

# ANNUAL REPORT 2011



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# **INFORMATION** ABOUT COMPANY

Company name:	Serbia and Montenegro Air Traffic Services Agency Ltd.		
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Serbia and Montenegro Air Traffic Services Agency Ltd. (SMATSA) was established in order to provide air traffic services within the area of its jurisdiction as well as to perform other activities in the air navigation field.

The founders of SMATSA Ltd. are the Governments of the Republic of Serbia and the State of Montenegro.





SMATSA Ltd. is responsible for the provision of the air traffic services over an area of 144,676 square kilometres, in the airspace of the Republic of Serbia, the State of Montenegro, a part of the international waters of the Adriatic Sea, as well as 55% of the upper airspace of Bosnia and Herzegovina territory. The Air Traffic Control Centre Beograd (ATCC Beograd), which

#### Figure 1: Airspace and Airports under ATCC Beograd Area of Jurisdiction

is located at Belgrade "Nikola Tesla" airport, provides air traffic services.



# 2 INTRODUCTORY NOTE

# MESSAGE FROM THE PRESIDENT OF THE MANAGING BOARD AND CEO

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When, on May 24th 2011, we put the new Air Traffic Management (ATM) systems into operation, we were convinced that we had done a good job. Our biggest and most complex project – The Future Air Traffic Management Modernization and Upgrade System (FAMUS) Project, marked the last couple of years. I usually like to say that we completed the project within the planned deadline and budget. And the fact is that, while meeting all the deadlines on time, we actually spent less than it had been planned and managed to save more than 5% of the estimated total amount – over three million Euros.

More than 100 SMATSA experts, together with the manufacturer, external consultants and contractors, were involved in its preparation and implementation. Our engineers, technicians and air traffic controllers all invested their knowledge and experience, thus completing this, in many ways, unique project.

system. We managed that in different ways: we achieved the top ranking position among the European air traffic controls that implemented and developed Safety Management System, and received second best rating among 54 providers that were audited by EUROCONTROL; we continued to participate in the international tenders and were granted a contract for performing flight inspection services at Budapest airport, as well as the inspection of other grotender for performing the services of refresher training of 20 Air Traffic Control Officers (ATCOs) for the purposes of Civil Aviation Department of the Republic of Srpska (RSCAD); we continued to train 50 ATCOs from Bosnia and Herzegovina for the area control surveillance radar positions and enrolled the first class of self-financing student controllers; SMATSA FTO also enrolled 58 new students on five different pilot courses; we strengthened our team with 16 young engineers in electrotechnical engineering who were either employed or admitted for upgrading their knowledge and skills.

The year 2011 was the year in which we managed to record a growth in traffic and on November 13th to accept the five hundred thousandth aircraft in our jurisdiction. A total of 550,874.00 aircraft flew through Serbia and Montenegro Air Traffic Services Agency Ltd. area of jurisdiction during the year. On August 6th we reached the peak with 2,460 over-flights and every eleventh aircraft in Europe used our services on that day.

We continued the reconstruction and renovation of aerodrome air traffic controls by building a new tower at Morava Airport in Kraljevo, and by purchasing Voice Communication Systems (VCS) for Kraljevo, Ponikve and Podgorica airports.

The international cooperation, as an integral part of our business activities, was very intensive in the year 2011: we took part in all significant international conferences, whereof I would like to single out the annual conference of Thales systems users, where we presented our FAMUS Project of modernisation that attracted great attention of the participants as an example of the best practice in this field, owing to its unique method of implementation. We signed the Memorandum of Operational and Technical Cooperation with HUNGAROCONTROL and BULATSA, with the aim of increasing the safety and the efficiency of air traffic in the area of jurisdiction of our Air Traffic Controls. In the year 2011, as a result of the agreement with BULATSA, we also signed the Contract on the radar data exchange with them.

This year our company's celebration day, December 29th, has been marked in a special manner – the Air Traffic Control Center has been consecrated, and by doing that we have continued the tradition of celebrating Saint Ilia's day, the day of the Saint who has been the patron of airman in our country since 1924.

We have been very successful. That is why I would like to share the good impressions with you. We have been unique and self-confident. Let's keep up with the good work.







# 8,466,897 OPERATING REVENUES (000 RSD) **OPERATING** DELAYS 53 TRAFFIC COMPLEXITY ()()**MINUTES** PER FLIGHT J Training **STUDENTS** 1() GOT ATCO LICENCE WITH ACS/RDR ENDORSEMENT **STUDENTS** 2 GOT ATCO LICENCE WITH ADI-GMC/AIR ENDORSEMENT **FRST** SELF-FUNDING CLASS OF STUDENTS ATCO WAS ENROLLED





#### Our mission

Our mission is provision of high quality air navigation services to civil and military aircraft (in ATM, CNS, MET and AIS domain) in order to maintain and enhance safe, orderly, expeditious and efficient flow of air traffic within the airspace of FIR/UIR Beograd and within the airspace of other neighbouring countries based on the bilateral state agreements, as well as provision of training of air navigation service provider personnel, pilots training, flight inspection services of ground navigational aids and systems from the air together with aircraft maintenance services.

SMATSA Ltd is guided by the following key principles in its operations:

- To provide high quality services in transparent and in the safiest possible manner without users discrimination
- To certify its services according to relevant regulations and ISO 9001 standard requirements,
- To fulfill users' requirements and expectation,
- To follow legal regulations,
- To document operating process,
- To constantly improve quality management system,



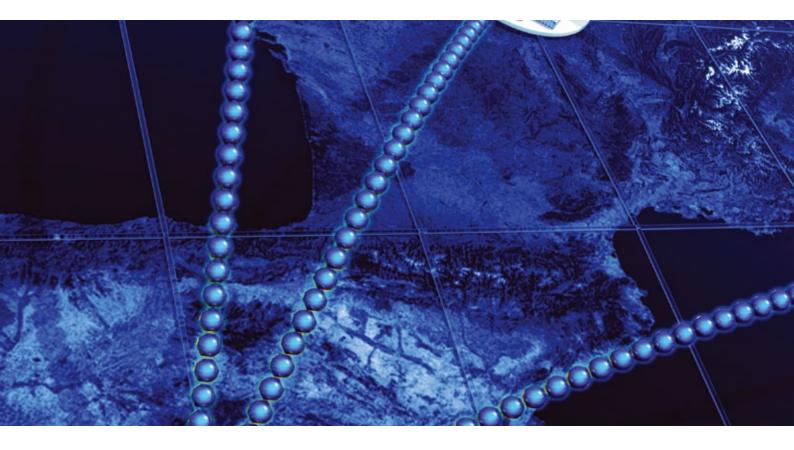
#### Our vision

Our vision is to stand out as the leading ANS provider in the region, respected training centre for air navigation personnel and aircraft maintenance, as well as reliable provider of flight inspection services of ground navigational aids and systems from the air. Our goal is to be recognized as prestigious partner among our users and other business associates.

- To keep on upgrading the knowledge and skills of its employees
- To apply the most sophisticated technical and technological solutions,
- To maintain and upgrade all SMATSA Ltd resources,
- To cooperate with competent government bodies, educational and research institutions and other organizations,
- To have correct relationship with its users, partners and employees,
- To maintain working enviroment healthy and safe.



# **CERTIFICATES** AND INTERNATIONAL ORGANIZATIONS MEMBERSHIP

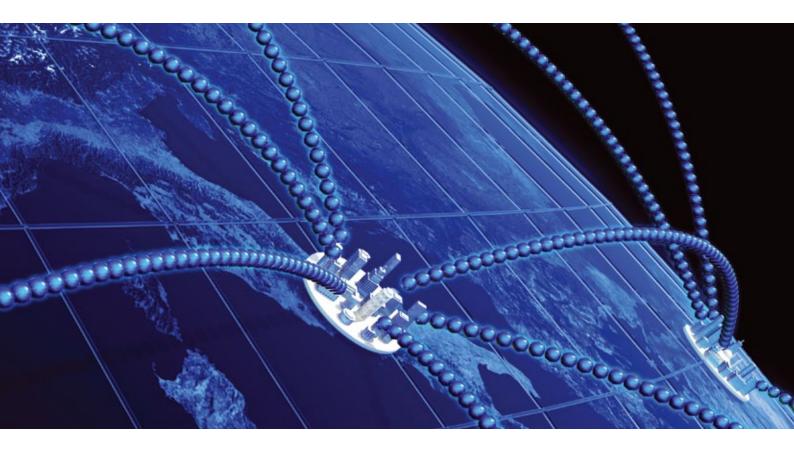


As a proof that its business activities are compliant with international standards, European and national legislation, SMATSA Ltd. owns the following certificates:

- Certificate of Compliance with Single European Sky Requirements (SES) for Provision of Air Navigation Services,
- Certificate ISO 9001:2008,

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- Certificate that it is entitled to provide ATCOs Training, including conducting of special training, ATCOs Continuation Training as well as Aviation English Training,
- Certificate that it is entitled to provide Aviation Personnel Training according to which SMATSA Aviation Academy is authorised organization to provide Flight Training,
- Certificate EASA Part 145 for Aircraft Maintenance.



SMATSA Ltd. is the member of the following aviation organizations, where it represents the Republic of Serbia and the State of Montenegro in the best possible manner:



INTERNATIONA CIVIL AVIATION ORGANIZATION (ICAO)





EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION (EUROCONTROL)



EUROPEAN CIVIL AVIATION CONFERENCE (ECAC)



CENTRAL ROUTE CHARGES OFFICE (CRCO)



INTERNATIONAL AIR CARRIER ASSOCIATION (IACA)

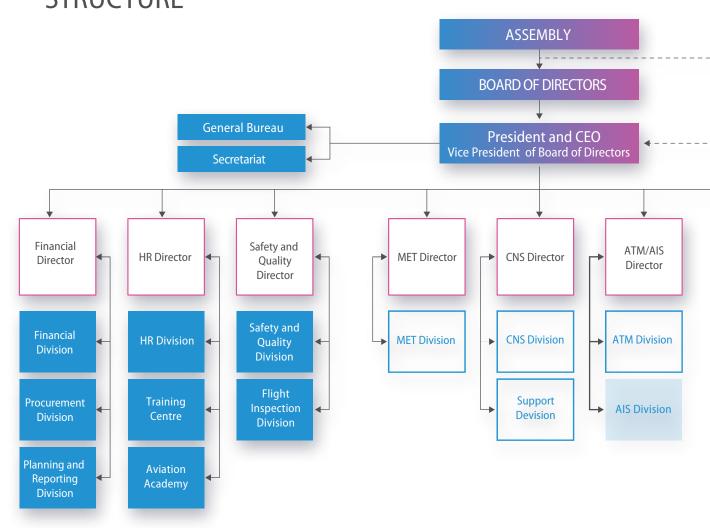


CIVIL AIR NAVIGATION SERVICES ORGANISATION (CANSO)



