

**Nineteenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group (CPWG/19)**

(Tokyo, Japan, 11-15 May 2015)

**Agenda Item 5: Status on CPWG/18 Actions**

**Airspace Structure of the Russian Federation**

(Presented by State ATM Corporation)

**SUMMARY**

This working paper presents information on airspace structure modernization in the Russian Federation in Q1 of 2015.

**1. Introduction**

1.1. During Q1 of 2014 the amount of traffic handled in the Russian airspace reached **295744** flights, with a decrease of **8,70%** compared to the same period of 2014. The number of international traffic was down by **16,25%** (**164503** flights) while domestic flights increased by **2,92%** (**131241** flights).

Below is a comparison analysis of traffic density from 2005 to 2014.

<b>Year</b>	<b>Total</b>	<b>International flights</b>	<b>Domestic flights</b>
2005	821667	465333	356334
2006	892985	516201	376784
2007	1017090	595648	421442
2008	1094754	655398	439356
2009	987969	605387	382582
2010	1109663	676879	432784
2011	1248106	767971	480135
2012	1318486	822134	496352
2013	1418749	871662	547087
2014	1462131	842320	619811
2015 (Q1)	295744	164503	131241

1.2. The breakdown of traffic intensity during 2015 is shown below:

<b>Month</b>	<b>Total</b>	<b>International</b>	<b>Domestic</b>
January	100308	58540	41768
February	90060	48686	41374
March	105376	57277	48099

Traffic dynamics both for international and domestic flights depends on the season as well as objective and subjective reasons.

In 2014, transit traffic reached 267193 operations which is down by 8,5 % compared to 2013.

1.3. The flights along the major ATS route:

<b>Increase in en-route flights (%)</b>	
Other	47,51
Trans-Siberian	18,95
Trans-Asian	15,17
Trans-Polar	1,12
Cross-Polar	24,09
Kaliningrad FIR	0,42
<b>Decrease in en-route flights (%)</b>	
Asian	78,96
Trans-East	11,87

## **2. Air Traffic Services Units**

2.1. The Russian ATM System interacts with 19 neighbouring States and is an integral part of the global and European regional air navigation systems. The Russian ATM System area of responsibility exceeds 26 million square km of sovereign and delegated airspace.

2.2. As of May 01, 2015, 42 ATC Units providing air traffic services operate in the Russian Federation.

2.3. After recent changes, the present-day air traffic control system incorporates 1 Main ATM Centre, 7 Zonal ATM Centres, 27 Area Control Centres (including 15 with planning responsibilities) and 7 auxiliary Area Control Centres.

**Number of ATS Units**

Type of Center	Main ATM Center	Zonal ATM Center	Aux Zonal ATM Center	Civil ACC	Aux ACC	Total:
2000	1	8	6	69	49	<b>133</b>
2001	1	7	4	68	46	<b>126</b>
2002	1	8	4	66	45	<b>124</b>
2003	1	8	4	65	45	<b>123</b>
2004	1	8	4	64	41	<b>118</b>
2005	1	8	4	62	37	<b>112</b>
2006	1	8	4	32	38	<b>113</b>
2007	1	8	4	60	32	<b>105</b>
2008	1	7	-	58	20	<b>86</b>
2009	1	7	-	54	18	<b>80</b>
2010	1	7	-	51	16	<b>75</b>
2011	1	7	-	41	14	<b>63</b>
2012	1	7	-	36	8	<b>52</b>
2013	1	7	-	29	7	<b>44</b>
2014	1	7	-	27	7	<b>42</b>
2015Q1	1	7	-	27	7	<b>42</b>

2.4. The work on the establishment of consolidated Area Control Centres and their technical upgrade with advanced ATC systems and facilities is in progress. Significant work was done on the consolidation of Yakutsk, St. Petersburg and Tyumen ACCs.

The consolidation programme was underway in 2014:

- Irkutsk ACC took over Chita ACC (26.06.14)
- Krasnoyarsk ACC took over Norilsk ACC (11.12.14)
- Yakutsk ACC took over Tiksi ACC (11.12.14)

Further consolidation activities scheduled for 2015:

- Chelyabinsk ACC will take over Magnitogorsk ACC
- Arkhangelsk ACC will take over Naryan-Mar ACC

As of now, 8 consolidated Area Control Centers (Moscow, Rostov, Samara, Novosibirsk, Khabarovsk, Irkutsk, Krasnoyarsk, and Magadan) are in operation.

