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to fly or not to fly

INPUT

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the magazine of the
EUROCONTROL GUILD of AIR TRAFFIC SERVICES

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PRESIDENT'S MESSAGE

It is with pride and pleasure that I can introduce the following article.

The author, Ted McCluskey, is not only a distinguished EGATS member since many years but he is also what could be called an "IFATCA freak"!

During more than 25 years Ted has been attending the IFATCA conferences either in an official IFATCA function or as a delegate with GATCO or EGATS; he has always been ready for those who needed his help and advice. Holding a degree in law he was a welcome guest whenever legal or constitutional matters were discussed and IFATCA could fully benefit from his experience when he founded and developed Standing Committee VII (Legal Committee); he was of particular value to EGATS when we were going through all difficult steps preceding our IFATCA affiliation.

All these achievements gave us a

good reason to offer Ted a commemorative plaque during last IFATCA conference in Rio and the IFATCA Executive Board followed suit by awarding him with the IFATCA Scroll of Honour.

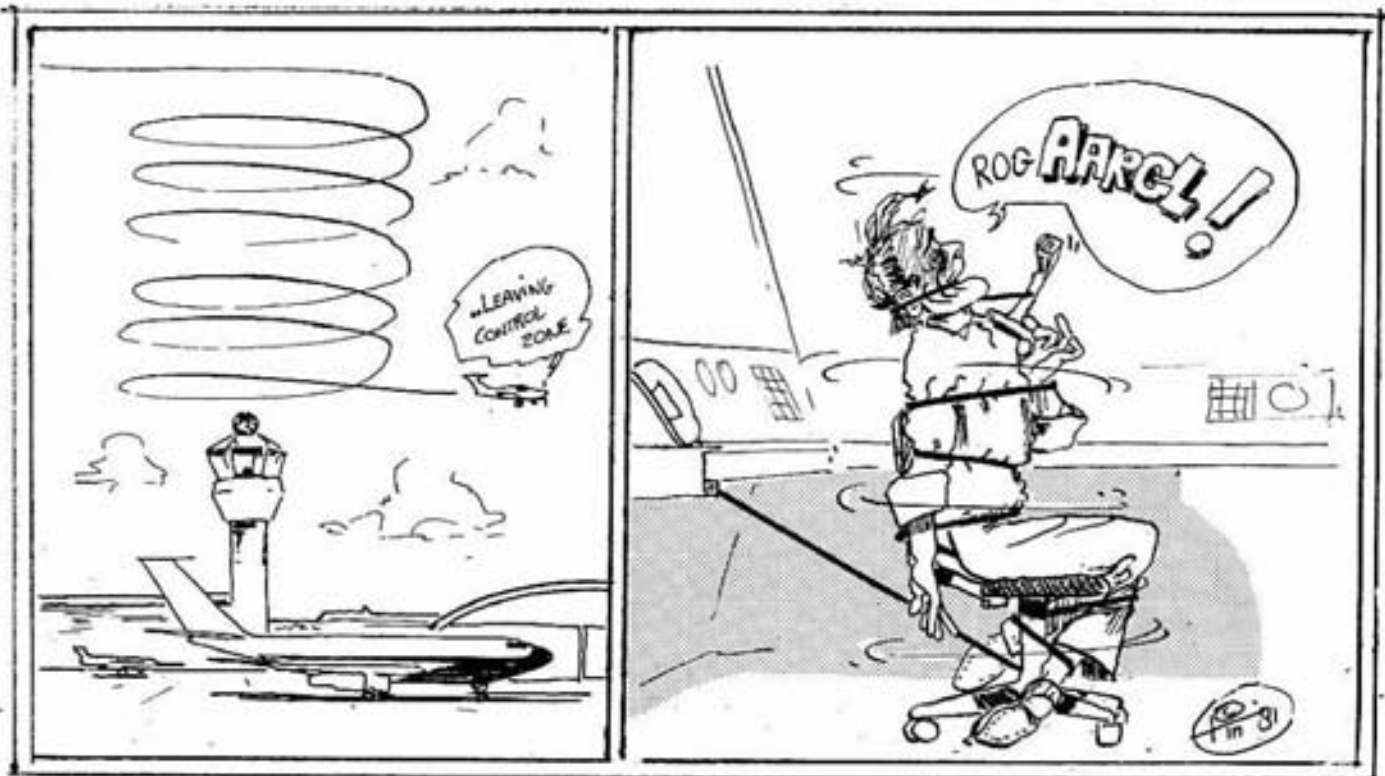
Ted has announced that he will cease his IFATCA activities and we used this opportunity to suggest a summary more than 25 years IFATCA experience.

In this respect the article is somewhat unique because of Ted's generation there are only a few left and amongst these one will rarely find the conviction and the motivation which Ted has demonstrated throughout all these years.

Thanks again Ted for a job well done, we sincerely hope to keep in touch with you and maybe hear and read some more of your wise thoughts in the future.

Maybe "Route Charges" (Ted's actual job) would be a suitable topic.

Jan Gordts



A QUARTER OF A CENTURY LATER



by Ted Mac Cluskey

When the President of EGATS suggested an article for Input on 25 successive conferences it seemed at first logical to start with the Brussels Conference 1964 but then being Irish it seems more logical to start before the beginning.

Just after joining GATCO in 1960 news came through that Controllers were forming some sort of European Trade Union called EFATCA. Their original meeting in Frankfurt brought about the inaugural conference in Amsterdam in 1961 to which GATCO sent observers. Under the influence of Paul Berger of ICAO the fledgling EFATCA changed its name to IFATCA but it became obvious that if the proposed Constitution were accepted unamended neither the UK nor Sweden with military members in their Guilds could participate. Amendments were proposed but at the UK Guild AGM only two,

Norman Ward and myself voted to join the Federation. Within a year opinions changed and GATCO not only joined with Sweden in Paris in 1962 but agreed to hold the Conference in 1963. Having supported the idea of IFATCA it was a bitter disappointment to discover that so many were going to London that I was unable to get leave. But in 1964 I found myself on leave in Paris so it seemed logical to drive up to Brussels to have a look.

First impressions on arriving at the first reception in the City Hall were not good as I knew no-one and the four man GATCO delegation was surprised that a Grade III controller could be a member of the Guild as in London at that time the Guild tended to be a supervisors' organisation. The ice was broken by a Venezuelan observer who had been at turn at the same time as me so the meal arranged by

chance after the reception resulted in my meeting not only those who spoke Spanish but also the Luxemburgers and the Danes. The fact that meals in the hotel were often served at tables for four meant eating with others than the official GATCO delegation so mixing with other delegations was necessary. Israel had joined in Paris being the first to show the sense of IFATCA and Central Africa (The old Rhodesia and Nyassland) had joined in London. Brussels with the arrival of Canada and Uruguay took IFATCA across the Atlantic.

What was impressive right from the beginning was the way the President Leo Tekstra seemed to know everyone, know their problems and be able to run a Committee as well. In those days there were only two committees so the technical committee seemed the obvious place for me to start. As it happened I ended up translating for the French delegation. They ended up taking on the SST studies. By the end of the Conference IFATCA was in the blood and so it was a logical step to decide to take annual leave for the next Conference. This was popular in the summer as it meant one less on leave but it wasn't so popular when everyone was trying to take all the days left before the end of the leave year in April. Fortunately my watch supervisor was Tom Harrison who believed passionately in IFATCA so in 1965 I set off by car to Vienna.

In Vienna the level of hotel had shot up really beyond the means of most controllers in those days but on entering the Intercontinental the difference from the previous year was marked because people now knew me. Those who remained in their Guild groups were not known to other Associations. Vienna was my first introduction to two great characters Willy Katz and Jacob Wachtel from Israel. Jacob worked for years trying to get IFATCA to found an ATC University to give controllers professional qualifications but funds then as now were limited. The big surprise in plenary was when the new MA New Zealand was called it was automatically considered that they would be absent but Keith Naisbitt and a colleague from Tels had taken six months leave and had come by boat and overland. Their return trip

was helped by being invited by all the then MAs. Yugoslavia became the first Socialist country to join and IFATCA already had a foothold on all the continents. At the Paris Conference a Swedish controller had asked to correspond with a British controller to improve his English so I took this on as I was studying Swedish. We both applied for the same ICAO job in 1964 and he got it and we continued to correspond.

In 1966 the Conference went to Rome so an even longer car journey. The Italian Government did not give the expected support and the Italian controllers subsidised our hotel bills to the extent of bankrupting their Association. The highlight of the Rome Conference was an audience in

GARDENCENTRE -
LANDSCAPE GARDENING -
LAYING - OUT AND MAINTENANCE

arthur speetjens

FROM OWN NURSERY:

- Conifers, all types
- Shrubs and climbing plants

EXTENSIVE ASSORTMENT:

- SODS
- All types of heather
- Roses

LAYING-OUT OF TERRACES:

- Peat, manure and fertilizer, etc.
- Gardenhouses
- Greenhouses
- Renovation of existing gardens
- Plowing and harrowing



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St. Peter's at which His Holiness Pope Paul addressed IFATCA in English and became the first Head of State to give IFATCA recognition.

The Central African Federation had disappeared and IFATCA had its first serious brush with ICAO when the Rhodesian Association replaced the Central African Association. It was at Geneva that I had my first experience in Committee A where I suggested a legal committee but the Chairman Des Eglinton of Ireland suggested that young controller must learn more about his own Association before getting deep into IFATCA work so I went home and was instrumental in setting up the Northern Ireland Lodge of GATCO and became its secretary. The Swiss last night party in Geneva was so good that only three of us turned up for the next day's visit to Euratom and Swiss controllers had to be called out to make the expected numbers.

Munich in 1968 was the first time that delegates were invited home by some of the German controllers so that Bavarian hospitality was sampled by many. With the arrival of Hong Kong IFATCA had made inroads into Eastern Asia. The Cossor representative, Bob Shipley had a party piece in that at the last party he would drink the local drink standing on his head. Bedecked in Lederhose he astounded everyone when the Germans produced their Stein. Double figures were reached for the first time for Corporate Members.

