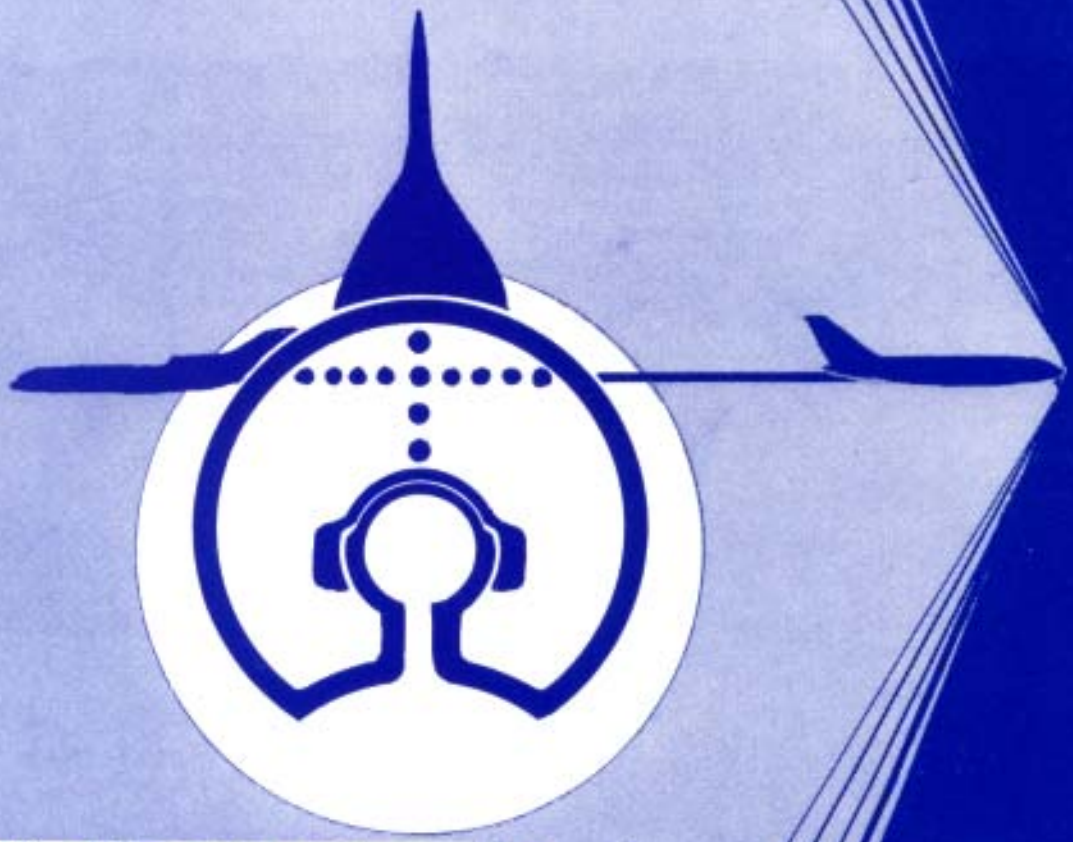

INPUT 4/83

INPUT

the magazine of the
EUROCONTROL GUILD of AIR TRAFFIC SERVICES

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This year's last issue is out. No cartoons this time. For those who open INPUT for these strips only there is no reason to panic: they will form part of the next issue's contents. On the other hand some excessively good photographs were available for some of our articles.

Hamilton Standard Stork B.V. was kind enough to promote the realization of a colour cover; it certainly gives an extra dimension to our magazine. Further on in this issue you will find more interesting details of our neighbour's activities.

Danny Grew deserves mentioning that he was a "whale for work" this time. Without his effort INPUT wouldn't have been ready in time.

Leaves me to wish you all a Merry Christmas and a prosperous 1984!

Rob.

President's Message

Whereas 1983 has been a year full of surprising events for Eurocontrol, we could declare 1983 as the year of the "home activities" for EGATS. Though these activities can mainly be summarized as "tidying up" they can nevertheless be qualified as essential for the good functioning and continuation of our association. Most of them implied paperwork and for the sake of information I wish to highlight some aspects which may be of interest.

After our Fuel Eco omy Forum in November 1982 we were confronted with a massive amount of information and, lacking experience at that time, we somewhat naively thought that we would be able to work through the cumbersome procedure of transcribing from tape to paper in a smooth and straightforward manner. The contrary was true! Following the good old Roman principle of "divide et impera" we firstly attempted to allocate this task to a few volunteers who had offered their stenographical abilities. After some time however it became apparent that the complex material should be handled by a central agency, able to coordinate the various parts of the discussions and having sufficient knowledge of the subject matter.

We are now proud to announce that the report has been printed. The lengthy process has certainly not deteriorated the valve of the contents and reading the report will be a rewarding exercise for most of us, because many of the proposed fuel saving methods are already being applied. The Director of Maastricht UAC has been kind enough to write a foreword for this document.

Another mammoth paper was produced during the months of May and June in the format of EGATS Working Paper 1/1983. This paper was the end product of some brainstorming within the Executive Board about the relationship between EGATS and Eurocontrol, with the focus on how EGATS could achieve more recognition and better integration within the Eurocontrol environment.

Looking back in history and also comparing ourselves with existing Eurocontrol bodies (Staff Association/Staff Committee) as well as speculating on relationships between national associations and their employers, we described in this paper several types of support (moral, material, etc.) which Eurocontrol could render to us in order to guarantee our professional existence and progress. In return we offered a high potential of professional knowhow and assistance.

This document has in due time been discussed and reedited, the result being that we have in our home division (Maastricht Operations) as well as on Director's level obtained an improved working relationship, which will enable future Executive Boards and Committees to operate in a more efficient way, i.e. a better back-up whilst developing plans and activities. A clear example of this co-operation could be seen during the joint venture Eurocontrol/Hollandse Signaalapparaten/EGATS at the Maastricht airshow.

Working Paper 1 will soon be discussed in Headquarters and we hope that we will be able to report on this during our next Annual General Meeting.

Though some of you may want to criticize the initiative as such, I wish to emphasize that it was considered to be a basic element, a missing link, which we had to accomplish in order to be able to tackle future problems. We will be glad to provide this Working Paper to interested members.

Talking about future problems we can, since November 15, look forward to the gradual establishment of Concept 1 in Maastricht. This intended development will not only concern the various Eurocontrol departments for some years, but we in EGATS will become involved in a new dialogue with the neighbouring associations. This dialogue may become our first concern in the near future and we must be well prepared in our Executive Board, in our Committees as well as at IFATCA level, to offer our good services in order to assist in the extension of Maastricht Operations.

The Dutch Guild will visit our centre on January 13, 1984, for an informal meeting which we hope to organize together with the Staff Committee and the Union Syndicale. Similar meetings will undoubtedly follow and I want to use this opportunity to make sure that we find enough support amongst our own members in case we need their time for EGATS activities. Meetings and discussions often are time consuming and sometimes necessitate intricate roster arrangements which can eventually be simplified if there is some goodwill!

I also wish to appeal to your goodwill with regard to the preparation of our 1984 Annual General Meeting. February 8th is still some time to go and soon you will be seeing some more EGATS papers, election forms and annual reports of the secretary, treasurer and Committees. You will positively contribute to the overall development of EGATS if you would give these papers the necessary attention. We, the Executive Board, would find it personally rewarding if a large number of members would attend the AGM.

This has been a year of expansion of activities for the Technical Committee, the Professional Committee and the Executive Board as a whole. However, the major part of the workload in EGATS is borne by a very small number of enthusiasts, for the ultimate benefit of an increasing membership. Therefore, I should like to appeal for more interest and participation in the day-to-day business of EGATS.

Finally, on behalf of the Executive Board may I wish you a Merry Christmas and a happy New Year.

Jan Gordts

Annual General Meeting

Euromotel

Februari 8, 1984

19.30 hrs.