### ORGANIZATIONAL STRUCTURE

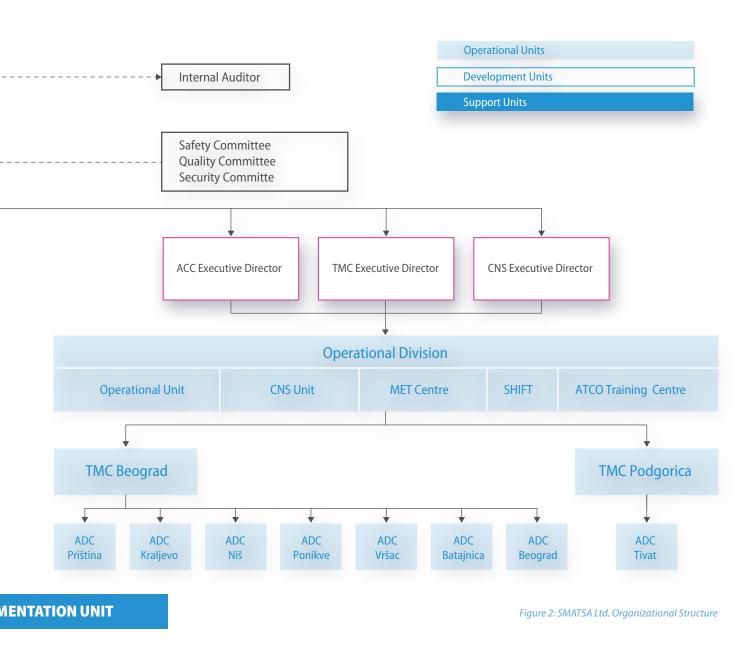
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#### **PROJECT IMPLEI**

SMATSA Ltd's organizational structure implies adequate distribution of available human and material resources and it is determined by the type of its activities which are fully focused on the requirements of the air traffic services users.

By implementation of the new systems and equipment in Air Traffic Control Centre, SMATSA Ltd.'s organizational structure was improved in 2011. Apart from this, integration of terminal and area control, together with higly qualified technical support and formation of Aeronautical Meteorological Centre contributed to this too. In this way, conditions for achieving high level of provided services, as well as compliance with required safety and quality objectives were improved.



According to their roles, SMATSA Ltd.'s organizational units are divided into the following ones:

- Development Units They provide harmonized development of all system organizational units according to the most recent standards and recommendations, international and national regulations, as well as technical-technological innovations, which are an integral part of SMATSA Ltd.'s development projects
- Operational Units Their task is to provide safe, efficient and qualitative air navigation services on daily basis.
- Support Units They are formed to support development and operational units, committes, as well as project teams and project implementation teams.





#### 7.1 Experienced and competent management

#### The Managing bodies of Serbia and Montenegro Air Traffic Services Agency Ltd. are the Assembly and the Board of Directors.

The Assembly is comprised of five members who are the representatives of the founding states i.e. their relevant ministries in charge of transport, finance and other government bodies, departments and relevant organizations. The President of the Assembly is Mrs. Tatjana Isaković. The Board of Directors is comprised of seven members who are appointed and evoked by SMATSA Ltd.'s Assembly. Five members are appointed by the proposal of the Government of the Republic of Serbia and two by the proposal of the Government of the State of Montenegro. The President of the Board of Directors and CEO is Mr. Nikola Stankov and the Vice President of the Board of Directors is Mr. Lazo Maksimović.

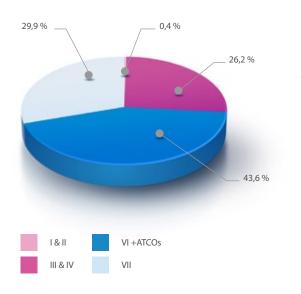
#### Competent people at the right place at the right time

Engaging highly qualified personnel and investing in various educational programmes, together with good organization of the work, enable SMATSA Ltd. to be compliant with high air navigation safety requirements and to provide good services. Bearing this in mind, SMATSA Ltd. created good basis for human resources management proactive system implementation thus enabling it to successfully deal with future development activities in aviation sphere.

7.2

Employees with adequate knowledge, skills and abilities, at the right place and at the right time provide safe, regular and good service.

The following Figures show the structure of employees in 2011 according to the level of education and age.





*Figure 3. Employees' Structure According to the Level of Education in 2011* 

Figure 4. Employees' Structure by Age in 2011

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SMATSA Ltd. tends to employ young people according to its need, therefore more than half of the hired candidates in 2011 were less than 30 years old.

Implementation of brand new systems and equipment in the last years required selection and employment of competent personnel. The total number of 20 employees was hired in SMATSA Ltd. in the course of 2011, 16 of them with university qualifications. The analysis results, which have been done in the period from 2002 to 2011, according to which more than 80% of all engaged employees are ATCOs, as well as employees with sixth and seventh level of university qualifications, are obvious evidence of significant improvement in human resources qualification structure.

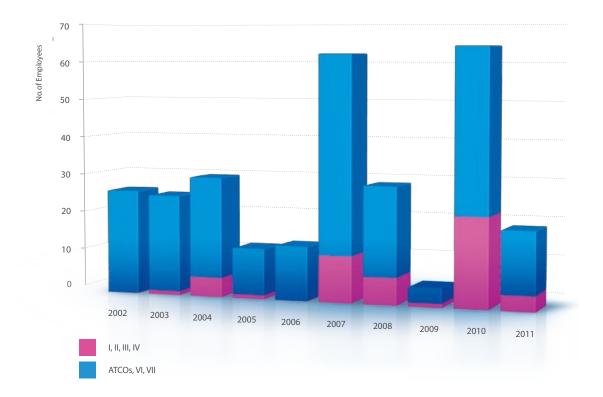


Figure 5. SMATSA Ltd. Employees' Structure, Hired from 2002 to 2011





Figure 6: SMATSA Ltd. Training Centre

#### 7.2.1 Investing in Development and Employees' Professional Upgrading

Licenced ATCOs professional upgrading, as well as upgrading of CNS, MET and AIS personnel is conducted in SMATSA Ltd. Training Centre. In the course of 2011, different upgrading trainings and refresher courses were conducted, with the help of brand new teaching methods and means which are used, taking care, at the same time, to be compliant with prescribed standards:

- 46 class: The total number of 10 student ATCOs acquired their ATCO licencies with the ACS/RDR endorsment.
- 47 class: In 2011 all of 20 candidates got their ATCO licencies with the ADI-GMC/AIR endorsement. Out of this, 6 candidates completed their ACP training, 6 training for APP endorsement, and after that they continue their training for acquaring ACS, i.e. APS endorsements.
- 48 class: During 2011, Basic Training of 44 students of this class, was finished and after that they continue their training for acquaring relevant endorsements.

In addition to the training of new ATCO classes, in this period different upgrading trainings were also conducted. So, 49 ATCOs attended refresher courses while 6 of them successfully finished Instructor Assessor and Instructor Examiner Courses.

In order to improve and refresh the knowledge of the CNS Division pesonnel, several relevant courses were conducted in 2011. The courses comprised the training for OLDI, ILS NM 7, MTP 2000C and MP 100, 1511 MAX I 1511 EM, 9400 AWY, Furthermore, 37 air traffic controllers from KL d.o.o, with valid licenses, got their language endorsements in accordance with ICAO LPR scale, three months before deadline (8 March 2011).

VCS 3020 X Rel.7.0, TRS Pro-line rel.2.0., DIVOS 3 log, STAR 200 and RSM S (refresher courses). The above mentioned training attended 81 candidates..



Figure 7: A Classroom at SMATSA Aviation Academy



Figure 8: SMATSA Aviation Academy Complex

#### 7.2.2 External Users Training Services Provision

Training Centre, with its capacities and expert staff, is able to provide training for external users needs.

In order to expend its activities referring candidates training, apart from ATCOs training as its first service, SMATSA Ltd. Is also dealing with provision of pilots training services within its own Aviation Academy.

Moreover, SMATSA Aviation Academy provides technical services, it is certified for maintenance of small aircraft and possess EASA certificate.

In 2011, there were more than 50 trainees at SMATSA Aviation Academy attending the following courses:

For the first time from its establishment, a self-funding class of 6 student ATCOs. enrolled Training Centre.

Since February 2011, SMATSA Aviation Academy has been certified (Certificate SRB/FTO-001) for pilot training as for acquiring of the following licenses: PPL (Private Pilot Licence), CPL (Commercial Pilot Licence), ATPL (Airline Transport Pilot Licence), FI (Flight Instructor).

Training Type	The Total Number of Candidates in Training		
ATP(A) Integrated	22		
C-310 MEP	16		
C-172 Ground School	2		
ATPL(A) MODULAR	1		
PPL(A)	2		
AVE-english language	10		
C-172 SEP CLASS	5		

Table 1: The Number of Candidates Trained at SMATSA Aviation Academy

Besides, SMATSA Ltd.Training Centre as well as SMATSA Aviation Academy provide language endorsement testing services to external users, too. In the course of 2011 by TEA (Test of English in Aviation) a knowledge check was conducted on:

- 170 pilots from: Serbia, Bosnia and Herzegovina, Macedonia, Montenegro, Slovenia, Netherlands, India, Malta, Hungary and Italy.
- 95 air traffic controllers from: Republic of Srpska, Bosnia and Herzegovina and Macedonia.



## WE RESPOND TO INCREASED VOLUME OF TRAFFIC

8



The establishment of a unified Air Traffic Control Centre (ACCC) in 2011, brought consolidation of approach and area air traffic services and resulted in a unique air traffic management, an improvement in technology and operating procedures, a better utilization of human resources and thereby an increase in the airspace capacity. Within the unified ATCC, the operational, technical and technological conditions were facilitated for the establishment of FIC Beograd.

In 2011, the Regulation on airspace classification below flight level 195 was adopted. Introduction of airspace classes C, D, and G below flight level 195 resulted in closer regulation of types and levels of air traffic services provision in certain airspace structures.

Over the past year, the significant actions were taken for the implementation of advanced air traffic management leading to optimum route planning, better utilisation of available airspace, increase in efficiency and reduction of delays.

The activities conducted on the use of P-RNAVprocedures will enable the adequately equipped aircraft to use the opportunity and thereby optimise their approach and take off paths. As well, the more precise flight path will be provided, thus increasing the terminal capacity

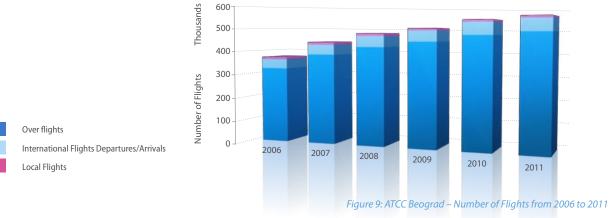
In 2011, the route network within SMATSA Ltd.'s area of jurisdiction did not undergo significant changes. Because of migration to a new ATM system, changes in the airspace were frozen until the end of the summer season in order to preserve the air traffic services provision capacity and the required level of safety. Despite this, KOTUS point in the airway UM749 (BEO– TONDO) segment was introduced on

30th June 2011. Namely, the change in the airway UM749 segment should be considered as a corrective measure to overcome problems caused by the development of the new ATM System flight profiles, as well as of the software tools flight profiles for planning of services for some of our customers (Swiss, JAT Airways). In coordination with JAT Airways representatives, it was concluded that the introduction of KOTUS point in the upper airspace eliminated all the problems and facilitated the planning and flight plan filing.