For the 1969 Conference IFATCA left the West European region for the first time and cheap fares to Belgrade were offered by JAT. Before the Conference Maurice Cerf who was about to take over the Presidency expressed the opinion that French speaking controllers were still having problems following in committee so I suggested a French speaking Chairman. The obvious one was a young Swiss Jean Daniel Monin who agreed provided that he had an English speaking Secretary. I got the job and that team continued in A for five Conferences. ATCA of the USA had found it difficult to pay subscriptions and had become a Corporate Member. The Belgrade Conference decided that controllers must be full members so that when the USSR Union was refused without a definite controllers' organisation IFATCA became the first international

organisation to refuse the USA and the USSR on the USSR on the same day. Cyprus joined and with them a young lawyer Andreas Avgoustis so the idea of Legal Matters came up again. SC IV had already recognised that some attention had to be paid to legal problems. Leo Tekstra having established IFATCA firmly now left it to Maurice Cerf to follow an expansionist policy. Maurice had to be replaced and the British Guild backed Gunnar Atterholm now back from ICAO, and he became 2nd V.P.

The decision to go to Montreal in 1970 horrified most of us as transatlantic travel was unthinkable but Germany came up trumps and many of us travelled in a Luftwaffe B707 from Köln. Under the direction of J.D. Lyon the Canadians showed all the North American know-how in organising a Conference. There was a membership explosion with the arrival of Australia, South Africa, Malta, Hungary, Netherlands Antilles and USA represented by PATCO. IFATCA had now gone behind the "Iron Curtain". Israel tried to propose me for President but as I had already supported Arnold Field's candidature in the British Guild I had to refuse. South Africa and Belgium tried to propose me for Honorary Secretary at the Athens Conference but Horst Guddat was already doing a very good job so I decided against it but in Committee Germany opposed Horst and tried to nominate a candidate from the floor so I requested Belgium and South Africa to propose me again which had the result of Germany withdrawing their proposal and Horst carried on for a number of years.

Things got more serious at the Dublin Conference. For the first time I became an official GATCO delegate and found myself proposed for VP Admin again not by my own Guild. This was the first time that Election speeches were suggested but three of the candidates refused to make speeches and the one who did Bob Meyer of PATCO was elected. IFATCA rode out a political storm by coming with a British President and Secretary just after a bomb attack on the British Embassy. It could only happen in Ireland that we arrived to find the hotel unfinished and surprised the management by putting up doors etc. which earned us a party on the house. It was a

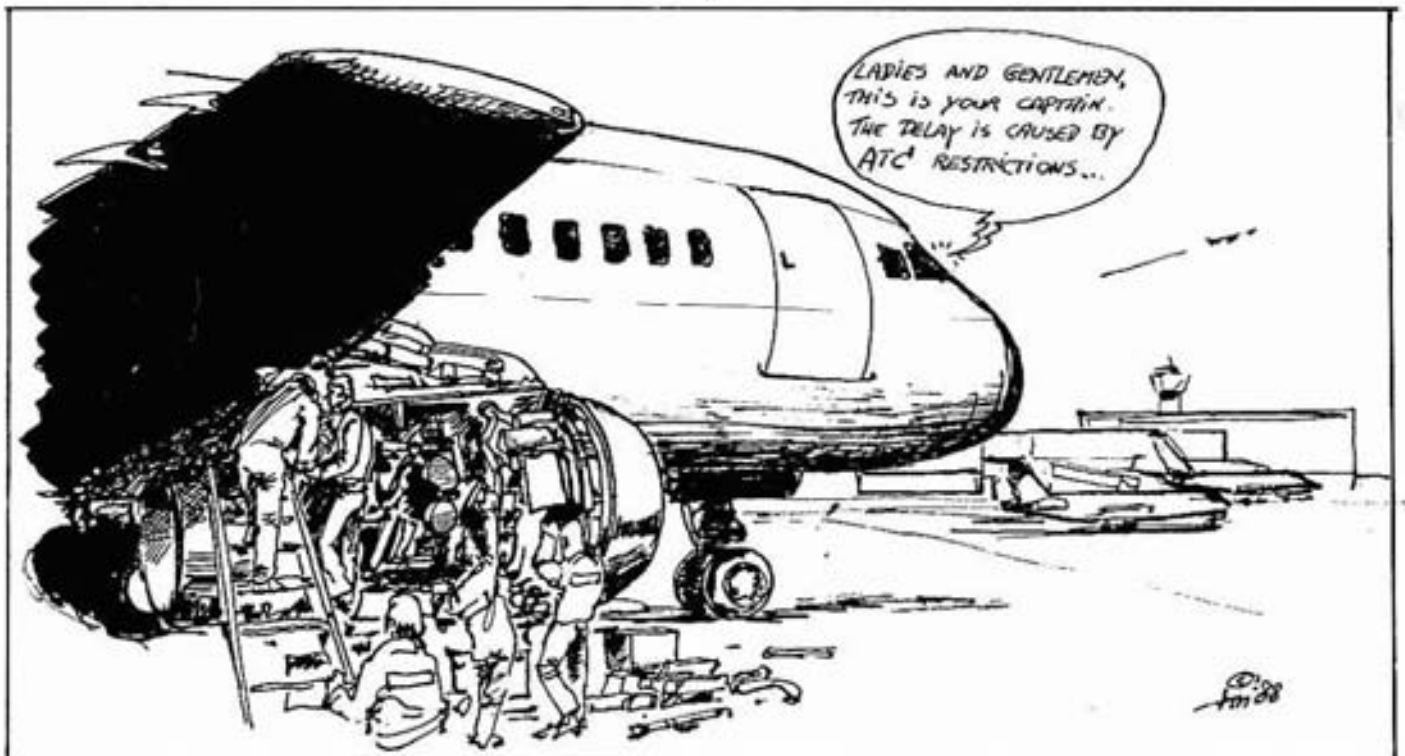
glorious week but Committee A was treated to a real time simulation of Irish weather when the sprinkler system went off during a meeting.

Again an official delegate to Reykjavik in 1973 two events were significant, resisting the candidature of Eurocontrol Maastricht Lodge in case we were faced with applications for several Eurocontrol Lodges and finally succeeding in starting SCVII although it was voted with a budget of 0. The first task was to examine the legal position of the Federation itself. Meanwhile back home I was recruited to help to draw up the EGATS Constitution and once it was multi Lodge to get the Brétigny Lodge off the ground. At last Controllers in Brétigny who were cut off from their "home" Associations could act as a group which did not originally please the then Director of the EEC.

Still with the British Guild in Tel Aviv, the Israelis considering that it was good luck to host the 13th Conference, the job in hand was to ensure the entry of EGATS. People still didn't understand International Organisations and the EGATS case lost on the 2/3 rule which prompted a brilliant speech by Roger Bartlett at

final plenary which earned a standing ovation. The scene had been set for Melbourne and the study on IFATCA's Legal position was already well advanced. As through GATCO I was instrumental in getting Jean Daniel Monin proposed as President in Dublin, the teamwork in Committee A had changed and now the only person who could remember previous Conferences was the Secretary who was not even a deputy Director so I decided to try to stand down in Melbourne. Arnold Field had a Presidency which consolidated finance but with Jean Daniel Monin IFATCA began to go to the top by negotiating direct with Heads of State.

GATCO had a limited delegation to Australia because of limited funds but the prospect of a one-off round the World trip was not to be missed so via Canada, USA, Fiji (making a contact from outside the PAC region) and New Zealand I arrived in Melbourne to an expertly organised Conference. This time I suggested that we could have a non-English speaking Secretary in Committee A and Andreas Papatomas took on that arduous task. Not only



did we now have Committee C but the Aussies invented Committee D which was to last for a number of Conferences. The Committee room was the pub next door to the Conference hotel. The main interest in Melbourne was that SCVII had been instrumental in achieving IFATCA's affiliation to the Federation des Institutions Internationales (non gouvernementales) at Geneva (FIIG) and that established that IFATCA could have Swiss nationality. Of course the candidature of EGATS came up again and obtained a majority again in Committee but PATCO pushed for a roll call vote in final Plenary. I believe that many non-committed MAs vote out of politeness with the host Association so Australia being first to vote was in our favour when they said "Yes". Four votes against would have lost the the EGATS case but only Canada, Iceland and PATCO did so. PATCO then decided on non-ratification and one other would have blocked the result but Canada and Iceland bowed to the vast majority. Being the only person from Eurocontrol present it was an honour to receive the EGATS scroll from the President. It came back via Singapore, Malaysia, Thailand, Bangladesh, India, Pakistan, Lebanon and France to Maastricht. That trip permitted first contacts with Malaysian and Thai controllers. We should have gone to Cyprus in 1976 but because of the invasion France stepped in and took the Conference to Lyon. Lyon permitted the Brétigny branch of EGATS to turn up in force and see IFATCA at work for the first time. The Conference was becoming a one man effort and I spent many hours helping Daniel Gorin in his task. EGATS did me the honour of nominating me as Director and immediately I was faced with a request from Costa Rica to use their proxy vote as I had through SCVII revised their constitution to conform with IFATCA. This proved to be an interesting exercise as I had to note for English as the single on RT for EGATS and against for Costa Rica in other words using their vote as they would have used it. The Secretariat in Lyon was pretty disastrous and some of us had to miss out on evening functions working long into the night to get reports out on time. However, at the dinner hosted by Air France it was good to see that EGATS was invited to

the President's table to represent Europe.

Director again for the Nicosia Conference I arrived a week early to help again a one man organising Committee, Andreas Avgoustis. In a way it was perhaps fortunate that the Director was not from Maastricht as the conference was marred for EGATS by the serious problem with the Netherlands Guild. What was worse was that the EB condemned both Guilds without giving either charges to answer. This aspect was taken up in the studies in SCVII of which EGATS was now a member. It had to be studied in the context of the incorporation of IFATCA in Switzerland which had been achieved largely thanks to SCVII which would now concentrate on controllers' problems. The EGATS decision to take a low profile for some years after Cyprus was proved to have been correct. By Copenhagen, IFATCA representation for EGATS could be changed in view of the experience gained so being now Deputy Director I could participate more in Committee C to cover legal matters.

Organising Committees often do not make arrangements for unforeseen circumstances which must arise when a few hundred people assemble for a Conference. I had my first personal problem in Copenhagen and the Danes were immediately on the ball organising everything. The second International organisation joined in Copenhagen with the East Africa Community Association so EGATS was no longer unique. The definitive loss of European majority in IFATCA began to show in Copenhagen. This was reflected in the election of the first non-European President, Harri Henschler. EGATS supported the award of the Scroll of Honour to Jean Daniel Monin. The new President was about to change the course of IFATCA by applying North American style to the office. Tom Harrison was also awarded the Scroll in Copenhagen.

