

## Basic information

**2005/0235(CNS)**

CNS - Consultation procedure  
Regulation

Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR

Amended by [2008/0159\(CNS\)](#)

Amended by [2013/0237\(NLE\)](#)

### Subject

3.20.01 Air transport and air freight

3.20.01.01 Air safety



3.50.20 Scientific and technological cooperation and agreements

Procedure completed

## Key players

European Parliament	<b>Committee responsible</b>		<b>Rapporteur</b>	<b>Appointed</b>	
	<b>ITRE</b> Industry, Research and Energy		HENNICOT-SCHOEPGES Erna (PPE-DE)	26/01/2006	
	<b>Committee for opinion</b>		<b>Rapporteur for opinion</b>	<b>Appointed</b>	
	<b>BUDG</b> Budgets		The committee decided not to give an opinion.		
	<b>TRAN</b> Transport and Tourism (Associated committee)		BRADBOURN Philip (PPE-DE)	06/02/2006	
	<b>Committee for opinion on the legal basis</b>		<b>Rapporteur for opinion</b>	<b>Appointed</b>	
	<b>JURI</b> Legal Affairs		WALLIS Diana (ALDE)	12/12/2005	
	Council of the European Union	<b>Council configuration</b>		<b>Meetings</b>	<b>Date</b>
		Economic and Financial Affairs ECOFIN		2787	2007-02-27
		Transport, Telecommunications and Energy		2695	2005-12-01
Transport, Telecommunications and Energy		2721	2006-03-27		
Transport, Telecommunications and Energy		2735	2006-06-08		
European Commission	<b>Commission DG</b>		<b>Commissioner</b>		

## Key events


Date	Event	Reference	Summary
25/11/2005	Legislative proposal published	COM(2005)0602 	Summary
01/12/2005	Debate in Council		
17/01/2006	Committee referral announced in Parliament		
27/03/2006	Debate in Council		Summary
18/05/2006	Referral to associated committees announced in Parliament		
08/06/2006	Debate in Council		Summary
23/10/2006	Vote in committee		Summary
27/10/2006	Committee report tabled for plenary, 1st reading/single reading	A6-0382/2006	
14/11/2006	Decision by Parliament	T6-0484/2006	Summary
14/11/2006	Results of vote in Parliament		
27/02/2007	Act adopted by Council after consultation of Parliament		
27/02/2007	End of procedure in Parliament		
02/03/2007	Final act published in Official Journal		

## Technical information

Procedure reference	2005/0235(CNS)
Procedure type	CNS - Consultation procedure
Procedure subtype	Legislation
Legislative instrument	Regulation
Amendments and repeals	Amended by <a href="#">2008/0159(CNS)</a> Amended by <a href="#">2013/0237(NLE)</a>
Legal basis	EC Treaty (after Amsterdam) EC 171
Stage reached in procedure	Procedure completed
Committee dossier	ITRE/6/32755







## Documentation gateway

## European Parliament

Document type	Committee	Reference	Date	Summary
Committee opinion		PE372.165	24/04/2006	
Committee draft report		PE374.009	25/07/2006	

Amendments tabled in committee		<a href="#">PE378.647</a>	25/09/2006	
Committee report tabled for plenary, 1st reading/single reading		<a href="#">A6-0382/2006</a>	27/10/2006	
Text adopted by Parliament, 1st reading/single reading		<a href="#">T6-0484/2006</a>	14/11/2006	<a href="#">Summary</a>

#### European Commission

Document type	Reference	Date	Summary
Legislative proposal	<a href="#">COM(2005)0602</a> 	25/11/2005	<a href="#">Summary</a>
Document attached to the procedure	<a href="#">SEC(2005)1532</a> 	25/11/2005	
Commission response to text adopted in plenary	<a href="#">SP(2007)0054</a>	11/01/2007	
Follow-up document	<a href="#">COM(2007)0103</a> 	15/03/2007	<a href="#">Summary</a>
Follow-up document	<a href="#">COM(2011)0014</a> 	24/01/2011	<a href="#">Summary</a>
Follow-up document	<a href="#">SWD(2017)0338</a> 	06/10/2017	
Follow-up document	<a href="#">SWD(2017)0339</a> 	06/10/2017	

