

**Seventeenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group
(CPWG/17)**

(Samara, Russia, 3-6 June 2014)

Agenda Item 8: Communication, Navigation, Surveillance and Air Traffic Management Issues

Airspace Structure of the Russian Federation

(Action Item #)

(Presented by State ATM Corporation)

SUMMARY

This Information Paper presents information on airspace structure modernization in the Russian Federation in 2013-2014.

1. Introduction

1.1. During 2013, the amount of traffic handled in the Russian airspace reached **1 418 749** flights, with an increase of **7.6%** compared to 2012. The number of international flights increased by **6.02%** (**871 662** flights) while domestic traffic was up by **10.22%** (**547 087** flights). Below is a comparison analysis of traffic density from 2005 to 2013.

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total	821667	892985	1017090	1094754	987969	1109663	1248106	1318486	1418749
International flights	465333	516201	595648	655398	605387	676879	767971	822134	871662
Domestic flights	356334	376784	421442	439356	382582	432784	480135	496352	547087

As shown in the table, a sustainable traffic growth both in international and domestic flights was observed during the period from 2005 to 2013. The traffic volume of 2009 is an exception as this was a crisis year.

1.2. The breakdown of traffic intensity during 2014 (January through April) is shown below:

	January	February	March	April
Total	109343	101634	112980	113912
International flights	68936	60028	67457	66299
Domestic flights	40407	41606	45523	47613

The dynamics of the traffic both for international and domestic flights depends on the season. The traffic has increased by 9.03% in 2014.

1.3. The transit flights along the main ATS routes totalled **292 039** flights representing an increase of

2.27% compared to 2012.

1.4. During January-April of 2014, as compared to the same period in 2013, traffic intensity has risen by **1.66%**.

Traffic growth by routes:

- Trans-Siberian +24.26%
- Trans-Asian +4.11%
- Asian +0.40%
- Other +34.59%

Equally, traffic has decreased on the following routes:

- Trans-East -8.82%
- Cross-Polar -0.74%
- Trans-Polar -4.95%
- Kaliningrad FIR -3.18%

2. Air Traffic Services Units

2.1. The Russian ATM System interacts with 19 neighboring States and is an integral part of the global and European regional air navigation systems. The Russian ATM System covers the area of some 26 million sq. km. of sovereign and delegated airspace.

2.2. As of June 01, 2014, the Russian Federation operates 45 Air Traffic Services Units, providing air traffic services.

2.3. After the recent changes, the present-day air traffic control system incorporates 1 Main ATM Center, 7 Zonal ATM Centers, 30 Area Control Centers (including 16 with Traffic Management responsibilities) and 7 auxiliary Area Control Centers.

Changes to Number of ATS Units

Type of Center	Main ATM Center	Zonal ATM Center	Aux Zonal ATM Center	ACC with traffic management authority	Civil/Military ACC	Civil ACC	Aux ACC	Aux ACC w/o ATC	Total:
2000	1	8	6	-	38	31	45	4	133
2001	1	7	4	-	42	26	44	2	126
2002	1	8	4	-	41	25	44	1	124
2003	1	8	4	-	40	25	44	1	123
2004	1	8	4	-	40	24	40	1	118
2005	1	8	4	-	32	30	36	1	112
2006	1	8	4	-	29	33	38	-	113
2007	1	8	4	18	-	60	32	-	105
2008	1	7	-	18	-	40	20	-	86
2009	1	7	-	18	-	36	18	-	80
2010	1	7	-	18	-	33	16	-	75
2011	1	7	-	17	-	24	14	-	63
2012	1	7	-	17	-	19	8	-	52
2013	1	7	-	16	-	16	7	-	44
2014	1	7	-	16	-	17	7	-	45

2.4. The work on the establishment of consolidated Area Control Centers and equipment of these with advanced ATC systems and facilities is in progress. A great amount of work was done on consolidation of Irkutsk, Novosibirsk, St. Petersburg, Tyumen ACCs.

The consolidation program was continued in 2013:

- Syktyvkar ACC took over Vorkuta ACC airspace
- St. Petersburg ACC took over Velikiye Luki ACC airspace
- Tyumen ACC took over Surgut, Khanty-Mansyisk FIRs
- Arkhangelsk ACC took over Leshukonskoye FIR
- Samara ACC took over Ufa and Orenburg FIRs
- Novosibirsk ACC took over Omsk ACC airspace

As of now, 6 consolidated Area Control Centers (Moscow, Rostov, Khabarovsk, Samara, Novosibirsk and Magadan) are in operation.

The consolidation process will continue in 2014:

- Irkutsk ACC to take over Chita ACC airspace (June 26, 2014);
- Krasnoyarsk ACC to take over Norilsk ACC (December 11, 2014).
- Yakutsk ACC to take over Tiksi airspace (December 11, 2014)

3. Improvements to ATS Routes

3.1. The current airspace structure supports international and domestic flights of 1 272 national and foreign airlines.

3.2. In 2014, State ATM Corporation of Russia has accomplished a number of important initiatives aimed at meeting user requirements, establishing and expanding transit ATS routes and keeping balance between the available ATC capacity and growing traffic.

3.3. In 2013, as a result of ongoing cooperation with neighboring air navigation service providers and the airline community, several new entry/exit points were opened with adjacent FIR: Norway- 5 (KOMEL, NIRUT, AGATA, EVMUV and ATKUP), Kazakhstan – 1 (SOMOL). 2 new entry/exit points with the USA (on Cross-Polar routes) will be established in 2014.