1979 saw me back to source at the second Brussels Conference where EGATS had a candidate for VP Technical in the person of Tom Van Hal. This served to show the difficulties of EGATS in IFATCA compared with other MAs. No decision had been taken on the possibility of special leave until the day of the vote. The Agency which is represented at all Conferences did not

provide a delegate in Brussels and EGATS was highly embarrassed when at the aperitif offered by Eurocontrol there was no one to answer the President's remark and perhaps give some publicity to the Agency - a chance was lost as was the failure to invite delegates to see Maastricht.

All ready to leave for Paramaribo in 1980, the news came of the coup d'état and the Conference was Toronto. Whatever the reasoning behind the EB's decision, one had to be impressed by the Canadian organisation as the sand-in host. At Toronto a special working group worked apart from Committees to update the bye-laws and both Canada and EGATS played a major role along with GATCO. Conference accepted the recommendations and IFATCA found itself again "modernised". Political pressure from outside, again ICAO had prompted the EB to ask ROCATCA Taiwan to withdraw her application for membership, as there was a fear that IFATCA would be debarred from ICAO meetings. The

Netherlands supported by EGATS took the stand that the Directors make such decisions so we campaigned to get ROCATCA to put forward the application again. The application was accepted unanimously in Final Plenary. This point should not be forgotten by Directors who sometimes elect the EB and then apparently live in fear of them.

Cairo in 1981 was the first Conference in Africa although Africa had for some time been the second Continent numerically speaking. The organisation left a lot to be desired and even caused a Finnish delegate to make the first recorded speech by a Finn complaining about confusion on room prices. Philippe Domogala made his complaint more dramatically by arriving with the large notice removed from his room door. I was invited to celebrate Israeli Independence day at the Israeli Embassy which was very agreeable considering we were in Cairo. But then Israel and Egypt had supported each other in IFATCA long before President Sadat made his historic journey to Jerusalem. Unfortunately other political problems arose. South Africa could not attend but was the candidate for the Conference. France made for the first time in my memory the first political campaign during a Conference. Her efforts nearly came to nought by an impassioned speech from the Sudan Director who pointed out that his government would not allow him to attend but that South Africa had been a member for a long time and should be given the chance to run the Conference. He requested all the African countries to abstain. The result of the ballot suggested that they all did but no-one will know what France was doing with proxies for African countries. South Africa lost and Yugoslavia took on the Conference in Split. France of course left IFATCA.

In 1982 IFATCA returned to source for the second Amsterdam Conference. It was pleasant to meet Jan Schmit again since we first met at the Vienna Conference defending Oceanic Controllers against attacks from American airlines on the subject of alleged preferential treatment on NAT tracks. With the series on Legal Matters in the Controller finished, EGATS could now make more input to SCVII.

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With Split in 1983, Estoril in 1984 and the second Athens Conference in 1986 IFATCA was again four consecutive years in Europe although EGATS still pursued its world wide policy. Estoril saw the first opening of a Conference by the Head of State. Next came a run of three Conferences outside Europe, first in Central America with again an opening by the Head of State in San José where the Costa Rica controllers made EGATS especially welcome. Our counterparts in Central America, CENAMER joined proposed by EGATS. Again there were two international organisations. EGATS had of course largely supported the Brazilian Association and it was rewarding when they succeeded in being voted hosts for 1988.

Nairobi and Rio were marred by muggings and this had not been explained to delegates in advance. Whether we can fault the host associations for that is questionable since tourist publicity does not mention these facts either but the host Association, knowing the facts, should do more to provide for delegates in trouble.

Rio was my 25th Consecutive Conference and only Bernard Rüthy has also attended 25 including the first but he did miss a couple along the way. So after a quarter of a century and more and more work at Eurocontrol I decided to call a halt to work for the Federation. I was overwhelmed by

the presentation of a plaque by EGATS supported by all the European Associations so I take this opportunity of thanking all members for the presentation and for their support over the years. A bigger surprise was the vote in Final Plenary for the Scroll of Honour which really should be awarded to the many who work for IFATCA behind the scenes. I feel they share the honour but it did coincide also with EGATS higher profile. I leave it now to a younger generation. EGATS of course is carrying on in SCVII and I wish the new people the best of luck.

For these who continue to go to conferences remember to mix with other delegations, to support the international spirit and be on the look out for likely young candidates for the EB. IFATCA depends on that spirit.





FLYING

by Gilbert Grosvenor and Dieter Busch

Editorial Note:

This is the headline of an article written by Gilbert Grosvenor, then president of the National Geographic Society (N.G.S.), Washington D.C., which was published in the the National Geographic Magazine of May, 1933. Amongst many other interesting aspects of air transport, part of this article is dedicated to navigation and air traffic control.

We wish to express our thanks to Mr. Dieter Busch, a controller at the Maastricht U.A.C., for producing this review of the original article and to the National Geographic Society for their kind permission to reproduce parts of the original 1933 article by Gilbert Grosvenor. Unfortunately it was not possible to get permission for the reproduction of accompanying photographs as the N.G.S. themselves had only one-time rights for publication.

Mr. Grosvenor is wondering about the tremendous changes - not only in speed, but also in everyday's language - when he writes: "What a miraculous change since 200 boy riders - using 500 horses - carried mail before 1840 from New York to New Orleans at the dizzy rate of 14 miles an hour! Even to our everyday speech, the advent of air traffic has added new words and phrases. We hear of take-offs, hops, riding the beam, low and high ceilings, blind or instrument flying, bailing out, artificial horizons, etc... Such air-travel terms tend to become commonplace, as are other terms used in golf and motoring".

Then he continues with mentioning "many new devices which make flying more comfortable":

"Rapid gain in air traffic, especially during recent years of business retrenching, is much due to many new aids to air navigation which now make flying safer. Chief among these are lights along the airways;

radio-range and radio-marker beacons; the two-way radiotelephones, by which a pilot in the air may talk with airports along his route; and a greatly improved weather-report service, radioed at regular intervals to pilots in the air".

There isn't really anything new under the sun, as you can see. Already 30 years after the first powered flight, safer air traffic and more "ATC-capacity" could be achieved only by an improvement of the facilities, although we would call them nowadays primitive or old-fashioned. Now, Mr. Grosvenor gives the interesting description of a night flight from Richmond to Atlanta:

"Imagine yourself riding up front with a pilot on a night flight over a modern illuminated airway, and you will understand just how these aids to aerial navigation do their work.

You take off, let us say, from Richmond for Atlanta. As you rise above the lights that flood the field,

a clerk sends a message out over teletypewriter circuit which may say: "Plane GH-4, Pilot Gill at controls, left Richmond at 9 p.m. for Atlanta". That message, flashed ahead, is automatically written by receiving machines at strategic points along the route you are to fly. By means of it, ground stations on your route can check your progress. No sooner are you high in the air and pointed on your course than you see in the distance a flash of white light. That is your first beacon. People on the ground see it as a revolving searchlight, sweeping a beam low above the horizon six times a minute. As the light continues to turn and the beam moves to one side, out of line of the pilot's vision, a red light suddenly shows, flashing a dot-dash code signal. That signal tells the pilot exactly where he is; for each beacon has its own identifying dot-dash, and this one indicates that the light you see is the first of ten beacons on the 100-mile stretch of route you are now flying. When this red code place-signal snaps off, the revolving white light is seen again. As each red signal-light has its own name in dots and dashes, the pilot has only to refresh his memory by a glance at his strip map for that section of his route. Flying on over this first light, you may see ahead, if the night is clear, three, four, or perhaps even five more lights. Standing ten miles apart, they illuminate your path like street lamps along a city boulevard". Although, 55 years ago the air was not as polluted as it is today, the visibility could be well below the required 10 miles for the distance between the signal lights but science had already invented the radio-beacon,



so the flight could continue without major navigational difficulties:

"If the night be so dark that you can see only one light ahead, the pilot, with his switch thrown and his radio-beacon receiver at work, depends on the beacon's aid in steering. Through his ear phones he listens to the signals coming from the beacon transmitter back at Richmond airport. As long as he sticks straight on his course, all he hears is one long "dash" sound after another; but if he wanders off to one side, he gets "A", or dot-dash in Morse code; if to the other, he gets "N", or dash-dot. Even if it gets so thick that at times you see no lights ahead, your pilot may follow his true course by flying his plane so that the long-dash sound predominates in his ear phones. Just as a double check, the long dash is interrupted periodically by a "dash-dot-dash" call, which is Richmond airport".

Also provisions were already made for an alternate aerodrome and additional inflight information:

"At least every 50 miles along your route you come to a green light. That means an intermediate landing field. But you fly on. Suddenly the tireless long-dash sound stops in the ear phones and a human voice is heard. It is from a man at the next airport ahead. He states the correct time, what the "ceiling" is whether it is raining, how hard the wind is blowing, and everything else that will help the pilot to fly in and make a safe landing. The pilot, if he wishes, can talk with this airport ahead, for his radiophone is two-way. He can also talk with other planes. Flying south, a northbound plane passed us - a mile to our left and some 2,000 feet higher. With an extra pair of ear phones, we distinctly heard its pilot conversing with our ship.

Weather news, picked up by observers not only along the route, but at points about 200 miles on both sides, is teletyped to the broadcasting

stations and put on the air at regular intervals".

Now again a bit of "air traffic control". After the "departure message" which was sent to stations ahead, each air station which is passed sends a "flight progress report":

"As we wing our way on toward Atlanta, on this flight from Richmond, each air station we fly over is on the lookout for us, because they got the teletyped message saying we had started; hence, over each station the pilot makes himself known by radio to lookouts below. Again, then, his position is reported to stations ahead by another teletype message, reading: "Plane CH-4, Pilot Gill, passed over this station at 10.30 p.m., flying in a southwesterly direction". All such words about our progress are received automatically by teletype, not only at stations along our route, but back at Richmond, our starting point. As we fly further from Richmond, its beam gets wider in the air and fades out; as it begins to fade, the pilot tunes in on Greensboro, then Spartanburg, finally on Atlanta, and rides its narrowing beam into the airport".

Finally Mr. Grosvenor ends this part of his article with some views into the future: "Planes of the Eastern Air Transport now fly the 1,210 miles from New York to Miami, Florida, in 830 minutes. They leave Newark Airport at 8 a.m. and reach Miami at 9.50 that evening. A fleet of new Curtiss Condors, to carry a payload of 3,200 pounds and cruise at 145 miles an hour, with a top speed of 170 miles, has just been built for this line. Planes in this new fleet will fly this Atlantic Seaboard route in about 600 minutes, or in nearly four hours less time than aircraft in use as this is written. Similar increase in speed across the continent will be achieved in 1933 by new planes of Transcontinental and Western Air, Inc., or "Lindbergh Line", and of the United Air Lines. Against the present coast-to-coast schedule of some 24 hours, improved craft are designed to make this flight, with mail, express, and passengers, in about 16 hours.