In February 2011, the amendments of Standard Instrument Departures (SIDs) for airport Belgrade were published. The amendments involved procedures in case of two-way communication failure.



The air traffic within the jurisdiction of ATCC Beograd continued its growth in 2011. During the year, a record number of 550,874 flights were executed under IFR which represents an increase by approximately 3% in comparison to 2010. In the last ten years, the air traffic has recorded an average increase of about 10% per year.





The first half of the year was characterized by more intense air traffic, whereas the 2011-2012 winter time-table of the largest national airline reduced the number of flights causing the drop in the air traffic within the jurisdiction of ATCC Beograd in comparison to the same period last year. In early October, the air traffic flow was greatly affected by reduction in airspace capacity over Greece, when the strike of Greek air traffic controllers generated long delays. The air traffic routes connecting Western and Central Europe and Southeast Europe, Turkey and the Middle East, and which used to pass over the territory of Serbia and Montenegro, were, at the time, dislocated to the east over the territory of Bulgaria and Romania, incurring thus the reduced air traffic flow within the jurisdiction of ATCC Beograd.

During the summer time-table, in the period from April until the end of October 2011, 71% of the annual air traffic was executed. The number of flights in the winter season 2011-2012 was lower by about 3% in comparison to the same period last year. It reflected a general tendency of reduction in number of flights all over Europe due to a poor economic situation provoked by debt crisis, as well as by the political situation in Africa and the Middle East.

	2010		2011.		2011 /
	Number of Flights	Participation (%)	Number of Flights I	Participation (%)	2010 (%)
Winter Time-Table (Jan-Mar)	86,960	16%	91,043	17%	5 %
Summer Time-Table (Apr-Oct)	377,925	70%	390,392	71%	3 %
Winter Time-Table (Nov-Dec)	71,541	13%	69,439	13%	-3 %
Total	536,426	100%	550,874	100%	3 %

Table 2: ATCC Beograd – Number of Flights in Summer/Winter Season

The next figure shows the percentage change in the number of flights per month in 2011 compared to last year.

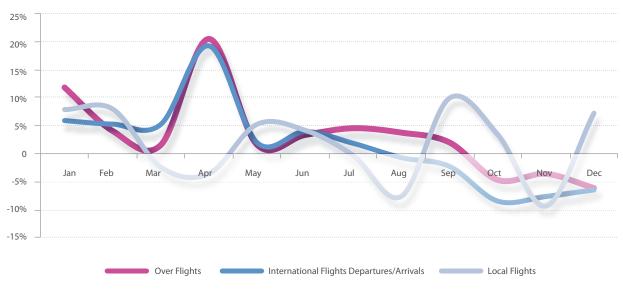


Figure 10: Percentage of Number of Flights Increase/Decrease per Month in 2011

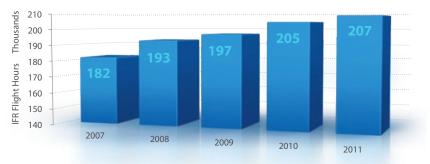
As in previous years, the over flights are the most common, comprising over 88% of the overall air traffic. The greatest number of over flights was performed across the routes connecting the countries of Northwest Europe and the Mediterranean, as well as Northwest Europe and the Middle East.

In 2011 the greatest number of flights per hour was recorded on 30th August when in the period from 09:00 to 10:00 UTC, 178 flights were performed.

In the summer season 2011, every 14th flight in Europe was executed by utilization of the airspace within the jurisdiction of ATCC Beograd. The greatest number of flights per day was recorded on 6th August (2.460 flights), when every 11th flight was conducted by utilization of the airspace within the jurisdiction of ATCC Beograd.

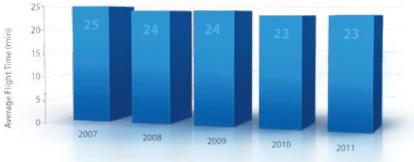
	2008	2009	2010	2011
Peak Hour	141	154	168	178
Peak Day	1,993	2,188	2,261	2,460
Peak Week	12,937	14,051	14,469	15,109
Peak Month	56,701	60,813	63,433	65,643

Table 3: The Number of Flights in Peak Periods



In 2011 under ATCC Beograd area of jurisdiction 207,389 IFR flight hours were executed, making an increase of 1.2% in comparison with 2010.

Figure 11: The Number of IFR Flight Hours from 2007 to 2011



The average flight time in the area of jurisdiction of ATCC Beograd has been decreasing from year to year, recording the value of 23 minutes per flight in 2011.

Figure 12: The Average Flight Time from 2007 to 2011



The airlines with 50% of flights accomplished in the area of jurisdiction of ATCC Beograd in 2011 are shown in the following figure.

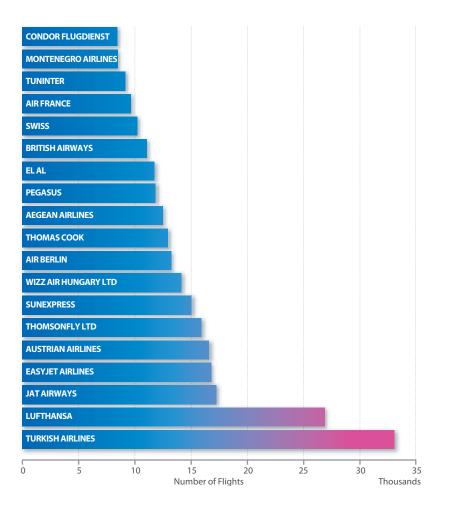


Figure 13: The Airlines with 50% of Flights Accomplished in the Area of Jurisdiction of ATCC Beograd in 2011

At four international airports in Serbia and Montenegro it was recorded a total number of 34,790 IFR take offs in 2011. As in previous years, the greatest number of flights, 69%, was executed from airport Beograd that was used by over 500 airlines and operators for their operations in 2011.



Figure 14: The Number of Departures at Airports under SMATSA Jurisdiction from 2007 to 2011

#### 8.1 National Unit Rate Value and Service Units

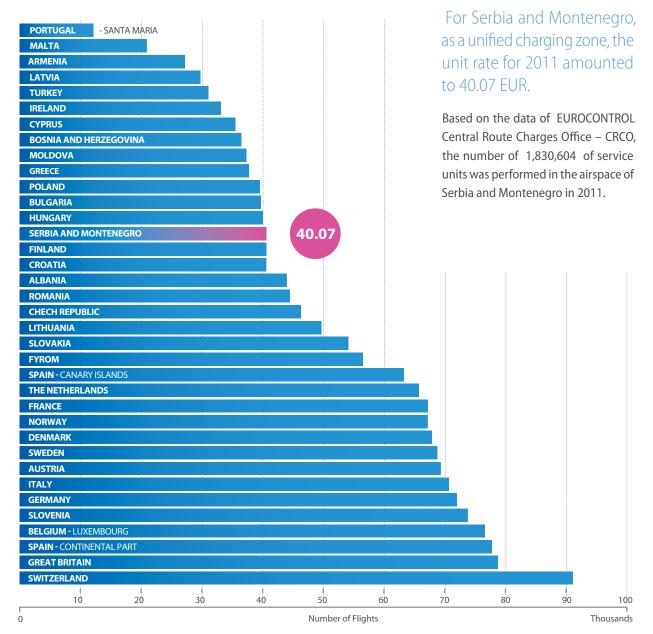


Figure 15: National Unit Rate Value per Country in 2011

In comparison to 2010, an increase of 0.6% was recorded. Shortening of average flight time in the airspace of SMATSA's jurisdiction, the average value of a service unit per flight has been decreasing from year to year, recording the value of 3.30 in 2011.

Figure 16: The Number of Chargeable Service Units from 2008 to 2011



<sup>3.60</sup> 1,840 Thousands Average Service Unit per Fligh 1,820 3.50 1,800 3.40 1,780 1,760 3.30 Service Units 1,740 3.20 1,720 The 1,700 3.10 2008 2009 2010 2011

### **SAFETY** AS AN IMPERATIVE

For the reasons of a constant increase of air traffic from year to year, the air traffic control system has faced the challenge of increasing the efficiency while maintaining a high level of safety. One of the tasks of the air traffic control system is to provide all necessary conditions for maximum freedom of movements of all air traffic participants under acceptable economic conditions and with taking into account the environmental protection and fulfullment of all safety requirements. The dynamic and complex system is based on the conjuction of people, technology and strict rules allowing the provision of air navigation services in a safe, orderly and efficient manner. A constant work to meet all safety criteria continued in 2011. The revised documents were all in the domain of safety to ensure compliance with laws and bylaws regulations of Serbia and Montenegro, as well as in the compliance with the QMS requirements. In connection with that, a new version of Safety Management Manual was adopted, as the most important document for successfully established safety management system. During the year, 5 periodic safety surveys and 1 targeted safety survey were performed.

For the purpose of further successful maintenace of the established Safety Management System, the representatives of SMATSA Ltd. took part in the following meetings and seminars in 2011:

- SSR (State Safety Programme) Implementation Seminar in the period 16th to 18th February 2011.
- The 41st meeting of Safety Team in Brussels from 14th to 17th June 2011.
- The first ISIS meeting in Brussels 21st 22nd June 2011.
- ES2 WS3 "Software Safety Assurance Systems & Modes Of Operations" Seminar held in Bled in the period 21st 22nd September 2011.
- The 42nd meeting of Safety Team in EUROCONTROL (Brussels) in the period 11th 13th October 2011.

The Safety Survey was performed (28th October 2011) by EUROCONTROL's representatives for the purpose of confirmation of SMATSA's achieved results in the field of Safety Maturity.



The Civil Aviation Directorate of the Republic of Serbia (CAD) determined the national safety indicators and their acceptable values. SMATSA Ltd. performed the analysis of the safety indicators for 2011 all in accordance with SMATSA Ltd.'s Safety Management Manual. The previously mentioned analysis will be presented in the following chapters.

#### 9.1.1 Incident Indicators

The acceptable level of safety defined by CAD of Serbia and CAA of Montenegro is less than 0.83 of serious incidents per 100,000 operations and less than 8,3 of major incidents per 100,000 operations. The safety target is less than 0.5 serious incidents i.e. less than 5 major incidents per 100,000 operations. With one (1) occurrence of serious incident and (1) occurrence of major incident, as it was reported in the airspace of SMATSA Ltd.'s area of jurisdiction in 2011, the safety criteria were fulfilled.

