



1963-2003

“40 years of service to European aviation”

Introduction

When commercial jet aircraft first took to the skies in the late 1950s, the face of aviation changed forever. It was in this regard that the Organisation EUROCONTROL was created, for the purpose of maintaining safety within the field of air navigation. This abstract traces the growth and history of the Organisation, from the events that generated its creation, to the challenges it faces in the years ahead.

1960s - the beginnings

The ultimate aim behind the creation of EUROCONTROL was to have an organisation that would be entirely responsible for upper airspace in Europe. The original task set by the International Civil Aviation Organisation, ICAO, advocated the complete integration of air traffic services, and plans were made for three international Air Traffic Control centres to be set up, to operate in the upper airspace. However, despite these positive beginnings, reservations began to spring up quite soon after the signing of the Convention. In the 60s and 70s, the majority of the European States were not prepared to give up as much sovereignty over their own airspace as EUROCONTROL would have needed to fulfil the original ideology behind its creation. Nevertheless, progress was made. As the Agency established itself and began to expand, the intention to work towards safety, efficiency and harmony in the European skies remained the same. The focus simply shifted from integration to cooperation.

13 December 1960 – Representatives of Belgium, France, the Federal Republic of Germany, Luxembourg, the Netherlands and the United Kingdom sign the EUROCONTROL International Convention relating to Cooperation for the Safety of Air Navigation in Brussels.

Before the Agency itself came into being, the Association for the Development of ATC Methods and Equipment was established under Director René Bulin, eventually to become the first Director General of the EUROCONTROL Agency. The body was structured in such a way as to foreshadow the eventual make-up of EUROCONTROL and carried out a series of activities that paved the way for the take-over of that Agency in 1963. These activities included the study of the standardisation of national regulations governing air traffic and the promotion of common action to be taken in regard to radio aids, telecommunications and corresponding airborne equipment, with a view to aircraft safety.

1 March 1963 – The EUROCONTROL International Convention relating to Cooperation for the Safety of Air Navigation enters into force, ending the transitional Association and seeing the Agency installed.

January 1967 – EUROCONTROL Experimental Centre, EEC, inaugurated at Bretigny-sur-Orge, France.

As early as 1961, the transitional Association recognised the need for an Experimental Centre to work towards the constant development of air traffic services in Europe. The volume of traffic was increasing constantly, making it necessary for EUROCONTROL to take measures to ensure that it kept pace. The centre was to specialise in research and development, creating new methods and tools for the ATM environment. Its most important function would be the carrying out of simulations in order to test new developments and to ease their transition into the practical world of aviation. It would also assist Member States in the process of putting these new developments into operation and to ease their transition into the practical world of aviation. To this day, the centre at Bretigny plays host to a wide range of technical tests, trials and simulations, keeping EUROCONTROL at the forefront of technological development in the world of aviation.

October 1969 – Institute of Air Navigation Services, IANS, inaugurated in Luxembourg.

This was to become an important training centre. It provided advanced air traffic control training for the personnel of EUROCONTROL's Member States, thus contributing to the process of international cooperation. In order to ensure maximum use of its training potential, it was eventually decided that the Institute should be financed through the Agency's own budget rather than by fees charged to Member States. As a means of keeping costs to a minimum, courses were also offered to fee-paying students from States outside EUROCONTROL. One of the first tasks of the Institute was to train the new generation of controllers who would eventually work in the UAC centre in Maastricht. Over the years, the Institute has developed a sound reputation for providing advanced and specialised training with an international emphasis.

1970s – the formative years

November 1971 – Route Charges system introduced.