Planes fast enough to fly between any two points in the United States between dawn and dusk are now the objectives of aircraft engineers. With craft now in use, overnight deliveries of mail and goods can be made from our chief trade centres to points about 1,400 miles away.

But faster planes, now under construction, will in 1933 clip off five or six hours from present schedules, which will add another 1,000 miles to this overnight plane delivery zone. To handle this growing express

business, several aircraft makers are studying designs for a special plane to carry nothing but cargo. Today express is carried on mail and passenger planes, such goods usually being loaded in the wings of the large multi-motored planes, where there is space for several hundred pounds.

Separate express sheds at airports and fast cargo planes flying on regular schedule, as trade comes to make more use of swift air distribution of the lighter merchandise suited to it, all come into the plans of airline operators.

Before many years have elapsed, air transport may earn more from freight than from passengers carried. As faster planes, now being built, come into use, so that express may be flown, say, from New York to Portland, Oregon, in one night, the amount of certain goods carried in stock and the methods of their distribution must all be affected".

I wonder what Mr. Grosvenor would write or say if he would experience today's air traffic with the tremendous development in all aspects. Mr. Gilbert Hovey Grosvenor lived 1875 - 1966. He was editor of the National Geographic Magazine 1899 - 1954, President of the N.G.S. 1920 - 1954, and Chairman of the Board of Trustees of the N.G.S. 1954 - 1966.

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NOTHING HAPPENS,
WHAT'S THE MATTER?...



ATC DELAY!

CRYSTAL BALL PRESENTATION FOR WESTERN EUROPE 2010

by Georges Maignan

Director Eurocontrol Brétigny

Preamble

The sole aim of the following presentation is to indicate a theme for the conduct of the discussions foreseen under part 3 of this seminar.

As a result of these discussions, the various groups of chairmen and I will attempt to formulate a perspective of what ATC will be in our European environment at the horizon of 2010 taking into account the worldwide evolution of air transport and ATC.

Five main subjects - traffic demand, the aircraft fleet, the

available technical tools, the constraints, and the concept - will be proposed for consideration and for discussion.

Each of these subjects should take into account the corresponding presentations given during the first and second part of the seminar.

The general discussion will serve the chairmen and myself to prepare a working paper presenting a synthesis to the Committee of Management of the Eurocontrol Agency indicating the possible future development of ATC concepts and systems.

Crystal Ball

The Chairmen of the various sessions and myself are in charge of forecasting what will be civil ATC in 2010. This guessing is limited to internal Europe (CRCO countries) but is quite dependent of the evolution of world air transport and world ATC. Our job is of course not easy, as the various constituting elements are strongly interacting (Fig. 1).

Fortunately the speakers during the various presentations have highlighted many of the bricks which will become available to build the ATC - or

the ATM - system of the year 2000 or later and some of the constraints which will apply to it (Fig. 2).

1. The tools available for ATC/ATM in 2010.

I could start anywhere in the wheel of Figure 1, as each of the items reacts with the others, so I will arbitrarily start with the tools, since it is probably the area where the forecast is the easiest and because they have been the subject of many comprehensive presentations. The only major exception which has not been covered by presentations is TCAS.

Due to the delay necessary for world-wide standardisation of equipment and procedures and for equipping the aircraft fleet with new devices, we can virtually be sure we will have these tools and no others in 2010.

However, we can also virtually be sure that the performance of all those tools which are dependent on computing power will improve tremendously, as in 20 years time the available computing power at constant price will probably be multiplied by 30 to 100.

For example: A typical FMS of today has a computing power of say 1.5 MIPS. We can expect 50 MIPS at least in 2010 for a modern FMCS system.

The same applies to data processing systems on the ground. A typical computer system for an ATC centre of today is - say - 5/10 MIPS. It will be 150/300 MIPS at least in 2010. With such a computing power, artificial intelligence functions will be easy to implement; optimal trajectories will be easy to compute. Thus we will have the same tools which will exchange messages according to procedures and functions we are defining today, but which will do the job much more

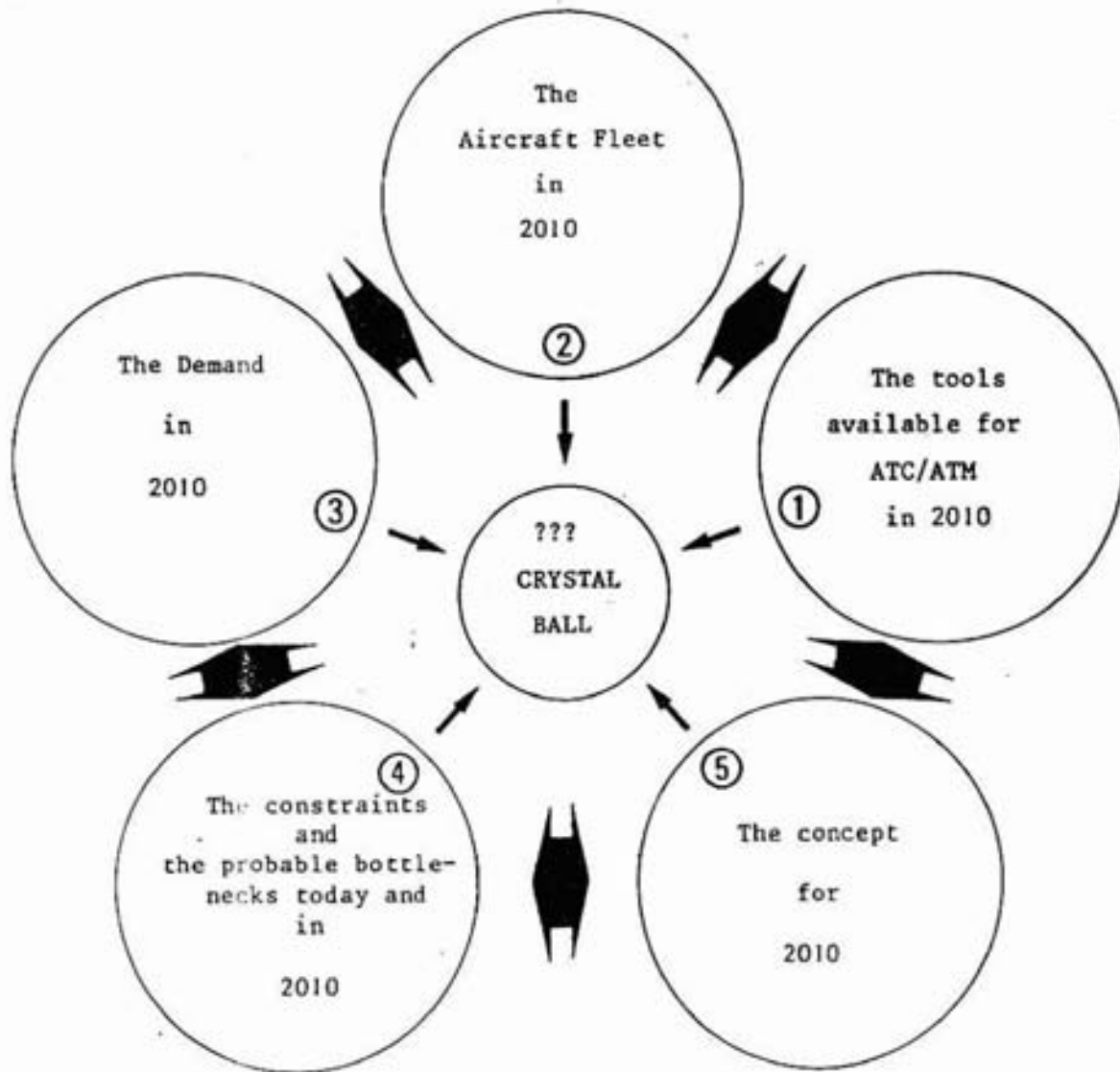


Figure 1

quickly and efficiently.

Based on this remark, and on the various presentations by the speakers, in 2010, in Europe, we can expect the following for Civil Air Traffic:

- All weather take-off and landing capability with independent parallel approach at all major airports due to improved ILS and MLS.

- A perfect independent surveillance capability due to a complete Mode S coverage. This will match a nearly perfect RNAV capability of all public transport aircraft. All general aviation aircraft penetrating areas of high density of traffic will be Mode A-C equipped and will have a sufficiently precise navigation capability to accurately follow non-RNAV trajectories.

Every civil aircraft will know where he is (in the horizontal plane) and this will be known by the ground.

- Military aircraft will be controlled by independent organisms, but bilateral interconnection between civil control and military control will give each system the possibility to see the other.

- Vertical navigation and surveillance will still remain dependent. Nevertheless reduced 1000 ft vertical separation is probable.

- ADS will exist in the surrounding oceanic area, using satellite channels shared with other applications. Renewal rate will vary according to the needs from 10 sec. to 5 min. or more.

FIGURE 2

TOOLS

- . Satellites
A.D.S
(Meyenberg;
Carvalho/Valadares)
- . Mode-S and
Mode-S Data Link
(Fay; Hughes)
- . MLS
(Anodina)
- . FMS 3-D/4-D
(Witt.)
- . A.I
(Mackenzie)
- . Control Position
Man-Machine
Relationship
(Maillier/Planchon
R. Machol)
- . Experimentation
(Platz; Laval;
Krella)
- . TCAS
GTIS
- . Technology
Forecast

OVERVIEW OF RESEARCH

- . EUROCONTROL (Vachery)
- . JAPAN (Yoshioka)
- . USSR (Anodina)
- . USA

INSTITUTIONS

- . FANS (Smit)
- . GARTEUR (England)
- . ICAO
- . EUROCONTROL

DEMAND/CAPACITY/PROSPECTIVE

- . Global Approach (Eggers)
- . The year 2000 and beyond (Machol)
- . ATM in 2000 (Hunter)
- . Crystal Ball (Chairman/Maignan)
- . Traffic Forecast

AIRCRAFT FLEET

- . Airlines (Gaebel)
- . Military
- . Advanced Type
- . General Aviation

CONCEPT

- . Optimum Traffic Handling (Benoit/
Swierstra)
- . Demonstration Model ATM (Krella)
- . ATM GARTEUR Scenario (England)
- . TIMER (Credeur/Capron)
- . COMPAS (Adam)
- . Automation Aids for ATC (Erzberger)

FINANCING

- . by the E.I.B. (Deeley)



- Compatible Mode S/Satellite/VHF data link available for a large percentage of the public transport fleet (50%?) which will also be equipped with 4-D FMS.

