

## THE SINGLE EUROPEAN SKY: EU REFORM OF AIR TRAFFIC MANAGEMENT

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### 1. Introduction

When the Prodi Commission took up office in 1999, it defined the reform of air traffic management as one of its priorities. At the end of its term, following approval by Council and European Parliament of a legislative package,<sup>1</sup> the regulatory reform is essentially completed. This initiative raised a number of issues, many of them technical and outside the scope of a legal publication.<sup>2</sup> However, the legislature also had to address some politically and legally sensitive issues, such as the relation between a new Community policy and a continuing intergovernmental cooperation, the scope for EU legislation on the organization of Member States (aerial) territories, and the relation between the civilian and military organization of air traffic. This article will attempt to provide a schematic presentation of the main elements of this new regulatory framework for the intention of non-technical readers<sup>3</sup>

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1. Regulations (EC) No. 549/2004 laying down the framework for the creation of the single European sky ("framework regulation"); No. 550/2004 on the provision of air navigation services in the single European sky ("service provision regulation"); No. 551/2004 on the organization and use of the airspace in the single European sky ("airspace regulation"); and No. 552/2004 on the interoperability of the European Air Traffic management network ("interoperability regulation"). The four regulations were adopted on 10 March 2004 and published, together with statements by Member States on military issues related to the Single European Sky and by the Commission on the process for defining functional airspace blocks, in O.J. 2004, L 96.

2. For more comprehensive information about technical issues and for ample reference material the reader is referred to the Commission's Single European Sky website at [europa.eu.int/comm/transport/air/single\\_sky/index\\_en.htm](http://europa.eu.int/comm/transport/air/single_sky/index_en.htm) and to Eurocontrol's website at [eurocontrol.int/home.html](http://eurocontrol.int/home.html).

3. A more comprehensive presentation by the author and others is available in Eurocontrol's *Skyway* magazine, Spring 2004.

and to explain in some more detail the solutions developed on these sensitive, legally relevant points.

## 2. A primer on air traffic management<sup>4</sup>

Contrary to for example motorcar drivers, pilots have little information on what goes on around them. Aircraft may have to operate at night or in clouds, with reduced or even no visibility. In any event, pilots have no vision below, above or behind the aircraft. Furthermore aircraft move very fast and by the time an obstacle is seen it is probably too late to avoid it. While, due to the relatively low density of air traffic, chances of two aircraft accidentally hitting each other in the upper airspace are small, the concentration of aircraft and proximity to terrain become bigger as they approach the ground to land or after they take off.

Therefore, from the early days of aviation, the need was felt to assist pilots from the ground.<sup>5</sup> The approach consists essentially, and somewhat counter-intuitively, in making sure that all aircraft follow virtual “routes” in the sky. Even though this generates a concentration in these airways, it becomes easier to sequence the aircraft and ensure that they maintain sufficient separation. Initially this was done through radio contact, whereby pilots had to report their position by reference to landmarks from time to time to a controller on the ground who could form a mental image of the air traffic and give pilots instructions to avoid proximity to other aircraft. Nowadays controllers can rely on radar images and pilots can use modern communication and navigation techniques, although the old “procedural” control still applies over the oceans and in some less dense areas. The sequencing of aircraft in air routes is still the normal method of ensuring separation.

As a result the responsibility for managing air traffic very much rests on controllers. They are watching a segment of airspace (“sector”) where normally not more than about ten or fifteen aircraft would be present, so that they are able to follow all movements. A number of sectors are grouped to-

4. For a more detailed technical explanation of air traffic management, see e.g. Duke, *Air Traffic Control*, 8th ed. (Ian Allan Publishing, 2001). For a discussion of the international regulatory framework, see e.g. Diederiks-Verschoor, *An Introduction into Air Law*, 7th ed. (Kluwer, 2001).

5. The set of services provided to airspace users are denoted as “air navigation services”. Art. 2 of the framework regulation lists the different components of these services. The main ones are air traffic services (essentially controlling aircraft with a view to avoiding collisions and to organizing the flow of air traffic); communication, navigation and surveillance; and the provision of meteorological and aeronautical information.

gether in an air traffic control centre, which is given responsibility for a “flight information region”.

The legal organization of air traffic management derives from the 1944 Convention on International Civil Aviation (“Chicago Convention”). That Treaty gives States the right to decide over which portions of their territory<sup>6</sup> they wish to provide air navigation services. The Convention and its Annexes set out some basic requirements with which these services have to comply, and the International Civil Aviation Organization (“ICAO”) defines common standards and practices that provide the basis for an air traffic management system that is relatively homogeneous throughout the world.