The Central Route Charges Office, CRCO, provided a centralised system for collecting a single charge per flight on behalf of the EUROCONTROL Member States and reimbursing the Member States with the charges collected. The system, one of the most efficient in the world, charged aircraft operators for each aircraft that used a given airspace; the exact cost being dependent on the distance flown and the weight of the aircraft. The proceeds financed navigation aids, air traffic control facilities, radar systems and associated support and safety service. Today, as well as handling route charges for all the EUROCONTROL Member States, the CRCO also offers its services to non-Member States by means of a bilateral agreement. The main benefit to States of using the CRCO's central route charges database is that it is cheaper than employing traditional collection procedures. The CRCO combines a high-recovery rate (average 99.48% for 1996-1999) with administrative costs which usually amount to little more than 0.5% of the charges collected. These administrative costs are even expected to fall in the near future as the volume of business is rising at a greater rate. All Member States have an equal say in the way in which the CRCO is managed and developed.

February 1972 – Maastricht Upper Area Control Centre (UAC) enters operational service.

This was a very important event in the history of EUROCONTROL. Maastricht was the first truly international Air Traffic Control centre to be built, covering the upper airspace of Belgium, Luxembourg, the Netherlands and northern Germany. Its entry into operation marked the first time in history that air traffic in one country had been controlled from a centre located in another. It was a small but significant step towards the original ideals behind the creation of EUROCONTROL – complete integration of European air traffic services. Maastricht also came to be a pioneer of new systems and technologies as well as setting an example in terms of cooperation between civil and military ATC service providers. The system used at the UAC was the specially developed Maastricht Automatic Data Processing and Display System, otherwise known as MADAP. Maastricht UAC has grown from strength to strength since its first entry into operation and is today the second busiest ATC centre in Europe, after London. It was an example for the future Central European Air Traffic Service (CEATS) centre, which was to be conceived much later, and a building block for a single sky.

July 1975 – Inauguration of automatic data processing system at Shannon UAC

In 1971, EUROCONTROL's Committee of Management approved the operational plan for Ireland for 1972-1975. This provided for the construction of a new air traffic control centre at Shannon to cope with the increasing traffic in this critical region of European airspace. Next to controlling all flights flying to, from and within and over Ireland, the Shannon controllers also have the task of managing traffic travelling between Europe and North America. Flights arriving from the American continent are received from oceanic airspace and integrated safely among European traffic. Flights departing are put onto specific tracks and instructed to reach a certain level and speed before they begin ocean crossing. Just as it has done for the centre at Karlsruhe, EUROCONTROL drew on its experiences in setting up Maastricht UAC in order to benefit the new centre at Shannon. The SHANDAP Air Traffic Control system installed there was also modelled on the MADAP system.

February 1977 – Karlsruhe UAC goes operational

Two years before EUROCONTROL's first Upper Area Control Centre entered into operational service in Maastricht, the decision was taken to set up a second one at Karlsruhe in the Federal Republic of Germany for the control of traffic in the southern half of that country's upper airspace. In the late 1960s, civil aircraft movements increased to such an extent that by 1970 traffic was approximately double that forecast at the time when plans for the creation of Maastricht UAC were being made. In order to meet this traffic increase, it was decided by Belgium, Luxembourg, the Netherlands and the Federal Republic of Germany that a second UAC needed to be built. EUROCONTROL took advantage of the work that had already been done in the building and setting up of its first Upper Area Control Centre in Maastricht and used that centre as a blueprint for Karlsruhe. As a result, the second centre took much less time to complete. The KARLDAP-1 system implemented in the UAC was modelled on the MADAP system used at Maastricht UAC. Since both systems are built on the same standards, an automatic exchange of flight data could be ensured, with the result to lower the telephone coordination to a minimum. Although today the centre is performed by DFS Deutsche Flugsicherung GmbH, the software development and maintenance for the KARLDAP system continues to be performed by a EUROCONTROL software team.