Sint-Truiden Airbase

by Rob Bootsma

Groups of fighter pilots in training have frequently visited the Maastricht UAC and have shown great interest in the activities of the civil air traffic controllers. Although we are not directly concerned with military flights, it appeared worthwile to visit Sint-Truiden (Brustem) and on November 7th last, a group of 35 people from our centre had the opportunity to learn more about the training of fighter pilots in Belgium.

In conformity with the season the sun was low in the sky but none the less we could enjoy its warm radiation. Many of us already thought of possible low level flights that Monday, not the least Jochem Schraa, who couldn't prevent smiling reminiscently while his mind went back to the good old navy days. Back, in 1970, he started pilot training on the Fokker S11 at Gilze-Rijen and later on the Fouga at Brustem. Unfortunately, after some 100 flying hours, including 40 solo, he had to discontinue his training - acrobatics did not have his preference. Were we not with so many, we certainly could have arranged some flights; this time we had to be content with a static display.

Education of pupil pilots of the Belgian Air Force takes place at national level with the object to fly in operational squadrons on high performance fighter aircarft. After a basic military training of 20 weeks at Sint-Truiden the pupil pilot will receive his first pilot training on the Marchetti SF-260MB at

First Alpha-Jet for the Belgian Air Force.

Goetsenhoven for 44 weeks. This includes 125 hours general, instrument, navigation and formation flying (including 25 hours solo).

Those who have completed the training programme at Goetsenhoven will join the 7th Squadron at Brustem for the first part of the initial operational training on the Alpha-Jet. Another 32 weeks are devoted to academics (navigation, aerodynamics, ATC, air safety, etc.), simulation and 100 hours flying (including 5 hours night flying), before the coveted "wings" are granted. The second part of the initial operational training, in the 11th Squadron, takes 26 weeks after which a pilot will obtain the higher pilot's certificate, that is after a total of 907 hours academics, 1102 hours officer training, 99 hours simulator and 305 hours flying. Appointment to an operational squadron thereafter implies conversion to a new type of aircraft.

The Alpha-Jet, equipped with two LARZAC 04 turbo engines, has been developed by Avions Marcel Dassault-Breguet Aviation and Dornier GmbH and can be used for training purposes as well as operational tasks (the aircraft has a great armament capacity and is mainly used for the ground attack role). Assembly takes place at two production lines in Toulouse and Munich. The aircraft offers an excellent view from the two pilot seats which are placed one after another and has eminent flying qualities, in particular at low altitudes. Minimum and maximum speed are respectively 90 and 540 knots. At the maximum altitude of 45.000 feet the Alpha-Jet can remain for 3½ hours in the air and when it carries two supplementary fuel tanks even 4½ hours. At low altitude the maximum airborne time is respectively 2½ and 3 hours; the maximum range without extra fuel tanks is 2300 km.

The aircraft can be easily maintained. First and second line servicing of the Alpha-Jet is carried out by their own maintenance personnel at Sint-Truiden. Some of the maintenance personnel have received their first theoretical and practical education at the factory; thereafter the education is provided for internally. This mainly concerns

The Alpha-Jet is designed for easy maintenance.

conversion courses of 6-7 weeks, as the initial technical schooling is given at Saffraanberg. The Fouga, of which some 20 are left, is fully maintained at Brustem's workshops, including the main inspection every 2-3 months. It is worth to mention that continuity is in jeopardy as experienced engineers retire early.

The air force also provides for maintenance and overhaul of the Alpha-Jet and Fouga engines. Most interesting was the explanation on the "Audio Scopic", a method by which the inside of an engine can be looked at in order to examine units on damages and the presence of flaws and cracks. For instance, after a birdstrike the engine can be immediately inspected in a simple way.

We also took a quick look at the Radar Approach Control (RAPCON). Information from the Beauvechain antenna is distributed to three surveillance radar scopes (Thompson CSF) which provide the air traffic controller with an improved data picture; automatic tracking,

Armament 30 mm gun-container, 8 x 250 kg bombs.

Mode 3A, Mode 2 and Mode C. Manual code callsign correlation can be effected for a maximum of 16 flights. Furthermore two precision radar scopes have been installed to facilitate precision approaches.

The well organized visit was complemented by an excellent lunch and a get together at the end of the programme. This visit proved to be of interest to us; we were enabled to widen our horizons towards the military environment. It is intended to arrange similar visits in the future.

On a Wing and a Prayer

Chinese soothsayers believe that several plane crashes - including a recent collision between a Trident of China's national airline, CAAC, and a military training aircraft - confirm predictions that the current lunar Year of the Pig would be a calendar of disasters. DEREK DAVIES, editor of the Far East Economic Review, reports on fears of oriental flying.

The recent troubles of the Chinese airline CAAC pale into insignificance beside those of Air Vietnam, which seems peculiarly accident prone. Hanoi, like most socialist regimes, does not publicise aircraft crashes, but observers suspect that the steady replacement of the DC6s and DC3s the Americans left behind in Vietnam by Soviet-made Yaks, Antonovs, Tupolevs and birds of like feather is not all to do with obsolescence or the lack of spare parts. Air passengers in Vietnam are advised to be cautious.

Rule No. 1: Avoid the Yak 40 Trijet at all costs. While it is a solid aircraft - though a gas guzzler - the Yak 40's fuel pumps have a distressing habit of cutting out, a characteristic which becomes quite hair-raising during take-off. Cross of three Yak 40s, says our informant, a long term resident of Hanoi.

Rule No. 2: If you take a Tu 134 that flies the route between Hanoi and Ho Chi Minh City over the Gulf of Tonkin, take a spare life jacket with you, as you will not find one under your seat. Bear in mind, too, that this model of the Tupolev would benefit from a better-

designed windscreen, which has an unfortunate propensity to shatter in flight - inwards of course. Cross off one co-pilot.

Rule No. 3: Don't fly in a freight-carrying Ilyushin 18 half full of unsecured rice bags. When the pilot of one of these aircraft banked (to the left, naturally), the rice bags followed suit. Cross off one Il 18.

Rule No. 4: (for pilots only): If your DC6 is scheduled to fly non-stop from Ho Chi Minh City to Hanoi and has only just enough fuel for the journey, don't make an unscheduled stop at Danang to pick up a friend and eight TV sets. Cross off one DC6, eight TV sets and one rice paddy 30 miles south of Hanoi airport.

Rule No. 5: (for governments only): If you own a Boeing 707, think twice before flying in it to Bangkok.

According to our informant, Hanoi finally retrieved an aged 707 which once belonged to Air Vietnam and was flown to Hong Kong just before the fall of Saigon. When Hanoi got the plane back it insisted that the training of a Vietnamese crew should be completed within a week. The 707 and its uncertified crew was then put on domestic routes, until an unidentified cadre in Vietnam's civil aviation administration (who is now undoubtedly shovelling nightsoil down on a remote collective farm) decided that it should go international.

The aircraft, packed with refugees leaving under the United Nations Orderly Departure programme, flew to Bangkok, where on the approach run its flaps ceased to function.

While the pilot did manage to bring the aircraft in, the landing gear also packed up; cross off one landing gear. Three days later, spares were flown in from Paris, but the Thai authorities said that since the aircraft was Vietnamese, all spare parts must be flown in from Ho Chi Minh City.

After three weeks, and outrageously expensive repairs, the aircraft limped home to Vietnam. Hanoi refused to learn its lesson and the aircraft is reportedly now not only flying domestic routes, but is also commuting to Rangoon.

Our informant also claims that the fuel gauges of the Soviet-built An 24s which Vietnam obtained from East Germany are inoperative, so their pilots now check fuel levels before departure by dipping a bamboo pole into the tanks. Of course, this method is not infallible - as witness Air Canada's Boeing 767 which recently ran out of fuel in mid-air. Its fuel tanks had been checked by a dipstick, but someone got the metric calculations wrong when converting the reading into kilograms - and the aircraft took off with only half the fuel it needed.

Would-be passengers in China complain that they are refused seats on competitive airlines, which take off almost empty, while the planes of their national carrier, CAAC, are sometimes so crowded that extra chairs - unattached in any way to the floor - are placed in the aisles to accommodate surplus passengers.