### **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, the State ATM Corporation of Russia 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, modernization of Moscow, Rostov, St.-Petersburg, Samara and Yekaterinburg airspace structure.

3.3. As a result of the ongoing cooperation with neighbouring air navigation service providers and airlines, several new entry/exit points were opened with adjacent FIRs: 2 new entry/exit points with the USA (on Cross-Polar routes – BARIP, SALET), a number of routes both on and within Russia's FIR boundary; the range of flight levels was extended and some route usage restrictions were removed.

3.4. The 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. In 2014, the overall number of ATS routes in the Russian airspace reached 921, of which 609 are international. The total ATS route length is 690 549 km, including 541 159 km of international airways.

3.6. According to the decision of the Government Transport Commission the implementation of the new Moscow TMA airspace structure has been postponed until November 2016. The transition to QNH in the Russian airspace will be carried out not earlier than November 2016.

#### **4. Number of ATS Routes Implemented**

Year	Total	International	Domestic	Weekend Routes/RNAV
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	-/4
2011	70	67	3	-
2012	57	51	6	-
2013	44	42	2	-
2014	62	28	3	1/31
2015	82	65	17	-

## 5. Route and Mileage Expansion

Year	Total number of airways		including					
			international		RNAV		Domestic	
	number	mileage (km)	number	mileage (km)	number	mileage (km)	number	mileage (km)
2001	549	392359	302	241028	-	-	147	107358
2002	555	394612	305	242807	-	-	148	107540
2003	571	404098	368	266051	-	-	301	94352
2004	785	510256	356	286945	-	-	298	177747
2005	810	522336	373	301026	-	-	307	176534
2006	812	499270	388	305888	-	-	302	144986
2007	791	537725	374	331259	-	-	293	163428
2008	821	574494	444	380101	-	-	271	148582
2009	829	598537	474	421768	-	-	259	143289
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	885	690302	573	521725	35		277	149390

## 6. ATS Routes Implemented since 30 April 2015

#	ATS routes	Airway Designator
1	PILAN (672718N 0324701E) – RATLU (671658N 0341129E) – LURAM (664606N 0375031E) – TOKRO (660730N 0391350E) – SOTIS (654100N 0400750E)	A303
2	TOKNI (612354N 0521524E) – SUNAD (604701N 0533703E) – GITLU (602801N 0542009E) – POBEM (595824N 0552408E) – URILI (594332N 0575134E) – ADANU (593502N 0590523E) – GIKES (585931N 0613710E) – BIBLI (583213N 0624300E)	A303
3	PEKUR (531231N 0523705E) – PODUT (521905N 0541956E) – Orenburg VOR/DME (ORN) (514751N 0552712E)	A360
4	Tobolsk NDB (NH) (580832N 0681633E) – UTORA (584248N 0635036E) – GIKES (585931N 0613710E) – SOMUD (591737N 0580229E) – BADIK (592124N 0570617E) – NEGOK (593016N 0531057E) – KEMEB (593334N 0520159E) – LIKNU (593621N 0505116E) – BEMIR (593554N 0485756E) – ANDAT (593100N 0452952E)	A575
5	Sambek NDB (SB) 474510N 0394755E – IRDET 471336N 0390950E – KENEN 465247N 0384518E	A712
6	ROTAT (600001N 0505129E) – LIKNU (593621N 0505116E) – TIKRO (592143N 0504635E) – ALOPU (591515N 0504443E) – OKBUM (585631N 0503800E) – DIKIN (583429N 0502957E) – DINTU (580914N 0501944E) – NURKA (564540N 0494915E)	B105
7	ASLEM 530214c 0521405B – PODUT 521905c 0541956B – BENAP 513800c 0563555B	B118