### **3. The organization of air traffic management in Europe**

While traditionally air navigation services were provided by government departments, almost all EU Member States have now set up corporate entities for that purpose. Most of these are publicly owned, but some have been partly privatized or are being prepared for privatization. At least for the core air traffic services, these air navigation service providers (“ANSPs”) enjoy a natural monopoly. The area of responsibility for the ANSPs typically coincides with the territory of its Member State and any high seas that may have been entrusted to the State. In a number of cases, neighbouring States have agreed on boundary corrections as a result of delegations of responsibility to provide air navigation services, but these remain limited in scope.

National ANSPs are not always a very practical approach, as the territory of States may be too small to allow for efficient and cost-effective air traffic management, and as traffic flows may not be accommodated easily in this territorial organization. Therefore ICAO has for a long time promoted joint air navigation service provision going beyond boundary corrections and extending over the territory of several States. In a few cases, this cross-border approach was pursued in Europe. For example, Luxembourg has delegated the responsibility for most of its lower airspace to Belgium; and the upper airspace over the Benelux countries and over Northern Germany is managed through a joint facility set up by Eurocontrol in Maastricht. But the overall picture remains one of high fragmentation. By way of comparison – where it must be recognized that the analogy is not complete – in Europe 29 ANSPs

6. The authority of States is normally limited to their land areas and territorial waters. However, on the basis of regional agreements approved by ICAO, States may be given the authority to provide air traffic services over high seas.

with 58 en-route centres are managing a similar geographical area and less than half the traffic volume managed by the U.S. Federal Aviation Administration with only 21 centres. No wonder that the unit cost of the European system is between 60 and 70 per cent higher than in the U.S.<sup>7</sup> In addition it must be acknowledged that the monopoly arrangements prevailing both in Europe and elsewhere are not conducive to cost reduction; the general rule is that ANSPs are entitled to recover their costs from airspace users through an elaborate charging mechanism.

With a view to improving the coordination of air navigation services between currently 34 States – including all EU Member States except for the Baltic countries – Eurocontrol works towards a seamless pan-European air traffic management system. The organization, for example, initiated a number of programmes to introduce improvements to air traffic management systems across Europe (e.g. reduction of the vertical separation between aircraft), and it provides some functions of common interest (e.g. it collects overflight fees and manages the flow of air traffic by delaying some departures to avoid overload of the system elsewhere). Eurocontrol, as an intergovernmental organization, is not part of the EU family but is based on its own treaty.<sup>8</sup> The European Community has acceded to Eurocontrol in order to be able to exercise Member States' obligations in areas of Community competence.<sup>9</sup>

#### **4. The military dimension**

Airspace is not only used by commercial and private flights (so-called "general air traffic"). The military are also important airspace users for training and operations (referred to as "operational air traffic"), although since the dissolution of the Warsaw pact their activity was reduced considerably. On

7. Eurocontrol Performance Review Commission, 6th Report (2003), Chapter 9.

8. The European Organization for the Safety of Air Navigation was set up in 1960 and is currently governed by the Protocol consolidating the Eurocontrol International Convention for the Safety of Air Navigation of 27 June 1997. The Protocol has not yet entered into force pending the ratification process, but is being applied on a provisional basis.

9. Proposal for a Council Decision on the signature by the European Community to the Protocol of accession of the European Community to the European Organization for the Safety of Air Navigation (Eurocontrol) and its provisional application, O.J. 2002, C 262; Council Decision of 29 April 2004 concerning the conclusion by the European Community of the Protocol on the accession of the European Community to the European Organization for the Safety of Air Navigation, O.J. 2004, L 304. The Community accession has not yet entered into force pending the deposit of the required number of ratification instruments.

the other hand the introduction of new high-performance aircraft changed the nature of their requirements, so that they have a greater need for high altitude large areas where much of the commercial traffic takes place.

Since it would be dangerous to mix general and operational air traffic, the military use segregated volumes of airspace for their training and operations and restrict access to these. For historical reasons (presence of air bases pre- and post-World War II) many of these areas are located in the core of Europe, often competing for airspace with major commercial air traffic flows. This severely restricts the possibility to design optimal routes for commercial traffic. Increasingly, the military only activate segregated airspace on a temporary basis for the time they need to conduct exercises, but even then the disruption of air traffic can be severe.