Passengers boarding one flight from Canton found the interior infested with flies. The hostesses issued everyone with a fly-swat.

(The Sunday Times, October 2, 1983)

Airline Lingo Translated

AIR TRAFFIC CONTROL: A game played by pilots and air traffic controllers. Neither knows how the game is played but it is always to prevent flights being on time.

Convex '83

Part I — Schedule Planning and Operating Costs

by Danny Grew

An EGATS delegation represented by Jan Gordts (President) and Danny Grew (Executive Board Member) attended the Convex '83 conference which was organized by the (British) Guild of Air Traffic Control Officers and held at the Garden House Hotel in Cambridge on the 22nd and the 23rd September, 1983.

The theme on this occasion, "ATC and The Development of Regional Air Services" was, if not self-evident, an important, wide-ranging and certainly a most complex one.

Altogether twenty speakers, representing a significant spectrum of the aviation industry, presented their respective papers during the two-day event. All were interesting though it would not be unfair to say that some either strayed off the beaten track or qualified as a mere commercial sales exercise for their product. Nevertheless, and this may well have been the intention, they acted as educative diversions.

Papers submitted ranged in topic from Airport Management to Flight Operations, Flight Scheduling, Airline and Airspace Management, Avionics and ATC Operations. Significant input also came from the Royal Air Force and the (British) Civil Aviation Authority. Since all speakers represented the British aeronautical fraternity it followed that the conference concentrated primarily on the British scene. However, most presentations were pertinent to world-wide aviation trends and their associated problems.

By virtue of the magnitude of their content it would be futile to try and condense all the Convex papers into précis form, especially when by doing so, much yet valid, information would be lost. For this reason EGATS will make available to its members a file containing all the relevant documentation. However, for the benefit of those readers who will not have access to that file or indeed who may not be too familiar with the subject matter, I shall endeavour to highlight a number of the complex problems facing airline operations vis-à-vis air traffic control, especially in the context of airspace saturation.

A not too infrequent comment or question made by air traffic controllers, among others, is as to why airlines time the majority of their flights to coincide with everyone elses', thus creating high peak during certain times of the day when it would seem more logical to spread the schedule more equally over the entire day. The answer to this dilemma was well documented by Dan Air's Peter Sommers, Chairman of the Gatwick Scheduling Committee, in his paper titled "Schedule Planning".

Planning an airline schedule involves a wide range of considerations such as Schedule Windows (i.e. arrival and departure times restricted by time zones and/or airport operating hours), Minimum Connection Times, Crew Duty Hours, Minimum Turnrounds, Aircraft Utilization and Air Traffic Control Restrictions. If this is not enough to be going on with, the most basic rule for any regular scheduled service flight is that it must be at a time the public require the service.

The greater number of users (of scheduled air services) are business people. For them it is essential, even imperative, that they be able to complete the maximum of business (away from base) in the minimum of time. In terms of travel this requires avoiding unnecessary overnight stop-overs and prolonged waiting

time between connections, because in a competitive business world "time is money". This in effect means that, Schedule Windows permitting, flights ideally need to be timed for specific periods of the day so that, whenever possible - at least on the shorter sectors - a business trip can be concluded in a single day. If an airline on a competitive route cannot meet this demand it will simply lose the passenger to another airline or even to surface transport competition.

In his paper, Mr. Sommers went on to say,""the more deregulation this country (the United Kingdom) has, the greater the peaks we will have at our airports because the carriers can only compete if they are competitive, and to be competitive you have to provide the flight at the right time which will probably be the same time as the opposition". The question here of course is to what extent will the Air Traffic Control facilities, or indeed the airports, be able to handle these increased peaks?

On planning a schedule for a Charter Airline specializing in Inclusive Tour Charter programmes, the time factor is not so critical to the user since the lower priced fares associated with this type of operation will more than outweigh any inconvenient departure or arrival time. However, a Charter Airline's ultimate aim is to achieve the maximum aircraft utilization possible, as every minute the aeroplane sits on the ground it loses money (bear in mind that owing to the highly competitive nature of this business, profit margins are very low). Therefore, coupled with the other set of restrictions, especially the airport curfew times, a good proportion of the Charter Operators' prime departure/arrival times correspond to those of the Scheduled Carriers. Additionally the Tour Operators' own Schedule Planners, with their own set of priorities, often call for particular destinations to be served on particular days, resulting in peaks again. An example of this at the Maastricht UAC last summer was the Friday evening "rush" from the United Kingdom to Greece, when a mass exodus of British Charter Airlines departed from a number of British airports en route to a variety of Greek destinations more or less at the same time, flying along the same airways and requesting the same (economic) flight levels!

Mr. Sommers opinion was that, "the ATC organization in Europe cannot cope with this type of intense programme". He went on, "This is a sad fact, but until the European Governments are prepared to spend money on Air Traffic Services, carriers are not going to be able to give the public what they want in the way of cheap travel".

Taking his 'Chairman of Gatwick Schedule Committee hat' he explained how Dan-Air have to allow at least 75 minutes to 90 minutes turn rounds in the United Kingdom to allow for ATS delays. Totalling the wasted minutes (on the industry's ideal turn rounds of 30 minutes) over the summer's 26 week high season and multiplying this by the airline's jet fleet of 30 aircraft results in a loss of about 3600 hours utilization or £ 1.5 million in monetary terms!

He concluded in saying that he did not blame the individual controllers, but that he did blame the Governments and Air Traffic Control Organizations for their inability to improve at an acceptable rate. (In view of the fact that he was addressing a majority of British controllers and guests he shall be forgiven for not having publicly excluded Eurocontrol and the Maastricht UAC from that statement!)

In a concluding plea he said, "do understand that all airlines have to schedule services to meet the public demand and if the public want to travel at the same time, we have to find ways for them to do it".

Without a doubt another fundamental factor influencing Air Carriers Operations is that of Operating Costs. This can be influenced by Air Traffic Control either directly by Route Charges, or indirectly by controller initiatives (good planning, short cuts, etc.) which results in lower fuel burn, thus lower costs. (Fuel Economy was the subject of a Pilot/Controller Forum organized by EGATS in November 1982. Individual copies of the final report are available c/o Mr. G.Gillett, Vice President Public Relations.)

An insight into Operating Costs came by way of a paper "Just Another Cost Heading", presented by Mr. David Beety, Chairman of a third level/commuter airline, Metropolitan Airways. The carrier began operating scheduled services with a small fleet of 20-seat Twin Otters only the year before, on behalf of a major carrier who had found it too costly to continue operating those routes with their 50-seat aircraft. This phenomenon is in effect how many of todays' Commuter Airlines came to being primarily because the major carriers expanded to such an extent that they no longer operated aircraft which were economical for the thinner routes; nor would their structure allow for the economic operation of smaller aircraft. They therefore began to sub-contract or hand over routes to carriers who would specialize in this type of operation. Mr. Beety emphasized how nevertheless even the so-called specialized (commuter) carriers found it difficult to balance the books with black figures; the outcome of costly and often unrealistic handling charges, be it ATC or airport, that confront the smaller carrier. He enlarged by submitting an example of cost breakdown for the company's first year of operation.

Taking revenues at 100%, Direct Operating Costs accounted for 68% broken down as follows:

Crew expenses	1.5%
Fuel and oil	18.9%
Maintenance	9.8%
Loading and departure fees	7.1%
En-route navigation charges	5.6%
Handling and parking	10.6%
Commissions	6.7%
Taxes	4.4%
Others	3.5%

Fixed costs account for 22.3% and are broken down as follows:

Crew salaries	9.1%
Insurance	2.4%
Aircraft rental depreciation (incl. spares) and interest	10.6%
Training	0.5%

Overhead accounts for 15% including:

Reservations	4.0%
Advertising (incl. sales)	1.5%
General & administration	5.9%
Flight expenses	2.1%

Mr. Beety pointed out that though not exorbitant the 5.6% costs for Navigation Charges(i.e. ATC) equated closely to the amount (5.5%) by which Metropolitan recorded a loss in that first year, emphasizing that in the USA for instance the cost of air navigation is borne by the taxpayer.