#### Other institutions and bodies

Institution/body	Document type	Reference	Date	Summary
EESC	Economic and Social Committee: opinion, report	<a href="#">CES0975/2006</a>	06/07/2006	

#### Additional information

Source	Document	Date
European Commission	<a href="#">EUR-Lex</a>	

#### Final act

<a href="#">Regulation 2007/0219</a> <a href="#">OJ L 064 02.03.2007, p. 0001</a>	<a href="#">Summary</a>
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## Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR

The Council took note of a progress report presented by the Presidency on a regulation on the establishment of a joint undertaking to develop a new generation European air traffic management system (SESAR = single European sky air traffic management and research). It invited the Permanent Representatives Committee to prepare the dossier with a view to reaching a general approach at its meeting in June.

SESAR is the technological part of the "single European sky" initiative, launched in 2004 to reform the organisation of air traffic control. It will introduce new communication, control and computing technologies between the ground and aircraft which will optimise the work of air-traffic controllers and pilots. SESAR is aimed at boosting the safety and environmental performance of air transport and at ensuring that Europe remains at the forefront of the world aviation market. The Commission adopted its communication and a proposal for the regulation in November 2005.

## **Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR**

2005/0235(CNS) - 08/06/2006

The Council reached a general approach on a proposal for a regulation on the establishment of a Joint Undertaking to develop the new generation European air traffic management system (SESAR – single European sky air traffic management and research).

The EU and Eurocontrol will be funding members of the Joint Undertaking but membership will also be open to the European Investment bank and public and private companies including those of third countries that contribute in funding the project.

## **Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR**

2005/0235(CNS) - 14/11/2006 - Text adopted by Parliament, 1st reading/single reading

The European Parliament adopted a resolution drafted by Erna **HENNICOT-SCHOEPGES** (EPP-ED, LU) making several amendments to the Commission's proposal on the Joint Undertaking for the European air traffic management system (SESAR). It clarified the timetable and three separate phases in terms of time period and content. Further proposed amendments deal with issues like safeguards for financial participation by the private sector, potential conflicts of interest, the Statutes of the Joint Undertaking and their review, the procedure for the accession of new members and voting rights on the administrative board. Parliament also added amendments on the role of the European Parliament.

The principal amendments were as follows:

- a new paragraph was added to Article 1 with the aim of clearly defining the three phases of SESAR (a "definition phase", a "development phase" and a "deployment phase") in terms of time-scale and of what should be achieved. Each phase should lay down the main elements of its content and for the deployment phase the legal provisions should be stated in a separate proposal.

- the development phase will start on 1 January 2008, once the Council has endorsed the ATM Master Plan, and end on 31 December 2013. The deployment phase will start on 1 January 2014 and end on 31 December 2020 and will comprise large-scale production and implementation of the new air traffic management infrastructure;

- Parliament introduced a review clause, which it deemed necessary judging from the experience of the GALILEO Joint Undertaking. The scope, governance, funding and duration of the Joint Undertaking will be reviewed by the Council, in accordance with the development of the project and the ATM Master Plan. A new clause stated that, if the Commission considers it necessary or if either the European Parliament or the Council requests, under the comitology procedure, the revision of the Regulation or of the statutes of the Joint Undertaking, the Commission shall submit the appropriate legal proposal in accordance with the procedure laid down by the Treaty.

