

# ARCHIVED REPORT

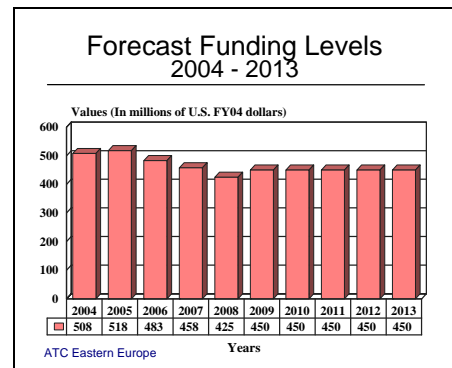
For data and forecasts on current programs please visit

[www.forecastinternational.com](http://www.forecastinternational.com) or call +1 203.426.0800

## ATC - Eastern Europe - Archived 8/2005

### Outlook

- Forecast International projects Eastern European governments will spend some US\$4.64 billion on air traffic control modernization over the next ten years
- Look for the European Commission to reform the architecture of European air traffic control by creating a single European sky



### Orientation

**Description.** Efforts to modernize Eastern European air traffic control (ATC) capabilities.

**Sponsor.** Various

**Contractors.** Various

**Status.** Ongoing development and implementation.

**Total Produced.** The goal is to develop a modern, unified air traffic control system across Eastern European nations.

**Application.** Airspace planning, operation, and control for Eastern European nations.

**Price Range.** The scope of the effort is so large as to prohibit breakdown of equipment pricing.

### Technical Data

**Characteristics.** The following nations compose the Eastern European air traffic control region covered in this report: Albania, Austria, Belorussia, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, the Former Yugoslav Republic of Macedonia (FYROM), Greece, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, the Slovak Republic (Slovakia), Slovenia, Turkey, Ukraine, and Yugoslavia.

This geographic region consists of moderately-sized countries that share common boundaries and exchange large volumes of air traffic. Equipment capacity limitations, political divisions, and language differences contribute to the delays in this region.

No central air traffic control organization exists to oversee air traffic management for the countries of Eastern Europe. That said, the following Eastern European nations are members of the European Organisation for the Safety of Air Navigation, (EUROCONTROL): Austria, Bulgaria, Croatia, the Czech Republic, Greece, Hungary, Macedonia, Moldova, Romania, the Slovak Republic (Slovakia), Slovenia, and Turkey. On a practical basis, countries have been sharing air traffic information. EUROCONTROL is the umbrella organization that oversees air traffic management in Western Europe.

### Program Review

**Background.** In 1997, the United States Air Force announced it was actively helping many Eastern

European nations to develop air sovereignty operations centers (ASOCs). These centers would combine civil

and military air operations by providing a single national air picture. While ASOC is primarily a military system, the civil aspect was incorporated with the signing of the Partnership for Peace program. Four nations (Poland, Hungary, the Czech Republic, and Slovakia) received immediate offers of U.S. assistance to implement an ASOC system, with the offer later extended to Romania, Albania, and Slovenia.

In May 1997, Lockheed Martin was awarded a contract to provide one ASOC system, consisting of 10 workstations and two processors, to the Czech Republic, Slovakia, Poland, Romania, and Hungary. All systems became operational by late 1998.

In May 1999, Lockheed Martin received a US\$5.4 million contract for the provision of four ASOCs to Estonia, Latvia, and Lithuania. Later in 1999, Lockheed received a second contract worth US\$94 million. Under the agreement, Lockheed provides five FPS-117E(1)T radars and associated display consoles, five monopulse secondary surveillance radars, and three operations centers, including large screen displays and airspace management consoles, to the Croatian government.

In March 2000, Moldova became the 29th member state of EUROCONTROL. In December 2001, the Ukrainian Minister of Transport signed the "Protocol of the revised EUROCONTROL Convention," following the unanimous decision of the Commission (the organization's highest political body) to accept Ukraine's application for accession to EUROCONTROL.

In April 2003, the European Commission and EUROCONTROL (in partnership with the Joint Aviation Authorities) signed a grant agreement for a project to strengthen the aviation sector in southeastern Europe, in terms of air traffic navigation and air safety.

Funds drawn from the European Commission's Community Assistance for Reconstruction, Development and Stabilisation (CARDS) Programme in the Balkans will finance the project.

The project will provide support to the Civil Aviation Authorities and Air Traffic Services providers in Albania, Bosnia and Herzegovina, Croatia, Serbia and Montenegro, and FYROM (Macedonia). Phase I of the project will conduct a needs assessment to identify the potential sub-projects and actions required to improve air traffic management and aviation safety in the region.

**Recent Developments.** In January 2004, Bulgaria's Air Traffic Services Authority (ATSA) awarded Raytheon Company a contract to upgrade Bulgaria's FIRST Air Traffic Control (ATC) radar training simulator (manufactured by Raytheon) to the FIRSTplus Integrated ATC radar and 2-D tower simulator (also manufactured by Raytheon). The FIRSTplus ATC training system will include nine training positions. The system will also provide advanced ATC simulation for radar, 2-D tower application, and ground and advanced airport surface detection equipment training.