- ATC centres equipped with sufficiently powerful computers to run AI functions capable of short term (tactical) conflict detection and resolution if the predictability of trajectories permits.

- In the control room of the most modern centres, one can expect Advanced Sector Suites with high definition colour displays and userfriendly input-output devices of the "CAD/CAM" type. This will help in the sharing of the tasks between the controller and the artificial intelligence functions.

- A number of public transport aircraft will be TCAS equipped and will use this facility (consequence of the use of TCAS in U.S.A., advertising effect on passengers, etc...).

2. The aircraft fleet in 2010

Before going further we now have to look at the probable aircraft fleet which will operate over Europe. Mr. Gaebel from DLH has given us a first hand view of one key European operator in this matter.

No doubt we will still have the more modern of today's aircraft:

Boeing 737 - 300/400/500, 747, 757, 767

MD 80/87

Airbus A 310, A 320

Fokker 100

Il'Ushin 86

BAC 146

ATR 42, 72

ATP

and the new types many of which are already known such as:

Boeing 7J7

MD 11

Airbus A 330, A 340

and perhaps some new large size aircraft which are envisaged by the manufacturers to overcome the expected ATC congestion.

The availability of a new SST is not very probable.

The real uncertainty concerns the VTOL/STOL fleet. Should an economically operable 70 seat tilt rotor type aircraft become available, this could considerably change the pattern, because the problem of the runway occupation time, which is one of the

most critical, would disappear.

For the year 2010, however, the probability is low.

3. The traffic demand

The current forecast of IFR movements for 2010 by Eurocontrol for the 12 States CRCO area, for the peak hour, is as follows:

peak hour	- x 1.50 -> low	2 300
1 533	- x 1.76 -> medium	2.700
	- x 2.61 -> high	4.000

The prediction from operators given at the 21st IATA Conference expects the number of passenger will double by the year 2000.

This corresponds to an average growth of 5.5 % per year, slightly higher than the hypothesis of 5 % made by the ATC System Concept Group of Eurocontrol.

The prediction of some aircraft manufacturers is that the total number of aircraft of the world fleet will grow from 6 236 today to 9 000 (x 1.44) by 2 006 and that the average of the fleet will be wide-body in order to overcome the traffic congestion problem.

In all it is probably not unrealistic to expect a growth of traffic by a factor of between 1.5 and 2.5 for public transport.

The growth general aviation will only be moderate since flying an aircraft in European bad weather and complicated airspace needs a relatively high level of qualification and permanent training.

Military traffic is generally not expected to grow. It will fly very low level and very high level, but transition between both will occur at rates of climb/descent exceeding 20 000 ft/min.

4. The major constraints and bottlenecks of today, in Western Europe, are probably the following:

Airport capacity;

Tactical controller (radar controller) capacity;

Inflexible route structure;

Fragmentation of airspace;

Boundary conditions with surrounding airspace;

Coexistence of civil and military traffic.

4.1 The total airport capacity

depends of runway capacity, of the number of runways per airport of their degree of independence, and of the number of airports.

The ATC community has nearly no influence on the second or the last point which are strongly influenced by economical, political and environmental problems. In 1985 only two European airports - Heathrow and Frankfurt - were in the list of the 25 busiest airports in the world with the ranks 13 and 25, corresponding to 288 000 and 220 000 movements in comparison with 718 000 movements for the world's busiest; so there should be room for improvement. It should, however, not be forgotten that Europe is small in surface with an extremely dense population which generates a strong pressure against the creation of new airports and new runways.

The improvement of runway capacity is the subject of active research. With conventional types of aircraft, it necessarily implies the precise control of the landing time (± 5 sec.) and the reduction of separation on final approach to the limit of what is possible due to wake vortices - 2.5 NM corresponding to 70 sec. at 130 kts is probably the minimum. A runway capacity of about 40 aircraft per hour in bad weather conditions is probably the maximum which can be obtained.

To achieve that it will be necessary to abandon the first come first served rules, to accept on board the required time of arrival concept, and to make 4-D profile and trajectory control during the descent and the approach. Partial 4-D FMS (RTA - Required Time of Arrival will be available of new 737/300, 400, 500 as from 1988.

4.2 Control Capacity.

Except perhaps for approach, where the limiting factors are the runway occupation time and the separation on finals, elsewhere the key element for the capacity of the ATC system of today is the capacity of the radar controller.

Today in any dense airspace including European airspace, control is nearly entirely tactical and the capacity of the human being for

surveillance, separation and vectoring is limited to few aircraft (10?). So, the syndrome of more aircraft, more sectors, more coordination which reduces the individual sector capacity is well known.

The solutions to decrease the burden on the shoulders of the tactical controller are:

- Better prediction, giving the possibility of more strategic and less tactical control.
- Application of artificial intelligence to the process of traffic organisation, conflict detection and conflict resolution.

4.3 Inflexible Route Structure

For a number of reasons (historical, reserved airspace, ATC methods and means), European air routes are not direct. They are converging on turning points. These turning points are artificially becoming busy resources, which can often not free and which generate penalisation of the traffic.

4.4 Fragmentation of airspace

There are currently 25 en-route/terminal air traffic control centres for the countries of CRCO. Approximately 230 sectors are in operation in total.

The high number of centres is not in itself a difficulty, as in any case the airspace has to be fragmented into a higher number of sectors to cope with the capacity of the radar/tactical controller.

The difficulty comes from the fact that many of these centres are not inter-operable because they are independently planned, are equipped with data processing systems which are functionally different, and are not efficiently inter-connected.

This traffic is consequently transferred from centre to centre, significantly less efficiently than it is transferred from sector to sector in the same centre. Sector to sector transfer rules in the same centres are 5 NM under radar control; between centres either 5 minutes or at the best 15 NM.



By 2010, one can expect that this problem will be completely solved and that smooth transition, if necessary according to profile climb/descent will be made everywhere as if all these sectors distributed over 25 centres were the members of a unique functional set.

This problem will consequently have disappeared.

4.5 Boundary Conditions

The European region has a lot of exchanges with surrounding areas: Atlantic Ocean, Scandinavian Countries, Eastern Countries, Middle-East, Africa. The ratio between inter-regional and intra-regional traffic is probably much higher than for the other regions of the world with a high density of traffic.

There is not necessarily a perfect match between the capacity of the surrounding area and the internal capacity of the region.

For the year 2010, it is expected that

- the capacity of the Oceanic area will increase due to the use of satellite navigation and automatic dependent surveillance;
- the capacity of the Scandinavian and Eastern European countries, which are generally ICAO members, will follow an evolution parallel to the evolution of the internal capacity;
- the capacity of Africa and Middle East countries will depend on the rate of economic growth of these countries.

Flow control measures and slot allocation procedures will probably remain necessary to adapt flows at the boundaries where capacity mismatch exists.

4.6 Coexistence of civil and military users

As in the majority of airspaces in the world, the European airspace is shared between civil and military users which have different missions to perform. Most often these flights are controlled by different units. In general, these units are interconnected and are expected to exchange the data necessary for controlling both traffic on a safe and orderly manner.

Depending of these performances and of these missions, military flights are conducted in reserved

airspace or are guided through the civil traffic by the military controllers.

The more predictable the civil traffic, the better will be the coordination and the lower will be the need for reserved airspace.

Ideally, if the civil aircraft follow perfectly known 4-D trajectories, they could be considered by the military controllers as mobile reference points through which the military traffic could be guided.

Substantial improvements can be expected in this direction. This will reduce the need for reserved airspace to a low level and will give the possibility to implement direct route nearly everywhere in the area.

5. The concept for 2010

The concept which seems to emerge for the year 2010 is called Air Traffic Management. It could also be called cooperative Air Traffic Control and implies an active participation of the airborne side for the prediction and the following of the trajectories in space and in time; from take-off - and even before take-off - to landing.

It gives the possibility to suppress the various bottlenecks or at least to reduce considerably their effects.

- Precise prediction of landing times will optimise the use of the runway and increase airport capacity.
- Precise prediction and following of trajectories in space and time will reduce the need for reserved airspace and will give the possibility to follow direct routes nearly everywhere.
- It will also give the possibility to use artificial intelligence to allocate trajectories and time slots which will reduce needs for unplanned tactical intervention to a manageable level.

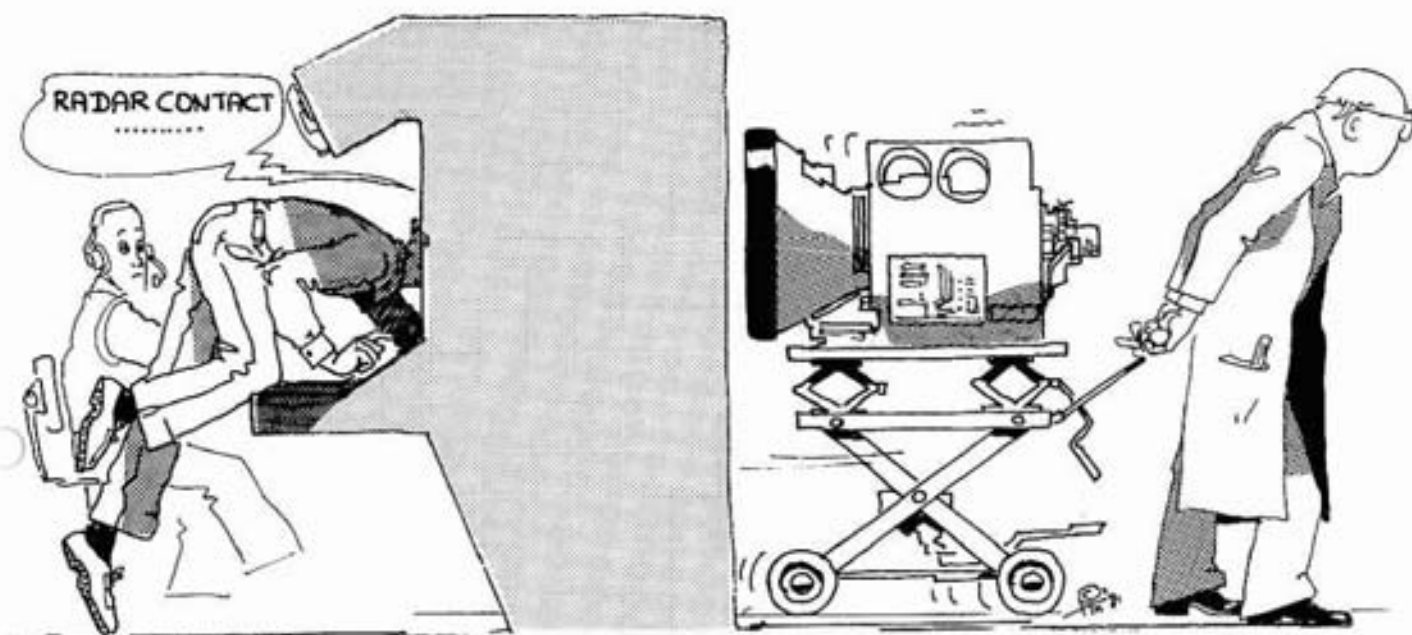
When necessary, Artificial Intelligence will also help in the choice of appropriate tactical interventions, without "domino effect". The excessive load of the radar controller will so be reduced and capacity increased accordingly.