- whereas the Commission had proposed that the seat of the Joint Undertaking should be located in Brussels, MEPs said that the decision on the seat should be taken by the European Council, in accordance with the principles underlying the decision on the seat of Agencies as set out in Council Regulation No 58/2003;

- Parliament deleted the provision stating that the Joint Undertaking shall be recognised as an international organisation;

- a new Article 5a was introduced stipulating that the accession of new members to the Joint Undertaking, including members from non-EU countries, should be subject to the approval of Parliament and the Council;

- Parliament and the Council should be kept fully informed of the results and working methods of the Joint Undertaking;

- Parliament should have observer status on the Administrative Board. It also proposed a better balance of representation and weighting of votes within the Board, linked to the financial contribution of each representative;

- the report introduced a number of legal provisions adopted by Parliament with regard to the proposed regulation on the term of office of the Executive Director of the European GNSS Supervisory Authority (see CNS/2005/0084): the term of office should be five years, renewable for a maximum period of three years;

- the Executive Director will be appointed from a list of at least three candidates proposed by the Commission and Eurocontrol, based on the result of the public recruitment competition and after hearing the opinion of the representative appointed by the European Parliament. The Administrative Board will take its decision by a majority of three-quarters of its members.
- Parliament introduced a new provision in the Annex with a view to clarifying the concept of conflict of interest.
- the Annex also contains a new provision on the criteria that the Administrative Board must take into account in proposing whether to authorise negotiations on accession with a public or private undertaking or body, given the agreement referred to in the third indent of Article 1 (2) of the Annex;
- the Commission should report to the European Parliament and the Council every three years on the application of the Regulation and, if appropriate, should propose amendments to it.

## Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR

2005/0235(CNS) - 27/02/2007 - Final act

PURPOSE: to establish a Joint Undertaking to develop SESAR.

LEGISLATIVE ACT: Council Regulation (EC) No 219/2007 on the establishment of a joint Undertaking to develop the new generation European air traffic management system (SESAR).

CONTENT: in 2004 the EU adopted four legislative acts to create the single European Sky. They consist of one framework Regulation and three implementing Regulations on:

- the provision of air navigation service in the single European sky (service provision Regulation);
- the organisation and use of airspace in the single European sky (airspace Regulation); and
- the inter-operability European Air Traffic Management network (inter-operability Regulation).

The purpose of this Regulation is to establish a fourth component: the modernisation of air traffic management in Europe. The modernisation of air traffic management in Europe will be realised through the SESAR project. In summary, this Regulation deals with the technological element of the single European sky.

The primary aim of the SESAR project will be to offer the Community, by 2020, a high-performance air traffic control infrastructure capable of delivering safe and environmentally friendly air transport. In other activities, SESAR will integrate and co-ordinate research and development activities in order to avoid duplication.

SESAR is defined by three phases:

- Definition;
- Development;
- Deployment.

**Definition (2005-2008):** The definition phase, which began in October 2005, defines the different technological steps, SESAR's modernisation priorities and the operational plans for implementing the project. It will be carried out under the responsibility of Eurocontrol and by a consortium of undertakings. At the end of the definition phase Eurocontrol and industry will present the "European Air Traffic Management Master Plan" or ATM Master Plan, the purpose of which is to define the work programme for the following phase. The Joint Undertaking (see below) will be set up before the end of the definition phase.

**Development (2008-2013):** The purpose of the development phase will be to develop new equipments, systems and standards. Eventually these will allow for converged technologies and a fully interoperable Air Traffic Management system in Europe.

**Deployment (2014-2020):** The deployment phase will be characterised by the large scale production and implementation of the new air traffic management infrastructure – which will be composed of fully harmonised and interoperable components.

In order to rationalise the activities (e.g. financing, technical expertise etc) the Regulation sets up a Joint Undertaking, based in Brussels. The Joint Undertaking will cease to exist after eight years - upon completion of the ATM Mater Plan. Completion of the ATM Master Plan should coincide with the completion of the definition phase.

The main task of the Joint Undertaking (the statutes of which are set out in Annex to the Regulation) will be to manage the research, development and validation activities of the SESAR project. It will do so by combing public and private sector funding and by relying on Eurocontrol's experience and expertise. Its aim will be to ensure the modernisation of the European air traffic management system by co-ordinating all relevant research and development efforts in the Community.

