



# The Single European Sky

**At the end of January 2004 the European Parliament approved the set of four regulations that comprise the Single European Sky package. In early February the Council of Ministers followed suit. This completed the legislative process that had been initiated in late 2001 as a result of the European Commission's proposals under the direction of Ms de Palacio.**

**The SES regulations were published in the Official Journal of the EU on 31 March 2004 (OJ L96/1-42). They entered into force on 20 April 2004. They are now available at: [http://www.europa.eu.int/eurllex/en/archive/2004/l\\_09620040331en.html](http://www.europa.eu.int/eurllex/en/archive/2004/l_09620040331en.html)**



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In the beginning many observers were sceptical that the European Union would succeed in this ambitious undertaking. They pointed out all the obstacles that have over the years stood in the way of a genuine reform of air traffic management: Member States' insistence on their sovereignty, the need to maintain a delicate balance with the military, entrenched positions within service providers and trade unions, the difficulty of reconciling Community and EUROCONTROL agendas and expectations.

We can take pride in the very broad support that the Single European Sky now enjoys. The European Parliament was almost unanimous in its approval of the legislative package, and in the Council all Member States approved the regulations. This is a very significant development, as the Single Sky package actually reflects the willingness of Member States to transfer very wide decision-making powers to the European Union and to move beyond the traditional national approach to air traffic management. We particularly welcomed the joint positive reaction by service providers and trade unions, which shows how much the positions of the social partners have grown closer in this area. The airline community, whose long-standing campaign triggered the Commission's initiative, might be slightly concerned about the compromises that inevitably have to be made in order to move forward in such a controversial area, but they also support the package and look forward to its implementation.

We are pleased to have achieved this result on such complex issues within a very short time frame. The constructive contributions made by the various stakeholder communities provided an excellent climate for the political decision-making to proceed rapidly. We can take even greater satisfaction from the fact that the result is an excellent basis for further work. There has been little dilution of the Commission's proposals; all of the important objectives were shared by the legislators. Where compromises had to be made to accommodate serious concerns of specific States or stakeholders, they do not prevent us from starting work quickly and efficiently and we have the commitment of States to revisit these areas in the light of our early experiences.

Perhaps the first point to be emphasised is that the need for the Single Sky is no less than when we started work four years ago. In this period we have seen a traffic downturn, but the situation is improving again and we are still working on a scenario of traffic doubling by 2020. The traffic downturn also highlighted the vulnerability of airlines and service providers and the need to have robust financial arrangements to secure the continuity of air traffic management. In 2001 and 2002 we witnessed two major accidents at the heart of Europe, underlining the fact that safety cannot be taken for

granted and that we need to have the legal and organisational tools to enhance safety regulation and safety management. A lot of work has been done to document the areas where the performance of the air traffic management system can be improved so as to increase capacity and cost-efficiency. Finally, we are seeing the development of new technologies – including satellite navigation and data link communication – that have tremendous scope for improving the efficiency and safety of the system, if we can agree on the choices to be made and on the way to introduce them into our systems.

### **Institutional framework and working methods**

The Single European Sky is essentially a regulatory initiative. It brings to the existing traditional engineering-inspired and consensus-driven approach that prevails in this industry a set of clear rules that define the rights but also the responsibilities of the different actors. These rules will of course, to the extent possible, draw on the consensus of those affected, but where necessary decisions will be taken that go beyond what would have been achievable by purely voluntary means. The European Union has the legitimacy and the democratic processes that guarantee transparency, fairness and accountability in decision-making.



## The Single European Sky (cont'd)

A regulatory approach also promotes greater compliance with decisions that have been taken. The Community legal framework facilitates enforcement not only vis-à-vis States but also as regards private parties. Where appropriate, a rigorous approach can be adopted to enable for example synchronised equipage by different categories of airspace users and by service providers so that system-wide benefits can be achieved.