There is some scope for improving these arrangements, in particular by reducing the number of small areas of limited use to the military and by creating new larger areas preferably where commercial air traffic is less dense. However, military do have an entirely legitimate need for airspace, and it would not be right to give them only residual areas. Furthermore, the location of military airspace cannot be modified easily because of operational, financial and social considerations. Therefore the tendency has been to concentrate on improving arrangements for opening the same volumes of airspace to both civil and military air traffic at different times through the “flexible use of airspace” concept.

In addition, military often play a major role in the conduct of general air traffic because they operate some facilities (e.g. mixed civil/military airports) and because they provide some air navigation services to civil airspace users (e.g. air traffic control in some areas, provision of meteorological information). Furthermore, the increased emphasis on security of air traffic following the events of 11 September 2001 underscores the need to develop close working arrangements between civil and military organizations so as to ensure the rapid detection of and reaction to threats that may originate from general air traffic.

For these reasons it is necessary to develop a comprehensive approach including both the civil and military components of air traffic management. A few Member States have been able to integrate both organizations but usually efforts made by Member States and by Eurocontrol towards that objective have produced limited results.<sup>10</sup>

10. Eurocontrol, Status of civil-military co-ordination in air traffic management, 2001.

## 5. Community involvement in air traffic management

The Community's air transport policy developed considerably from the 1980s onwards to address substantially all elements relevant to the aviation industry,<sup>11</sup> starting with commercial issues relating to airline competition and air services, but gradually also extending to more technical areas such as safety and equipment. However, air traffic management remained mostly outside the ambit of Community legislation. Air traffic management was raised occasionally by EU institutions<sup>12</sup> but the thrust of the Community's action was to let Eurocontrol deal with these issues. No doubt Member States were generally satisfied with the action taken within the Eurocontrol framework, perhaps also because they could not envisage ways in which to handle the military dimension of air traffic management within the EU context. As a result the only Community legal instrument dealing with air traffic management was a directive making mandatory certain equipment standards developed by Eurocontrol.<sup>13</sup> The Eurocontrol convention was revised in 1997, in particular to make it possible for the Community to join the organization and to exercise Community competences in the field of the free movement of goods<sup>14</sup> as well as to give Eurocontrol some regulatory competences.

In 1999 this approach started to change. Air traffic management suffered unusual disruption, among other reasons as a result of the military operations over former Yugoslavia and of operational changes in the route network. Delays reached critical levels and the organization of air traffic management was severely criticized in the press and at political level. Eurocontrol was not perceived to react effectively to this crisis; the organization was blamed for not being sufficiently sensitive to the expectations of airspace users, for slow

11. Ayral, "La Communauté européenne et le transport aérien", *Petites affiches – les dossiers de l'Europe*, 30 Jan. 2003, 26.

12. Resolution of the Council and the Ministers for transport, meeting within the Council of 18 July 1989 on air traffic system capacity problems, O.J. 1989, C 189, in effect rejecting the Commission's proposals for legal instruments to deal with air navigation services, equipment and airspace set out in the Commission's communication COM(88)577; Communication from the Commission to the Council and the European Parliament on congestion and crisis in Air Traffic, COM(95)318 final; White paper on Air Traffic Management, COM(96)57 final.

13. Council Directive No. 93/65 of 19 July 1993 on the definition and use of compatible technical specifications for the procurement of air traffic management equipment and systems, O.J. 1993, L 187, amended by Commission Directive No. 97/15 of 25 March 1997, O.J. 1997, L 95 and implemented by Commission regulations No. 2082/2000 of 6 Sept. 2000, O.J. 2000, L 254, and No. 980/2002, O.J. 2002, L 150.

14. See *supra* note 9.

decision-making and for its inability, once changes were agreed, to put these in practice. At the same time Ms de Palacio, as the member of the new Prodi Commission responsible for transport policy, expressed an interest in pursuing a Community approach to complement the traditional Eurocontrol actions. She argued that because of its political mandate, effective decision-making and enforcement mechanisms, the Community was in a better position to carry out a real reform of air traffic management than Eurocontrol.