In terms of Community funding, the research component will be funded mostly through the 7<sup>th</sup> Framework programme although additional funding will stem from the Trans-European Network programme. Specific funding for the Joint Undertaking, on the other hand, will be limited to the development phase only and be covered by the current financial framework (2007-2013). After 2013 all Community contributions to the Joint Undertaking will cease to exist. Public funds will also be supplemented by financial contributions from industry.

The Joint Undertaking will be a non-profit entity. Public financing for the definition and development phases of the SESAR project are substantial and investments in a new generation of air traffic management will be made by the Member States. As a result the Member States (including bodies designated by the Member States), the EU and/or Eurocontrol will be allowed access free of charge, for non-commercial purposes, to the knowledge resulting from the project and be allowed to use this knowledge for their own purposes – including calls for public tender.

ENTRY INTO FORCE: 3 March 2007.

## Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR

2005/0235(CNS) - 24/01/2011 - Follow-up document

In accordance with Regulation (EC) 219/2007, the Commission presents a report evaluating the implementation of the Regulation, the results obtained by the SESAR Joint Undertaking (SJU) and its working methods, as well as the general financial situation of the Joint Undertaking. The evaluation was launched in March 2010 and is the first evaluation of the SJU. The evaluation covers the period from 27 February 2007 until the end of 2009. To recall, SESAR (The Single European Sky Air Traffic Management Research) Programme is the technological pillar of the Single European Sky initiative. It will deploy a new generation of air traffic management (ATM) technologies.

SESAR is composed of three phases: the definition phase (2005-2008); the development phase (2008-2013); and the deployment phase (2013-2020). The SESAR Programme is now in its development phase managed by the SJU, the first ATM public-private partnership set up as an EU body. The SJU's mission is to ensure the modernisation of the European ATM system by coordinating and concentrating all the relevant research in the EU, and execute the ATM Master Plan. The SJU develops the new generation of ATM technologies and procedures that will constitute SES technologies & procedures.

**Results of the evaluations:** the overall conclusion of the first intermediate evaluations is that the SJU performed well during the reference period in terms of setting up and developing its organisation as well as conducting its designated tasks. In general, SJU stakeholders are satisfied with its performance.

**Implementation of the Regulation:** the provisions of the SJU Regulation were appropriately implemented during the reference period, although with some delay in some cases. It is important to note that the amendment of the SJU Regulation, transforming the SJU into an EU body, slowed down the setup process, because of the need to adopt new financial rules, new staff contracts and accounting principles required for EU bodies.

**Results obtained by the SJU and its working methods:** in general, the SJU has implemented the planned activities and achieved the expected results.

The general level of satisfaction of stakeholders with the SJU's work is high. Some of the key achievements during the reference period are:

- gathering and committing stakeholders on a common R&D programme;
- developing the work programme that supports rationalisation and consistency, avoiding gaps and overlapping;
- developing the required methods and tools for programme implementation;
- initiating several projects within a short timeframe without compromising on quality requirements and coordination between work packages and projects.

The **challenges facing the SJU** relate to maintaining its capacity to coordinate all work-packages and projects and validate the deliverables. There is a common awareness amongst SJU members of the importance of an **efficient risk management framework** that fully involves them in its establishment. An "Enterprise Risk Management Framework" will be introduced in 2010. The communication processes and instruments should be further developed to meet the differentiated communication needs of the founding members, SJU members and other stakeholders, members and non-members of the Administrative Board.

**General financial situation:** the SJU has implemented an appropriate framework complying with the SJU's financial rules and the principle of sound financial management. The Court of Auditors recently commented on the SJU financial rules highlighting some areas to be strengthened. A number of actions are being taken by SJU to implement these improvements. All SJU members have formalised their financial commitments through appropriate agreements with the SJU:

- the Commission contributes 700 million EUR, entirely in cash;
- Eurocontrol provides 700 million EUR in contribution, of which 535 million EUR in kind and 165 million EUR in cash;
- the other members have committed a global amount of 537 million EUR of which 5% is provided in cash.