While the focus of the Single Sky is naturally on the ATM industry, its embedding into the European Union system makes it possible to take a wider political view. Air traffic management does not exist in a vacuum. It is part of a wider context and other objectives must be pursued in parallel, such as security. One of the Single Sky's attractions is the opportunity to integrate civilian and military components of air traffic management. Recent developments have shown that the air traffic community can and should make a contribution to collective security to guard against terrorist attacks. Industrial policy considerations can likewise support the modernisation of the air traffic control infrastructure, so that our manufacturers will be able to draw on their experience in the European context to develop global activities.

A political framework for air traffic management also opens the door to public funding opportunities to encourage operational changes. Within the European Union, we have been able to draw on research and trans-European network budgets to develop and introduce new technologies into the system. The current sixth Framework Programme gives priority to aeronautics research and helps to support both longer-term work as set out in the Strategic Research Agenda, and more short-term large-scale validation projects to organise the introduction of new equipment and procedures into the industry. Trans-European network projects facilitate their actual entry into



service by funding feasibility studies and operational improvements of European interest.

Beyond these traditional financial instruments there may be scope for a specific Single Sky budget to assist the structural and technical adjustments that will need to be made as a result of the Single Sky initiative.

How do we now plan to proceed in practice? The European Commission has been given the responsibility of developing the various domains of the Single Sky. The legislation lays down a number of principles and objectives that we will have to put into practice.

While the Commission retains the ultimate responsibility for the application of the Single Sky package, we will do so in close cooperation with all the different interested parties.

The Single Sky Committee is the interface between the Commission and the Member States. It is composed of representatives of the civilian and military air traffic management communities in

the States, thereby creating a common agenda and encouraging convergence between both groups. Obviously the 25 EU Member States are attending, but we will continue to be amenable to the involvement of neighbouring States with close relations in the field of aviation – initially Switzerland, Norway and Iceland, later perhaps to be followed by others. We have also invited EUROCONTROL to join the Committee to contribute its technical expertise and its pan-European perspective and to ensure consistency with work within that organisation. The Single Sky Committee will be the political sounding board for any significant initiatives in the ATM sector and is the mandatory point of passage for all legislation affecting the industry.

We have seen that industry is also keen to play a substantial role in the Single Sky process. At the time when we were preparing the legislative proposals through the High Level Group and the Industry and Social Group in 2000, it was clear that equipment manufacturers, airspace users, airports but also staff are able and willing to make an



important contribution to future work in this area. Their interest has been acknowledged and in recognition of their potential contribution we have set up the Industry Consultation Body. This group will be composed of senior representatives of the industry and professional associations. EUROCONTROL is involved in the work of this group to ensure consistency with developments within that organisation, but the Industry Consultation Body will preserve a capacity for original work to reflect industry expectations.

In parallel, we will continue the social dialogue with employers' organisations and trade unions, as a platform for discussions on the social implications stemming from the realisation of the Single European Sky. While we encourage and support this dialogue, it is essentially for the social partners themselves to identify subjects for discussion and to agree on longer-term objectives for the dialogue. This has been an invaluable tool to enable a structured discussion with and between the social partners, with the potential to develop into collective

agreements on social issues of European relevance.

Much of the work in the operational area will focus on the definition of standards for equipment and procedures. We are working closely with the general European standardisation bodies, CEN/CENELEC<sup>1</sup> and ETSI<sup>2</sup>, as well as with EUROCAE<sup>3</sup> and EUROCONTROL, to establish arrangements that make it possible to develop extensive voluntary standards to support interoperability.