Early in its term the Commission issued a Communication on “the creation of the single European sky”<sup>15</sup> which emphasized the need for structural reforms with a view to integrating management of airspace and developing new concepts and procedures of air traffic management. The Commission announced the setting up of a high level group composed of senior representatives of civil and military air traffic authorities in the Member States.<sup>16</sup> This approach was endorsed first by Transport ministers during their Council meeting on 9 and 10 December 1999, followed by Heads of State and Government during the Lisbon and Feira European Councils in March and June 2000, and finally by the European Parliament in July 2000.<sup>17</sup>

The high level group met throughout the year 2000 and completed its report in November.<sup>18</sup> In parallel the Commission had convened an “industry and social group” composed of representatives of the main stakeholder communities (airspace users, air navigation service providers, airports, trade unions and professional staff organizations, equipment manufacturers) in order to provide input into the discussions of the high level group. The high level group report emphasized the need to consider airspace as a common resource, managed as a continuum. Gradual progress was required towards joint civil and military management of air traffic. Efforts should be made to develop and deploy new technology and improve interoperability of equipment. The group confirmed the desirability of involving professional and trade union organizations in the Community social dialogue. The reform of air traffic management required the intervention of a strong Community regulator, as the EU institutional framework was deemed to be the only suitable way to make rapid progress towards more efficient and coherent air traf-

15. Communication from the Commission to the Council and the European Parliament: The creation of the single European sky, COM(1999)614 final.

16. The Commission also invited Switzerland and Norway to participate in the discussions on account of the close involvement of these third countries in the Community’s aviation policy on the basis of air transport agreements.

17. European Parliament resolution of 6 July 2000 on the creation of the single European sky, O.J. 2001, C 121/470.

18. Single European sky, report of the high-level group, European Commission, 2001.

fic management. The group expected the Community's involvement to rely on synergy with Eurocontrol's expertise in the area. In the course of the discussions the Commission made it clear that its objective was not to liberalize air traffic management – which for technical reasons continues to be a natural monopoly –, nor to launch a privatization process – for which the Community in any event has no authority; its purpose is rather to develop a regulatory framework in order to enable effective decision making and enforcement, and to deal with an industry that is increasingly operating as a business rather than as government departments and that will pursue opportunities outside its traditional home State.

## 6. Community legislation

While the high level group had been preparing its report, the Commission had launched a number of studies to analyse technical aspects of airspace and service provision.<sup>19</sup> It maintained frequent contacts with stakeholders and endeavoured to build a constructive relationship with trade unions, *inter alia* by launching a sectoral social dialogue on air traffic management.<sup>20</sup> As a result it was ready to follow up on the high level group report and devoted most of 2001 to preparing legislative proposals.

There was some concern, however, that the Commission's upcoming proposals would be held hostage to the long-running dispute between the United Kingdom and Spain on the application of Community legislation to the Gibraltar airport because of differences over the sovereignty of the territory in which the airport was located. At the time, this dispute held up a large number of air transport proposals in the Council. Eventually an understanding was reached between the authorities concerned, according to which the application of the Single Sky legislation to Gibraltar airport would be suspended until a more permanent solution is developed.<sup>21</sup> On this basis at the end of 2001 the Commission came forward with proposals for a framework regulation setting out the principles and working methods to be followed in the Single Sky, and for specific regulations dealing with air navigation services, airspace and equipment.<sup>22</sup> Discussions took about two years and were

19. Available on the Commission's Single European Sky website as per note 2 *supra*.

20. On the basis of Commission decision No. 1998/500 of 20 May 1998, O.J. 1998, L 225.

21. Point 6(1) of the Explanatory Memorandum of the framework regulation – COM(2001)123 final/2 of 30 Nov. 2001, and Art. 1(4) and (5) of the framework regulation.

22. The proposals were made in two stages during 2001 and were subsequently revised on linguistic grounds. The relevant texts were published in O.J. 2002, C 103 E.

concluded at a conciliation between European Parliament and Council in December 2003; the texts entered into force on 20 April 2004.

## **7. Working methods**

The Single Sky legislation takes the form of regulations, obviating the need for extensive transposition measures by Member States. Nonetheless national authorities continue to play a major role, not only because some of them still participate in the business of providing air navigation services, but mostly because the trend towards increasing corporatization or even privatization requires the development of adequate surveillance structures.<sup>23</sup> Therefore Member States are expected to set up independent supervisory authorities that operate at arms' length from the air navigation service providers. Where a State still provides these services itself, it has to ensure at least "functional separation" meaning that safeguards are required to avoid supervisory decisions being affected by conflicts of interest because of operational functions carried out within the same organization.<sup>24</sup> It should be noted that where several States participate in a functional airspace block, they have to conclude an arrangement on the supervision for the service provider managing that block,<sup>25</sup> and more generally there is no need for Member States to set up individual authorities for each State but they are at liberty to set up cooperative structures for that purpose.