**The Master Plan:** this is the commonly agreed roadmap executed by the SJU, for shifting to a new ATM operational concept to support SES objectives. The Master plan is a living document that covers both the development and the deployment phases of SESAR. It steers the work programme for the development phase and, similarly, the Master plan will be a key governance tool of the deployment phase. The main deliverable of the SESAR definition phase is the SESAR Master Plan that integrates areas of performance improvements, elements of the new ATM concept, cost benefit analysis and lays out the roadmap for the implementation of the operational improvements into a coherent work programme. In line with SJU Regulation, the SESAR Master Plan has been transferred from Eurocontrol to the SJU on 7.11.2008. On 30.03.2009, the Council endorsed the SESAR Master Plan as the initial version of the Master plan providing the roadmap for the development and deployment phases of the SESAR programme. The Council also confirmed that ATM modernisation and the proposed timelines for its achievement remain a high political priority for the EU. The SJU Administrative Board adopted the Master plan on 12.06.2009.

**Development phase:** the SJU's research and development activities were launched on 3.06.2009. One year later, 85% of the 300 projects have been launched with about 160 projects having started actual R&D work. For the most advanced projects the first deliverables have already been submitted to the SJU. Currently, through the SJU, 1500 experts from 16 members in 17 different States are working to develop and validate the future European ATM system.

Today's priority is achieving quick benefits from early results on information management, route assignment and guidance as well as on the airborne side of trajectory management. The SJU is expected to deliver the first validated technologies by early 2012.

**Deployment phase:** the Master plan currently defines 3 implementation packages which build upon each other. Implementation Package I (IP1) contains the basic validated functionalities and technologies of the SESAR operational concept that do not require further research and are available to be deployed. At this stage of the programme only IP1 deployment is being performed by different ATM actors. All enablers for IP1 operational improvements have been validated and are either ready for deployment or already deployed. IP1 is a key deployment issue as any delay in the implementation of short term initiatives is a major risk for the SESAR programme. The Commission has set up an IP1 Steering Group which will make recommendations to reduce any gaps between the deployment plan, as laid down in the Master plan, and the reality.

## **Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR**

2005/0235(CNS) - 25/11/2005 - Legislative proposal

**PURPOSE:** to develop a new generation of European air traffic management through the creation of a Joint Undertaking, SESAR.

**PROPOSED ACT:** Council Regulation.

**CONTENT:** projections for the development of air traffic in Europe show that it should more than double in the next 20 years, or even triple in some regions, particularly in Central Europe. Air transport contributes EUR 220 billion to European gross domestic product and employs 3.1 million people. Developing an efficient, fully-integrated and inter-operable air transport infrastructure is therefore becoming a major European priority. One of the key areas in which Europe needs to maintain safety standards as well as innovation relates to air traffic management. The current air management structure is characterised by out-dated equipment based on varying, national norms. This has an impact not only on the EU's ability to compete with its major industrial competitors such as the United States, but in the long-term could impact on safety issues relating to air transport. Further, the cost of continuing with the *status quo*, would be significant. The cost of the European air traffic control system currently runs at about EUR 7 billion per year. If the predicted doubling or even tripling of air traffic should be realised then, under a simple trend-based scenario, air traffic control could cost between EUR 14 billion and EUR 18 billion per year in 2020.

In order to address the challenges relating to air traffic management, the Commission is presenting this Council Regulation, the purpose of which is to set up a Joint Undertaking to be known as SESAR, based on Art 171 of the TEU. The specific objective of SESAR is to develop the new generation of European air traffic management system. Under this mandate, it will be responsible for developing the kind of technologies needed to establish a fully functioning European air traffic management system. At the same time it will be responsible for developing methods of organisation and industrial components that are capable of ensuring the safety and fluidity of air transport in the next 20 years. Given the scale and the ambition of the task, the Commission proposes that SESAR be compared to other major industrial projects with high technological value such as GALILEO (satellite radio-navigation) and ITER (nuclear fusion). As with GALILEO and ITER, SESAR will combine research efforts, as well as acting as a catalyst for Europe's innovation capacity.