One of the most challenging aspects of the Single Sky is the involvement of the military in this initiative. We have worked very closely with representatives of air forces and military ATM over the past years, and we have discovered a genuine interest and willingness on their part to play a role in this process. It is unfortunately not easy to accommodate this input since we do not possess time-tested mechanisms within the European institutions to organise work together. We have been able, however, to work out a satisfactory approach. First of all, the military will be full partners in the development of any future EU rules that may affect them as airspace users or as providers of ATM services. Any rules on such things as equipment or airspace organisation will need to reflect the requirements and constraints of the military in the same way as those of civilians. It is understood, however, that it may be necessary to make specific rules for the military if they stand in the way of the proper conduct of defence and training missions; but hopefully the early involvement of the military in the drafting of these rules will obviate the need to rely on this type of safeguard. Secondly, Member States have agreed to include the subject of Flexible Use of Airspace in the Single Sky package. This makes it possible to develop clear and enforceable rules on this subject and to reinforce the harmonised application of this important concept. Thirdly,

Member States have agreed to work together in areas not covered by the Single Sky legislation, to support work in this area. As a result, we can make progress e.g. towards the development of harmonised OAT<sup>4</sup> rules, joint exercises and eventually joint training areas. We will need to explore together with the military in what way work on these subjects can be organised most efficiently.

The institutional set-up of the Single European Sky consolidates the position of EUROCONTROL. It is clear that this organisation will continue to play a major role in its own right with regard to air traffic management. The Single Sky package has found a balanced way to develop synergies between the two poles, EUROCONTROL and the European Union, and to concentrate on what each of these organisations does best. The European Commission has no intention of duplicating the technical expertise that has been built up over the years in EUROCONTROL, and EUROCONTROL acknowledges the legitimacy of the European Union as the political and regulatory focus of work in this area.

This synergy is reflected in arrangements that streamline cooperation between the two organisations. The European Community has joined EUROCONTROL as a full member, and the ratification process is well under way. This will make it possible for the Commission to reflect the common objectives of EU States within EUROCONTROL and to make sure that the political EU agenda is supported by and consistent with work on technical and operational issues.

In parallel, the European Commission and EUROCONTROL have agreed on a Memorandum of Cooperation that provides a platform for the contribution by EUROCONTROL to the Single European Sky initiative. The Memorandum will lead to the definition of a joint work programme that organis-

**1- European Committee for Electrotechnical Standardisation**

**2- European Telecommunications Standards Institute**

**3- European Organisation for Civil Aviation Equipment**

**4- Operational Air Traffic**

## The Single European Sky (cont'd)

5- Nordic Upper  
Area Control  
Centre

6- Central  
European Air  
Traffic Services

es technical input into future EU legislation. The Commission will have to adopt detailed rules to implement the principles and objectives set out in the Single Sky package. Most of these rules will be based on technical input to be provided by the EUROCONTROL Agency. We are proceeding with a system of “mandates” that define the objective and timetable of these rules. As EUROCONTROL has accepted these mandates, the Agency will undertake to prepare a proposal, conduct an extensive and transparent consultation process, and deliver the results to the Commission for adoption after discussion in the Single Sky Committee. This approach opens the way to the convergence of the political agenda with technical work in a structured manner. In line with our ambition to complete the essential parts of the Single Sky legislation by the end of 2004, the first batch of mandates has already been submitted to EUROCONTROL.

Additional areas of cooperation will extend to research and development, statistical information, GNSS and international cooperation. In the international area the EU will need to be more present. As our own house is being put in order, we should increasingly assume an active role in international organisations, establish a close working relationship with our main international partners and assist other parts of the world to improve the performance of their own air traffic management systems.

### The implementation of the Single European Sky

When Ms de Palacio started work on the Single Sky initiative back in 2000, she insisted on the completion of this process under the current Commission term, at the end of this year. We have been able to stick to that timetable. Obviously something as complex and evolving as air traffic management is a moving target that

can never be “finished”, but following the adoption of the legislative package we are on track to define the main implementation rules by the end of this year.