In an airspace as complex as the European airspace where the constraints are manifold and intricate, this apparent restriction of freedom seems to be the price to pay to give the passenger the real freedom to take

the plane. If not he could be obliged to take the train or to stay at home.

By 2010 the evolution towards such a system will only be partial one and

if the rate of increase of the demand stays at the present level some restrictions and flow control measures will be difficult to avoid.



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by Geoff Gillett

Long before air traffic controllers from all over the world came to Rio, the Portuguese had discovered the area in 1501 and had established a trading post there. Some sixty-four years later it became a military garrison, set-up to remove the French from an outpost across the bay. Although Rio is no longer the nation's capital, it is the most popular city for international tourism. In April this year, it became the first city in South America to host an IFATCA conference, with participants from more than 40 countries.

The Brazilian controllers' association, in hosting the conference, had almost no support from their national administration and had to hire the services of a professional tourist organisation, to make the necessary arrangements for the conference involving more than 400 persons. Without financial support from private companies, air carriers and subsidiary companies operating in Brazil and the considerable support from the Corporate Members of IFATCA, it would have been impossible to organise this, the 27th Annual Conference.

Opening Ceremony

It is customary for these conferences to be opened by a person of some importance - the Minister of Aviation for example - but this year was an exception. One had the impression that the opening ceremony lacked the atmosphere and dignity normally associated with such events.

Committee Procedures

At risk of boring well-informed readers, but in the interest of those who might be new to IFATCA matters, firstly it should be explained that the work of conference is divided between three committees, whose task it is to determine policy and to produce information/guidance material on all ATC matters. These committees are as follows:-

- Committee A deals with Administration
- Committee B deals with Technical Matters
- Committee C deals with Professional and Legal Affairs.

During the year, various other Standing Committees (SCs) work on the day-to-day business, including studies and the production of working papers for conference:-

- SC I Technical Matters
 - SC III Finance
 - SC IV Human Factors
 - SC VI Constitution
 - SC VII Legal Matters
- SC II and SC V no longer exist.

EGATS Delegation

Controllers who represent their Member Associations are given impressive titles, the leader of the delegation being known as "Director" and the committee delegates, "Deputy Director", whilst other participants are defined as delegate, observer or accompanying person. The EGATS team in Rio was:-

- Director of delegation, Jan

Gordts.

- Committee A, Kees Scholts and Ger Horsman
- Committee B, Koos Zipp and Geoff Gillett
- Committee C, Fred Le Noble and Andries Bonne.

In addition, Philippe Domogala was present in his capacity of Regional Vice-President, Europe-West and Roger Bartlett acted as secretary for Committee A.

Travel Troubles

The usual difficulties in obtaining transport facilities were again experienced and with the cooperation of the U.K. Guild, the majority of EGATS participants were able to travel with British Airways at a charter fare. Additionally, some assistance from Lufthansa, KLM and Swissair was appreciated. It can be mentioned that it is regrettable to see empty seats on some flights, that could have been offered to controllers who had to pay to fly with other carriers. This is particularly annoying when one considers the amount of financial benefit enjoyed by companies, from the direct routings which controllers provide whenever possible, in the interests of fuel economy.

The opening Plenary Session being completed, the delegates divided into their three committees to deal with the work programme.

Committee A : Chairman, Mr. "Edge" Green (UK Guild).

This year, EGATS supplied a secretary for this committee - Mr. Roger Bartlett, who survived a mugging prior to the start of conference. If anybody has any illusions that an IFATCA conference is some kind of a leisure trip, Roger can surely correct this misconception.

- Membership Applications.
Grenada, Namibia and Malaysia were accepted as new MAs and Spain rejoined after an absence of several years.

- Finance.
Standing Committee III was charged to investigate a Gross National Product based method of calculating IFATCA membership subscriptions. Registration

rates for conference will in future be expressed in local currency (instead of US \$) and an equivalent amount in Swiss francs. Financial problems continue to be experienced by a number of countries partly due to inflation or to restrictions on currency export. In accordance with the wishes expressed at the EGATS AGM, we pressed for IFATCA's financial support for MAs unable to pay their fees and a sum of FL 637.-- was donated by EGATS, being the outstanding dues of Cenamer up to May 1988.

- Election Results.
Mr. E. Sermijn, President (Belgium)
Mr. T. Gustavsson, Vice-President Finance (Sweden)
Mr. W. Rooseman, Vice-President Professional (The Netherlands)
Mr. P. Domogala, Regional Vice-President EUR.W. (Eurocontrol).

- Scroll of Honour
The Directors approved the award of the IFATCA Scroll of Honour to Mr. Ted McCluskey (UK GATCO and EGATS) in recognition of 25 years of service to the Federation. This was presented to him in the Final Plenary session, a plaque having been presented to him by EGATS during the European Regional meeting.

Committee B: Chairman, Mr. Lex Hendrix (The Netherlands).

Reports and working papers dealt with a wide range of technical matters of

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current and future importance to ATC. Items of direct interest to our members were:

- SSR problems and collision avoidance systems (CAS). Trials are continuing with the latter but results are less good than expected. It was agreed that ATC remains the primary method of separation and that airborne CAS should be regarded as only a back-up.
- A report of the Future Air Navigation Systems (FANS) group highlighted the fact that controllers must be kept involved in the Air Traffic Management process.
- The subject of frequency blocking was again raised but regrettably without much interest.
- Input had been made by EGATS on the paper dealing with the reduction of separation above FL 290. Among the questions raised were:
 - a. Can the ATC system absorb an increase in traffic above FL 290?
 - b. Should it be for same-direction flights only?
 - c. Up to what level should 1000 feet separation be used?
- Another area of our involvement was in the operation of SSR without primary radar but much work has to be done on this subject before definite policy can be established.
- The handling of replacement flight plans (Q plans) will be further reviewed by ICAO.

Committee C : Chairman, Miss Lesley Austin (UK Guild).

In Committee C this year there were no difficult discussion points. The Information Handbook still is a problem. Questionnaires are answered by a few member associations only, thus impairing the value of the IHB considerably.

It is proposed that EGATS prepares a working paper for the Frankfurt Conference on this subject in which we suggest that a more workable situation be created, whereby MAs be responsible for updating information in the handbook which would also be more economical.

Another interesting subject was the completed study on night-shift paralysis. As a result of this study, IFATCA accepted as policy that no night shift shall begin on the same day that a morning shift ends. It will be difficult for EGATS to present this

to our management, since we are already working in conflict with this system.

Also on this matter it would be worthwhile considering the preparation of a working paper for next year's conference. It could be recommended, that no night shifts shall begin between 00.01 and 06.00 hrs.

On the subject of the use of VDU's in ATC, a general discussion took place. It seems that the people who want this subject to be put on SC IV's work programme year after year, do not really know what they are asking for. As long as there is not a large number of people declared medically unfit as a result of VDU radiation, it seems unnecessary to keep putting this on the work programme. The execution of a test programme should be left to a qualified medical institute or to the aviation industry, in order to determine the facts.

Loss of licence insurance exists with a number of associations. Details as far as premiums and conditions concerned are available in the working paper.

In the legal field, there are no dramatic developments but still, nobody seems willing to determine a limitation of the legal liability of the air traffic controller. Liability of the manufacturer of ATC equipment, however, is limited to 500 million US dollars.

The provision of controller scholarships is still under study. A test scheme was set-up between Denmark as host and Tanzania but further developments are awaited.

Closing Ceremony

The last official part of the conference was the Final Plenary session where the Committee Chairmen presented their reports for the Directors' approval. This year, there were considerable discussions over the location of the 1990 conference before a secret vote finally opted for Mexico. The secret voting procedure was also called for in the election of the President, Mr. Eric Sermijn for a further term of office.

Farewell Party

The infectious rhythms of the samba dancing were enough to bring the hard-working delegates on to the dance floor and judging by the performance of some, there were some aching limbs the following day. The highlight of the performance, both of the professional show dancers and of the conference participants, was the limbo dance where the horizontal crossbar was progressively lowered until approximately 25 cms from the floor.

Whilst certain members of the EGATS delegation made an impressive attempt, the performance of the professionals was incredible and was rewarded with loud appreciation from the enthusiastic audience.

And so ended the 1988 conference. For some, it was an early departure the following day, for others, an opportunity to see a little more of the wonderful country of Brazil but for all, an improved awareness of some of the on-going problems of air traffic controllers worldwide.

Note:

I should like to express my appreciation to Fred Le Noble en Ger Horsman for their assistance in the preparation of this report.

Geoff Gillett.

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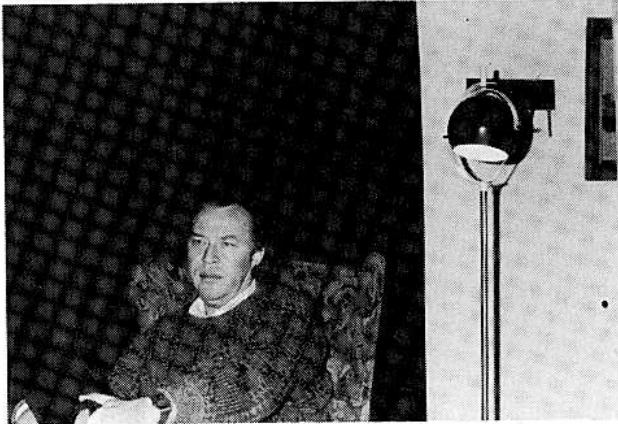
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AN INTERVIEW



Willem Kramer

Interviewed by Jo Florax

Introductie

"Ik had het idee van een batman die daar op de baan stond en verder kwam ik ook niet". Typisch een denkbeeld van iemand over het beroep (of roeping?) van "air traffic controller", wiens carrière nooit werd gepland en die bepaald werd door toeval. Een man die eigenlijk liever pursur wilde worden bij de Holland Amerika Lijn, die altijd weg wilde, de neiging had in te zwerven. Totdat hij werd geattendeerd op een kleine advertentie om de ANWB-kampioen of "iets dergelijks" waarin verkeersleiders werden gevraagd. Indachtig "small is beautiful" toch maar gesolliciteerd, vervolgens in 1965 in opleiding genomen. Ziedaar een profiel van Willem Kramer (3-3-1943) vanuit zijn praatstoel met vele beschouwende momenten over allerlei aspecten van het beroep in een tijdsbestek van zo'n 23 jaren.