The legislation gives the Commission extensive implementing powers. These are exercised in accordance with the "comitology" principles.<sup>26</sup> An unusual feature of the Single Sky Committee is the presence of two rather than a single representative for each Member State;<sup>27</sup> this allows States who so wish to delegate a member of both their civil and military ATM communities, thereby making it possible for the military to be closely involved in the elaboration of Community legislation in this area. In addition the association of civilians and military will help Member States to organize structures for coordination at national level, and if necessary arbitrate between these two communities that remain too often separate. The Rules of Procedure of the

23. As the European Aviation Safety Agency develops, consideration will be given to entrusting that organization also with missions in the field of air traffic management.

24. Framework regulation, Art. 4.

25. Service provision regulation, Art. 2(3).

26. Council Decision No. 1999/468 of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission, O.J. 1999, L 184.

27. Framework regulation, Art. 5.

Committee allow for the participation of Eurocontrol because of the specific expertise and pan-European scope of that organization, and of third countries that have agreements with the Community associating them with its aviation policy (currently Norway, Liechtenstein, Iceland and Switzerland).

As a result of these aviation agreements it can be expected that the Single Sky legislation will eventually apply to most of geographical Europe. The current agreements cover all of Western Europe, and further agreements may be expected with Eastern European and North African neighbouring States.<sup>28</sup>

Building on the positive experience of the industry and social group in 2000, the legislation sets up an Industry Consultation Body, composed of high level representatives of ANSPs, airspace users, airports, manufacturers, and professional staff representative bodies, that will advise the Commission on technical aspects of the implementation of the Single Sky.<sup>29</sup> The Commission expects this Body to provide the framework for the development of a consensus among the various stakeholders on the technological choices that need to be made in this field and on the timetable to be followed for the introduction of new equipment and procedures.

The maintenance of monopoly arrangements for air traffic services implies that one cannot rely on market mechanisms to ensure dynamic service provision, customer responsiveness and emphasis on cost containment. Therefore the legislation introduces systematic performance review as an instrument to identify best practices and to organize their dissemination.<sup>30</sup>

## **8. Eurocontrol in the Single European Sky**

While there may have been some concern about the possibility to organize the coexistence of the EU and Eurocontrol, the Single Sky package has found a balanced way to develop synergies between the two poles and to concentrate on what each of these organizations does best. The institutional set-up of the Single European Sky acknowledges the contribution which that

28. Framework Regulation, Art. 7. It should be noted at this point that the geographical scope of the Single Sky legislation as regards EU Member States is not explicitly defined. The guiding principle is that it applies not only to the territory *stricto sensu* of Member States, but also to other areas for which they have the responsibility (essentially high seas areas entrusted to States by ICAO): see Art. 8(1) of the service provision regulation and Art. 1(3) of the airspace regulation (enabling Member States to exclude airspace over the high seas in the Atlantic region from the application of the airspace regulation).

29. Framework regulation, Art. 6 and 10.

30. Framework regulation, Art. 11.

organization can make and sets out a number of mechanisms for that purpose. It was already mentioned that the European Community has decided to join 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 on 22 December 2003 have signed a Memorandum of Cooperation that provides a platform for the contribution by Eurocontrol to the Single European Sky initiative. This Memorandum will lead to the definition of a joint work programme that organizes technical input into future Community legislation. Most of the implementing rules which the Commission will have to adopt, will be based on technical input to be provided by Eurocontrol under a system of "mandates" that define the objective and timetable of these rules.<sup>31</sup> When Eurocontrol accepts these mandates, it 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.

Eurocontrol's broad membership covering essentially all of geographical Europe makes it possible to extend the Single Sky beyond EU Member States and countries that are linked with the EU through aviation agreements. Eurocontrol's work under the mandates will find its way into the air traffic management environment in those countries and, even where it does not have a solid regulatory basis in those countries, contribute to the creation of a seamless pan-European airspace.

## **9. The position of the military**

One of the most challenging aspects of the Single Sky is the involvement of the military in this initiative. Representatives of air forces and military ATM have worked closely with the Commission to develop the Single Sky initiative over the past years, and demonstrated a genuine interest and willingness on their part to play a role in this process. However, it has not been easy to

31. Framework regulation, Art. 8. The mandate mechanism set out in this provision is inspired by the arrangement between the Commission and the CEPT in the field of radio communications: Art. 4 of Decision No 676/2002 of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community, O.J. 2002, L 108.

move from policy discussions to regulatory measures. While the Common Foreign and Security Policy provides some opportunities to develop action on military subjects, it has been difficult to do so in the field of air traffic management, for which there was no consensus within the second pillar to consider it as a priority area for cooperation. On the other hand, the Community has traditionally had difficulties accommodating military subjects within its activities, even though there is no blanket exemption for these matters.<sup>32</sup> The practical problem is one of defining the scope of the legislation as far as the military is concerned, and of developing the right structures for channelling input by the military into the Community process.