### Main principles

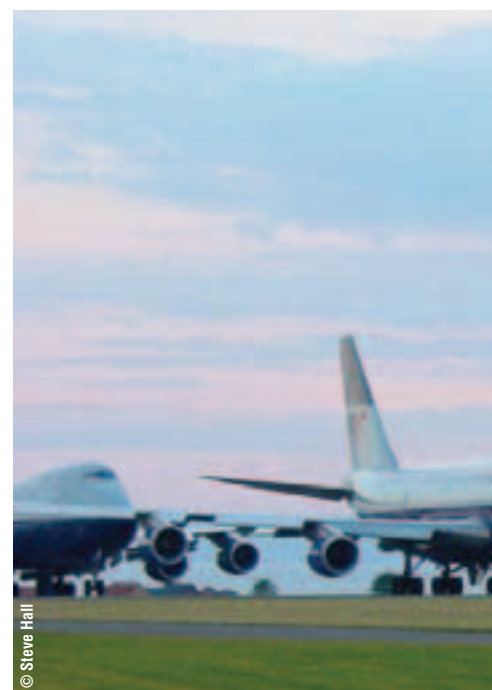
Perhaps it is useful to recall the main themes of the Single Sky legislation. In the field of airspace, an effort will be made to move from the traditional national approach to airspace organisation and management, towards a more integrated European perspective. Clearly Member States retain responsibility for their airspace under the Chicago Convention, but nothing prevents them from exercising this responsibility collectively under the EU umbrella and agreeing uniform rules. This implies the definition of a harmonised classification of airspace with a reduced number of airspace categories, together with harmonised rules on route and sector design. This will make the whole process of airspace design and management much more straightforward and open the way to the creation of cross-border airspace structures.

As we develop a more seamless airspace, this should be recognised by the establishment of a single European Upper Information Region and by the preparation of comprehensive aeronautical information to be managed and made accessible centrally.

It has long been acknowledged that national boundaries are not necessarily the optimal basis for air traffic control. The Single Sky legislation obliges Member States to analyse the way in which air traffic is managed over their territories in the light of a number of technical criteria, and to organise the provision of these services on the basis of optimised zones that we call “functional airspace blocks”. This means that national boundaries will become less relevant than opera-

tional parameters such as traffic flows and cost-benefit analysis, and that there is scope for greater efficiency and integration, thereby also reducing a number of safety hazards. Over time we expect to see the creation of a number of cross-border functional airspace blocks, drawing on the experience of Maastricht, NUAC<sup>5</sup> and CEATS<sup>6</sup>.

We look at the establishment of functional airspace blocks as a “bottom up” process, driven by the Member States concerned and by their service providers. They know best where there are opportunities for operational improvements. We do not wish to direct this process towards a specific result, but we will offer technical and financial support to make sure that all opportunities are being pursued diligently and we provide a forum for discussion if difficulties arise between States. It is fair to say that we are putting a lot of faith in the ability and willingness of States and industry to come up with good proposals. Until the end of the legislative process, the European Parliament was sceptical about this approach. We



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therefore agreed to revisit this area in five years' time at the latest and to make proposals for improvements of the procedure with a stronger Community input, if it transpires that States are reluctant to move in the direction of functional airspace blocks.

Airspace harmonisation as a regulatory process is limited to the upper airspace above FL 285. However, there is nothing to prevent Member States from going below this level where there would be operational benefits from doing so. In addition the legislation includes a rendezvous in three years' time, when the Commission will be able to make an initial analysis of work in this area and propose the lowering of the threshold for airspace harmonisation.

In the field of airspace, we have also been able to secure the commitment of Member States to give full effect to the Manual on Flexible Use of Airspace and to support this through detailed and binding Community rules. The framework for flow management will be reinforced.

The Community approach to airspace is mirrored in the area of service provision. It will be possible for air navigation service providers to operate across national borders. A Member State will be able to designate an organisation in another Member State to assume responsibility for air traffic control in its airspace. Together with the establishment of functional airspace blocks, this opens the door to integrated service providers operating over large areas. Likewise, for supporting services such as communication and meteorological information, service providers and airspace users will have the choice between providing these services in-house or procuring them from a supplier in their own or in another Member State.