1980s - Capacity challenges

At the beginning of the 80s, the aviation industry entered a new era. Air traffic had been increasing steadily and in the last few years had coincided with under-investment in facilities and insufficient recruitment of personnel. This was beginning to cause problems in the form of congestion and severe delays. The changing needs of the industry were reflected in the strategy of EUROCONTROL over the next two decades. Safety remained an important issue, as did cooperation, the latter particularly since it was beneficial and even necessary to solving the problem of capacity itself. Many of the projects undertaken in this period with a view to increasing capacity represented that the two went hand in hand. But it was capacity that became an additional major priority of the Agency throughout the 80s and 90s, in its bid to cope with the ever-growing pace of demand. It was also in this twenty-year period that EUROCONTROL itself began to experience considerable expansion in the form of new Member States. Ireland and Portugal had so far joined the original six, but from the mid-eighties onwards there was a new accession almost every year, sometimes more. The fall of the iron curtain also played a significant part in this growth. Many Eastern European States now chose to join European organisations, EUROCONTROL included. The changes in the political situation of the continent had therefore a significant influence on the Agency. Its growth facilitated the process of European-wide cooperation.

[January 1986](#) – Amended EUROCONTROL Convention comes to power.

After the experience of the 60s and 70s, it was thought realistic to abandon the objective stated in the original Convention of common ATC in the upper airspace. The emphasis was now placed on European cooperation instead, which had in fact been the case, if not in theory then certainly in practice, since the Agency had first come into being.

[October 1988](#) – First meeting of the ECAC Transport Ministers on the Air Traffic System in Europe (MATSE 1). Decision taken to create the Central Flow Management Unit, CFMU.

By this date, air traffic in Europe had doubled in volume in comparison with the early 70s. Because of the lack of investment and sufficient personnel, the European aviation industry was now experiencing serious congestion and delays, culminating in a particularly poor season in the summer of 1988. The purpose of the CFMU was to make the best possible use of the airspace being made available by air traffic control centres throughout Europe for civil aviation, by balancing demand and capacity and centralising air traffic flow management on the continent. This would be a more efficient system than the previous national flow management units, which had been operated by their own national administrations. Also in terms of a quick reaction to reduce traffic to an airspace or airport due to weather or other occurrences, the CFMU would raise the efficiency of air traffic flow management. The CFMU would be able to take data from the flow management positions at every air traffic control centre in Europe in order to draw up strategic demand forecasts based on the number of flights being planned by aircraft operators. The flow of traffic could then be managed accordingly so as to create as few delays as possible.

1990s- European solutions to European problems

April 1990 – MATSE 2 meeting, ECAC Transport Ministers initiate the European Air Traffic Control Harmonisation and Integration Programme, EATCHIP.

By adopting the ECAC Strategy for the nineties, later referred to as the ECAC En-Route Strategy, the ECAC Transport Ministers took a significant step towards integrating current ATC systems into a common European ATM system. In order to achieve this, EATCHIP was launched. While the CFMU was concerned with making a maximum use of existing capacity, an important feature of EATCHIP was its work towards increasing capacity. It represented a completely new approach to European air traffic management cooperation. The initial challenge was to achieve harmonisation of European air traffic services in all ECAC States by 1998, by working towards the compatibility and interoperability of European ATM systems and procedures. The programme also developed EUROCONTROL's role as an air traffic management planning organisation for Europe and provided the institutional framework to introduce common ATM facilities.

March 1992 – MATSE 3 meeting, ECAC Transport Ministers initiate the Airport/Air Traffic System Interface Strategy, APATSI.

Other than the EATCHIP programme, APATSI was in the first stage coordinated by ECAC itself. However, this Strategy had the goal to increase the capacity of the air traffic system in and around airports in Europe. Accordingly, there were several interfaces to the EATCHIP programme dealt with by EUROCONTROL. For EUROCONTROL the improvement of the interface between air traffic control and the airports was an important issue. The production of a High Intensity Runway Operations (HIRO) concept, the development of a European Delay Analysis System which includes guidelines on delay monitoring, the establishment of the Central Office of Delay Analysis (CODA) within the EUROCONTROL Agency and the development of a harmonised validation methodology for ATC procedures and systems were also improvements to the overall goal for more capacity.