In his conclusions he reiterated that, "the cost structure (Airports, Handling, ATC, etc.) represents a particularly heavy burden for third level airlines, which it may not be reasonable to expect them to bear. For Metropolitan, landing and departure costs, ATC charges and handling represent nearly one quarter of total costs. Of course, I appreciate that a flight is a flight, regardless of whther the aircraft has 20 or 400 seats. Naturally third level aircraft require runways (though in Metropolitan's case it does not need the runways which exist). I venture to suggest that we have designed in the United Kingdom a system of monopolies or quasi monopolies where costs are geared to historical practices and not necessarily current needs and where costs have, in the main, been set having regard to aircraft which are larger than third level aircraft. These charges become particularly burdensome where multi-sector operations (the essence of third level operations) are flown... I believe there will have to be a nationwide reassessment of the burden of costs which third level services can be expected to bear".

Though Mr. Beety made specific references to the UK situation it would not be untrue to view his conclusions as being pertinent to most European countries.

I have only barely scratched the surface of the problems associated with the conference's theme. I hope that if nothing more it may wet your appetite and inspire you to peruse the file.

The only negative criticism of an otherwise superbly organized conference was, albeit as a result of extenuating circumstances, the almost negligible time allocated to the open forum sessions on both days.

With even the most meticulous planning conferences rarely respect time limits. Because of this and the need for the room to be reorganized for associated social events on both evenings, the open forum on the final day for instance only lasted 25 minutes - insufficient for an audience pregnant with questions as the result of such an extensive series of presentations.

Part II — Some other aspects

by Jan Gordts

The motives which inspired GATCO to organize a conference about "ATC and The Development of Regional Air Services" can, no doubt, be found in the introduct-

ion of their Convex Report as stated by Sir Ian Pedder: "The air transport industry is living through interesting times. The challenges arising from rising fuel costs, service related en-route and aerodrome charges, the "deregulation" or liberalization debate and increasing real competition as well as new equipment choices and above all passenger demand, present us all with plenty to talk about together!" And indeed, those speakers who came to the platform had a lot to say.

The type of air traffic involved in Regional Air Services mainly consists of the so called "Low and Slow" and includes the newest generation commuter aircraft (Bandeirante, Shorts 330/360, Metroliner, etc.). This traffic, operated by third level airlines and commonly referred to as "commuter traffic", should ideally be complementary to the services offered by the main air carriers.

There are two facets of regional traffic which are attractive to the modern business traveller and the operator alike, namely lower costs resulting from fuel efficiency and good punctuality. In this respect our attention was drawn to the rapid development of some industrial branches, such as North Sea Oil. Business passengers require frequent and punctual air connections to industrial areas which can not be reached easily by means of conventional air or surface transport. The air operators serving these passengers may also be interested in local aircraft or helicopter operations,

which can be based on a convenient aerodrome along the coast from where they have short and efficient hauls to nearby offshore oil platforms. This development may explain the growth of some regional aerodromes, such as Aberdeen, and illustrates that regional air services are viable in the United Kingdom. But there are problems.

The major airports are more intensely used by the main air carriers, leaving the commuter traffic on the side because of the so called "mix effect" ("Low and Slow" against "High and Fast"). On the other hand co-operation may exist. For instance in 1982 British Caladonian decided to encourage various third level airlines to serve London Gatwick and to establish what is known as the "Hub and Spoke" concept; aircraft flow into and out of an airport in waves to facilitate the transfer of passengers from one route to another.

As far as ground services are concerned, the commuter airlines seem to suffer from some degree of discrimination. In consequence of investments in relatively expensive aircraft third level airlines expect proper and adequate facilities at the airports. The airport authorities in the United Kingdom, however, may be reluctant to invest in the required facilities as the com muter airlines' economics do not allow much for landing and handling fees. Ideally a separate area with its own passenger facilities and a separate runway should be reserved for commuter traffic. In other words: a better utilization of the concrete!

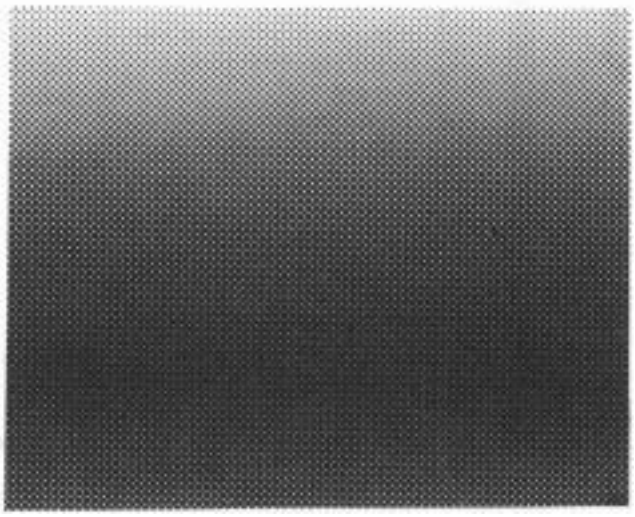
With regard to en-route operations it is obvious that commuter flights will bring about more problems for air traffic control; they put pressure on the ATC system because:

- there is a trend towards using smaller aircraft flying at more regular intervals (the "Low and Slow").
- there is increasing competition on the routes between the regions and the capital.
- the expanding holiday sector offers direct flights from the regions.
- the increased number of overnight mail and cargo flights create major changes in traffic flow at certain regional airports.

Presently civil and military authorities are studying the concept of "Air Traffic Management in the Open FIR", which would permit a high degree of freedom and flexibility to airspace users with the minimum resort to regulation. A wide range of air traffic services can be provided, designed to facilitate the safe and expeditious flow of air traffic. GATCO realizes that the best possible equipment and support are needed for Open FIR Operations and that the service provided must be of such a standard and reliability that the risk of incidents is reduced to an acceptable minimum, if the goal, protected airspace for all public transport flights, can not be attained.

In addition,

- consultation meetings with military authorities and airspace users are envisaged.
- advisory routes and open FIR tracks could be changed into proper airways, provided the amount of traffic is substantial.
- co-operation between ATC and military operations is to be improved.



Hamilton Standard Stork —

A Revelation

by Rob Bootsma

and

Martin Germans

It is not long ago that Eurocontrol was the only distinctive mark at the north-east side of the airport, but a glimpse out of the window shows us that the sight of Maastricht Airport has changed considerably. Several new companies have set up business at Beek and became our neighbours, Hamilton Standard Stork, an aircraft component overhaul and repair facility, being one of them.

Many of us know little of its activities, a good reason to give some detailed information on the service it offers. We had the opportunity to visit them on November 10 and were welcomed heartily by Mr. Jan van Bree, marketing and services coordinator, to whom we owe a lot for his comprehensive explanation.

Origin

In 1929 two propeller companies, Standard Steel and Hamilton Aero Manufacturing merged into Hamilton Standard. Having been a division of United Technologies Corporation of the United States for a considerable number of years now, Hamilton Standard designs and produces highly advanced propeller systems, applied to both commercial and military aircraft. In addition, Hamilton Standard designs and manufactures a highly diversified range of electronic and mechanical/hydromechanical aerospace equipment, including environmental, flight and engine controls as well as flight and data management systems.

Hamilton Standard's Support Systems Department has been a major contractor for overhaul and repair of aircraft components since 1955. The ultimate goal to extend this Department into a worldwide service organization made it necessary to set up an overseas repair and overhaul centre, which should primarily attend to the needs of Hamilton Standard equipment users located

in Europe, Africa and the Middle-East.

V.M.F.Stork N.V. of the Netherlands, founded in 1827, is an international engineering group with some fifty individual operating companies, located in virtually every part of the world. Its activities range from the design, construction and assembly of all kinds of machinery to the installation of whole production lines and even complete plants. Having the technical skills available and already working to the highest quality standards, V.M.F.Stork aimed at the expansion of its Industrial Services Division into the aeronautical market.