A further feature of SESAR will be its role in making European air traffic control infrastructure the most modern and high-performance infrastructure in the world. In addition, SESAR will allow for the pooling and rationalisation of a modernised air traffic control system, which upstream, creates economies of scale and downstream, brings significant benefits in terms of the operation and maintenance of these systems. The technological lead conferred by SESAR on the European aeronautics industry will put it in a position of strength on export markets. It will also allow European aircraft to compete with their foreign competitors. Nor, must the impact of SESAR on safety be underestimated. The current fragmentation of systems and operational procedures combined with ageing technologies are not sustainable. A modern, safe, standardised and reliable air traffic control infrastructure will bring significant benefits in terms of the safety of air transport. An additional advantage is the positive impact the deployment of SESAR will have on the environment. It has been estimated that the savings in terms of the reduction of greenhouse gas emissions could be between 4% and 6% - even though this needs to be set off against the expected significant increase in the number of flights.

Having carefully considered all the available options, the Commission is proposing that SESAR be set up as a Joint Undertaking (please refer to accompanying document). The establishment of SESAR as a Joint Undertaking will give it a flexible and reactive structure with a legal personality so

that it can conclude the contracts required to develop the European air traffic control system. A Joint Undertaking is in line with the Lisbon Agenda in that it allows for public and private resources to be combined for a joint objective, the idea being that the programme will gradually and irrevocably be taken over by industry.

In order to bring the project forward, the creation and establishment of SESAR is foreseen in a number of stages. The first being the **Definition Phase 2005-2007**. During this phase a plan for the modernisation of air traffic management in Europe will be drawn up. The different technological steps needed will be defined as will the priorities for modernisation and the timetable for operational implementation. Significantly, the Joint Undertaking will be set up before the end of the definition phase so that it can appropriate the modernisation plan being drawn up and prepare the resulting work programme. The following step will be the creation of the **Implementation Phase 2008-2020**, which will consist of two successive stages, namely **Development 2008-2013** and **Deployment 2014- 2020**. Under the deployment stage the new system will be installed with a widespread implementation of the related functions.

The splitting up of the project into phases is significant in that it has an impact on the funding of SESAR. For example, during the Definition Phase, funding will stem from both the EU (EUR 30 million) and from Eurocontrol (EUR 30 million). During the Development Phase funding will be split equally between the Community, Eurocontrol and Industry – or in other words each will contribute EUR 100 million between 2008-2013. Lastly, during the Deployment Phase SESAR should be fully funded through industry, at which stage the Joint Undertaking will be required to transform into an essentially private body. As far as the Community funding is concerned it will be sourced from both the EU's RT&D Framework Programmes as well as from the trans-European networks programmes. After the Definition Phase, however, the Community's financial contribution is strictly limited to the duration of the new financial perspective, 2007-2013.

To conclude, a number of studies have clearly shown that the only solution in Europe for developing the new generation of air traffic control systems is to pool energies in a major industrial project. SESAR will represent real progress in terms of efficiency by making technologies available, which will optimise the capacities of machines and people. In addition, SESAR will allow for the extensive standardisation and inter-operability of the systems installed. On a final point, SESAR will greatly increase the safety of air transport, which is currently threatened by the obsolescence of equipment and the lack of standardisation of air traffic control in Europe.

## Air transport: Joint Undertaking to develop the new generation European air traffic management system SESAR

2005/0235(CNS) - 15/03/2007 - Follow-up document

In June 2006 the Council adopted conclusions that stressed the European importance of the SESAR project and requested the Commission to begin the preparatory work needed in order to set up the SESAR Joint Undertaking. It also asked the Commission to take stock of the SESAR project, and in particular, progress made within the definition phase. The purpose of this Communication is to report to both the Council and the European Parliament on the state of progress with SESAR and industry's participation in the project during the development phase. SESAR forms an essential component of the Single European Sky and is considered the only successful way of bringing about the technological revolution needed to complete the Single European Sky.