March 1996 – CFMU becomes fully responsible for air traffic flow management in the whole of Europe.

First conceived in 1988, the CFMU became fully operational eight years later. It was one of the first initiatives of the ECAC Transport Ministers in creating the ECAC Strategy, and also one of the most important, representing a significant change in the way air traffic flow was managed across Europe. Instead of five regional flow management centres, all separately operated by their own national administrations, the CFMU now provided flow management services throughout the airspace of all 36 ECAC Member States. It achieved its main objective of making more efficient use of airspace since the average delay suffered by each flight in Europe in 1989 had been halved by 1997. It also set an example in European air traffic management cooperation. The success of the CFMU in this respect is remarkable when the problems affecting integration in other areas of airspace management – political, social, financial and institutional – are taken into consideration.

March 1996 – the Concept of Flexible Use of Airspace is adopted

New technology and procedural or operational changes play a crucial role in creating additional capacity. However, one of the most immediate solutions is ensuring that as much of European airspace as possible is available to the maximum number of users for most of the time. To this end, EUROCONTROL introduced the Flexible Use of Airspace (FUA) concept, which made provisions for both civil and military users to

have access to the airspace as and when they need it. Its application has led to a host of advantages: improved civil/military coordination, better airspace management, more efficient separation of Operational and General Air Traffic, a significant reduction in airspace segregation needs and a net gain in capacity. The concept has, however, still not been fully implemented in all ECAC States. Therefore, the Agency is working hard to identify ways of speeding up a full and common implementation of the concept throughout Europe.

February 1997 – MATSE 5 meeting, agreement reached on the ATM 2000+ Strategy

The aim of the ATM 2000+ Strategy was for air traffic planning and management to become coordinated over the entire European airspace, to create a seamless European ATM system. It laid out a road-map of short-, medium- and long-term aims, which would shape air traffic management over the next fifteen to twenty years. The decision was prompted by the ever-growing volume of air traffic – the result of increased demand for business as well as leisure flights – and the corresponding pressure being placed on existing national ATM systems. It had become necessary to improve technology and to invent new concepts for the way in which air traffic was managed. One example for this would be improved levels of communication between air traffic control centres, aircraft operators and airports. Other initiatives of the strategy included taking measures to keep costs down, helping airports to make the best use of their capacity, reducing the effect of air traffic on the environment and enhancing civil and military cooperation.

June 1997 – Signing of the EUROCONTROL revised Convention and the agreement for the Central European Air Traffic Services Programme, CEATS.

The EUROCONTROL revised Convention was an important milestone in the history of the Agency. First conceived in 1992 as a response to the growing changes in the air traffic management environment, one of its most significant elements allowed for the expansion of EUROCONTROL's authority to include the airport taxiway and runway as well as the en-route, research and coordination aspects of air traffic management. This was to become known as the gate-to-gate concept. Other features included the cooperation with other European institutions, the introduction of European ATM performance review and target-setting systems, a more efficient decision-making process based on majority voting and the reinforcement of cooperation between civil and military authorities. Each Member State had its own views and specific national concerns, which made the revised Convention a challenge to finalise. It also meant that it would not immediately be ratified in each Member State. Because of this, the EUROCONTROL Commission decided on a transitional period that allows the Organisation to implement some of the major elements early. One of these elements was the establishment of a Provisional Council, the new key deliberative body of the Organisation, supported by advisory bodies that reflected the expanded scope of EUROCONTROL's activities.