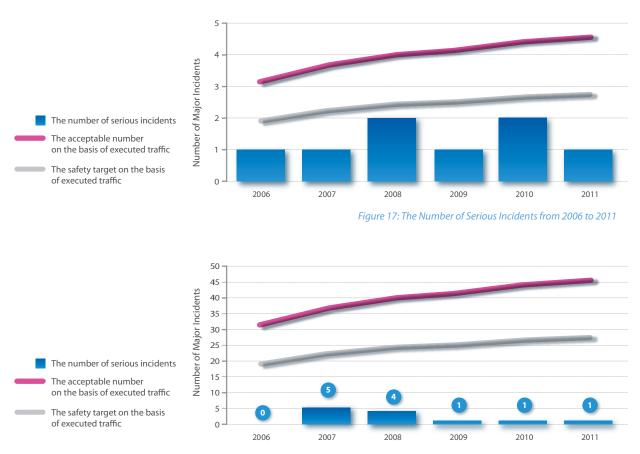
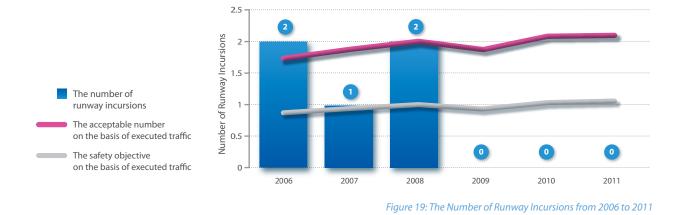


Figure 18: The Number of Major Incidents from 2006 to 2011



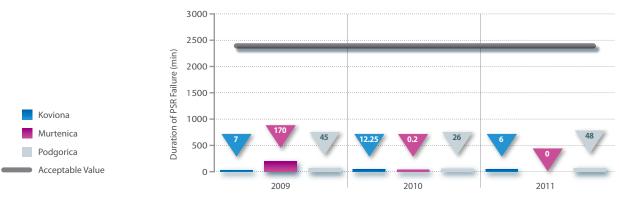
#### 9.1.2 Runway Incursion Indicators

In the airspace where SMATSA Ltd. provides services, in 2011 there were no reported events in the category of runway incursions. The acceptable level of safety defined by the CAD of Serbia and CAA of Montenegro is less than 3 runway incursions to 100, 000 take off / landing flight operations. The safety target is less than 1.5 of runway incursions to 100,000 take off / landing operations.



#### 9.1.3 ATM Specific Technical Event Indicators

Safety indicators values for all four radar stations (Koviona, Koševac, Murtenica and Podgorica) are within the acceptable level of safety prescribed by the CAD. The acceptable level of safety for the PSR, determined by the DCV, the value adopted as recommended by EURO-CONTROL, which is less than 2,400 minutes per year.



The acceptable level of safety for the SSR, determined by the CAD, is the value adopted as recommended by EU-ROCONTROL, which is less than 600 minutes per year.

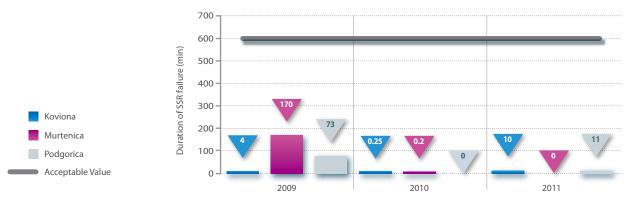


Figure 21: Safety Indicators for SSR Radar Stations

The safety indicator for DPS (Trackview / EUROCAT-E) system, based on the data from the previous three years, is on the average one failure per year and that is within the acceptable level of safety defined by the DPS system indicator. The mentioned safety indicator determined by the CAD is less than 10 failures per year. In 2011, there were no failures of the DPS system.

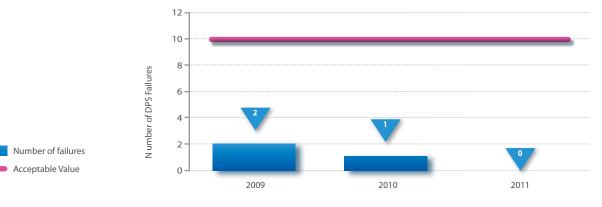


Figure 22: Safety Indicators for DPS



# 10 WE HAVE BEEN WORKING ON IMPROVEMENT OF CNS INFRASTRUCTURE



#### 10.1 Telecommunications

Telecommunication services in SMATSA Ltd. include voice communication (ground-to-ground and ground-to-air), as well as data transmission (AFTN and OLDI).

Through the FAMUS project, the testing and the site acceptance of entire telecommunications network was completed. The network enabled the redundancy in radar data transmission from RS Koviona, RS Koševac and RS Murtenica sites. The new telecommunication lines to neighbouring air traffic controls of Albania, Macedonia and Bulgaria were also introduced. During the year, the factory acceptance test (FAT) and installation of six DVRPS and TRS systems for aerodrome control were completed. In 2011, the project for procurement and installation of VCS system for voice communication to locations TMC Podgorica, ADC Kraljevo and ADC Ponikve was initiated. In ADC Kraljevo, the installation and site acceptance test (SAT) were successfully completed and upon which the system was put into operation.

In the last quarter of 2011, the project of improvement

and expanding of the VHF / UHF radio systems for groundto-air voice communication was successfully completed in by installation and site acceptance testing of VHF/UHF radio systems at ADC Kraljevo and Sveti Ilija sites.

In 2011, the project of connecting the optical infrastructure of ATCC Beograd to VHF / UHF radio centres Kopaonik and Beograd, as well as to ADC Batajnica and ADC Kraljevo was completed. A connection to a double optical ring of telecommunication networks of Telekom Serbia a.d. was also performed. The existing ATCC Beograd facility is connected to a telecommunications network of Telekom Srbija by a double optical ring.

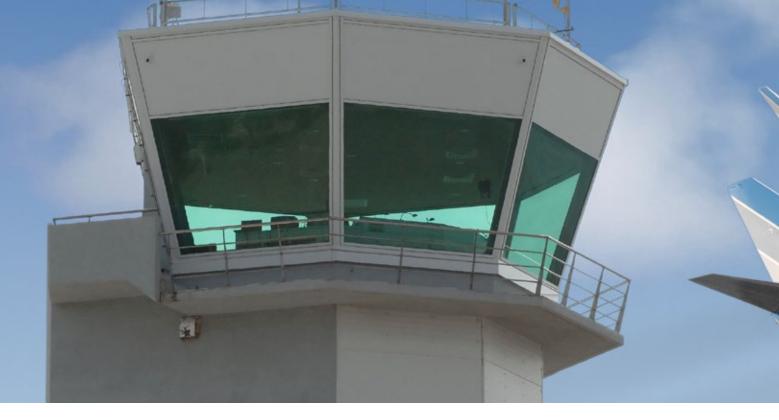
In 2011, the training for telecommunication equipment was conducted at ADC Kraljevo and TMC Podgorica.





SMATSA Ltd. provides navigation services in all phases of aircraft flight (takeoff, over flight, approach, and landing). Navigation infrastructure for over flights includes VOR / DME and NDB equipment. VOR/DME infrastructure supports RNAV operations, while NDB devices provide over flight operations of the civil aircraft that do not have modern aviation equipment.





As part of air navigation services provision, the following projects and activities were executed in 2011:

- In February 2011, the FAT of new ILS NM 7000B equipment was completed in NGPAS factory in Oslo, Norway.
- In March 2011, the tender was announced for the procurement of additional spare parts for the new DME FAL 2020, as well as the tender for execution of preliminary construction works for ILS installation at airport Podgorica.
- In the period March September 2011, the site selection and preliminary construction works for installation of meteorological measuring equipment were performed at the airports in Belgrade, Podgorica and Kraljevo.
- In April 2011, the new ILS NM 7000B was delivered to Podgorica.
- In May 2011, the tender was announced for the selection of contractors for execution of preliminary construction works required for installation of ILS at airport Beograd.
- During May and August October 2011, the works were carried out on the AWS200 AKL automatic weather station relocation to a new ADC Kraljevo building, as well as the installation of anemometers at airport Kraljevo.
- In June 2011, the NM 7000B ILS was installed in Podgorica. Simultaneously, on the job training was conducted. The work on the unified system for navigation aids surveillance was conducted in Podgorica and Tivat.
- In the period August October 2011, the old ILS was removed and the new NM 7000B ILS for runway 12 and runway 30 at Beograd airport was installed, calibrated, site acceptance tested and commissioned.
- During December 2011, the upgraded MIDAS IV VAISALA System was moved from the old ACC building to a new ATCC building in Belgrade. The tender for procurement of additional spare parts sets for the new ILS NM 7000B was announced.
- The training for ILS NM 7000B was conducted in January at NGPAS factory in Oslo, as well as in February in SMATSA Training Centre.



### 10.3 Surveillance

Radar air traffic management services include generation, distribution and processing of radar data to internal users within SMATSA Ltd., as well as to external users. In operational work, primary surveillance radars (PSR) and mono-impulse / Mode S secondary surveillance radars (MSSR/Mode S) are used. All MSSR / Mode S radars facilitate operations in elementary or advanced Mode S mode. The surveillance data are distributed to multiradar surveillance system, whereby, as in accordance with European regulatory standards, the following is provided:

- Double MSSR/Mode S route coverage and
- Double MSSR/Mode S plus PSR coverage of the main TMA.

In January 2011, the Contract on Technical Support for Radar Systems in the next three years was signed with the equipment manufacturer, Thales.

Within activities for the exchange of radar data with neighbouring air traffic controllers, the meetings, on a technical level, were organized with the representatives of ANTA in Tirana and BULATSA in Belgrade: The initiative for the exchange of radar data with neighbouring air traffic controls through definition of appropriate agreements (Radar Data Sharing Agreements) was launched.

The integration of radar data into FAMUS Eurocat-E DPS system was accomplished:

- Koviona (Mode S and PSR), Koševac (Mode S), Murtenica (MSSR i PSR) and Podgorica (PSR),
- Weather channel (PSR) Koviona and Murtenica.



## 11 METEOROLOGICAL SERVICES IMPROVED

Audits, from MET services provision domain were performed during 2011 by CAD of the Republic of Serbia and CAA of Montenegro as well as several internal surveys which proved compliance of MET services provision with the international and national regulations. SMATSA Ltd.'s representatives participated in the international and national activities for the purpose of improvement of MET services, and thus, directly contributed to the development of corresponding regulations and new technology which are applied in providing MET services.

National activities in 2011:

- Cooperation with CAD of the Republic of Serbia in the development of Regulations on observed aeronautical-meteorological data for the production of aeronautical climatological information.
- Presentation of aeronautical-meteorological services at Seminar for Classification of Belgrade FIR air space below FL 195 which was held on 4th November, 2011.

International activities in 2011:

- Third meeting of the Project Team for regional harmonization of meteorological services for flights at low altitudes, which was formed by Meteorological Group (METG), which took place at Belgrade ATCC on 19th and 20th April, 2011.
- Participation at regular annual meeting of Meteorological Group (METG), which follows and coordinates implementation of all systems in meteorological field in European region within European Air Navigation Planning Group (EANPG). The meeting was held at ICAO office for Europe and North Atlantic in Paris from 6th to 9th September, 2011.
- Participation at MET Support to ATM Workshop 5. The Workshop took place in Brussels from 19th to 20th October, 2011.

In order to improve MET services, during 2011, a lot of activities were taken, of which the most important systematic organizational change is introduced with forming Aeronautical-Meteorological Centre (AMC).