To recall, the SESAR project will be established according to different phases:

**Definition Phase 2005-2007.** During this phase a plan for the modernisation of air traffic management in Europe will be drawn up. The Joint Undertaking is to be established before the end of the definition phase. Funding will be split evenly between the EU and Eurocontrol.

**Implementation Phase 2008-2020.** This phase will consist of two successive stages.

Firstly, **Development 2008-2013.** This phase will set the ground for the deployment stage the new system, the purpose being to install and implement the related functions of SESAR. Funding during development will be split equally between the Community, Eurocontrol and Industry.

Secondly, **Deployment 2014- 2020.** Funding during the deployment of SESAR will stem exclusively from industry. The Joint Undertaking is expected to transform itself into an essentially private body.

**Progress with SESAR Definition Phase:** Responsibility for the Definition Phase rests largely with Eurocontrol, the European Organisation for the Safety of Air Navigation, although it is being part financed by the European Community (EUR 30 million from the budget for trans-European transport networks). In November 2005 a contract was signed with a consortium of thirty companies from the European aviation community for work involved in the definition phase. Staff representatives and military authorities are involved in the work of the consortium as are non-European companies such as Honeywell, Boeing and Rockwell, all of whom have a particular interest in the definition phase of SESAR.

The definition phase has been divided into six milestones. For each milestone the consortium holds a seminar the purpose of which is to present its work to the entire aviation community. So far two reports have been published dealing with societal, economic and operation issues of aviation in Europe and a precise definition of performance criteria for the development of the new generation of control systems. In this later report, industry set ambitious targets for the design of the new systems – namely a three-fold increase in capacity, a halving of unit costs and an increase in safety by a factor of 10. After one year of existence and following a start-up phase over 600 people are involved in the definition phase. The Commission notes that all reports were delivered on schedule.

**Elements of the SESAR operational concept:** The new SESAR structure will be structured around the following elements: Operations based on better forecasting (e.g. collaborative decision-making procedures; better sharing of meteorological information; merging of the different "trajectory" representations into a single one established by on-board computers; and effective monitoring of the scheduled "trajectory"); Establishment of an efficient telecommunications network: (e.g. replace the current system of radio contact with an efficient network of ground-to-air links); Optimisation of

the use of airports (e.g. to promote a number of operational technologies and procedure which make it possible to manage airport movements more efficiently); and the Increased automation of air traffic control tools to assist operators (e.g. to use automated tools and systems to produce all the trajectory negotiation planning or for cockpit tools for the visualisation of surrounding traffic).

**Preparatory activities for the establishment of the SESAR Joint Undertaking:** The Commission has made initial contacts with a number of potential members and has started preliminary discussion with Eurocontrol on the establishment of the Joint Undertaking. Eurocontrol is a founder member and has agreed to a provisional financial contribution of EUR 700 million. As far as industry is concerned, the Commission has received twelve expressions of interests from industry in becoming a member of the SESAR Joint Undertaking. The cumulative investment in SESAR envisaged by industry amounts to a preliminary total of EUR 900 million to EUR 1 300 million – broadly corresponding to the expected contribution. In addition, a number of non-European parties have expressed an interest in joining SESAR.

**Allocation of intellectual property rights:** The property rights arising from the results of the development phase will belong to the Joint Undertaking. Each member will be entitled to access these results exclusively for research, development and validation activities. Given the public-sector investment involved, rights of access to the development phase may be granted to the Member States for strictly non-commercial purposes.

To conclude its report, the Commission remarks: it can be asserted that, thanks to SESAR, the process of rationalisation of air traffic control research has begun. SESAR is arousing much enthusiasm and a strong commitment within the European aviation community. The definition phase, which has been entrusted to Eurocontrol and an industrial consortium, is meeting the objectives assigned to it and is yielding promising results.