1 Maart 1986 in dienst van Eurocontrol gekomen met de introductie van de Amsterdam 300+ sektor, fully qualified radarverkeersleider in 1969, gelijk in het diepe gegooid tijdens een langzaam-aan-actie in die tijd. Toch wel een enerverende tijd die resulteerde in een reorganisatie waarin behoefte was aan een vast corps instructeurs. "Daar heb ik voor gesolliciteerd", aldus Willem en "omdat het aantal verkeersleiders niet zo gek groot was, werd je bijna automatisch instructeur, ik denk in 1971. Een instructeur, dat stelde toch iets anders voor dan bij Eurocontrol. Iets breder, mag ik wel zeggen want je deed je werk als verkeersleider en daarnaast de on-the-job training van mensen in opleiding. Maar wij hadden ook nog het zg. projektenwerk, bij een apart bureau, een bureau opleiding verkeersleiding en daar ging je dan voor wat langere tijd - een paar maanden - een projekt doen. Dus dat kwam er nog bij".

In 1973 werd besloten om de opleiding drastisch te veranderen. Er werden adviesbureaus ingehuurd, die stelden een draft op en dat moest door een aantal mensen dan uitgevoerd worden. "Ik was er één van, dus tot 1976 heb ik met name vrij diep in het opleidingsgebeuren gezeten, meer in het projektenwerk en wat minder in on-the-job training" aldus Wim. Omdat in 1976 de opleiding van verkeersleiders werd gestopt, daalden ook de opleidingsactiviteiten sterk. Dat bleef zo tot 1982. De introductie van SARP II veroorzaakte weer een tekort, dus besloot men weer met de opleiding te gaan beginnen waarbij Wim Kramer in 1984 Hoofd werd van de sectie Opleidingen ACC. In 1984 was de hele discussie over wel of geen overdracht van taken aan Eurocontrol in een finale fase gekomen. In die fase ontstond er bij Wim toch wel een behoefte om weg weg te gaan: "Je bent 40 jaar en je wilt wel eens wat anders", benadrukt Wim, om dan even verder te stellen: "Op een gegeven moment, dan zit je zo'n 20 jaar op Schiphol en je hebt het wel gezien, je bent actief geweest op velerlei gebied en je denkt "Oh, ik zou wel eens wat anders willen, nou ja, wij zeggen altijd dat je als verkeersleider geen beroep geleerd hebt, met andere

woorden, je kunt natuurlijk niet zo gek veel binnen het kleine wereldje van de verkeersleiding en toen kwam die mogelijkheid". Dat maakt mij echter benieuwd naar hoe de overgang verlopen is van RLD naar Eurocontrol, vermoedende dat dit toch wel een heel drukke tijd is geweest. En inderdaad: "Ik liep met twee petten op", verduidelijkt Willem, "Ik was verkeersleider die dus verkeersleider bij Eurocontrol moest gaan worden hetgeen impliceert dat je natuurlijk een opleiding moest gaan volgen om hier het werk te kunnen doen. Gelijktijdig moest ik als Hoofd van de Sektie ACC-opleidingen een deel van mijn collega's van Eurocontrol inwijden in de Amsterdam sektor. Dat hield in dat een aantal collega's een paar maanden op Schiphol rondgelopen hebben voor de theoretische en praktische opleiding. Dus ik was verkeersleider om af en toe de rating bij te houden, ik was leerling Amsterdam 300+ situatie en ik moest ook nog eens een keer zelf als docent optreden voor wat betreft die theoretische cursus dus".

Na twee jaren Amsterdam Sektor lijkt het vanzelfsprekend om een evaluatie te geven, met name de vraag of het scheidingsniveau van FL 275+ niet beter ware geweest? Willem Kramer daarmee gekonfronteerd: "Er is wat friktie geweest in het begin, vooral in het coördinatiegebied wat voor ons tot gevolg had dat we ons extra moesten bewijzen. Nou, daar kan ik van

zeggen dat de situatie met Milligen optimaal is en met Amsterdam ook de optimale kant uitgaat. Met 300+ is in ieder geval mee te werken. De angst is vooral geweest dat het aantal flight-levels voor overvliegend verkeer, kruisend in SPY-PAM, niet toereikend zou zijn. Dat is dan niet helemaal uitgekomen, vooral door regelmatig excessief sturen om dat verkeer op dezelfde levels uit elkaar te houden". Je vraagt je af wat dan de optimale situatie zou zijn in zijn ogen: "275+, mits andere ingrijpende aanpassingen niet haalbaar moesten blijken te zijn. Bij ons is FL 310 een druk gebeuren, een level waar alles samenkomt door de division level 300. Dus als je de mogelijkheid zou hebben om het verkeer dat hoger wil op een lager level al in jouw gebied te kunnen aanwijzen vanuit Amsterdam Lower, dan zouden wij meer ruimte, tijd en speling hebben. Dat is het grote voordeel van 275+ al is het voor Amsterdam Lower gewoon ongunstiger doordat het verkeer op een vrij laag niveau aangeboden moet worden". Na deze technische interpretatie zijn we natuurlijk geïnteresseerd in een bepaalde visie op de toekomst van de luchtverkeersleiding, zeg over 10 of 20 jaren. Een verre gaande automatisering, mode S, Random routes. Ziedaar een paar sleutel woorden. Er volgt een intensieve uiteenzetting, een beschouwing van wat in zijn ogen wel of niet mogelijk is. "Je kan op voorhand niet zo gek veel zeggen, een oordeel kan pas gegeven worden als bekend is hoe alles precies geïnterpreteerd zal gaan worden; hoe de technische output is waarmee je werkt, dat is punt 1. En die is nog niet helemaal bekend. Maar stel voor dat die optimaal zou zijn, dat het technisch mogelijk is om als verkeersleider een soort monitorfunctie te gaan vervullen en niet meer dan dat. Nou, dan denk ik dat het voor verkeersleiders zeer gevaarlijk is, dat is trouwens voor elk beroep dat met vrij grote risico's werkt en zeer alert moet reageren. Het zal niet mogelijk zijn om tijdens een shift van bijv. 6 uren in je monitorfase alert te blijven. Je raakt achter en juist door te doen kom je in een bepaalde vorm van methodiek waardoor je alert blijft". Hier komt Willem in een beslissend stadium: "Als je namelijk werkt in een sequence van afhandelingen die je zelf gedaan hebt,

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DEADLINE:**

31 - 8 - '88

dan is het makkelijker de draad op te pakken in een moeilijk geval dan wanneer je die cyclus daarvoor niet gedaan hebt en ineens die kluwen van handelingen die op je afgegooid worden uit elkaar moet gaan houden. Ik ben bang dat je dan vaak te laat bent". We laten de toekomst niet los. Er komen nog een paar andere perikelen bij zoals de mogelijkheid om over te gaan tot 1000 voet separatie i.p.v. 2000 boven FL 290. Dat laatste zegt Willem "O.K. indien de hoogtemeters betrouwbaar zijn, geen enkel probleem", ik noem zowaar het Collision Avoiding System. Hier schuift Willem het veiligheidsaspect toch meer van de cockpit naar het grondstation: "Als vanuit een vliegtuig een konflikt warning komt en er moet een oplossing gecreëerd worden, dan zal dat waarschijnlijk de oplossing zijn voor het eerstkomende konflikt en niet voor de volgende achterliggende konflikten. Dus die oplossing blijkt achteraf slechter te zijn voor het tweede of derde konflikt dat de piloot later tegenkomt. Dat is het probleem, voordeel voor de verkeersleider is dat die nog steeds een overall view heeft op het hele gebied en van daaruit strategisch kan werken met dat bepaalde konflikt waar we het daarnet over hadden".

Een ander belangrijk punt waar Willem voor pleit is de herstructurering van het luchtruim, een heel andere situering van de airways. Luchtruimtes zijn altijd en nog steeds gebonden aan nationale grenzen en per land is er toch een bepaalde historische ontwikkeling geweest die misschien nu niet meer aansluit op de behoefte van het luchtverkeer. Als voorbeeld nemen we de Amsterdam situatie. "Als je in Amsterdam kijkt naar de luchttroutes, dan kruisen die bij SPY-PAM. Waarom? SPY-PAM liggen noord van Schiphol. Door de historische ontwikkeling is er een route structuur gemaakt die op Schiphol gericht was, dat houdt in dat de overvliegende routes ook bij Schiphol kruisen. Daar stonden de eerste VOR's, want dat was het belangrijkste punt. Daar werden de luchtruimtes op aangepast, de airways". Logisch dunkt mij dat zo'n herstructurering van het luchtruim een taak is van één of ander overkoepelend orgaan, Eurocontrol dus? "Ja", stelt Wim vast, "dat is de grootste uitdaging voor Eurocontrol in de toekomst",

vervolgens "kijken waar de behoeften liggen, hoe liggen de diverse verkeersstromen en van daaruit eens gaan kijken of je in samenspraak met de militairen bijv. een betere en optimale structuur kunt krijgen". Maar ook, met wie heeft men van doen. Ik raak hier het punt van de callsign confusion aan, vraag dan ook of er bepaalde suggesties zijn want daar zijn vele oplossingen voor aangedragen. En die suggestie is er: "Op een bepaald moment dat de luchtvaartmaatschappijen een callsign creëren, dit voorleggen aan een of andere board, een ATC-board of zoiets die de bevoegdheid heeft een callsign te accepteren of af te wijzen of een voorstel voor een andere callsign doet". "Is dit geen taak voor de Centrale Data Bank van Eurocontrol" stelt Willem. Mijn commentaar in deze luidt dat de CDB geen callsigns kunnen verbieden.