AMC activities consist of MET services provision in accordance with the requirements stated in international

standards for international air traffic and special requirements of aeronautical users from the following jurisdictions:

- MWO (Meteorological Watch Offices) meteorological watch office for flight information region, in our case Belgrade FIR, and
- AMO (Aerodrome Meteorological Offices) aerodrome meteorological offices, in our case, part of aeronautical meteorological services for Belgrade and Batajnica airports.

By forming and equipping this centre, including the improvement of audio communication and introduction of visual communication between AMC and users at Belgrade and Batajnica airports, as well as by providing human resources, the conditions for expanding the range of services were created for provision of low level flights, which, first of all, was the long lasting request of domestic aviation users. In 2011, necessary preparatory actions were performed including submitting the request for issuing Amendment to Certificate on Air Navigation Services Provision, in order to provide the users with low level Significant Weather Charts (SWL Charts).

Besides forming AMC, the following activities were taken in 2011 with the aim for improving MET services:

- Improving the distribution of MET data at "Nikola Tesla" Airport;
- Replacement of antenna system at EUMETSAT system;
- Works on installing software corrections of SAWAS software at airports;
- Putting into operation the equipment for upgrading the MIDAS IV VAISALA system at TMC and relocation of SAWAS server into technical hall;
- Operational using of laser silometers was started at ADC Batajnica,
- The auxiliary anemometer at TMC Podgorica was installed;
- The drawing for Airport Kraljevo reference point was done;
- Relocation of MET equipment into new ADC Kraljevo premises.



## 12 AERONAUTICAL INFORMATION SERVICES IN TIME WITH THE LATEST STANDARDS

The development and improvement of users quality information was actively continued in 2011.

# The very first bilingual electronic version of Aeronautical Information Publication (e-AIP) was published in html and pdf format, by using new technologies – "FrameAPS", i.e. the applications based on European AIS Database (EAD).

The e-AIP was created in accordance with the EUROCONTROL specifications, thus the specific requirements of European Commission Regulations 73/2010 (ADQ) were fulfilled. Main advantages of "FrameAPS" application and basic improvements in relation to "Word" application are the decrease of manual input of critical and important aeronautical information, protected access to files being processed and file versioning. The Aeronautical Information Publication for flying in visual flight rules in pdf format on CD (VFR AIP on CD) was published in December 2011.

The aeronautical charts of obstacles Type A were published for all international airports, route charts (lower/upper air space) and aeronautical chart of 1:500000 scales, by which some ICAO requirements were fulfilled and information services improved. The process of customers' satisfaction surveys was upgraded with the questionnaires on customers' satisfaction in Serbian and English language.

The staff training was successfully prepared and conducted for all employees at NOF/ARO Belgrade for work at complemented jobs within their new positions. Separated works of two positions are now consolidated, which increased the efficiency of available resources and improved the knowledge of employees.

In order to improve the work and quality of aeronautical

information, apart from operational procedures and making aeronautical publications (MIL AIP and VFR AIP) which are based on SharePoint, a library of documents was formed and updated in an electronic format. In this way traceability and archiving was enhanced and thus support for team work was provided.

Work on implementation of system for briefing (Briefing Facility) was continued. Purchasing of the system was completed and test of equipment was conducted.

Drafts for Regulation on Aeronautical Information (containing index data source) and Regulation on Aeronautical Charts as part of an integrated aeronautical information package were developed in cooperation with CAD of the Republic of Serbia. The mentioned Regulations were conducted in accordance with international standards and recommended practice contained in ICAO Annex 4, Annex 15 and European Commission Regulation for Aeronautical Data and Information Quality (ADQ).



## 13 FLIGHT INSPECTION SERVICES AN EXAMPLE OF REGIONAL COOPERATION



Figure 23: Aircraft for flight inspection – Hawker Beechcraft King Air 350

SMATSA Ltd. performs flight inspection services of ground based radio navigation aids from the air and check of flight procedures, for its own needs as well as for the needs of the users in the region. The flight inspection is performed in accordance with ICAO recommendations, using Hawker Beechcraft King Air 350 aircraft equipped with the system for flight inspection AD-AFIS-260.

## 299 flight inspections were successfully performed in 2011, with the total annual flight time of 478 hours.

ANNUAL REPORT FOR 2011

During 2011, SMATSA Ltd. increased the number of offered flight inspections in the region, realizing the following activities:

- Flight inspection of all ground navigation aids at Sarajevo, Mostar and Tuzla airports according to contract with DCA of Bosnia and Hercegovina,
- Flight inspection of all ground navigation aids at Banja Luka airport according to contract with the Republic Directorate of Air Traffic of the Republic of Srpska,
- Flight inspection of ILS equipment and PAPI lights at Budapest airport according to contract with the airport company,
- Flight inspection of VOR equipment according to contract with ANS service provider in Hungary (HungaroControl),
- Flight inspection of VOR/DME equipment at Portorož airport according to contract with THALES company,
- Flight inspection and putting into operation new ILS equipment in Belgrade, Podgorica, Banja Luka, Mostar, Skoplje and Zadar,
- Work on establishing organization for providing continuous air worthiness management which includes Flight Inspection Unit and Aviation Academy as well as offering these services to third parties,
- Organizing workshop on trading CO2 emissions with the presence of representative of independent verification body ETS Verification GmbH.

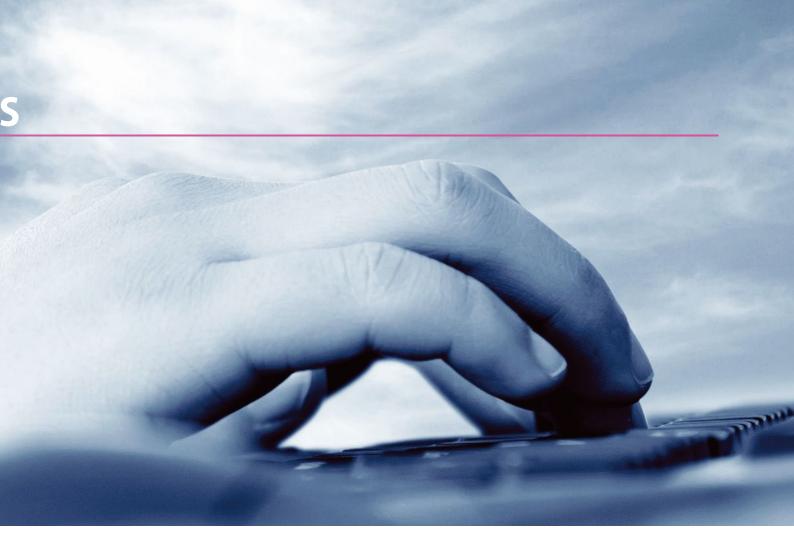


## 14 WE FOLLOW THE LATEST ACHIEVEMENT IN INFORMATION TECHNOLOGIES



#### The following projects and tasks have marked 2011:

- The implementation of complete computer and IP telephone infrastructure and integration of ATC service system (AFTN, Meteo, Thales, corporative network) were conducted in the new Belgrade ATCC building.
- The application for integration of billing log file from the new DPS system and flight plans were conducted in order to keep function of the existing database and compatibility of data from previous system.
- VMware virtual server infrastructure was installed and put into operational work.
- The application for monitoring aircraft conditions, with the accompanying reports connected to the condition of engine life limit, fuel and airworthiness were successfully put into operation at Vršac.
- The system of client's virtual infrastructure was implemented which includes installation of XenDesktop Server at server's
  virtual infrastructure and the integration with an active directory and adequate SQL Server database.



SMATSA Ltd. representatives participated in "VMware vSphere: Install, Configure, Manage [V4.1]" course and presentation of the new Kaspersky protection system designed for the protection of computer systems and resources, during 2011.

- The implementation of protection system SMATSA VMWARE Data centre was conducted based on technology of TrendMicro Company called TrendMicro Deep Security.
- The implementation of the complete computer, IP telephone and network infrastructure was conducted in the TWR building Kraljevo as well as system for access control and video surveillance.
- The development of application for tracking licences, endorsements and validity of controllers' language and medical revalidations was started. Creating of monthly schedules and lists of presence as well as daily lists of presence and scheduling by sectors were also conducted.
- The application for tracking licences, ratings and revalidation of CNS and CNS (MET) personnel was developed. The process of generating of licences archives at SharePoint portal was automated in this way.
- FAX server, which enables sending and receiving of messages via PC, was installed. This method of FAX communication provides considerable savings of materials and eliminates maintaining FAX machines.
- The installation and testing of system for exchanging messages of EAD and AFTN system (BF Box) were completed.



## **WE INVEST** IN NEW BUILDINGS AND INFRASTRUCTURE



Figure 24: The construction of new ADC Kraljevo building

According to the Investment Plan, significant projects in terms of construction, design, reconstruction, repairs, adaptation, capital and current maintaining of facilities were carried

#### New building of ADC Kraljevo

15

The largest SMATSA Ltd. investment in 2011, when talking about construction of buildings, was the new building of ADC Kraljevo. Works on building gross area of about 1,200 m2 lasted from May to November 2011. The concept of the building is such that it satisfies the needs of air traffic services, so that ARO and MET services as well as facilities for electrical energy, thermo-technical equipment and equipment for fire protection are located on the ground floor, technical room and administrative block are on the first floor, while the radar room is located on the level below the cab.

The auxiliary buildings were constructed next to the main

out in 2011. New projects have been started, which completion is expected in the following year.

building - power station, boiler site with underground fuel tank, an underground fuel tank for diesel electric generators, underground water tank and bio tank with the cesspool and there is a parking lot for 12 vehicles.

Modern, high-quality materials were used in the constructive and architectural materialization and a range of technicaltechnological interior equipment and furniture was carried out in accordance with modern trends for this type of facility. The construction of the new ADC Kraljevo building created the conditions for the establishment of civil air traffic which is of great importance for this part of Serbia.

#### **Other investments**

From other investments realized during 2011, the construction of supporting infrastructure for the needs of the installation of new ILS equipment on "Nikola Tesla" airport in Belgrade and airport "Golubovci" in Podgorica should be mentioned. When talking about the plans for investments in the current buildings of SMATSA Ltd., which implementation began in 2011 and will be finished by the end of 2012, the most significant is the reconstruction of current buildings and infrastructure of SMATSA Aviation Academy and Vršac airport complex.

The following activities were initiated:

- preparation of project documentation for the complete reconstruction of Training Centre complex facilities for the accommodation of students, the school and administration building, restaurant with kitchen and power block,
- project documentation for reconstruction and expansion of the cab on ADC Vršac building,
- routine maintenance works in ADC Vršac.

At the end of 2011, construction-installation works for the construction of facilities that are part of the Transmission center on mountain Rudnik on the location of Veliki Šturac were contracted. Besides that, works including delivery and installation of the radar antenna at the location of RS Kopaonik, and repairs on the current cab, works on hydroisolation of roof plate on RS Kopaonik and current facility maintenance works were contracted. The above mentioned works will be conducted during 2012.