As a result, the foundation of the joint-venture company Hamilton Standard Stork B.V. on May 1, 1981, appeared to be a very logical step. After thorough study a location at Maastricht Airport in the southern part of the Netherlands was chosen as being most suitable for Hamilton Standard Stork's facility; easy accessibility by air, road and rail as well as the favourable financial conditions created by the Dutch Government and Limburg's Industrial Bank LIOF were important factors in this decision.

Activities

Building activities were executed in three phases and started in March 1982. During the first phase an initial building of 24.000 square feet was realized in a rather short period of time and Hamilton Standard Stork began doing business in its new facility on September 24, 1982. At the same pace this building was expanded from its original area to 54.000 square feet and these construction works were completed by June 1983. Finally the construction of a second building for specialized repair work on electronic components was finished in September 1983.

Hamilton Standard Stork B.V. provides overhaul, repair, modification and test services for a wide range of aircraft components; it does not manufacture aeronautical components. Three main areas of activities can be distinguished:

1. Start-up work at the facility involved overhaul and repair of components and accessories for the Pratt & Whitney F-100 engine, powering both the McDonnell Douglas F-15 and General Dynamics F-16 fighter aircraft. Presently Hamilton Standard Stork B.V. is capable of overhauling the Chandler Evans Main Fuel Pump, the Bendix Unified Fuel Control (UFC; a hydro-mechanical computer adjusting fuel supply), the Hamilton Standard Back-up Control (installed in the F-16) as well as several smaller F-100 accessories.

Test-benches are available for every component. Most impressive were the computer controlled test-benches for the UFC, both of which provide the tester with two independent results (on a printer as well as on a data screen).

Bendix Unified Fuel Control being tested on Hamilton Standard Stork's automated test-bench.

2. Hamilton Standard Stork B.V. is fully facilitized to perform overhaul, inspection and repair work of jet fuel controls used on turboshaft and turboprop engines. These controls include Hamilton Standard JFC's 26, 31 and 42; they are applied on both military and civil aircraft and helicopters like the De Havilland of Canada DHC-5 Buffalo transport, the Canadair Challenger business jet, and the greater part of the Sikorsky, Bell and Boeing Vertol manufactured helicopter types.

Two fuel control test-benches are installed at Hamilton Standard Stork: both are modified by its own engineering department in order to have "easy-change" capability for testing different types of fuel controls within a short period of time. No disguise

Assembly of overhauled Hamilton Standard 24PF propeller.

Overhaul of Hamilton Standard 54H60 propeller.

is made of the fact that they are very proud of the result obtained.

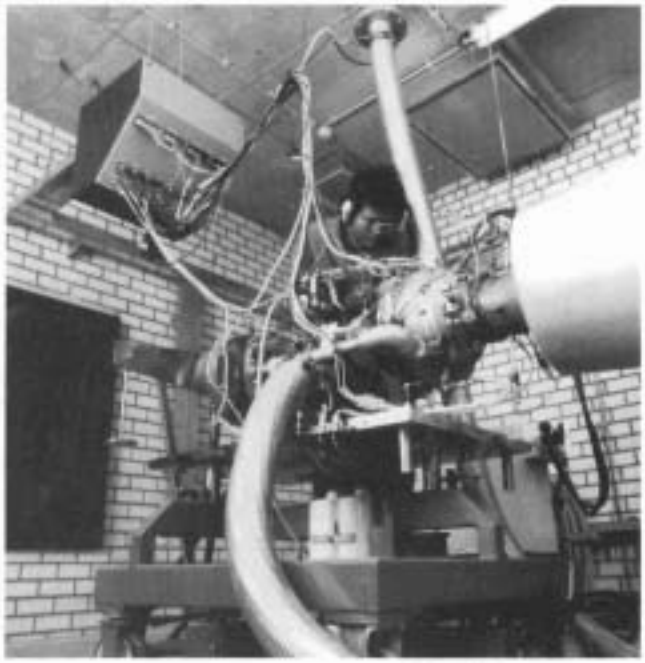
3. Overhaul and repair services are provided for the Hamilton Standard model 54H60 propeller, fitted to the C-130 Hercules and P3 Orion aircraft, the model 63E60 propeller for the DHC-5 Buffalo and Grumman E-2C Hawkeye aircraft and the model 24 PF propeller for DHC-7 aircraft. Support activities have extended to overhaul services for other commuter and general aviation propeller systems, such as Dowty propellers for the Fokker F27 and British Aerospace HS748 aircraft, and Hartzell propellers for, amongst others, the Beechcraft King Air and DHC-6 Twin Otter aircraft.

From Europe many airlines and air forces send in their repair items to Hamilton Standard Stork. In addition some customers in Africa and the Middle-East already receive support and their number is increasing rapidly.

The Grumman E-2C Hawkeye equipped with Hamilton Standard 63E60 propellers.

All maintenance work is performed in accordance with the manufacturer's specifications and the technical orders from the air forces. "Approvals" (a quality measure) have been acquired from the CAA and RLD and it will not be long before FAA "approval" is a fact (this approval is granted after the execution of repair work to an American aircraft in accordance with FAA standards).

The computerized aircraft spare parts stocking and retrieval system is still expanding. The picture shows two paternosters for small items.



Turbomach Auxiliary Power Unit during final test in Hamilton Standard Stork's APU test-cel.

Future

Hamilton Standard Stork's policy aims at enlargement of the existing service capability. Recently full repair capability for the Turbomach Jet Fuel Starter (Titan T-62), installed in the F-16, and its commercial Auxiliary Power Unit version was established. A number of customers has already been recorded.

In the electronic shop, on-condition maintenance of the EEC-90, a supervisory control for the F-100 engine, is executed. Automated test equipment is presently being installed to service numerous other electronic components: synchrophasers used in aircraft with two or more propellers (C-130 and P3) is the first new item to come.

Whereas the services offered are equally distributed over both civil and military clients, it is expected that the activities in the civil sector will expand, depending on the planned turnover. Short term plant expansion plans exist and a feasibility study for a hangar is in the process of execution.

Personnel and Training

The number of employees has risen from 30 people at the time operations started, to the current number of 85 and by the end of 1984 some 125 people will provide their high quality services. Both theoretical and practical training take place at the facility in Beek, with some additional courses abroad. New products require some people to be educated in the United States, after which they set up a "shop" and production can start.

Logistic Support

On October 1, 1982, Hamilton Standard Stork opened a spare parts depot at Schiphol Airport.

De Havilland DHC-7 equipped with Hamilton Standard 24PF propellers.

Presently the 19/20-seat De Havilland of Canada DHC-6 Twin Otter and the 50-seat Dash 7 commuter aircraft as well as the Sikorsky S-76 commercial helicopter are included in this service. Opportunities for its expansion to other types of aircraft are in the process of being finalized.

The Sikorsky S-76 commercial helicopter.

Operators in Europe, Africa and the Middle-East can purchase from this depot; the main administrative offices are located at Maastricht Airport. Order requests are transmitted electronically to the depot for processing and shipping.

We may conclude that Hamilton Standard was remarkably succesful in its efforts to offer a worldwide service to the aeronautical market. The territory in which Hamilton Standard Stork operates is supplementary to the domain of its parent company in Windsor Locks, Connecticut (services are offered to customers in North- and South-America) and a second repair and overhaul centre at Long Beach, California (Pacific, Australia, New Zealand and Far-East).

Hamilton Standard Stork has developed rapidly into an aircraft component overhaul and repair facility, responding quickly to the needs of airspace industry with emphasis on diversification and versatility.

The visit to your facility was very much appreciated. Many thanks!

Greek Air Traffic Controllers; Problems and Wishes

by Philippe Domogala

In our operations room we often hear about "problems in Greece", "Athens restrictions" and more recently "strike actions planned for Greece". What is really going on?