On the same day, the CEATS agreement was signed, aimed to provide for an air traffic control centre which could manage the combined airspace of Austria, Bosnia and Herzegovina, Croatia, the Czech Republic, Hungary, Slovakia, Slovenia and part of North East Italy. CEATS would comprise the UAC at Vienna, expected to be operational by 2007, and three supporting units: the CEATS Strategy Planning and Development Unit (CSPDU) at Prague, Czech Republic; the CEATS Research, Development and Simulation Centre (CRDS) at Budapest, Hungary, and the Training Centre (CTC) in Forli, Italy. The existence of CEATS would allow for common regional ATM planning for all the States concerned, bringing financial benefits and harmonisation. By introducing common systems, working practices, training and

procedures, levels of safety in the area would be increased. Current restrictions imposed by national frontiers were to be lifted with regard to sectorisation of the airspace and traffic routings. The CEATS UAC would also provide a unique opportunity for civil-military integration.

November 1997 – ATM Surveillance Tracker and Server System, ARTAS, is successfully brought to maturity and delivered to its first user, the Netherlands.

In contrast to traditional dedicated radar sensors which provide surveillance of data direct to the ATC unit, ARTAS is designed specifically to achieve surveillance integration by combining all types of surveillance data from different sensors into a seamless and accurate air traffic situation representation, paving the way to standardisation of surveillance data processing and distribution. This system will not only improve the efficiency and reliability of ATM surveillance systems across Europe, but it will also provide a means for States to readily exploit new surveillance technology such as Mode S radar and Automatic Dependent Surveillance (ADS) as they become available. ARTAS has been in operational use in the Netherlands since Spring 1998. Its implementation is expected in several other European States before 2005.

April 1998 – B-RNAV is implemented in Europe

B-RNAV is the first phase implementation of area navigation, which requires aircraft to navigate via non-physical waypoints rather than tracking ground-based navigation aids. It relies on the enhanced functionality of on-board navigation systems and it is vitally important to the development of an optimal en-route operating environment in European airspace. The introduction of B-RNAV was a most conspicuous success for the Agency and proved to the outside world that the EUROCONTROL Agency was more than capable of running large programmes efficiently.

February 1999 – EATCHIP becomes EATMP

The European Air Traffic Control Harmonisation and Integration Programme, EATCHIP, had by now run its course and proved very successful, its achievements including the building of 8 new ATC centres, the development of data exchange links over 85% of the ECAC region and a 40% increase in airspace capacity. But with the dawn of the ATM 2000+ Strategy, it was clear that harmonisation and integration alone were just the beginning. EATCHIP therefore evolved into EATMP, the European Air Traffic Management Programme. In accordance with the ATM 2000+ Strategy, approved by the ECAC Ministers of Transport, its aim was to create a uniform ATM system, which would control the airspace from the departure gate to the arrival gate for all the ECAC States. While EATCHIP and APATSI had been designed to carry out ECAC's En-Route and Airport strategies for the 1990s, the role of EATMP would be to transform its ATM Strategy for 2000+ into reality, catering for the forecast increase in traffic demand up to 2015 and beyond. It also ushered in a change of approach. The ECAC En-Route Strategy for the 1990s, for example, had essentially been a reaction to the delay situation of the late 1980s. The ATM 2000+ Strategy, on the other hand, would be more proactive, concerning itself with preparing for the future. The reorganisation of the EATCHIP Directorates in preparation for EATMP took into account the necessity for the outside world, particularly the stakeholders of the Agency, to see more tangible results of the money and personnel that was invested in EUROCONTROL. For example a Stakeholder Relations Management and International Coordination Unit was set up. It also created the necessary expansion in order to accommodate the broadening of the Agency's activities, for example by setting up an Airport Operations Unit.

March 1999 - Outbreak of conflict in Kosovo. Providing solutions within a crisis situation.

The Kosovo conflict was the first big crisis that EUROCONTROL had to face. Under instructions from NATO, a portion of airspace was closed for safety reasons over Bosnia and Herzegovina, Croatia, Hungary, Italy, Romania, Bulgaria, Slovenia and the former Yugoslav Republic of Macedonia. Lack of adequate Operational Air Traffic (OAT) routes in some States also led to military aircraft making increased use of the civil ATS route system, while there was also demand being generated by an extensive humanitarian airlift. All this resulted in an increase in delays of between 30% and 42%. During the crisis, it was the job of the CFMU to work in close cooperation with ICAO and NATO to ensure the safe re-routing of traffic and to minimise as far as possible the impact of the crisis upon it. The situation made it clear that very close coordination between civil and military ATM organisations was vital in the planning and carrying out of emergency measures.