First of all, the Single Sky legislation makes it clear that it does not apply to military activities *per se*, defined as “military operations and training”.<sup>33</sup> In the same sense, the objective of the initiative is defined as enhancing safety and efficiency “for general air traffic”,<sup>34</sup> thereby excluding “operational air traffic”, i.e. flights operating in accordance with military air traffic service procedures, as opposed to movements of civil and state aircraft that are carried out in conformity with ICAO procedures. As a “belt and braces” measure the legislation contains a safeguard provision in order to protect essential security and defence policy interests.<sup>35</sup> As a result the military are not constrained in their ability to conduct operations of a military nature. However, that does not imply that military flights and aircraft are outside the scope of the EC legislation; unless they benefit from an explicit exemption, aircraft equipage and flights transiting civil airspace will have to comply with applicable requirements. In addition some military organizations provide services to civilian users and these will have to operate in accordance with rules on service provision.<sup>36</sup>

Therefore it is desirable that the military be full partners in the development of any future Community rules that may affect them as airspace users or as providers of ATM services. Any legislation will need to reflect the requirements and constraints of the military in the same way as those of civilians. This is reflected in their participation in the Single Sky committee referred to above and, more generally, in their involvement in the drafting of implementing rules by the Commission or by Eurocontrol on a mandate from

32. Koutrakos, “Is Article 297 EC a ‘Reserve of Sovereignty’?”, 37 CML Rev. (2000), 1339.

33. Framework regulation, Art. 1(2).

34. *Ibid.*, Art. 1(1).

35. *Ibid.*, Art. 13.

36. Service provision regulation, Art. 7(5).

the Commission. It is understood, however, that it may be necessary to make specific derogations for the military if the application of the normal rules stands 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 creates possibilities for the development of clear and enforceable rules on the sharing of airspace between civil and military and on the interfaces to be developed for that purpose, and for the reinforcement of the harmonized application of this important concept. While it is of course problematic to do so without trespassing at all on military operations and training, both civil and military air traffic management communities are committed to pursuing that approach. In addition the statement made by the Member States on military issues related to the Single European Sky<sup>37</sup> reflects their commitment to work together in areas not covered by the Single Sky legislation, to support initiatives in this area. As a result, we can make progress outside the formal Community context e.g. towards the development of harmonized rules on operational air traffic, joint exercises and possibly joint training areas. This work will no doubt create a common interest that may eventually lead to further-reaching measures, all the more since the draft Treaty establishing a Constitution for Europe integrates the three Treaty “pillars” and will thereby facilitate the accommodation of military subjects within traditional Community policies.

## **10. The consolidation of air navigation services**

The high level group report had identified fragmentation as one of the main causes for the disappointing performance of air traffic management. As a result, the Single Sky legislation sets out a number of mechanisms that are intended to facilitate the restructuring of airspace and of air navigation service providers with a view to creating a more integrated, seamless environment.

Without introducing an actual market environment, the service provision regulation makes it possible for ANSPs to operate outside their home State. The regulation introduces a certification mechanism, to be administered by national supervisory authorities, that ensures compliance with a set of common requirements relating to technical competence, financial strength and

37. See note *supra* 1.

management of ANSPs.<sup>38</sup> As a result the certification mechanism creates a harmonized baseline within the EU that elaborates on the ICAO principles and provides assurances that service providers continue to meet public interest requirements even when the trend towards corporatization and privatization continues.