In Greece all controllers are university graduates and therefore they practise their profession only in the late twenties. Their salaries, however, are not in proportion to their education. The average controller earns 60.000 Drs per month (ƒ 1900,-), which is comparatively low. A Boeing 727 co-pilot of Olympic Airways earns 150.000 Drs and a check-in girl at the airport 80.000 Drs.

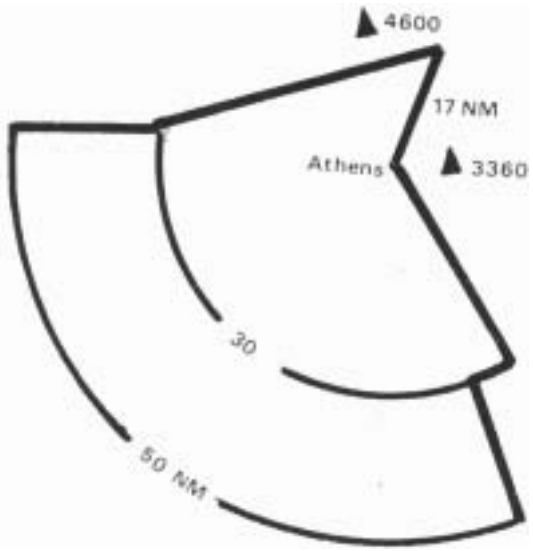
Life is not so cheap as it used to be in Athens. For example, cars are a very luxurious item, the cheapest one, the Autobianci A 112, costs 700.000 Drs (ƒ 22.500,-).

The system of taxation swallows almost all their shift allowances. For example 1 hour duty at night is compensated by 72 Drs (ƒ 2,-) and compensation for public holidays amounts to 430 Drs (ƒ 13,-) per day.

Air traffic controllers retire at an age of 65 or after 35 years of service.

In the ACC 150 people are employed; 70 of them are qualified as controller and operate nine sectors in six teams. The equipment is old fashioned and designed for the fifties. Traffic is dense (300.000 movements per year) and complex, since East Block countries and war zones (Lebanon, Iran, Irak, etc.) surround the Greek airspace, but the traffic is still separated in accordance with procedural standards.

The adjacent centres are not much better equipped. For instance, traffic required to hold in the Nicosia FIR, will be transfered to Athens whatever circumstances exist, as Nicosia has available only one VOR.



ATHENS APP RADAR COVERAGE (USABLE)

The Athens approach radar is unique in Greece. In consequence of the mountainous area (see diagram), coverage extends only to the southwest with a maximum range of 50 NM. Basic functions are performed and no correlation is effected. On a separate data screen beside the radar scope, the controller is provided with the altitude of only that target, which is hit by the antenna. So, if you are controlling four to five aircraft within a small area, you might get four or five different altitude readings or nothing at all.

It is expected that new, more sophisticated equipment will be installed early 1986 and operat-

ional use is foreseen for end 1986/begin 1987. Completion of the modernisation plan with two long range radars is due for 1990.

Athens ACC.

Some procedures require extreme care from the controllers and pilots. For landings at Athens pilots have to intercept radial 340 from Athens VOR at 3000 feet. The point of interception is only defined by a radial and DME reading (Standard APP route RWY 15). If you miss that approach you fly straight into a 4600 feet mountain, five miles off the track. The installation of a VOR ten miles prior to the runway would eliminate quite some risks....

On May 18, 1983, the Greek Controllers' Association has submitted a package of demands to the Authorities. Among them:

- Improvement of retirement conditions: allow people to retire after 30 years of service (instead of 35).
- Reduction of working hours to 32 per week (actually 35,5).
- Recruitement of new personnel: the present system needs some 100 controllers.
- Reorganization of ATC services.
- The allowance for qualified controllers to be doubled (the allowance amounts 5600 Drs per month now = ƒ 180,-).
- Approval of the application of the same tax deduction facilities offered to pilots, to allowances given for duties during nights and public holidays.

Before and after submission of these demands to the Authorities, the Greek Association acted by "quiet" means to open negotiations with the Ministry of Transport. No progress was made and therefore the Assembly of controllers decided to start an industrial action on July 24-25 and July 29-30. Immediately after this announcement, negotiations between the controllers and the Ministry of Transport were opened, but broke down on July 22. The Minister declared then the mobilization of the controllers, which is still in force in November 1983 and negotiations are not taking place.

Without doubt we may conclude that the Greek controllers face difficult times and we may wonder whether safe air navigation within the Greek airspace is being challenged.

A pattern for early retirement? (Athens ACC and TWR).

Iceland 1983

by Danny Grew and Paul J. Hooper

The Anecdotes

When we received an invitation to attend the seventh NLTF (Nordic Association of Air Traffic Control Assistants) conference in Reykjavik, Iceland, on October 7th, 8th and 9th last, we naturally packed our thermal underwear and the very warmest clothes we had, in anticipation of experiencing the type of climate which the country's very name seemed to imply. It therefore came as a pleasant surprise to discover that only a small percentage of Iceland's territory is in fact dominated by ice glaciers. The capital Reykjavik, for instance, whose climate is influenced by the Gulfstream, may not quite be able to emulate summer in the French Riviera but it certainly doesn't suffer any more than we in the Netherlands do in the winter.

Subsequently, contrary to our expectations we stepped of the Icelandair DC-8 on a mild and sunny afternoon in Keflavik - the international airport serving Reykjavik. Before clearing customs we were greeted by two of our Icelandic hosts. Their priorities being unquestionably beyond critisism, they deliberately intercepted us at this point in order to advise us to purchase any strong beer that we may wish to drink during our stay. The reason for this good advice, we learned, was an old and fatuous Icelandic law which forbids the domestic sale of alcoholic beer. Fatuous because no such ban exists with regard to spirits - other than the price that is! This sad state of affairs is probably one of the primary reasons why Iceland is one of the very few countries which allows duty-free purchases to arriving international passengers and certainly no coincidence that cans of strong Danish beer can be found piled up to the ceiling in the duty-free shop. We duly stocked-up to our maximum permissible allowance which in effect was well above our requirements, but we had somehow perceived that there was going to be no shortage of volunteers to oblige with its consumption!

Following a 45 km drive we arrived at the Hotel Lofleidir, situated on the airport of Reykjavik, which was to be our stable and also the venue for the conference. With barely a moment to recover our faculties, we embarked on the first of a three-

day programme that very evening. This included a Viking Reception, a film on Iceland, the official opening of the conference and a light meal offered by our hosts. Of particular interest was the Viking Reception which not only offered the first opportunity to become acquainted with the other delegates but, as it turned out, provided some interesting moments.

Whilst gathered in the hotel's foyer we noted that suspiciously each delegate was ushered individually and at given intervals through the door into the room where the Viking Reception was being held. Finding this somewhat odd we could not help portentous thoughts of Team Charley, Appy and Mr. Jo run away with our imagination! Soon enough it was our turn. It transpired that on entering the mystical and sombre room a large and omnipotent hand clasped one's own then with a yank firmly pulled one towards what, only microseconds prior to impact, one could identify as a towering, doughty and fully attired Viking. Mr. Viking proceeded to greet one with a bone-crunching hug and the ordeal was over - well almost. Next a piece of string supporting a "shot" glass was hung around the neck; this ingenious idea thus eliminating the possibility of misplacing one's empty glass in between refills - though this proved to be only a purely hypothetical theory since in Iceland one's glass is never empty.

October happens to be the slaughtering season in Iceland. Of old tradition so as not to encourage wastage, the Icelanders concoct a number of recipes which make use of animal parts which would normally be disposed of. These specialities are eaten as a means of fortifying the body in preparation for the winter months. With our Viking friend ominously guarding the only means of exit, we were invited to savour a selection of these appetizers which included such delicacies as Pressed Lambs' Brains, Sheeps' eyes, Rotten Shark, Whale Blubber and what was generally agreed to being tastiest of all (seriously), Pressed Rams' Testicles. These delights were washed down by an equally irresistible and moreish local fire-water appropriately referred to by the locals as "The Black Death".