#	ATS routes	Airway Designator
8	ANDAT (593100N 0452952E) – SODMU (591644N 0480538E) – SONAT (591220N 0484746E) – OLMED (590201N 0500058E) – NIKUB (585916N 0501958E) – OKBUM (585631N 0503800E) – SUROL (585225c 0510926E) – ABGER (584444N 0520531E) – BAPTA (583901N 0524521E) – GIMUN (581001N 0545836E)	B210
9	BAGOK (563834N 0595653E) – OBILU (563145N 0602448E) – KEGOM (562948N 0603319E) – ALUMA (562246N 0610116E)	B210
10	NEKER (560613N 0620443E) – BASAB (554611N 0634624E)	B210
11	Mikhaylovsk NDB (MH) (562549N 0590659E) – INLEB (562418N 0601144E) – GOGTA (562353N 0602729E) – ALUMA (562246c 0610116E) – ODENO (561802N 0625853E) – KUSEB (561626N 0633115E) – MOTOG (560937N 0652235E) – KEROM (560049N 0671743E) – OSGOP (555736N 0675430E) – OKDEG (554914N 0692124E) – OKETI (553655c 0711326E)	B213
12	DOSUM (571720N 0612401E) – ATMEB (572803N 0621226E) – SALER (574943N 0640819E)	B215
13	POBEM (595824N 0552408E) – ARPOS (602236N 0573433E) – DIKDA (610032N 0613327E) – BEBOM (610356N 0615741E) – ABIPA (611013N 0624348E) – UNISO (611725N 0633936E)	B229
14	RIMLI (514218N 1580655E) – RINOT (522205N 1585954E) – PETIN (531012N 1582713E)	B244
15	SOPAL (584011N 0451922E) – SONAT (591220N 0484746E) – TIKRO (592143N 0504635E) – BAMAL (592632N 0520230E) – NEGOK (593016N 0531057E) – MOTUB (593517N 0575504E) – ADANU (593502N 0590523E) – GIMAK (592325c 0624612E)	B245
16	IRKAN (552000N 1625631E) – GITRU (551259N 1600635E) – LUPIR (550053N 1570825E) – NELEB (545857N 1564046E) – BANIT (544949N 1550431E)	B327
17	LATMI (552655N 0181002E) – PELUG (550900N 0201918E) – ITVUL (550827N 0214300E)	B489
18	GOMED (542652N 0193915E) – NERIG (551800N 0205500E)	B704
19	KUNER (551531N 0182653E) – TIGNU (553613N 0195018E)	B709
20	KEPET (573854N 0803025E) – NILAP (570504N 0832900E) – GIPAN (570058N 0834900E) – Malinovka NDB (SP) (564129N 0851945E)	B716
21	BIRBO (485001N 1325504E) – DASKO (490619N 1380834E) – GIGRO (501241N 1413005E) – ULMIK (502745N 1421950E) – LIMKU (503238N 1423620E) – AMKUD (504635N 1432434E) – TAKAD (505537N 1435647E). Conditional route (weekend & holiday)	B723
22	KUNER (551531N 0182653E) – RONUN (554441N 0191945E)	B810
23	BIKUR (475701N 1412805E) – NOPSO (472903N 1413937E) – KENOM (465031N 1414811E)	B813
24	TOKMO (562302N 0851240E) – SONUL (560307N 0834322E) – EDINI (554802N 0830457E)	B911
25	BUNIB (545900N 0481554E) – ABKOR 545150N 0480805E) – TUNOL (535030N 0470318E) – AMGAN (521627N 0454547E) – PETUR (520900N 0453954E) – GILUB (511200N 0445854E) – Sirotinskaya NDB (ST) (491532N 0434046E)	B920
26	MINOR (571502N 0790357E) – LAMGA (560112N 0821542E)	B925