In addition, ANSPs that benefit from a certificate are entitled to offer their services to other ANSPs, airspace users and airports within the EU.<sup>39</sup> This does not mean that ANSPs will automatically be in a position to provide these services outside their home State; but it creates an option for users of air navigation services to procure these services from a supplier elsewhere in the EU rather than to procure them from a domestic supplier or to supply them by their own means.<sup>40</sup>

As a result, the certification mechanism creates considerable opportunities for the provision of cross-border air navigation services and rationalization of the industry. In order to increase the momentum towards this development, the airspace regulation introduces the concept of “functional airspace block”. This notion refers to the fact that ANSPs should be given responsibility for areas that reflect operational requirements to enable optimum use of airspace, taking into account traffic flows rather than reflecting national boundaries. Member States are now obliged to reconfigure their upper airspaces into these functional airspace blocks.<sup>41</sup> This duty will entail the critical review of existing arrangements for airspace organization and their gradual adjustment to more functional areas, moving away from the current focus on national territories and leading towards the creation of cross-border blocks along the lines of the current Maastricht area.<sup>42</sup> When a cross-border functional airspace block is created, participating Member States have to agree on the designation of one or several air traffic service providers for the area.<sup>43</sup>

The combination of the certification mechanism and of the establishment of functional airspace blocks opens the way towards the consolidation of ser-

38. Service provision regulation, Art. 6. These common requirements will be elaborated in an implementing regulation to be adopted by the Commission.

39. *Ibid.*, Art. 7(6) and (8).

40. It should be kept in mind that for the core air traffic services Member States are entitled to maintain monopoly arrangements. However, they are at liberty to designate a provider from another Member State rather than continuing the historic reliance on the domestic provider. Service provision regulation, Art. 8.

41. Airspace regulation, Art. 5.

42. With a view to stimulating this review process, the Commission has mandated Eurocontrol to carry out a number of activities in order to identify practical issues arising from this complex exercise and to develop common solutions.

43. Service provision regulation, Art. 8(4).

vice provision, whereby larger cross-border areas can be entrusted to one or a combination of service providers to be managed in an integrated manner.<sup>44</sup> This process also creates opportunities for the rationalization of current operational arrangements, in particular through the combination of small air traffic control centres into optimized units. Some of these changes will require personnel moves, and with a view *inter alia* to organizing the mobility of air traffic controllers the Commission made a proposal for the creation of a Community air traffic controller licence.<sup>45</sup>

The shift towards functional airspace blocks was one of the more critical elements of the political discussions. Some Member States viewed the establishment of cross-border control zones as impinging on their sovereignty. The Commission took the view that Member States retain responsibility for their airspaces under the Chicago convention, but that nothing prevents them from exercising this responsibility collectively under the EU umbrella and from agreeing uniform rules. The European Parliament was also keen to define mechanisms to ensure rapid progress towards optimized cross-border airspace arrangements. Eventually a compromise was reached around the confirmation of Member States' sovereignty over their airspace<sup>46</sup> and the establishment of a so-called "bottom up" process, which conditions the creation of functional airspace blocks on the consent of all Member States

44. The Community traditionally has struggled with the need to support the cross-border organization and supervision of network industries. Compare e.g. Art. 13 of the Commission's proposal for a European Parliament and Council Directive on a common framework for general authorizations and individual licences in the field of telecommunications services (O.J. 1996, C 90), which provided for coordination of authorization procedures, with the eventual text of Directive (EC) No 97/13 of the European Parliament and of the Council of 10 April 1997 on a common framework for general authorizations and individual licences in the field of telecommunications services (O.J. 1997, L 117), which merely introduced a "one stop shopping procedure"; and of its replacement Directive (EC) No. 2002/20 of the European Parliament and of the Council of 7 March 2002 on the authorization of electronic communications networks and services, O.J. 2002, L 108, which obliges Member States to comply with previous agreements on the harmonized assignment of radio frequencies at European level without organizing such coordination at EU level. Even in relation to trans-European networks, cross-border coordination is limited to the optional appointment of a "European Coordinator" with the agreement of the States concerned: Art. 17a of the Community guidelines for the development of the trans-European transport network as introduced by decision No. (EC) 884/2004 of the European Parliament and of the Council of 29 April 2004, O.J. 2004, L 167.

45. Proposal for a directive of the European Parliament and of the Council on a Community Air Traffic Controller Licence, COM(2004)473 final. This proposal is intended to harmonize the conditions for access and to exercise this profession, thereby increasing safety standards. The mutual recognition provisions will facilitate mobility of controllers in the context of cross-border air traffic control centres.

46. Framework regulation, Art. 1(2).

concerned,<sup>47</sup> rather than a Community or Eurocontrol organized “top down” approach. On the insistence of Parliament, fearing that this approach will consolidate the status quo, however, the Commission undertook to evaluate the results of the bottom up process within five years and to make proposals for amendment if necessary.<sup>48</sup>

A more seamless environment also requires additional emphasis on the standardization of equipment and procedures, which is achieved by the interoperability regulation.<sup>49</sup> The legislation is based on a set of essential requirements relating in particular to interoperability, safety and performance levels. These essential requirements may be refined by means of binding implementing rules to be adopted by the Commission; beyond this the regulation follows the traditional “new approach” relying on voluntary standardization initiatives.