The rest of our time during the next two days was taken up mainly by the conference itself. Since interested parties have in the mean time received a newsletter, detailing the outcome of the conference, there is no need for further comment here.

What little free time did remain was allocated to sightseeing tours which had been very kindly organized by our hosts. Also deserving mention is the lavish and delicious dinner which was offered by the Icelandic Assistants on our second evening there. Considering they are only ten in total, the organization for the entire period was second to none. We take this opportunity to thank and congratulate them again on their magnificent achievement.

The Country and its Economy

Iceland, with its 6000 km coastline of fjords and headlands offers a range of contrasts, from the gigantic, silent, cold and eternal glaciers to the untamed, violent volcanic activities of the past, now only visibly evident from the strata covered landscape which in turn contrasts with the straddling green and fertile rural farming regions.

About half of the country's 236.000 population lives in the capital, Reykjavik. Today the name Reykjavik, which translates as Smoke Bay, is something of a misnomer. It is in fact probably one of the most smokeless capitals in the world. This clean air phenomenon is due to the geothermal resources hidden under the city and its surround-

ings and the initiative of the Icelandic people to make good use of these resources thus reducing the burning of oil, coal and petrol.

One of the many hot springs in Iceland.

It all began back in 1928 when the first borehole for hot water was drilled. The years following saw a continuous expansion and today a multitude of boreholes have been drilled and are exploited in three separate thermal fields. The volume and temperature of the water obtained ranges from 180 litres per second at 92°C in the Ellioaár field to 1700 litres per second at 87°C in the Mosfellssveit field. Langavegur, the third source, pumps at a rate of 320 litres per second but with a water temperature of no less than 126°C (water under pressure boils at temperatures higher than 100°C).

The hot water is carried through a single 70 cm and two parallel 35 cm steel pipes each laid into concrete conduits 16 km long, terminating at storage tanks which have a capacity of 54.000 m^3. From the storage tanks and the main boosters the water is then pumped to the District Pumping Stations which total ten in all. Finally, from the District Stations it is pumped to the consumers through either single or double pipe distribution systems. The difference between single and double pipe systems being that in the case of the single pipe, after having given up its heat in the house, the water is wasted through the drains, whereas with the double pipe system the water is collected back and returned to the district stations to be re-mixed with a higher temperature supply of water for another cycle. The water leaves the district station at a temperature of 80°C and experiences a heat loss of approximately 11°C in the distribution system. The heat loss from the fields to the storage tanks however is even less - generally about 5°C.

A distribution station.

At the end of 1981 nearly 99% of the population within the distribution area was connected. Total pipeline length for the entire system is 698 km. Direct heating costs equate roughly to ƒ 0.30 per m^3. The total heating load for 1981 corresponded to 350.000 metric tons of fuel oil which of course not only helps

to reduce city pollution, but also constitutes enormous savings in foreign currency. Unfortunately they haven't as yet designed the thermal-powered automobile - but who knows?

Iceland's more recent claim to fame, and their proud boast, is having the world's first democratically elected woman Head of State. President Vigdís Finnbogadóttir was elected in June 1980 by a close margin - many people doubting her ability as a woman to fulfil the rôle adequately. Today however it is quite evident that the Icelandic people are very proud, and hold great respect, for their Lady President.

Worthy of mention, since it gives you a little insight into our Icelandic ATC colleagues' financial plight, is the country's continuous struggle to reduce inflation which, in March of this year, reached an all time high of 131%. Faced with this record inflation when it took office at the end of May, 1983, the Coalition Government, led by Steingrímur Hermannsson, took drastic and highly controversial steps to try and put the economy back on an even keel. The general index of prices used to calculate inflation-linked wage increases was discontinued and a scheduled 22% wage rise, which was due to take effect on June 1st, was cut back to 8% only, with a further 4% on October 1st irrespective of price increases during the interim period. The inclusion of index-linking in wage agreements has been banned by law until June 1985. Though drastically reduced, inflation for October remained high at 35%, which highlights the bread-winners' problem.

Consequent with its environment Iceland's major industry and economic lifeblood is fish. The nation boasts one of the world's most sophisticated fishing fleets. But, no amount of sophistication is going to be of any value if there are insufficient fish. A few years ago, you may remember, Iceland made news when it announced the extension of its territorial fishing limits. This was in order to conserve and encourage an increase in fish stocks which for so many centuries had been thought of as inexhaustible and which in fact had fallen to a dangerously low point, aided by the many foreign fishing fleets that operated close to Iceland. The Icelandic Government's timely action had been met with, as they quoted, "scant understanding". They remained firm and enforced their decision effectively though not without some confrontation. This era was heralded by the press as the "Cod War". Of course since then many other countries have followed suit with their own territorial limits.

A view of Reykjavik harbour.

More recently its fishing industry has been further aggravated by severe competition in the American market where it has experienced a 48% drop in its merket share. Also on the negative side have been this year's so far poor catches with a total drop of 12% on the previous year, but more dramatically a 19.7% drop in cod alone. On the positive side is an 87% increase in sales on the British market. They are expanding their sales in France and establishing new markets in Belgium and the Netherlands.

Always a useful asset to a nation's economy is that of

tourism. Though the season is somewhat short (from June to August) tourism is expanding steadily and is rapidly playing an increasingly important role in alleviating the nation's struggling economy.

With its natural and unspoiled landscapes, spectacular waterfalls, glaciers, hot springs, volcanoes and the midnight sun; with the hospitality of its people and a virtually crimeless society where a mere break-in makes the headlines; and finally, if not only for its clean crisp healthy air, Iceland more than merits a visit.

Iceland's Aviation

By virtue of the rugged geological nature of the country many of the roads outside the principal townships are primitive to the extreme and even, in some areas, non existent. For similar reasons Iceland has not developed a railway system to connect Reykjavik with outlying communities. It therefore comes as no surprise to learn that aviation lays no claim to luxury status but, indeed, forms an essential part of Icelandic day to day life. This is well illustrated by the fact that in 1981 just under 300.000 passengers flew on domestic sectors. Total population of Iceland - 236.000!

A total of eighty eight airports/airfields serve the country, ranging from Keflavík with its full international facilities handling over 430.000 passengers in 1981 to Djúpivogur which accommodated a total of 73 pax from its 600 x 25 m strip.

Scheduled international and domestic services are provided by Icelandair and Eagle Air/ Arnarflug. Eight other companies undertake ad hoc charter work. Drastic variations in meteorological conditions are an every day occurrence in Iceland which, in company with an often hostile terrain, do little to enhance flying conditions. Approaches are frequently flown around cloud enveloped mountains onto unpaved and unlit runways, which become even more critical when coupled with the extremely short Arctic winter days when a missed approach could well result in insufficient available light to initiate a second attempt. Despite the inherent hazards Iceland has a relatively good safety record; a tribute in itself to the high level of skill and airmanship of the pilots.

Icelandair (Flugleidir HF).

Today's Icelandair is the result of a merger between two companies; Icelandair/Flugfélag Islands, founded in 1937, and Loftleidir, founded in 1944. Although the merger officially took place in the summer of 1973 both companies continued operations under their separate identities until formally fused on October 1, 1979.

Icelandair now operates scheduled international services from Keflavík to New York, Chicago, Baltimore, Glasgow, London, Copenhagen, Stockholm, Gothenburg, Oslo, Frankfurt, Paris and Luxembourg as well as to the Faeroe Islands and points in Greenland with their three DC8s and three Boeing 727s. The international fleet does tend to fluctuate in number as the company leases aircraft in and out to meet the seasonal demand.

Arnarflug's Piper Cheyenne.

Eagle Air/Arnarflug.

Formed as a private venture to operate international charter flights, Eagle Air came into being on April 10, 1976. In September 1978 Flugleidir acquired a majority shareholding (57.5%) in the company, although this was subsequently reduced to 40%.