#	ATS routes	Airway Designator
27	OSKOL (520911N 0553123E) – KEPIS (524554N 0554126E) – REDKI (532250N 0555123E) – OKNUR (544025N 0551600E)	G106
28	ERUSA (631055N 0594248E) – DITLI (620215N 0604306E) – ABLOR (614046N 0610101E) – KUDED 612840N 0611055E) – MINPU (611644N 0612034E) – DIKDA (610032N 0613327E) - DETEG( 601808N 0620607E) – OGPAS (600823N 0621326E) – ULRES (595345N 0622416E) – GIMAK 592325N 0624612E)	G108
29	AKERA (574313N 0624507E) – GIKLA (565736N 0630950E) – RURAK (563741N 0632017E) – KUSEB (561626N 0633115E) – GONOD (560518N 0633651E) – BASAB (554611N 0634624E) – NELTI (541942N 0641630E)	G108
30	GIBUL (572349N 0634537E) – ATMEB (572803N 0621226E) – ORTOD (572922N 0613740E) – ABDIR (573119N 0603624E)	G358
31	OKMOS (535558N 0554843E) – REDKI (532250N 0555123E) – MAGDU (525125N 0560437E)	G367
32	BIKMA (570419N 0591036E) – UMTEK (564718N 0600834E) – RAREK (564334N 0601641E) – NEBNA (563605N 0603244E) – ALUMA (562246N 0610116E)	G368
33	ASLIM (555401N 0614355E) – BASAB (554611N 0634624E) – OKUNA (553537N 0642919E)	G368
34	DEMAN (522630N 0515218E) – PODUT (521905N 0541956E) – KUPOM (520038N 0580222E) – LENTA (514854N 0602236E)	G371
35	Ishim NDB (OL) (560829N 0692537E) – OGTON (562441N 0663110E) – LIBMI (563000N 0652124E) – RURAK (563741N 0632017E) – AGIRU (563852N 0630039E) – Ekaterinburg VOR/DME (EKB) (564436N 0604749E) – UMTEK (564718N 0600834E) – LUNAG (565101N 0590354E)	G710
36	ATRIT (595348N 0460310E) – LIKNU (593621N 0505116E) – RURAD (594257N 0520117E) – POBEM (595824N 0552408E) – OKATI (600400N 0574244E)	G713
37	OSKIT (601143N 0491353E) – SUNAD (604701N 0533703E) – NIPRA (611004N 0571240E)	G723
38	TUMKO (534802N 0833158E) – IPLEN (540532N 0834316E) – BEGIL (542958N 0840759E)	G807
39	NIPRA (611004N 0571240E) – TUNAL (613310N 0595925E) – ABLOR (614046N 0610101E) – GEPLA (615555N 0631718E)	G813
40	OKTIL (604300N 0554200E) – ABODI (603755N 0572742E) – DETEG (601808N 0620607E) – PITET (601225N 0630824E) – SADER (600749N 0635500E)	G814
41	ALIRO (540202N 0821827E) – LUTAR (532141N 0824905E)	G824
42	OSNAB (553803N 0795356E) – USETO (554004N 0780435E) – BEDNI (554020N 0753616E) – INRAR (553902N 0745513E) – DORON (553601N 0733856E)	G825
43	RISPA (544926N 0851740E) – GITIS (545838N 0855958E) – LAPAK (552556N 0885410E)	G826
44	KENGA (561914N 0804203E) – TUPIM (562133N 0821006E) – GONPA (562234N 0831618E) – TOKMO (562302N 0851240E)	G827

#	ATS routes	Airway Designator
45	DAKIN (540930N 0722418E) – OLKIR (542800N 0734558E) – TADEG (545238N 0754344E) – Barabinsk NDB (SZ) (552125N 0781810E) – OSNAB (553803N 0795356E) – UBIRI (560258N 0823336E) – DIMID (560412N 0824212E) – LIBSA (560912N 0832112E) – Kozhevnikovo NDB (NN) (561412N 0835919E)	G828
46	Kolyvan NDB (GV) (551917N 0824212E) – EDINI (554802N 0830457E) – REGMI (560449N 0833936E) – Kozhevnikovo NDB (NN) 9561412N 0835919E)	G829
47	ADARO (504706N 0815242E) – RUBID (513501N 0811157E) – ORPAS (540156N 0814839E) – OTGEN (540626N 0815221E)	G831
48	LADOV (584808N 0800433E) – TINOB (570526N 0812743E) – LAMGA (560112N 0821542E) – ODRUS (555619N 0821735E) – Novotyryshkino NDB (KD) (551651N 0822420E)	G832
49	ALIRO (540202N 0821827E) – BARLU (532150N 0833228E) – KUDEB (522802N 0852258E)	G833
50	Mikhaylovsk NDB (MH) (562549N 0590659E) – BAGOK (563834N 0595653E) – RAREK (564334N 0601641E) – LEBLA (565045N 0604620E) – ANATU (565326N 0605728E) – BEGMA (565624N 0611003E) – SOPUS (570807N 0620007E)	G901
51	BEGIL (542958N 0840759E) – IDLON (540103N 0842628E) – KUDEB (522802N 0852258E)	G930
52	GIMAK (592325N 0624612E) – GOLON (591902N 0635825E).	P865
53	DIMID (560412N 0824212E) – GONPA (562234N 0831618E) – POGUT (570756N 0844410E) – GUPRU (575756N 0854845E) – Maksimkin Yar NDB (CE) (583826N 0864348E)	R27
64	LUGET (550344N 0794915E – Barabinsk NDB (SZ) (552125N 0781810E	R201
55	BUKOS (565437N 0643743E) – KUSEB (561626N 0633115E) – OTLUK (560703N 0631108E) – LERDA (554341N 0622215E) – Chelyabinsk VOR/DME (LBN) (551825N 0613104E)	R202
56	BEGIL (542958N 0840759E) – SAMBA (541402N 0852258E)	R241
57	BANAM (570719N 0634513E) – Ekaterinburg VOR/DME (EKB) (564436N 0604749E)	R354
58	OSNAB (553803N 0795356E) – Severnoye NDB (KZ) (562018N 0782126E) – Novy Vasyugan NDB (XV) (583523N 0763027E)	R362
59	LAMTU (571512N 0464505E) – KODUG (572953N 0472334E) – LANIL (575442N 0490511E) – DINTU (580914N 0501944E) – UNANI (582506N 0513812E) – NETAD (583103N 0520628E) – BAPTA (583901N 0524521E) – LEBMI (590101N 0543853E) – BADIK (592124N 0570617E) – UDRAL (592736N 0575819E) – ADANU (593502N 0590523E) – ULRES (595345N 0622416E) – IDKOM (595641N 0630109E) – NALOG (600049N 0635730E)	R487
60	Magnitogorsk VOR/DME (MGR) (532415N 0584527E) – NERNI (532413N 0574319E) – REDKI (532250N 0555123E) – TISEB (532342N 0541930E)	R707
61	LIKNU (593621N 0505116E) – SODMU (591644N 0480538E) – TIRAT (585042N 0450241E)	R815
62	DINEP (555045N 0644402E) – BASAB (554611N 0634624E) – NOMGI (553907N 0625713E)	R834