The counterpart for the continuation of the natural monopoly for air traffic control is increased transparency and continued emphasis on performance review, benchmarking and identification of best practice.

The basis for cross-border service provision is the Community certification mechanism. Each Member State

will need to set up a National Supervisory Authority that operates at arms' length from the service providers and has adequate financial, technical and personnel resources to oversee the operations of the service providers. These authorities will ensure compliance of the service providers established in their territory with a set of harmonised requirements to ensure continuity, safety and quality of services. The certification mechanism provides assurances so that purchasers of cross-border services can be confident that requirements will be met.

Cross-border service provision will also be supported by air traffic controller mobility. The Commission has agreed to submit a proposal shortly that will set out a mechanism for a common air traffic controller curriculum, thereby consolidating training requirements and facilitating the movement of controllers between centres and countries.

The financial basis for service provision essentially relies on cost recovery by Member States through user charges. This mechanism continues to be the starting point for the charging regime to support the Single Sky. It is nevertheless enhanced by measures to ensure increased transparency of these charges. Service providers will be expected to prepare their accounts in accordance with International Accounting Standards, stating also any cross-subsidies that may be applied. Costs will have to be reviewed by EUROCONTROL and be subject to a dialogue with airspace users. Member States will be able to introduce incentives and penalties by linking income for their service providers to performance levels and by taking into account efforts made by airspace users to contribute to the efficient running of the air traffic management system.

The charging regime will need to support the establishment and operation



of functional airspace blocks, to provide a template for the allocation of costs and revenues over different States and to offer incentives for service providers to pursue this approach.

The charging regime will apply not only to the current en-route area, but also to terminal charges. The principles of cost-relatedness and non-discrimination may over time lead to adjustments to be made to the balance between these two charge categories.

The regulation provides for the possibility of earmarking some charges for the funding of collective improvements. This makes it possible to assist specific service providers or categories of airspace users to equip themselves in such a way as to provide system-wide benefits. It could also lead to specific programmes to improve operational efficiency or safety performance.

With regard to equipment and procedures, work will be directed to enhance standardisation with a view to ensuring wide interoperability and consequently to facilitating seamless cross-border operations. Standardisation follows the Community's "new approach" of relying on essential requirements that are detailed through voluntary standards elaborated by industry itself under transparent and non-discriminatory procedures.

These voluntary standards provide the basis for off-the-shelf solutions that facilitate the deployment of new technology, reduce the cost of infrastructure and help European industry to offer attractive products in global markets. In addition to these voluntary standards, we see the need for some mandatory "implementing rules" for subjects where we require tightly defined interfaces between equipment. These implementing rules will also provide the basis for mandatory equipage obligations that make it possible to synchronise the introduction of new equipment and procedures across Europe.

### Objectives for 2004

The Single Sky legislation lays down an ambitious agenda, and we are committed to acting rapidly on it. The first priority is to set up all the necessary structures and instruments to prepare further initiatives.

The Memorandum of Cooperation with EUROCONTROL was signed just before Christmas 2003. It is the framework within which we can organise EUROCONTROL's contribution to the Single European Sky. In the course of this year, we will elaborate comprehensive programmes to share work between ourselves and EUROCONTROL in the different areas covered by the Memorandum.

The Single Sky Committee met for the first time on 9 February 2004 under the chairmanship of the Commission. It defined its rules of procedure and had an initial exchange about the Commission's work programme to implement the Single Sky. We intend to have monthly meetings for the remainder of the year to support the execution of this work programme, in particular to issue mandates to EUROCONTROL and to assist the Commission in adopting implementing rules. The Commission will submit a draft of these rules to the Committee which will issue an opinion by qualified majority in accordance with Article 205 of the EC Treaty. Where the Committee does not support the Commission's draft rules, the Commission will involve Council and Parliament in a complex procedure that guarantees the taking of a decision within a reasonable timeframe by a qualified majority of the Member States or, if there is no majority, by the Commission.

