINE

We take your bags and send them in all directions.

MOSCOW HOTEL

If this is your first visit to the U.S.S.R., you are welcome to it.

NORWEGIAN LOUNGE

Ladies are requested not to have children in the bar.

BUDAPEST (HUNGARY) ZOO

Please do not feed the animals. If you have any suitable food, give it to the guard on duty.

ROMAN DOCTOR

Specialist in women and other diseases.

ACUPULCO HOTEL

The manager has personally passed all the water served here.

TOKYO SHOP

Our nylons cost more than common, but you'll find they are best in the long run.

JAPANESE HOTEL

colles and heates: If you want just condition of warm in your room, please control yourself.

TOKYO CAR RENTAL FIRM

When passender of foot heave in sight, tootle the horn. Trumpet him melodiously at first, but if he still obstacles your passage then tootle him with vigor.

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