## 7. CPWG/18 Action Plan Implementation Status

Item	Action	Body	Status
CP01-08	ATFM collaboration between FAA/ATO and State ATM Corporation	FAA/State ATM Corporation	Agreement is under consideration in State ATM Corporation - under legal evaluation.
CP04-31	Implement use of radar procedures between Magadan ACC and Anchorage ARTCC □	State ATM Corporation	Providence Bay: 2017 - 2018– operational commissioning.
CP07-02	Add additional entry/exit fixes on the FIR boundaries □	FAA/State ATM Corporation	End of 2015 – beginning of 2016, two new entry/exit points (820939N 1685824W and 762814N 1685224W) respectively were established in Cross-Polar direction on Magadan and Anchorage FIR boundary.
CP10-08	Improved contingency collaboration between State ATM Corporation and JCAB □	JCAB/State ATM Corporation /FATA	Agreement is under consideration – legal evaluation.
CP10-13	Expand CPDLC/ADS-C capability for Magadan FIR and install CPDLC/ ADS-C at Murmansk. □	State ATM Corporation	CPDLC /ADS-C in Murmansk is planned for 2018.
CP10-14	Provide information on minimum level of service maintained outside operational hours for emergency diversions □	State ATM Corporation	Publication of aerodromes for emergency landing is under consideration in RF Ministry of Transport. AIC is planned to be published.
CP12-06	Coordination between State ATM Corporation and ATMB □	State ATM Corporation/ ATMB	Russia's proposal to open a new entry/exit point east of SIMLI has not been considered yet by ATMB. Continue cooperation with ATMB on opening the new entry/exit point. Challenge: State ATM Corporation's proposals on the modernization of communications between Russian and Chinese ATC Units have not been addressed, no response from the Chinese party to requests. There were no meetings for the expired period.
CP14-02	Establish flight data exchange between facilities □	State ATM Corporation/ FAA State ATM Corporation/ JCAB	AIDC exchange is planned: Magadan ACC – Anchorage ACC 2018; Khabarovsk ACC – Sapporo ACC 2017-2018 by agreement with JCAB.
CP15-04	Develop LoA between PK and Fukuoka at the bilateral meeting and also consider opportunities for reroute transitions. Develop routings from RFE to NOPAC.	JCAB, State ATM Corporation, FAA, IATA	On the issue the information paper at the Meeting to be submitted.

Item	Action	Body	Status
	□		
CP15-06	Consider utilizing the ATM VACP Template in the development of Volcanic Ash Contingency Plan for NOPAC and RTE. □	State ATM Corporation	EUR/NAT VATF/1 Meeting decision was taken to develop single Volcanic Ash Contingency Plan for ICAO EUR/NAT Region including RFE. Thus, the Plan developed by EUR (EAST) VOLCEX/SG has been suspended. It is supposed that this plan will be included in a single plan.
CP15-09	Streamline the process for establishing danger areas through NOTAM process	NAV CANADA, State ATM Corporation FAA, FAA	Due to recurrent requests from various space agencies to establish danger areas for rocket launching in the offshore zone of the Arctic Ocean (launches from Kourou Space Centre in French Guiana, Andoya Space Centre in Norway). The issue of streamlining the process for establishing such areas in order to reduce a negative impact on air traffic flows is under discussion. It is planned to discuss the aspects of establishing dangerous area for recent launches and develop proposals for optimization.

## 8. Action by the Meeting

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