## **11. Modernization of air traffic management systems in the Single European Sky**

The implementing rules referred to above may also be used to facilitate the coordinated introduction of new technologies. The Commission has the possibility to adopt requirements obliging manufacturers of equipment, airspace users, airports and air navigation service providers to comply with certain indications as to which type of equipment and procedures they should use, as well as to lay down a timeframe for compliance.<sup>50</sup> On this basis the Commission may prescribe the use of specific technologies and mandate equipage of aircraft and air traffic control centres throughout the Community. This power is particularly significant in the light of the traditional difficulty to agree on technological choices, which considerably delayed the introduction of new equipment and stood in the way of a uniform technical environment.

Obviously the Commission is not in a comfortable position to make these choices, even where it is supported by Eurocontrol under the mandate system. Therefore it intends to rely on the consensus which should emerge from discussions within the Industry Consultation Body. Manufacturers have understood the opportunities resulting from this approach and are currently

47. Airspace regulation, Art. 5(4) and (6).

48. Commission statement on the process for the establishment of functional airspace blocks, see *supra* note 1.

49. See *supra* note 1.

50. Interoperability regulation, Art. 3(3)(e).

preparing a major initiative to organize the synchronized development and introduction of new technology under a major project (“SESAME”), to be funded by the EC’s Trans European network programme. Obviously this project will require a strong governance structure, also involving Eurocontrol, so as to ensure that all stakeholders are associated and that the project maintains consistency with ICAO and European standards.

## **12. Future perspectives**

Air traffic management is a new policy area for the EU, and the Single European Sky legislation is an excellent basis for starting work in this field. Nevertheless it is only a first step and adjustments no doubt will have to be made in the light of experience. A number of items are already identified in the legislation to be revisited in a few years’ time: the application of the airspace regulation to lower airspace is a priority as there is probably even greater need for coordination of airspace use for lower than for upper airspace;<sup>51</sup> and it was already mentioned that the Commission will have to evaluate the process for the creation of functional airspace blocks in order to assess whether the “bottom up” approach produces sufficient results. The provisions on Flexible Use of Airspace and the Member States’ Statement on military issues open the way for closer involvement of the military in the Single Sky initiative, and as cooperation in this field intensifies, there may be scope for additional actions in this area.

On the institutional level perhaps the greatest challenge will be for Member States to set up effective national supervisory authorities. For many of them it will require considerable effort to build an effective structure at arms’ length from the service provider. With the development of cross-border services it may perhaps be preferable to pursue the development of supervisory authorities on a regional level, either to reflect the structure of functional airspace blocks or in connection with the eventual broadening of the competences of the European Aviation Safety Authority to the field of air traffic services.<sup>52</sup>

No doubt the development of the EU’s regulatory competences and the progress of air navigation service providers towards stronger cross-border or-

51. Airspace regulation, Art. 10.

52. Regulation No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, O.J. 2002, L 240, recital 23.

ganizations will entail some consequences for Eurocontrol. In particular the perspective of an involvement of the European Aviation Safety Agency in this field may lead to a reflection of the missions of Eurocontrol as an inter-governmental organization.

Perhaps one area on which there is need for further development of the legislation relates to the rules on air navigation charges.<sup>53</sup> The current provisions to a large extent mirror the ICAO and Eurocontrol approaches that are based on cost recovery. As a basis for financing air navigation services this mechanism is increasingly criticized because, in a monopoly context, it does not in itself create any incentives for cost reduction and because it shifts the burden of traffic downturns entirely to airspace users (in times of crisis, airlines end up paying relatively more for the services they receive when they can least afford it). While adjustments to pure cost recovery have been developed, alternative mechanisms deserve consideration.

Finally, air traffic management, like other aviation subjects, is a quintessentially global activity. The EU will need to embed its action in this worldwide framework by active participation in the ICAO process, and to coordinate it with the main partner third countries.

Thanks in particular to careful preparation, broad interest by stakeholders, high level political support and transparent working methods, the Single European Sky initiative has made rapid progress. In the end, however, the initiative will be judged on its success in improving the performance of air traffic management for the benefit of airspace users and the travelling public.

53. Service provision regulation, Arts. 14–16.