Finally, in December 2011, the preparation of project documentation for reconstruction and expansion of SMATSA Ltd. main building at Trg Nikole Pašić 10 in Belgrade was contracted. The designing will be completed during 2012.







Air Traffic Management Modernization and Upgrade System Project (FAMUS) were initiated in 2002 with the aim of increasing infrastructural capacity of ATC system in accordance with the expected rise in air traffic.

In the first phase of modernization, the project meant the recovery of resources destroyed during 1999, while the second phase covered the implementation of new systems and equipment as well as building new ATCC Belgrade, which was finished in 2010. The concept of energy efficient building with the small amount of energy spent, with integrated multi-level management and completely automated functions rank this building among "smart buildings", which at this level, there are very few in the region.

The Contract for purchasing and installation of Air Traffic Management System, accompanying equipment and services was concluded in the contracted time and the equipment was put into operational work in 2011. Coordination of all activities during the transition period from the previous system onto the new system and putting the new system into operational work were conducted successfully with the introduction of minimal restrictions and insignificant influence on the air traffic flow. Apart from that, in November 2011, the Instrument Landing system (ILS) in Podgorica and Belgrade were put into operation as well as Distance Measuring Equipment on 8 locations. Besides that, Digital Voice Recording and Playback System – DVRPS and Time Reference Systems – TRS were delivered on the contracted locations and they are expected to be put into operation in the first part of 2012.

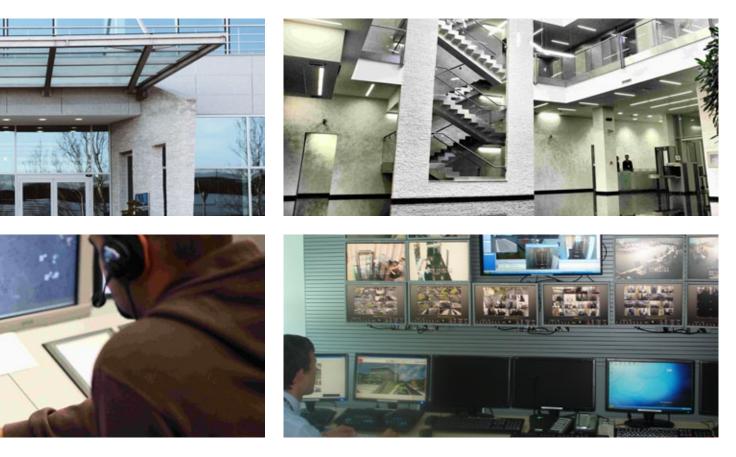


Figure 25: New ATCC Beograd building

#### With the FAMUS project realization, the air traffic management system is completely in accordance with the established rules and standards in order to realize the concept of Single European Sky (SES).

Likewise, FAMUS project provided the interoperability with the systems of other service providers in air traffic which operate and harmonize with the standards and recommendations defined in the European ATM Master Plan. With the successful implementation of FAMUS project, SMATSA Ltd. representatives gained significant experience and improved their knowledge which will be used in future, both for their own purposes as well as in cases of support through consultant services for third parties.



## 17 CONSULTATIONS WITH SERVICE USERS

In order to obtain the transparency connected to the route charges, SMATSA Ltd. regularly, on a yearly basis, consults the representatives of International Air Transport Association - IATA in cooperation with the Central Route Charges Office - CRCO.

SMATSA Ltd. performs regular consultations both with the individual users of its services, and with their associations.

Through participation on international forums organized by EUROCONTROL, CANSO and other organizations from the air traffic domain, some useful information is obtained. With domestic and foreign partners, SMATSA Ltd. has signed agreements and contracts about business – technical cooperation, as well as agreements about coordination - LOA (Letter of Agreement) which are regularly revised and thus feedback from partners is gained.



## **WE CARE ABOUT THE** ENVIRONMENTAL PROTECTION

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By improving route network and air space organization, SMATSA Ltd. continuously gives its contribution to environmental protection. By constant improvement of working technology and by trying to shorten air space routes in its jurisdiction, SMATSA Ltd. has an impact on users to save their flight time, influence on reduction of fuel consumption and thus on significant reduction of CO2 emission. Work on constant optimization of the route network led to the fact that the length of the most frequent routes within SMATSA Ltd. jurisdiction was only 2 % greater than its length at great circle.

All (STAR) procedures under SMATSA Ltd. jurisdiction are designed on CDO principles and whenever the traffic situation allows, they are operationally conducted as CDO. In situations with the increased volume of traffic, radar vectored aircraft are provided with CDO as well. Air traffic controllers clear direct routes whenever the traffic situation allows. Inbound aircraft are directed to IF with the information about distance to FAF and are cleared for descent with the optimal vertical profile until FAF altitude. Aircraft which take-off, whenever the traffic situation allows, are directed by the shortest route towards the exit corridor. Usually, with the previous coordination with the neighboring ATC, aircraft are cleared via direct routes towards the corridors within the adjacent FIR, thus significantly shortening the distance flown and reducing CO2 emission.

Apart from that, SMATSA Ltd. as an aircraft operator is an active participant in the fight for reduction of pollution and mitigation of global climatological changes.

# Following EU legislation, SMATSA Ltd. is involved in System of trading emissions of harmful gasses (EU Emission Trading Scheme, EU ETS), the first international system of this type in the world.

In 2011 SMATSA Ltd. established a system for monitoring, reporting and verification of emission data, meeting the requirements of EU Commission Regulation 2009/339/EC. The system has successfully passed the audit of an independent verification body - German company ETS Verification GmbH. In Serbia, during 2011, activities to develop an action plan to reduce emissions of harmful gasses in order to comply with ICAO requirements (Resolution A37-19) were carried out, in which SMATSA Ltd.'s experts were involved. Adoption of the Action Plan is expected in June 2012.



## SMATSA LTD.'S SOCIAL RESPONSIBILITY

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Figure 26: Action "Battle for babies"

Bearing in mind the given facts, SMATSA Ltd. Board of Directors decided to support the action "Battle for babies" by purchasing two incubators that were donated to the Institute of Neonatology. SMATSA Ltd. had previously participated in actions for children and babies support, and the action "Belgrade baby club" is also supported, organized by the city of Belgrade, in which newborn babies were provided with packages of necessary things.

In 2011, SMATSA Ltd. joined humanitarian action organized by B92 Fund, in order to purchase 100 incubators for prematurely born babies for health institutions in Serbia.



## **COOPERATION** WITH AIR TRAFFIC CONTROLS IN THE REGION

An example of the good practice from previous years was continued in 2011, by signing the Agreements on operational -technical cooperation between SMATSA Ltd. and a few Air Traffic Controls in the region:

Budapes

• HUNGARO CONTROL, in January

• BULATSA, in February

• MK CAA, in September

In this way, the cooperation in areas of common interest was upgraded and an approach for solving operational, technical as well as developing issues in the field of providing air navigation services was harmonized.









10

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Figure 27: Signing the Agreement on operational - technical cooperation



# **IMPROVING QUALITY**

21

### TOWARDS MORE SUCCESSFUL BUSINESS

No	Process	Objective	Planned	Realized	Remark
1.	ATM	Delay per flight, generated by SMATSA Ltd.	Less than 0.3 minutes per flight	Yes	Delay per flight, generated by SMATSA Ltd. is 0.04968 min.
2.	ATM	Maximum number of serious accidents, which are analyzed and found to be caused by the ATM	Less than 0.5 on 100,000 operations	Yes	The value of the number of serious acci- dents on 100,000 operations is 0.18.
3.	CNS	Operational availability of technical equipment and systems that directly affect the provision of A (t)	99.9%	Yes	Availability: RDR: 99.9933%; EUROCAT- E system (EUROCAT-E with ARTAS and AFTN/AMHS system): 100%, Flight inspection and MET devices: 99.925%; Frequencies: 99.91%; Links to remote sites: 99.674%, VCS and RBS systems, TRS Pro-Line Rel. 2.0 and DIVOS 3 Log: 100%, EE: 100%.
4.	MET	Accuracy of forecasts for the airport (TAF)	According to ICAO Annex 3, Attachment B	Yes	The results of the realized forecast analysis (TAF): for LYBT 97.7%, for LYBE 98.1%, for LYKV 95.1%, for LYNI 97.0%, for LYUZ 93.8%, for LYPG 98.3%, for LYTV 97.7%, average for all airports 96.8%.
5.	AIS	Quality evaluation Q	the least 0.76	Yes	Quality evaluation was conducted on the sample of 249 data. The average score for this sample is 0.761.
6.	TRE	Annual training plan reali- zation	100%	No	Out of 41 planned trainings, 35 were realized.
7.	TRE	The introduction of self-fun- ding class for ATC	1 class	Yes	

In accordance with ISO standards, with the SMATSA Ltd. policy and set goals, the processes for effective functioning of system were monitored, maintained and improved.

As confirmation of the well-established quality management system is the fact of ISO 9001 Certificate validity extension after the first successfully conducted surveillance audit by the certification company SGS, in May 2011. Apart from that, the scope of ISO certificate validity was extended, which now includes pilot training process and aircraft maintenance.

No	Process	Objective	Planned	Realized	Remark
8.	FTO	Realization of the planned the- oretical classes for the current year, for every started group of candidates.	100%	Yes	Planned: 18,290 student-class, realized 21,268 student-class.
	FTO	Realization of planned deadli- nes completion of theoretical training for the current year	100%	Yes	All the deadlines for completion, for all groups were realized.
10.	FTO	Realization of the planned flying hours, for every single course commenced in the current year.	100%	Yes	Planned number of flying hours: 3,000, realized number of flying hours: 3,639.
11.	FTO	Realization of planned dead- lines completion of the flight training for the current year	100%	Yes	
12.	CAL	Annual plan of flight inspection unit	100%	Yes	Number of realized flight inspec- tions: according to annual plan 246, according to contracts 38. Number of non-scheduled flight inspections 15.
13.	CAL	Provision of services	Additional user	Yes	Two new contracts were concluded: Budapest airport and Hungaro Control.
14.	МО	Realization of annual airwort- hiness revalidation for aircraft which are used in Aviation Academy	100%	Yes	Planned 15, airworthiness revalidati- on for 17 aircraft.
15.	МО	Signing and realization of Agreement on Aircraft Mainte- nance and Provision of Services	Three users	No	Planned 3 realized 2 contracts.

#### Table 4: Realized quality objectives

Quality Management System structure is adjusted to SMATSA Ltd. organization, satisfying its needs and providing documentation of all business processes that may influence the quality and service safety and their effective application. Based on the defined annual quality objectives, which are brought by the Quality Committee, the key indicators which are measured in order to determine the feasibility of performance objectives and to identify opportunities for improvement were determined.

The realized quality objectives in 2011, in relation to planned values for the same year, are given in the following table:

Besides monitoring the success of the business through established quality management system, SMATSA Ltd. develops indicators and monitors the success of business through four key areas that are defined in the regulations of the European Commission 1216/2011 i.e. 691/2010.

These areas mean Safety, Environment, Capacity and Cost-Efficiency and are the part of the framework section defined in the Strategic Business Plan.