The Industry Consultation Body will be set up by Summer 2004. We are in discussions with the industry associations that will drive this body to organise work properly. It will be a

forum for the different stakeholder communities to discuss the direction and timetable of improvements to the European air traffic management system, so that we can work within a broadly agreed framework to plan the introduction of new equipment and procedures.

Most of the substantive work over this year will focus on the preparation of the first set of implementing rules. We will give priority to four subjects that are crucial to the reform of air traffic management in accordance with the Single Sky legislation:

- Member States have to set up National Supervisory Authorities and start issuing certificates to the service providers. This step is a necessary condition for the regulatory regime to support cross-border service provision.
- The charging regime is essential to stimulate cost-efficiency, to provide for information disclosure and transparency, and to offer a framework for incentives to service providers and airspace users to pursue the opportunities created by the Single Sky legislation.
- Airspace harmonisation presents a platform for better airspace design and management and for the establishment of functional airspace blocks.
- Flexible Use of Airspace will provide a framework for cooperation with the military and be a stepping-stone for other projects.

The Commission is drafting a regulation on certification and has issued mandates to EUROCONTROL on the three other subjects. These mandates became effective in March, and we expect EUROCONTROL to complete the drafting and consultation process in October so as to enable us to adopt regulations before the end of 2004.

In addition, we are preparing a non-regulatory mandate to EUROCONTROL in order to support the establishment of functional airspace blocks. Under this mandate, EUROCONTROL will assist States and service providers to analyse opportunities for cross-border service provision, to identify common issues that arise in this context and to develop solutions for those problems.

We hope to be able to use existing financial instruments, notably the trans-European network budget, to support a number of initiatives to support the Single Sky. We would in particular consider feasibility studies for functional airspace blocks. In addition, we expect to launch a major definition study to prepare the longer-term development of the air traffic management infrastructure in accordance with the Commission's Strategic Research Agenda, which is currently being set up as the "DEPLOY" project.

In the area of equipment, we expect to issue a number of mandates focusing on flight data processing, with a view to adopting implementing rules next year. Further subjects should be identified with the help of the Industry Consultation Body, where our objective should be to concentrate standardisation work on areas where there is a high-added value in the light of the need for regulatory intervention and of the maturity of the subject.

### Longer-term objectives

While we hope to achieve significant results by the end of this year, the Single Sky initiative will require a sustained effort in the future as well. In the regulatory area, we will need to work on the other issues identified in the legislation, notably aeronautical information and flow management. The initial experience in setting up functional airspace blocks should be reflected in common principles that will guide future work in this area.

A study is under way to assess the future funding needs of air traffic management, in particular to review the need for a mechanism to complement cost recovery. Such a funding mechanism could help to ensure the continuity of service provision in difficult times, to assist adjustments by the air traffic management industry to the Single Sky, notably for airspace users that remain outside the charging scheme, and to support the deployment of new technologies.

Finally, as the Single European Sky matures we will need to take up our responsibilities in the international area. A framework for cooperation with the main international partners will be necessary to coordinate research efforts as well as to ensure commonality of new technologies and worldwide interoperability. Industrial initiatives such as DEPLOY need a global platform to succeed. The dialogue on new technologies provides a framework for discussions with authorities and manufacturers in the U.S. and other third countries to organise the global acceptance of satellite navigation and datalink technologies into the ATM system.

### Conclusion

The coming years will require a sustained effort to improve safety, increase capacity and enhance the efficiency of the system. The Single European Sky provides the tools to meet that challenge. We hope that all interested parties will work together closely to use the opportunities that have been created.

*This article is a revised version of the presentations given by Michel Ayrat and the author at the Maastricht ATM conference on 10-11 February 2004. Any opinions set out in this paper only reflect the views of the author and do not commit the European Commission.* ■