In 1979 Eagle Air received authority to set up a scheduled domestic and international network. The latter connects Iceland to Amsterdam, Düsseldorf and Zürich using a single Boeing 737. The company is also involved in other spheres of operation such as scenic tours of Iceland and Greenland. Aircraft leasing is an activity which results in the company's three Boeing 707s spending most of their time in other carriers' liveries.

One of Arnarflug's Twin Otters.

The remainder of the fleet consists of two Twin Otters, a Piper Cheyenne and a Cessna 402.

9th Western European Regional Meeting Athens - Greece 5 - 6 November 1983

by Philippe Domogala

The decision on Eurocontrol of September 12, 1983.

This year the two day meeting was held in Athens. The EGATS delegation was Messrs. Horsman, Bonne and Domogala. We expected some problems after the IFATCA special newsletter 4/83 in which

the Dutch Guild announced that actions could be taken which might involve surrounding ATC units. Upon receipt of this newsletter EGATS reacted by declaring a strict neutrality in the matter.

During the meeting the Dutch Guild's representative was particularly worried about the fact that an Association might act as a substitute to another Association in industrial action. We then made it clear that it was not our intention to take over operational responsibility for the Netherlands airspace in case of a strike. The IFATCA E.B. members present in Athens (Messrs. O'Doherty, Sermijn and Finlay) further assured that they will never support an action that will go against another Member Association.

Once this was understood, the Dutch Guild declared that they were now accepting the resolution of the four States and that they will not endeavour to reverse this decision. If they consider action it will be solely to obtain satisfactory social guarantees in the transfer of ATC tasks to Maastricht. The Dutch delegation further mentioned that in the light of their good relations with management, they were rather optimistic of the outcome of their negotiations.

Unfortunately the Belgian Guild was not present due to transportation problems and we could not hear their point of view.

The situation is somewhat different as far as Germany is concerned. The VDF is opposed to the resolution of the four States and will fight to have concept 5 (re-nationalisation of the airspace delegated to Maastricht) imposed. In that respect they are busy contacting every political party, pilots' association and airline in Germany.

Division of civil and military tasks in the FRG.

But more than Eurocontrol they are concerned for new developments in the civil/military situation in the Federal Republic of Germany. According to the VDF representative a new concept, which would bring about many changes and could be implemented in November 1984, is being evaluated. Introduction of the plan would imply the assignment of more responsibilities to military authorities. The VDF fears that the number of civil controllers will decrease in the future, while the number of military will increase.

France.

France, not present at the meeting, has decided to leave IFATCA at the end of this year. One of their reasons was the subscription to IFATCA in relation to the FF/SFR rate of exchange (the FF loses 20-25% per year against the SFR). This was again discussed and the meeting agreed that a proper solution should be found once and for all. An ad-hoc committee, of which EGATS is a member, was formed and will collect ideas and prepare a paper for the next meeting.

Early retirement.

The British controllers will probably fight for 55 as well, but the Ministry of Transport of Ireland has recently made its position clear: "Our controllers retire at 65, with the possibility to leave at an age of 60. This will not be changed under any circumstances."

PATCO.

Two papers were presented at the meeting concerning the ex-PATCO controllers. Now they are sentenced to imprisonment and fines in court, varying considerably from State to State. In Philadelphia for instance, two controllers were fined $ 1 each and in Pittsburg two controllers were sentenced to six months imprisonment, three years probation, eight hours of community service work per week for three years and $ 1000 fine each.

The Association which supports legal funds and assists the families of jailed controllers, the USATCO, is in need of funds and is asking every Controllers' Association to help them financially. In that respect they created an "Associate membership" for groups of controllers. It can be a team or an ATC unit. The subscription is $ 60 per year and in return this group will receive the USATCO monthly bulletin, explaining what is going on there.

For further information see our publication board or write directly to: USATCO, 210 7th Street, S.E., Suite C-26, Washington D.C. 20003, USA.

EGATS' proposal, to organize the next Western European Regional Meeting, was unanimously

accepted. So, the next meeting will be held in Maastricht during the last week of October 1984.

The organization of this year's meeting was excellent and our Greek colleagues did a wonderful job. Despite the very tight agenda and the on-going discussions in private rooms until 03.00 at night, the Greek Association managed to find two hours for a bus tour of the city of Athens and to have a dinner in a music restaurant. Full marks! Now we know what Greek hospitality really means.

Our thanks must also go to Headquarters and Sabena, without whom our participation would have been difficult.

The Committee for European Airspace Co-ordination

by Rob Bootsma

The division in a lower airspace for civil aircraft and an upper part for military aircraft is rendered out of date since civil aircraft are equipped with jet engines. Civil pilots prefer to climb to high altitudes, to the most economical flight level. This means that civil and military air traffic have to share the relatively small airspace in Western Europe.

But different issues are at stake. Civil aviation aims at the development of an efficient and profitable commercial air transport system. This implies the determination of the most expeditious way, whilst a high level of safety is maintained. However, military flights require large portions of airspace for training, exercises or operations and ATC procedures normally do not contribute to their mission.

Air traffic managers distinguished that the problem was international in character and that an optimal civil-military co-ordination was essential to prevent unsafe situations and to optimize air defence. The North Atlantic Treaty Organization (NATO) - not only a military alliance - is, apart from its military responsibilities (e.g. air defence), concerned with civil aviation because of the economical interests of its member states. Therefore the Committee for European Airspace Co-ordination (CEAC) was established on April 20, 1955, with the general objective to promote

a safe and efficient air navigation, in particular in Western Europe. CEAC is composed of civil and military representatives of the European NATO-member states as well as the United States and Canada.

Through the intermediary of CEAC the number of military restricted areas was reduced considerably; as a result a more efficient utilization of airspace was accomplished. CEAC has made proposals to improve air traffic control and to exchange flight- and radar data between civil and military units. Further it has developed a comprehensive procedure to co-ordinate national and NATO exercises. Planning of these exercises takes place in regional working groups. Representatives of the member states, military authorities entrusted with the preparation of exercises and delegates of IATA, aim to arrive at acceptable compromises. When all parties are in agreement as to the division of airspace, a NOTAM has to be published prior to a predetermined time limit.

CEAC is also engaged in the co-ordination and allocation of SSR-codes and the idea to set up an European ATC centre for the upper airspace was born in this Committee.

The Committee meets twice a year at NATO headquarters in Brussels. It has two permanent working groups:
- The Operational Working Group attends to the development of the details of the above mentioned NATO exercise programme. Military requirements are co-ordinated and adjusted to the civil needs.
- The Technical Working Group ensures that civil and military equipment in respect to telecommunications are as compatible as possible, or when this is not possible, do not interfere.

ICAO, Eurocontrol and IATA attend the meetings as observers. Although ICAO is mainly concerned with civil aviation, it is obvious that military organizations take an interest in the procedures laid down by ICAO. Within ICAO, the European Air Navigation Planning Group (EANPG) was created, which contains many of the representatives who participate in CEAC. Through these delegates a fruitful exchange of ideas can be induced and developments within the military environment can be attuned to civil developments.

Both Eurocontrol and CEAC aim at an increased safety of air navigation. In addition, the Eurocontrol Convention requires to take account of the defence interests of member states. Therefore Eurocontrol obtained the observer status at CEAC. Also a close liaison exists with the European Air Navigation Planning Group.

I hope that I succeeded in giving a, though not complete, outline of the many mechanisms that have developed to ensure that equitable airspace sharing is achieved.

Airline Lingo Translated

FOG: A natural weather phenomenon which usually occurs around an airport while surrounding areas are clear. Fog is controlled by the airlines and is used to delay flights.

CABIN CREW AND GROUND STAFF: A superhuman race with the patience of a saint, the herding ability of a pack of pedigreed Australian sheepdogs, the understanding of a psychoanalyst, the extra sensory abilities of Uri Geller, the tact of Henri Kissinger mystical abilities to control wind, rain, fog and the ability to answer three questions at the same time out of one mouth, while talking on the phone. In later life usually seen in bars or carrying on mysterious conversations with themselves in parks and rest homes.