The indicators and the gained results on which it is possible to make comparison of successful business of SMATSA Ltd. and other Air Traffic Controls in Europe are presented in LSSIP and ACE Benchmarking Report documents, as well.





Item	2010	2011
Operating revenues	7,072,781	8,466,897
Revenues from provided services	7,010,323	8,284,722
Other operating revenues	62,458	182,175
COGS	-	-
Material and energy expenses	94,192	232,564
Salaries expenses	4,093,819	4,596,696
Other operating expenses	1,016,015	1,294,007
EBITDA	1,868,755	2,343,630
Depreciation and Amortization	1,143,492	1,347,182
EBIT	725,263	996,448
Financial revenues	369,759	490,511
Financial expenses	473,703	579,841
Other and extraordinary revenues	572,084	99,403
Other and extraordinary expenses	502,511	424,651
EBT	690,892	581,870
Income tax	160,772	252,567
Net Income	530,120	329,303

Table 5: Income Statement in the period of 2010-2011, in 000 RSD

Item	2010	2011
ASSETS		
Subscribed capital unpaid	-	-
Intangible assets (net value)	12,900	29,719
Tangible assets (net value)	13,598,221	13,612,674
Equity investments	-	-
Other long-term financial investments	-	-
Total long-term financial investments	-	-
Fixed assets	13,611,121	13,642,393
Inventories	93,805	181,989
Receivables	1,216,544	1,279,438
Excess profits tax receivables	-	17,539
Cash and cash equivalents	907,720	1,805,027
VAT and accrued items	371,543	185,999
Current assets	2,589,612	3,469,992
Deferred tax	-	
Operating assets	16,200,733	17,112,385
Capital gains/losses	-	-
Total assets	16,200,733	17,112,385
Off-Balance sheet assets	1,913,315	46,531

Table 6. Assets in the period of 2010-2011, in 000 RSD



Item	2010	2011
LIABILITIES AND EQUITY		
Initial capital	1,873,820	1,873,820
Subscribed capital unpaid	-	-
Statutory reserves	347,044	507,044
Revaluation reserves	3,819,765	3,058,107
Retained earnings	2,685,349	3,677,758
Less: Loss	-	-
Less: Repurchased shares	-	-
Equity	8,725,978	9,116,729
Long-term provisions	611,576	665,307
Long-term loans	3,710,426	5,161,896
Other long-term liabilities	-	-
Long-term liabilities	3,710,426	5,161,896
Short-term financial liabilities	492,176	626,444
Operating liabilities	1,964,223	569,088
Other short-term liabilities	439,260	655,340
VAT and other tax payables	10,162	8,302
Profit tax liabilities	54,484	6,536
Short-term liabilities	2,960,305	1,865,710
Deferred tax	192,448	302,743
Total Liabilities	7,474,755	7,995,656
Total Liabilities and Equity	16,200,733	17,112,385
Off-Balance sheet liabilities	1,913,315	46,531

Table 7: Liabilities and Equity in the period of 2010-2011, in 000 RSD

Position	2010.	2011.
CASH FLOW FROM OPERATING ACTIVITIES		
Cash inflow from operating activities	7,641,978	8,760,929
Cash receipts from sale and received advance payments	6,645,503	8,177,955
Interest received from operating activities	3,807	8,484
Other inflows from operations	992,668	574,490
Cash outflow from operating activities	5,860,633	6,654,929
Cash paid to suppliers and given advance payments	1,634,813	1,830,364
Salaries, salary compensations and other personal expenses	4,164,989	4,587,426
Interest paid	8,611	114,00
Income tax paid	52,220	123,13
Other taxes	-	-
Net cash inflow from operating activities Net cash outflow from operating activities	1,781,345	2,106,000
CASH FLOW FROM INVESTING ACTIVITIES		
Cash inflows from investment activities	1,841	9
Sale of equity and stakes (net inflows)		
Proceeds from sale of intangible assets, buildings, facilities, equipment and biological assets	1,841	
Other financial investments (net inflows)		
Received interest from investment activities		
Received dividends		
Cash outflows from investment activities	2,739,059	958,91
Acquisition of shares and stakes (net outflows)		
Purchase of intangible assets, buildings, facilities, equipment and biological assets	2,739,059	958,91
Other financial investments (net outflow)		
Net cash inflow from investing activities Net cash outflow from investing activities	2,737,218	958,900
CASH FLOW FROM FINANCING ACTIVITIES		
Cash inflow from financing activities	1,129,053	50,703
Initial capital increase		
Proceeds from long-term and short-term loans (net inflows)	1,129,053	50,70
Other long-term and short-term liabilities		
Cash outflow from financing activities	127,373	413,77
Repurchased own shares and stakes		
Payment of long-term and short-term loans and other liabilities (net outflows)	127,373	413,770
Payment of financial leasing		
Dividends paid		
Net cash inflow from financing activities	1,001,680	-
Net cash outflow from financing activities	-	363,06
TOTAL CASH INFLOW	8,772,872	8,811,64
TOTAL CASH OUTFLOW	8,727,065	8,027,614
NET CASH INFLOW	45,807	784,027
NET CASH OUTFLOW	-	-
CASH AT THE BEGINNING OF THE ACCOUNTING PERIOD	982,821	907,720
POSITIVE FOREIGN EXCHANGE EFFECTS FROM CONVERSION OF CASH	176,567	428,989
	1/0,50/	120,70
NEGATIVE FOREIGN EXCHANGE EFFECTS FROM CONVERSION OF CASH	297,475	315,70





#### 22.1.1 The basis for Preparation of the Financial Statements

The preparation of the SMATSA Ltd's financial statements for the accounting period ending on 31st December 2010, was carried out, in all material respects, in accordance with the Accounting and Auditing Law (,'Official Gazette RS", No. 46/2006 and 111/2009) which implies applying International Accounting Standards (IAS) as well as International Financial Reporting Standards (IFRS), and in accordance with the regulations issued by the Ministry of Finance of the Republic of Serbia.

The financial statements are presented in Dinars (RSD), which is SMATSA Ltd.'s functional and reporting currency and reports are given in thousand dinars. Foreign currency transactions are calculated in RSD using the exchange rates valid at the date of the transactions or accounting item entry validation. Foreign exchange gains and losses resulting from the settlement of such transactions and from the conversion of monetary assets and liabilities denominated in foreign currencies at end of the year are recognized in the income statement. Foreign exchange gains and losses that relate to loan liabilities and cash and cash equivalents are presented in the income statement within the financial revenues item or the financial expenses item.

#### 22.1.2 Summary of Significant Accounting Policies

#### **Intangible Assets**

Intangible assets are non-monetary assets without physical substance, the future benefits of which are expected to flow to the entity (in the period longer than one year).

An intangible asset is recognized and is subject to amortization if the asset meets the recognition criteria prescribed by the IAS 38 (Intangible Assets), has a useful life that exceeds the period of one year, and an individual purchase price, when acquired, is higher than the average gross income per employee in the Republic of Serbia, according to the latest data made available by the Statistical Office of the Republic of Serbia. An intangible asset is initially measured (recognized) at cost value or cost price. After the initial recognition, an intangible asset is measured at cost less any accumulated depreciation.

Intangible assets subject to amortization are amortized using the straight-line method over the course of five years, except for assets whose life is determined by a contract, in which case they are written off within terms specified in the contract. The amortization of an intangible asset is calculated as of the beginning of the month following the month when an intangible asset was put into use. The basis of the amortization calculation is the cost value less the residual value with written-down value for accumulated amortization and total loss due to impairment.

Intangible assets' additional charges, after their purchase or life-end, increase intangible asset's value if the asset meets the recognition criteria for fixed assets, i.e. has a useful life that exceeds the period of one year and if additional charges value is higher than the average gross income per employee in the Republic of Serbia, according to the latest data made available by the Statistical Office of the Republic of Serbia. Purchase price is adjusted according to additional charges increasing intangible assets value.

Base amortization rates which apply to individual intangible assets are the following:

Title	Amortization rates
Licenses and application software	20-33.33 %
Other intangible assets	20-33.33 %

Table 9: Base Amortization Rates for Intangible Assets

#### Property, Plant and Equipment

A tangible asset is recognized as property, plant and equipment and is subject to depreciation if it meets the recognition criteria prescribed by the IAS 16 (Property, Plant and Equipment), has a useful life that exceeds the period of one year, and an individual purchase price when acquired is higher than the average gross income per employee in the Republic of Serbia, according to the latest data made available by the Statistical Office of the Republic of Serbia. Property, plant and equipment are depreciated using the straight-line method, as of the date of the asset being made available for use.

Base depreciation rates which apply to individual property, plant and equipment are given in the following table:

Title	Depreciation rates	
Constructions	0.24-33.33%	
Equipment	2.22 - 33.33%	
Vehicles	16.67 - 33.33%	
Computer equipment	4.26 - 33.33%	
Furniture	2.22 - 33.33%	
Other equipment	2.32 - 33.33%	
Other entity equipment	20%	

Table 10: Base Depreciation Rates for Property, Plant and Equipment

Investments in other entity's assets are depreciated based on their estimated useful lives. Property, Plant and Equipment are not accounted into balance sheet after alienation or when the asset is withdrawn from usage permanently and when no further economic benefit is expected from its alienation.

#### **Tools and Accessories**

It is mandatory that the tools and accessories, which have useful lives shorter than one year, are accounted for as current assets (as inventories), regardless of their cost value. These assets are not depreciated, but their value is transferred to expenses when they are put to use.

#### **Spare Parts**

Spare parts are recognized as fixed assets if their useful lives exceed the period of one year, and their individual purchase price, when acquired, is higher than the average gross income per employee in the Republic of Serbia, according to the latest data made available by the Statistical Office of the Republic of Serbia. Such spare parts, upon being installed, increase book value of the assets they have been installed in. Spare parts which do not satisfy the conditions from Paragraph 1 of this Article, upon being installed, shall

be given as operating cost.

#### **Inventories**

Inventories are accounted according to IAS 2 (Inventories). Inventories are assets in the form of materials or supplies to be consumed in the production process, or in the course of rendering services. Inventories include raw materials and consumables, which shall be consumed in the production process, or in the course of rendering services. Materials purchased from suppliers are measured by the lower of the two - purchase cost value or selling value. The purchase cost value or cost price of inventories comprises all costs of purchase, and other costs incurred in bringing the inventories

to their present location and condition.

#### Short-term Receivables and Investments

Short-term receivables comprise accounts receivable, domestic and foreign, for sale of merchandise and services rendered. Short-term investments comprise loans, securities and other short-term investments having date of maturity or sale of one year from the balance sheet date. Short-term accounts receivable are measured by original invoice value. If the invoice value is denominated in a foreign currency, the value is calculated into the presentation currency at the average exchange rate prevailing at the date of transaction. Changes in the exchange rate from the transaction date to the receivables collection date are presented as exchange rate gains and losses and credited to revenues, or charged against expenses.