In order to handle the situation more efficiently, a NATO cell was set up inside the CFMU, while CFMU terminals were installed in their turn at NATO headquarters and in Vicenza immediately after the outbreak of the conflict. When the conflict came to an end and airspace was reopened, EUROCONTROL took advantage of the opportunity to work with the States concerned on the ICAO European Regional Air Navigation Plan. The aim behind this was to achieve normalisation within and to make maximum use of an airspace that had been volatile even before the crisis. The event showed that the Agency was capable of reacting well to and providing solutions within a crisis situation. It also had a permanent consequence for the CFMU itself in terms of civil-military cooperation, as it was decided that from then on, a representative of NATO would always be present in the operations room.

May 1999 – European Transport Ministers agree to develop a new second generation satellite system, Galileo.

The Global Navigation Satellite System (GNSS) is expected to have far-reaching consequences for the future of air navigation. Satellite-based navigation will offer the safety and accuracy of existing ground-based systems while at the same time providing a far more cost-effective infrastructure. GNSS-1, expected 2003 – 2004, will already be able to provide a high level of accuracy. GNSS-2, or Galileo, is expected after 2008 and may eventually be able to replace ground navigation aids altogether. EUROCONTROL is working in conjunction with the EC and the European Space Agency (ESA) to ensure coordination of European GNSS developments. Galileo will eventually be able to function alongside similar second generation systems being planned in Russia and the USA.

October 1999 – Introduction of 8.33 kHz channel spacing

In 1994, delays in Europe were on the increase and a shortage of VHF frequencies had been identified as a major impediment to the creation of additional ATM capacity. It was becoming increasingly difficult to open new air traffic control sectors due to a shortage of available frequencies. This problem had been tackled before in the history of aviation. Over the years, channel spacing had already been reduced from 100 kHz to 50 and then again to 25. It was in 1994 that ICAO took the decision to reduce spacing to just 8.33 kHz, an action which would effectively allow for two extra frequencies between each existing one. EUROCONTROL was entrusted with the business of

carrying out this task, which was no easy one considering that the implementation of the new spacing affected more than 9000 aircraft, ranging from older Boeing 727s to the modern Airbus 320s and Boeing 777s. Costs to airspace users were kept to a minimum by limiting implementation to the upper airspace of the core area of Europe. 8.33 kHz eventually went ahead on 7 October 1999, slightly later than expected, in order to ensure adequate aircraft equipage rates. It provided an important step forward towards increasing the potential for expanding ATC system capacity.

2000 – From now to the future

The early years of the new millennium have been noticeably different from the decades that preceded it. While the eighties and nineties provided constant challenges for EUROCONTROL in the form of increasing traffic and consequent delays, one of the first tasks the Agency had to deal with this century was finding a way to cope with the shocking events of September 11th 2001. This was true of the immediate aftermath of the attacks, and the need to manage airspace safely in emergency conditions. But the effects of that day were also to have much more profound, long-term consequences for the aviation industry. Safety and security had always been important priorities for EUROCONTROL, but now they became paramount. Instead of finding itself under pressure from increasing traffic and delays, expected as the year 2000 dawned, the Agency now found that the opposite was true. The number of flights went down. On the one hand, this added to the decrease in delays already in evidence thanks to EUROCONTROL's capacity-enhancing measures, but it also meant that economising was necessary. People had lost faith in flying as the safest means of transport, a situation that was not helped by the tragic mid-air collision in 2002 over Lake Constance. The challenge now was to win that faith back.