Na een technisch relaas lijkt het nuttig om de aspecten van de opleiding eens nader te bekijken, een terrein waar Willem Kramer zich thuis voelt. Moeten opleiders een zg. coachcursus gevolgd hebben? Hij staat even stil bij dit aspect en beaamt dat dit het geval moet zijn. Aansluitend komen we op een heilig terrein, wat is een goede luchtverkeersleider, is daar een definitie van te geven? Ook een vraag die prima aansluit op de docerende eigenschappen van Willem. Het evangelie volgens Willem Kramer: "Hij moet onder alle omstandigheden niet in paniek geraken, hij mag best wel eens een keer bang worden, bang is een groot woord. Hij moet in staat zijn een situatie in zichzelf aan te voelen als het uit de hand loopt, sterker nog hij moet dat gevoel sublimeren tot nog meer actie. Je ziet vaak nog dat mensen die in opleiding zijn en dat gevoel bij zichzelf gaan onderkennen terug slaan, dichtslaan en verstart als het ware niet verder gaan. Een goede verkeersleider is diegene die dus nog helder, zij het gebaseerd op een stukje angst of onzekerheid, door blijft handelen met een goede afloop. Je ziet wel eens mensen die vanuit angst zich gaan verschuilen en dan niets meer doen en dat is voor de verkeersleider dodelijk".

Bij eventuele konflikten zou men kunnen denken aan het bestaan van corp zoals men indertijd ook in Amsterdam wilde oprichten, hetgeen daar het



instituut vertrouwensman werd genoemd, maar voor zover mij bekend is het er tot op heden niet van gekomen. Willem: "Ik ben ervoor zoals dat lichaam op dit moment funktioneert", voor hem een geruststellend gevoel van toegankelijkheid voor een moment om iets kwijt te willen".

Voor iemand die al zo lang werkzaam is op het gebied van de luchtverkeersgeleiding is het zinvol even terug te kijken naar het verleden, een moment van bezinning inlassen waarbij de vraag rijst of hij het op dezelfde manier gedaan zou hebben. Een vraag op het lijf geschreven van iemand die daarover graag filosofeert en het relativerende niet uit het oog verliest: "Ten eerste moet ik zeggen dat

ik in de afgelopen 22 jaren grosso modo gesteld tevreden ben met mijn beroep, een beroep dat toch wel een young-mans job is. Toch denk ik dat het na een jaar of twintig wat minder interessant wordt omdat er ook een routine element in zit en het feit dat de flexibiliteit met het ouder worden afneemt. Dus, als ik nog moest kiezen, had ik best weer het beroep van verkeersleider gekozen. Mede bepalend is ook de omgeving waarin het beroep zich afspeelt, daar ben ik gevoelig voor". Met onze organisatie als overkoepelend orgaan voor een mogelijke Europese integratie van het altijd voller wordende luchtruim voor ogen zegt Wim resoluut. Men zal vanzelf komen op het feit dat men internationaler in de verkeersleiding bezig zal moeten zijn. Sommigen zien dat nog niet, de economische belangen zijn vaak nog groot. En mocht er dan een terugslag zijn in de economie, dan kiest men eieren voor zijn geld". Met dat laatste zijn we dan terug bij de oorspronkelijke doelstelling 25 jaar geleden, wetende dat alles toch een zaak is van zeer lange adem. Vanuit deze praatstoel hebben we er dan een Europeaan bijgekregen.



TYPICAL TOWER-CONTROLLER



TYPICAL RADAR-CONTROLLER



British Airways took delivery of the world's most advanced commercial aircraft. Lord King, Chairman of British Airways, will accept the airline's first Airbus A320 aircraft from Jean Pierson, President of Airbus Industrie, at a formal handover ceremony in Toulouse.

"The A320 will introduce new standards of passenger comfort and

operating efficiency into our fleet. British Airways is proud to be an inaugural operator of this aircraft", said Lord King.

The aircraft is the first of ten to join the British Airways fleet. The A320s will be based at London's Gatwick Airport.

The airline will take delivery of a further three aircraft this year, with three more in 1989 and the remaining three in 1990.

The 152-seat, two-class configuration A320s will operate from the new North Terminal on scheduled services to Tunis, Genoa and Milan, in addition to Geneva this summer, and a programme of inclusive tour holiday flights to Mediterranean destinations.

The A320 is the first aircraft to be wholly conceived through computer-aided design. Using advanced technology, its unique "fly-by-wire" systems herald a revolutionary change in flying techniques.

"This aircraft will be the most advanced airliner in the world. The A320 is the first fully computerised

civil airplane and I congratulate Airbus Industrie and its consortium members in France, Britain, Germany and Spain on its successful manufacture and the impressive order book covering sales throughout the world", said Lord King.

The British Airways fleet of A320s will be powered by super efficient CFM-International CFM56-5A1 engines using the same amount of fuel on a London/Glasgow flight to carry 150 passengers, as a BAC One-Eleven does to carry 100.

Its ultra-modern engines will reduce noise levels to well below those set by international regulations for 1993 and beyond, making it a good neighbour jet wherever it flies.

"British Airways is one of the world's leading airlines, and we are very proud to count the British flag carrier amongst the first operators of the latest addition to our new family", said Jean Pierson.

Today Airbus Industrie holds orders, options and commitments for 486 A320s from 21 customers.

BELAIRBUS TO PARTICIPATE IN AIRBUS A340/A330.

An agreement covering Belgian participation in Airbus Industrie's A340/A330 programme was signed on 13 April in Toulouse, by Belairbus President Michel Viseur and Airbus Industrie President and CEO Jean Pierson, in the presence of Belgian Prime Minister Wilfried Martens.

Belairbus will make the leading-edge slats and slat-tracks for the very long-range four-engined A340 and medium to long-haul twin-engined A330, which use the same basic wing design. Its workshare represents about 2.6 percent of the overall programme, and is expected to represent a business volume of about 600 million US dollars between 1991 and 2005.

All four Airbus Industrie partners - Aerospatiale of France, MBB through Deutsche Airbus, British Aerospace, and CASA of Spain - have agreed the involvement of associate member Belairbus, which brings together SONACA, ASCO and Watteuw of Belgium for participation in Airbus programmes. Belairbus is already responsible for the design and production of slats and slat-tracks for the Airbus A310 and A320.

Belairbus will finance development and tooling for its workshare in the A340/A330 as a risk-sharing investment, which it will recover over sales of the aircraft.

Launched as a combined programme in June 1987, the Airbus A340 and A330 have 145 orders and options from twelve customers. The A340 will enter airline service in May 1992, and the A330 in September 1993.

FIRST AIRBUS INDUSTRIE A320 IS DELIVERED TO AIR FRANCE

Air France celebrated the arrival into its fleet of its first Airbus

Industrie A320 at a ceremony held in Paris on 28 March. French Prime Minister Jacques Chirac, Air France Chairman Jacques Friedmann and Airbus Industrie President and Chief Executive Officer Jean Pierson participated in the ceremony.

Air France, the first Airbus Industrie customer ever, and the first to commit to the all-new aircraft in June 1981, has ordered a total of 25 A320s plus 25 options. The French national carrier will have received all of its A320s on order by 1992 and, by the mid-Nineties, Airbus aircraft will represent about half its fleet.

Air France will use its A320s on European routes, on which they will replace Boeing 727s. Powered by CFM International CFM56-5s, the aircraft seats 153 passengers, 27 in business class and 126 in economy.

As the only all-new short to medium range aircraft in the 130-179 seat category, the A320 offers a more spacious cabin and hence more comfort to passengers than any other aircraft in this class. It is also able to carry containerised cargo underfloor.

Airbus A320 orders, options and commitments currently stand at 483 from 20 customers, more than any other airliner at its first delivery.



"REVISIONS"

by Geoff Gillett

Some interesting facts and figures from, would you believe 1978!

January

- The state of the approach road to the Eurocontrol Centre has deteriorated to a dangerous level. Staff advised to exert utmost care.
- Proposals from management to modify duty rosters. Study Group appointed under chairmanship of Mr. Klaus Dittmar. Terms of reference: 80% of staff must be in favour of any change.

February

- An enquiry held about a proposed ban on smoking in the Operations Room. 207 staff members consulted, 126 replied, 60 in favour of smoking, 57 against and 10 don't care.

March

- EGATS membership total reaches 116.

April

- Eurocontrol Director General, Mr. R. Bulin retires, new D.G. Mr. J. Levêque visits Maastricht U.A.C.
- Prison sentence on controller, Gradimir Tasic reduced to 3 1/4 years on appeal. Charges dropped against all other controllers involved in the Zagreb accident.
- \$ 34 million contract awarded to Raytheon for development, production, installation and maintenance of DERD-MC ATC system, announced by Federal Republic of Germany.
- Spain joins IFATCA - all Western European countries now represented.

May

- Danish ATC Assistants initiate formation of International Federation of Assistants.

July

- Nederlandse Luchtvaartschool opens new flying school building adjacent to Maastricht UAC.

August

- Messrs. von Villiez, Endlich and Dieben fly "secret-weapon" Jochen Dickmann, to European Controllers' Cup Competition in Munich. Amsterdam wins the tournament, Maastricht finishes in twelfth place out of twenty six teams.
- Mrs. N. Smit-Kroes visits Maastricht UAC, meets representatives of the 390 staff and buys Eurocontrol tee-shirts from Kees Scholts, after being shown vacant Amsterdam consoles in Operations Room.

September

- European Community officials consider legislation making it necessary for everyone working night shifts to have a doctor's certificate of health.

October

- Captain Jürgen Prader of "Lippe Radar" presents a paper on behalf of EGATS, to CONVEX Conference in Cambridge, on the subject of Civil/Military coordination at the Maastricht Centre.

November

- Reduction of Eurocontrollers' pension age again the subject of discussion between staff representatives and management.

December

- Working Group set up at Eurocontrol Headquarters to study career profile and promotions. Maastricht representative, Mr. Marcel Jacobs.
- Director Operations, Mr. George Trow retires from Eurocontrol, succeeded by Mr. J. Van Elst.
- Maastricht Centre handles more than 400.000 flights in current year, an increase of 9 % over 1977.

And from an American Press report:
A former military controller (female) hi-jacked a chartered helicopter and ordered the pilot (male) at gunpoint, to fly to a federal prison. She removed the pilot's headset and prevented him from squawking A75. Whilst her finger was off the trigger, the pilot grabbed her and flew the aircraft with his feet. During the struggle, the hijacker was fatally shot. The pilot reported that his chopper performed some previously unknown manoeuvres.....