#### Cash and Cash Equivalents

Cash and cash equivalents comprise a part of the current (operating) assets of a legal entity, which are measured by nominal, or fair value, in accordance with the IAS 39 (Financial Instruments: Recognition and Measurement) and other relevant standards, the IAS 32 (Financial Instruments Presentation) and the IAS 7 (Cash Flow Statements).



Cash and cash equivalents comprise: cash on hand, demand deposits, other short-term highly liquid investments with original maturity period of up to three months, or shorter (cheques and bills received for collection, current investments in securities) and bank overdrafts. In the balance sheet, bank overdrafts are included in borrowing liabilities, within current liabilities.

#### **Initial Capital**

Initial capital is the initial investment of SMATSA Ltd. founders. The founders of SMATSA Ltd. are the Republic of Serbia (92%) and the State of Montenegro (8%). First, initial capital is disclosed in the amount of initial investment in the SMATSA Ltd. (i.e. it consists of paid-in capital and issued unpaid capital).

Initial capital changes are only executed according to the prescribed rules of Law on Business Associations, and all these initial capital changes are registered in relevant Register. Although initial capital value is disclosed in Register in Euros, initial capital value disclosed in dinars does not change according to Euros exchange rate changes.

#### **Statutory Reserves**

SMATSA Ltd. has a mandatory provision formed from retained earnings until the provision reaches at least 10% of the initial capital, as governed by SMATSA Ltd's Articles of Association.

#### **Revaluation Reserves**

Revaluation reserves comprise the positive effects of changes in the fair value of property, plant, equipment, intangible assets and other financial instruments.

#### **Retained Earnings**

Retained earnings are recorded as prior years' retained earnings and current year's retained earnings.

#### **Provisions**

Long-term provisions comprise warranty provisions, provisions for retained caution money and deposits, provisions for restructuring of a company, provisions for employee benefits, the IAS 19 (Employee Benefits), and other long-term provisions for coverage of liabilities (legal or actual), arisen as a result of past events, which are likely to cause an outflow of resources of economic benefit, for the purpose of their settlement, and which may be reliably measured (e.g. ongoing litigations), as well as provisions for issued guarantees, and other forms of surety.

#### Liabilities

A liability is any obligation which is a contractual obligation:

Transfer of cash or any other financial asset to another company, or

• Exchange of financial instruments with another company under potentially unfavorable conditions.

#### **Deferred Income Tax**

Taxes for the period comprise current and deferred tax. Tax is recognized in the income statement, except for the value that relates to the items which are directly recognized in the equity. In that case, tax is recognized in the equity as well.

Current income tax is calculated on the date of income statement based on the valid statutory tax regulation of Republic of Serbia where SMATSA Ltd. operates and generates taxable income. Deferred tax is calculated in full amount using the liability method, on temporary differences arising between the tax basis of assets and liabilities and their carrying amounts in the financial statements. However, if deferred income tax, provided it has not been accounted for, arises from initial recognition of an asset or liability in a transaction other than a business combination, that, at the time of the transaction, affects neither the accounting nor the taxable profit or loss, then the deferred tax is not accounted for.

#### **Revenues and Expenses**

Revenues comprise revenues from the ordinary course of SMATSA Ltd.'s activities, and gains. Revenues from the ordinary course of activities are revenues gained from rendering services in air traffic, revenues from subsidies, grants, compensations and recovery of duties based on the sale of services, and other revenues calculated in the accounting document, irrespective of their payment time.

Gains represent other items qualifying as revenues, and may arise, though not necessarily, from the ordinary course of SMATSA Ltd.'s activities. Gains represent an increase in economic benefit, and as such are not different in nature from revenues. Gains include gains on disposal of long-term assets, unrealized gains; e.g. the ones resulting from an increase in book value of long-term assets. Gains are recognized on a net basis, after being reduced for respective expenses. Expenses comprise costs arising from the ordinary course of SMATSA Ltd.'s activities, and losses. Costs arising from the ordinary course of SMATSA Ltd.'s activities comprise expenses of direct material and goods, and other operating expenses, irrespective of the payment date.

Losses represent other items qualifying as expenses, and may arise, though not necessarily, from the ordinary course of SMATSA Ltd. `s activities. Losses represent reduction in economic benefits, and as such are not different in nature from other expenses.

#### Interest and Other Borrowing Costs

Interest and other borrowing costs of SMATSA Ltd. are accounted for per the basic procedure in accordance with

the IAS 23 (Borrowing Costs).

#### **Subsequent Errors**

Subsequent material errors are corrected through the account of retained earnings from prior years and retained losses from prior years, in the manner established by the IAS 8 (Accounting Policies, Changes in Accounting Estimates and Errors). A material error is an error which individually, or cumulatively with other errors, exceeds 3% of total revenues. Subsequent errors that are not material are restated for correction against expenses, or in favor of revenues in the period when identified.



### 23 INDEPENDENT AUDITOR`S REPORT



#### INDEPENDENT AUDITOR'S REPORT

### TO THE SUPERVISORY BOARD OF THE SERBIA AND MONTENEGRO AIR TRAFFIC SERVICES SMATSA LLC BELGRADE

We have audited the accompanying financial statements of the SERBIA AND MONTENEGRO AIR TRAFFIC SERVICES SMATSA LLC Belgrade (hereinafter: the "Company") which comprise the balance sheet as at December 31, 2011 and the related income statement, statement of changes in capital and the cash flow statement for the year then ended, and notes to the financial statements.

#### Management's Responsibility for the Financial Statements

The Management of the Company is responsible for the preparation and the relevant disclosure of these financial statements in accordance with International Financial Reporting Standards, as well as for those internal controls determined by the Management as necessary for the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on the subject financial statements based on our audit. We conducted our audit in accordance with the International Standards on Auditing and the Law on Accounting and Auditing of the Republic of Serbia. Those standards require that we comply with ethical requirements and that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

## A

#### INDEPENDENT AUDITOR'S REPORT (continued)

### TO THE SUPERVISORY BOARD OF THE SERBIA AND MONTENEGRO AIR TRAFFIC SERVICES SMATSA LLC BELGRADE

#### Auditor's Responsibility (Continued)

Making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying financial statements present truly and objectively, for all materially significant respects, the financial position of the Company on December 31, 2011, and its results of operations, changes in capital and cash flow for the year then ended in accordance with the accounting regulations of the Republic of Scrbia.

Belgrade, May 8, 2012

UCA-A Certified Auditor BEOGRAPHISTOP Zoran Djerković, PhD

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## 24 ABBREVIATIONS

ACS	AREA CONTROL SURVEILLANCE
AFTN	AERONAUTICAL FIXED TELECOMMUNICATION NETWORK
AIP	AERONAUTICAL INFORMATION PUBLICATION
AIS	AERONAUTICAL INFORMATION SERVICES
AMHS	AERONAUTICAL MESSAGE HANDLING SYSTEM
AMO	AERODROME METEOROLOGICAL OFFICES
ANS	AIR NAVIGATION SERVICES
ANSP	AIR NAVIGATION SERVICE PROVIDER
ARTAS	ATM SURVEILLANCE TRACKER AND SERVER
ATFM	AIR TRAFFIC FLOW MANAGEMENT
ATM	AIR TRAFFIC MANAGEMENT
ATPL	AIRLINE TRANSPORT PILOT LICENSE
AWS	AUTOMATIC WEATHER SYSTEM
CANSO	CIVIL AIR NAVIGATION SERVICES ORGANIZATION
CDA	CONTINUOUS DECISION APPROACH
CDO	CONTINUOUS DESCENT OPERATIONS
CNS	COMMUNICATION, NAVIGATION AND SURVEILLANCE
CPL	COMMERCIAL PILOT LICENSE
CRCO	CENTRAL ROUTE CHARGES OFFICE
DME	DISTANCE MEASURING EQUIPMENT
DPS	DATA PROCESSING SYSTEM
DVRPS	DIGITAL VOICE RECORDING AND PLAYBACK SYSTEM
EAD	EUROPEAN AIS DATABASE
EANPG	EUROPEAN AIR NAVIGATION PLANNING GROUP
EASA	EUROPEAN AVIATION SAFETY AGENCY
ECAC	EUROPEAN CIVIL AVIATION CONFERENCE
EUROCONTROL	EUROPEAN ORGANIZATION FOR THE SAFETY OF AIR NAVIGATION
FAA	FEDERAL AVIATION ADMINISTRATION
FAF	FINAL APPROACH FIX
FAMUS	FUTURE ATM MODERNIZATION AND UPGRADE SYSTEM
FI	FLIGHT INSTRUCTOR
FIR	FLIGHT INFORMATION REGION
FL	FLIGHT LEVEL
IACA	INTERNATIONAL AIR CARRIER ASSOCIATION
ICAO	INTERNATIONAL CIVIL AVIATION ORGANIZATION
ICT	INFORMATION AND COMMUNICATIONS TECHNOLOGY
IF	INTERMEDIATE APPROACH FIX

IED	
IFR	
ILS	
ISO	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
LOA	LETTER OF AGREEMENT
LSSIP	LOCAL SINGLE SKY IMPLEMENTATION PLAN
MET	METEOROLOGY OR METEOROLOGICAL
MSSR	MONOPULSE SECONDARY SURVEILLANCE SYSTEM
MWO	METEOROLOGICAL WATCH OFFICE
NDB	NON DIRECTIONAL RADIO BEACON
OLDI	ON-LINE DATA INTERCHANGE
PANS OPS	PROCEDURES FOR AIR NAVIGATION SERVICES
ΡΑΡΙ	PRECISION APPROACH PATH INDICATOR
P-RNAV	PRECISION AREA NAVIGATION
PSR	PRIMARY SURVEILLANCE RADAR
SES	SINGLE EUROPEAN SKY
SMATSA	SERBIA AND MONTENEGRO AIR TRAFFIC SERVICES AGENCY
SGS	SOCIÉTÉ GÉNÉRALE DE SURVEILLANCE
SSR	SECONDARY SURVEILLANCE RADAR
TRS	TIME REFERENCE SIGNAL
UHF	ULTRA HIGH FREQUENCY
UIR	UPPER INFORMATION REGION
UPS	UNINTERRUPTIBLE POWER SUPPLY
VCS	VOICE COMMUNICATION SYSTEM
VFR	VISUAL FLIGHT RULES
VHF	VERY HIGH FREQUENCY
VOR	VHF OMNIDIRECTIONAL RADIO RANGE
ADC	AERODROME CONTROL
CAA	CIVIL AVIATION AGENCY OF MONTENEGRO
АМС	AERONAUTICAL METEOROLOGICAL CENTRE
LTD.	LIMITED LIABILITY COMPANY
CAD	CIVIL AVIATION DIRECTORATE OF THE REPUBLIC OF SERBIA
GROUND NAV-AIDS	GROUND NAVIGATIONAL AIDS
SMATSA LTD.	SERBIA AND MONTENEGRO AIR TRAFFIC SERVICES AGENCY LTD.
RWY	RUNWAY
тмс	TERMINAL CONTROL
во	BOARD OF DIRECTORS
ATCC	AIR TRAFFIC CONTROL CENTRE