[January 2000](#) – MATSE 6 meeting, formal launch of the ATM 2000+ Strategy.

This meeting marked the end of ECAC Strategies for the nineties, which had increased airspace capacity in Europe by 40% and made progress towards the integration of European ATM, and formally launched the ATM 2000+ Strategy. This was to cater for the traffic demand up to and beyond 2015, which was expected to double and its main objective would be to break down the artificial barriers currently limiting the free flow of air traffic to create a uniform, gate-to-gate system for Europe. The European Commissioner for Transport, Loyola de Palacio, also announced the EC's intention to create a high-level group, combining both civil and military personnel, with the task of establishing a time plan and programme of work for the eventual realisation of a single European sky. The completion of this task would require the help and expertise of EUROCONTROL. It was also at MATSE 6 that progress was made towards the eventual accession of the European Community to EUROCONTROL. The outcome of the meeting was therefore positive, although it was still felt by some that more needed to be done in order to address the problems of rising delays and costs.

[July 2001](#) - Service contract signed for the operation of a European Aeronautical Information Service Database, EAD, with the GroupEAD Europe SL.

There has long been a need for accurate, precise and complete aeronautical information, particularly in the light of the rapid development of airline flight planning systems on the ground and flight management systems on board aircraft. The European AIS Database (EAD) will provide European air traffic service providers and

aircraft operators with a central database of validated dynamic (NOTAM) and static aeronautical data, thereby changing the way this data – used for day-to-day aircraft operations – is delivered throughout Europe. In other words, it will be an important component of EUROCONTROL's strategy of improving safety and capacity levels throughout Europe.

July 2001 – First use of Controller/Pilot Data Link Communications, CPDLC, over the over the Aeronautical Telecommunications Network, ATN.

Controller/Pilot Data Link Communications was the direct result of the successful PETAL Trials (Preliminary EUROCONTROL Test of Air/Ground Data Link) which had taken place in 1995. The aim of the project is to increase the level of involvement of the aircrew in the air traffic controllers' decision-making process, something completely new in air traffic management. It goes hand in hand with the developments being made in GNSS, with the long-term aim being to revolutionise the business of air traffic control by transferring the majority of responsibility to the aircraft itself. In July 2001, an American Airlines flight to Paris Charles de Gaulle airport was controlled by Maastricht UAC using computer commands and messages transmitted via the Aeronautical Telecommunications Network, a first in aviation history.

January 2002 – Reduced Vertical Separation Minima, RVSM, introduced.

Even though the main concern of the aviation industry following the events of September 11th 2001 had been the need to improve security measures, it was still necessary to find new ways of increasing capacity and reducing delay, and the introduction of RVSM was a prime example. Previously, aircraft had only flown at a separation minimum of 2000 ft (660 m) between flight level 290 (roughly 9500 m) and 410 (roughly 12500 m). By reducing the minimum to 1000 ft (330 m), six extra flight levels were created, bringing the total to thirteen. This allowed more aircraft to fly at the most fuel-efficient cruising altitudes, which reduced costs for airlines and aircraft operators by an estimated 3.9 billion euros per year. Reductions in fuel consumption also provided benefits for the environment. Although there had been some concerns from people outside the industry that allowing aeroplanes to fly closer together might be a safety risk, RVSM in fact increased safety by reducing the number of aircraft forced to share potentially conflicting routes on the same flight level. The programme would also be beneficial to passengers since it was expected that capacity would increase by up to 20%, helping airlines to meet rising demands for flights. RVSM was not a new idea; it had already been implemented on a smaller scale in the airspace of the North Atlantic; but to introduce it over such a wide area and in such a complex airspace was unprecedented. RVSM was introduced in 41 States, stretching far beyond EUROCONTROL's membership. It was a programme that took all the Agency's experience in handling the sensitive political issues of such a wide-spread implementation, technical expertise, a considerable investment of time-decades of investigation and three years of serious preparation. The controllers of all 41 States and the pilots and flight planners of 2,300 operators had to be trained and prepared for its implementation. Nevertheless, RVSM was introduced on time and within budget. Victor M. Aguado, Director General of EUROCONTROL, described the programme as the biggest change in Europe's airspace for fifty years.