Under the upgrade contract, Raytheon will provide hardware, software, training, and support to upgrade and integrate Bulgaria ATSA's current simulator. Bulgaria purchased Raytheon's FIRST ATC radar training simulator in 1994.

In March 2004, AMS successfully completed the Site Acceptance Testing of a new air traffic management system for the Common National Air Traffic Control Centre (CNATCC) of Sofia, Bulgaria. In May 2004, the system became operational.

## Funding

Eastern European nations, along with the European Union (EU) banking system, are funding ATC modernization efforts in Eastern Europe.

## Recent Contracts

<u>Contractors</u>	<u>Award (US\$ millions)</u>	<u>Date/Description</u>
Lockheed Martin	32.0	Jan 2003 – The Albanian Directorate General of Civil Aviation (DGCA) awards Lockheed Martin a US\$32 million contract to modernize all components of the Albania National Airspace System.
Unknown	5.8	Ap 2003 – The European Commission and EUROCONTROL award US\$5,848,500 to civil aviation authorities and air navigation services providers of Albania, Bosnia and Herzegovina, Croatia, Serbia and Montenegro, and the Former Yugoslav Republic of Macedonia to modernize air traffic management in the region.

<u>Contractors</u>	<u>Award (US\$ millions)</u>	<u>Date/Description</u>
Raytheon	Unknown	Jan 2004 – Bulgaria’s Air Traffic Services Authority (ATSA) awards Raytheon a contract to upgrade Bulgaria’s FIRST Air Traffic Control (ATC) simulator to the FIRSTplus Integrated ATC radar and 2-D tower simulator.

## Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	1970s	Initial U.S. and French equipment sales to the region
	1990	Poland and Hungary join ECAC/EUROCONTROL
Jul	1992	Final report of the Task Force on Airspace and Management published
	1993	Danish and Hungarian governments agree on merger of civilian and military airspace
	1994	Seven Eastern European nations set one-year agenda for decision on establishing centralized control center
Jun	1996	Lithuania, Latvia, and Estonia accept U.S. offer of assistance to upgrade their ATC systems
	1997	Spain, Slovakia, and Croatia join EUROCONTROL
	1998	Hungary’s ASOC air traffic center becomes operational
	1999	Lockheed Martin receives Eastern European ATC contracts worth US\$99.4 million
Mar	2000	Moldova joins EUROCONTROL as 29th member
Dec	2001	Ukrainian Minister of Transport signed the “Protocol of the revised EUROCONTROL Convention”
Apr	2002	During the Aeronautical Information Management (AIM) Symposium, EUROCONTROL announces a new approach to providing aeronautical information
Apr	2003	The European Commission and Eurocontrol award a contract to civil aviation authorities and air navigation services providers of Albania, Bosnia and Herzegovina, Croatia, Serbia and Montenegro, and the Former Yugoslav Republic of Macedonia to modernize air traffic management in the region
May	2004	A new air traffic management system for the Common National Air Traffic Control Centre (CNATCC) of Sofia, Bulgaria becomes operational

## Worldwide Distribution

This program is geographically restricted to Eastern European nations including the following: **Albania, Austria, Belorussia, Bosnia-Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, the Former Yugoslav Republic of Macedonia, Greece, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, the Slovak Republic (Slovakia), Slovenia, Turkey, Ukraine, and Yugoslavia.**

## Forecast Rationale

As indicated by the **Ten-Year Outlook** chart, Forecast International projects Eastern European governments to spend some US\$4.64 billion on air traffic control modernization over the next ten years. The European Commission’s belief that aviation safety in Eastern Europe does not compare favorably with aviation safety around the world is driving Eastern European ATC modernization spending.

In October of 2001, the European Commission adopted a package of proposals on air traffic management designed to create a single European sky by year-end 2004. The proposals specify the objectives of the single

European sky and its operating principles, based upon six lines of action. The six lines of action are: joint management of airspace; establishment of a strong Community regulator; gradual integration of civilian and military management; institutional synergy between the EU and Eurocontrol; introduction of appropriate modern technology; and better coordination of human resources policy in the air traffic control sector.

To accelerate the creation of a single European sky, the Commission adopted three additional proposals covering the provision of air navigation services,

organization and use of airspace, and interoperability of equipment.

Reforming the architecture of European air traffic control by creating a single European sky is an ambitious undertaking. Whether the European

Commission achieves its goal of creating a single European sky by December 2004 remains to be seen. Currently, airspace is organized as it was in the 1960s: each country regulates its airspace without regard to cross-border traffic flows (a flight from Rome to Brussels passes through nine different control centers).

## Ten-Year Outlook

		ESTIMATED CALENDAR YEAR FUNDING (US\$ in millions)											
		<u>High Confidence Level</u>				<u>Good Confidence Level</u>				<u>Speculative</u>			
<u>Designation</u>	<u>Application</u>	<u>Thru 03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>Total 04-13</u>
ATC - EASTERN EUROPE	AIR TRAFFIC MANAGEMENT (VARIOUS)	4287.50	508.00	518.00	483.00	458.00	425.00	450.00	450.00	450.00	450.00	450.00	4642.00