3.4. State ATM Corporation’s efforts to establish a near Great Circle route system were applauded and commended by IATA and airline representatives at several international meetings.

3.5. The overall number of ATS routes in the Russian airspace has reached 8 869, of which 601 are international. The total mileage of ATS routes has reached 690 549 km., including 530 550 km. of international airways.

4. Number of ATS Routes Implemented

Year	Total	International	Domestic	Weekend Routes
2004	124	75	42	7
2005	36	19	15	2
2006	50	43	6	1
2007	61	57	2	2
2008	136	115	20	1

2009	67	56	10	1
2010	41	32	5	-
2011	70	67	3	-
2012	57	51	6	-
2013	44	42	2	-
2014	24	20	3	1

5. Route and Mileage Expansion

Year	Total number of airways		including							
			international		RNAV		Domestic		Conditional	
	number	mileage (km)	number	mileage (km)	number	mileage (km)	number	mileage (km)	number	mileage (km)
2001	549	392359	302	241028	-	-	147	107358	100	43973
2002	555	394612	305	242807	-	-	148	107540	102	44265
2003	571	404098	368	266051	-	-	301	94352	129	43695
2004	785	510256	356	286945	-	-	298	177747	131	45564
2005	810	522336	373	301026	-	-	307	176534	130	44766
2006	812	499270	388	305888	-	-	302	144986	124	48396
2007	791	537725	374	331259	-	-	293	163428	124	43038
2008	821	574494	444	380101	-	-	271	148582	106	35811
2009	829	598537	474	421768	-	-	259	143289	96	33480
2010	810	610016	489	441600	4	8602	321	168416	-	-
2011	840	639085	521	468227	4	8602	315	162256	-	-
2012	863	668160	544	497868	4	8602	313	161690	-	-
2013	869	678507	556	508869	4	8602	309	161036	-	-
2014	886	690549	601	530550	5		277	149390	-	-

6. ATS Routes Implemented since April 3, 2014

#	ATS routes	Airway Designator
1	SUGIR (544401N 0363833E) – AGNIN (534757N 0354117E) – ARLAB (533634N 0354628E) – RIMAK (532541N 0355123E) - KOREB (525859N 0360553E). Sector A131 SUGIR (544401N 0363833E) – UNORI (532829N 0361453E) – KOREB (525859N 0360553E) received status of R374.	A131 continuation
2	KELEK (683012N 0282730E) – PILAN (672718N 0324701E) A new sector replaces GEPLA (673852N 0303958E) – PILAN 672718N 0324701E	A222 continuation
3	KUDAR (521802N 1062901E) – BALOG (520959N 1055624E) – USONA (520202N 1052501E)	A807 continuation
4	GUSIN (510602N 1061401E) – LETBI (501154N 1033036E)	A809 continuation
5	VOR/DME KR D (Krasnodar (450115N 0390950E) –NDB XT (Ryazanskaya) (445744N 0393435E) - NDB RF (Ladozhskaya) (451712N 0395503E) - NDB ND (Bolshevik) (454550N 0401439E) – SUDIR (462059N 0402754E)	B820
6	ULTUK (514302N 1034100E) – LETBI (501154N 1033036E)	G909
7	IDENI (513436N 1050942E) – LETBI (501154N 1033036E)	G910

8	NDB UK (Yukhnov) (544415N 0351316E) – AGNIN (534757N 0354117E) – FORMA (502118N 0354154E)	G915
9	SUGIR (544401N 0363833E) – OGRUS (533207N 0342326E)	G916
10	IDENI (513436N 1050942E) – AMUTA (502230N 1045230E)	G917
11	KULED (452659N 0403354E) – KULOM (454859N 0412554E) – NOSAK (452729N 0424324E)	G918*
12	NDB UH (Tikhoretsk) (455107N 0400524E) - KULOM (454859N 0412554E)	G919*
13	PARAT (453159N 0414254E) – TUSOK (450159N 0425355E)	G920*
14	ABELA (441129N 0423601E) – RESLO (435700N 0423730E)	G921*
15	LARIN (443559N 0430107E) – RESLO (435700N 0423730E) – OKOBA (434000N 0422955E) – LODNA(425942N 0431449E)	G922*
16	VOR/DME MNW (Mineralnye Vody) (441423N 0430313E) - RESLO (435700N 0423730E) – DINAP (433130N 0414955E)	G924*
17	POGUL (440459N 0441555E) – RATKI (434000N 0441800E) – DIKUL (431219N 0443624E)	G925*
18	GUBOR (435253N 0404237E) – DINAP (433130N 0414955E) – UGADA (432759N 0430155E) – NAMEN (433048N 0433830E) – RATKI (434000N 0441800E)	G926*
19	KUDAR (521802N 1062901E) – SILON (524835N 1095516E) – KARAL (533013N 1164621E) – URUSA (534550N 1220812E) – NIKTO (534727N 1232810 E)	P873 RNAV 5
20	SUGIR (544401N 0363833E) – UNORI (532829N 0361453E) – KOREB (525859N 0360553E)	R374 continuation
21	GIREN (574614N 1080337E) – LADEN (553838N 1101525E) – RITEK (520138N 1131820E)	R809 continuation

* G918-G922, G924-G926 are detour routes to be implemented in case of natural emergency situations between April 25 and September 30. Both routes shall be used by instruction from ATC unit.

7. Action by the Meeting

7.1. The meeting is invited to note the information contained in this paper.