[October 2002](#) – Diplomatic Conference, Accession of the European Community to EUROCONTROL.

Negotiations for this event had begun in 1997, when the EUROCONTROL revised Convention was signed. This opened the possibility for the European Community (EC) to become a member of EUROCONTROL. Slowly but surely, the path was laid for the accession, which eventually took place at the Diplomatic Conference at the EUROCONTROL headquarters in Brussels on 8 October 2002. It is considered to be an event of great importance since the addition of the EC will not only speed the process of ratification of the EUROCONTROL revised Convention, but will also strengthen the Organisation and give it added legal force, something which will be necessary in the effective development of a single European sky.

[November 2002](#) – Transfer to the new Operator Input and Display System, ODS, at Maastricht Upper Area Control Centre.

In a bid to improve safety and to gear up air traffic control to deal with future developments in the aviation industry, the EUROCONTROL Upper Area Control Centre in Maastricht introduced the ODS in November 2002. Under the slogan '*a new eye for a safe European sky*', the system, among other things, automatically highlights potential short- and medium-term conflicts between aircraft and performs many of the more laborious tasks of air traffic controllers automatically. It also comprises a back-up system, allowing controllers access at all times to the information necessary to the safe handling of the aircraft flying in their airspace.

[The shape of the future](#) – One sky for Europe

Since its modest beginnings in 1960, EUROCONTROL has grown beyond all expectations and has pushed the boundaries of technology in its tireless commitment to providing a safe, efficient and economic service. As time goes on and air traffic gradually resumes its normal levels after the downturn following September 11th 2001, the pressure will be on to maintain standards among an ongoing increase in demand. Continued advances in technology will be necessary and EUROCONTROL will continue to progress with its global navigation and air/ground data link projects. The cost-effective measure of introducing free route airspace, (airspace in which flights may follow a preferred, more economic route), is also under development.

Something else that is steadily gaining in importance is the need to protect the environment. The EUROCONTROL revised Convention underlined the Agency's commitment to this issue and provision has also been made for it in the ATM 2000+ Strategy. EUROCONTROL has already taken steps towards lessening the impact of the aviation industry on the health of the planet by the introduction of Reduced Vertical Separation Minima, RVSM, which allows aircraft to fly at more fuel-efficient levels. Other issues, such as minimum impact at and around airports and the reduction of aircraft noise, are also being worked on.

EUROCONTROL will continue its policy of promoting consolidation of airspace, based on the examples of Maastricht and the Central European Air Traffic Services Centre (CEATS) and cooperation between States. This last looks set to expand beyond Europe and to develop on a global scale, partly for the more effective operation of security matters as a result of September 11th, but also because cooperation with non-European neighbours is beneficial to the efficiency of European

ATM. The introduction of RVSM has already underlined the benefits to be drawn from such cooperation, while there is also a clear potential for a closer working relationship in the areas of flow management and route charges. The revised Convention does not allow for the possibility of non-European Member States, but in 2001 a cooperation agreement was signed with ASECNA (Agency for Security of Aerial Navigation in Africa and Madagascar). Now, similar agreements are being pursued with Algeria, Morocco and the Middle East.

Perhaps the most important challenge facing the Agency in the years to come will be the part it plays in the implementation of the single European sky initiative. But the expertise gained by EUROCONTROL over four decades of success and crisis makes it a hugely rich depository of knowledge and experience on which Europe's politician can rely for creating a single sky for Europe.

EUROCONTROL began its journey back in 1960 with the ambition to dissolve national boundaries in European airspace. Now, more than forty years later, the original dream of the Agency's founding fathers seems to finally be in sight.