



International Civil Aviation Organization

**Europe – Asia Trans-Regional Special Coordination Meeting**

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**Agenda Item 4:   ATS Route Alignment**

**THE ICAO EUR/NAT OFFICE ROUTE DEVELOPMENT GROUP – EAST (RDGE)**

*(Presented by the Secretariat)*

**SUMMARY**

This paper presents information on the history, the terms of reference, the work programme and on the recent meeting results of the ICAO Route Development Group - Eastern part of the ICAO EUR Region (RDGE)

**1   Introduction**

1.1.   The ICAO Route Development Group - Eastern part of the ICAO EUR Region (RDGE) started its work in 2004 as a successor to the former Meeting for the Planning and Coordination of Implementation of ATS Routes through the airspace of the Eastern Part of the ICAO European Region including Middle Asia (TARTAR). The decision to set up the RDGE was made by the EANPG at its 45<sup>th</sup> meeting in Paris in December 2003. This was done, as a step forward in the process of reorganising the EANPG working structure, due to existing operational problems in air traffic management which were experienced by air navigation service providers and airspace users in the Eastern part of the ICAO European Region.

1.2.   It should also be noted that on a delegated mandate from ICAO and its European Air Navigation Planning Group (EANPG) from 1994, EUROCONTROL had been entrusted with the responsibility to organize and carry out the necessary co-ordination of planning and implementation activities for improving and upgrading the ATS route network in the ECAC<sup>1</sup> area of the European Region. The associated work of airspace structure development is carried out by the Route Network Development Sub-Group (RNDSG), in which the short, medium and long-term airspace structure developments in ECAC area are discussed. The main work of the RNDSG is focused on the progressive development of the Air Traffic Services (ATS) Route Network and Air Traffic Control (ATC) Sectors with the aim of meeting the needs of the Airspace Users, increasing capacity and finding solutions to known problem areas. Consequently there is a high demand for continuous cooperation and coordination between the RNDSG and the RDGE to ensure a seamless ATS-Route Network development within the ICAO EUR Region and at the interfaces to the other ICAO Regions.

(5 pages + Attachment)

<sup>1</sup> ECAC area is defined as: Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom.

## 2 Discussion

2.1. The mission of the RDGE with regard to new ATS routes (and the associated amendment of the regional air navigation plan (ANP)) is to prepare the technical material for States in the Eastern part of the ICAO EUR Region, that will be used afterwards by their Civil Aviation Administrations in order to originate formal proposals for amendment to the ICAO Air Navigation Plans. At its meetings, the RDGE coordinates new ATS route structure improvements and agrees on actions and dates of route implementation in order to enable the States to initiate preparatory activities or to continue coordination on a bilateral or multilateral basis between the RDGE meetings.

2.2. The initial task list of the RDGE was composed of the following 3 items:

- i. Develop and maintain procedures and an ATS Route Catalogue reflecting new routes for easy reference and coordination between States as well as with other international organizations and ICAO Regions
- ii. Develop and maintain efficient ATS Route network to accommodate major traffic flows through the entire ICAO EUR Region
- iii. Provide a coordination mechanism to enable States to develop and refine their proposals for amendment to the Table ATS-1 of ANP (Doc 7754) without the need for approval by the EANPG

and at its meeting, the RDGE also developed the RDGE coordination procedures, the format of the RDGE ATS route catalogue and the first 3 parts of the ATS route catalogues for the Baltic Sea, Black Sea and the Middle Asia and their interface areas sub-groups.

2.3. Based on the experiences from the past years concerning the various route planning activities that would actually interfere/overlap with the area of accreditation of the ICAO EUR/NAT Office the composition, the task list and working procedures of the RDGE were revised at the EANPG Coordination Group (COG/50) meeting in Malmoe, Sweden in 2011 (see **Appendix A**). The approved changes extended the composition to States that are invited to RDGE meetings with regard to specific coordination matters, updated the task list on specific coordination aspects and established the fourth RDGE subgroup for the Far Eastern Area of the ICAO EUR Region. These changes were intended to fulfill the increasing demand for enhanced regional coordination, more seamless ATS route planning and faster implementation of all the ATS Route network (e.g. Trans-Asian, Trans-Eastern, Trans-Polar, Trans-Siberian, Trans-European Routes) and airspace improvements (e.g. Free Route Airspace Concept implementation).

2.4. The composition of the RDGE (as defined from COG/50 in June 2011) was extended and currently includes the following States and International Organisations:

Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Finland, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Norway, Poland, Republic of Moldova, Romania, Russian Federation, Sweden, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan, EUROCONTROL, IAC, IBAC, IACA, and IATA

2.5. With regard to specific regional coordination matters the following adjacent States are also invited, as needed: Afghanistan, Canada, China, Democratic People’s Republic of Korea, Iran, Iraq, Japan, Mongolia, Pakistan, Syrian Arab Republic, United States. In addition, a special note was attached to the RDGE ToRs in order to address the coordination aspects with the CPWG (Note: The Cross Polar Working Group (CPWG) could also be invited to participate on specific issues related to ATS route planning and implementation in the Far East Area of the ICAO EUR Region).

2.6. The revised working procedures of the RDGE also allowed the group to cover in a stepwise approach the full implementation aspects of ATS-Route implementation not only over the sovereign territory, but also the ATS-Route implementation over the High Seas (requiring a special coordination procedure). Due to the growing complexity for ATS route developments which sometimes go beyond the geographical limits of the ICAO EUR Region, the ICAO Secretariat is tasked to address and conduct the coordination of the ATS route proposals through the appropriate Regional Offices of ICAO to the concerned States in the other Regions. In addition the RDGE started to estimate the environmental benefits accrued from operational improvements and the extraction of information on savings in terms of mileage or time, fuel and CO<sub>2</sub> emissions from ATS route changes which are all items to be provided in the RDGE States’ reports. The following statistic indicates the evolution in the direct results/outcome from the RDGE meetings:

<b>Meeting</b>	<b>New routes or realignments Implemented</b>	<b>Number of new routes included in Catalogue</b>	<b>Number of existing routes reviewed</b>
<b>RDGE1</b> (May 2004)	23	<i>21+42+22=85</i>	
<b>RDGE2</b>	20	<i>24+11+7=42</i>	<i>21+32+18=71</i>
<b>RDGE3</b>	22	<i>40+7+7=54</i>	<i>46+37+18=101</i>
<b>RDGE4</b>	26	<i>3+7+7=17</i>	<i>37+23+26=86</i>
<b>RDGE5</b>	12	<i>10+9+4=23</i>	<i>47+33+37=117</i>
<b>RDGE6</b>	16	<i>13+1+12=26</i>	<i>48+29+40=117</i>
<b>RDGE7</b>	19	<i>7+5+8=20</i>	<i>61+25+42=132</i>

<b>Meeting</b>	<b>New routes or realignments Implemented</b>	<b>Number of new routes included in Catalogue</b>	<b>Number of existing routes reviewed</b>
<b>RDGE8</b>	20	$28+1+2=31$	$61+28+39=128$
<b>RDGE9</b>	28	$11+19+1=31$	$83+32+36=151$
<b>RDGE10</b>	88	$15+6:21$	$61+34+38=133$
<b>RDGE11</b>	98	$14+4+4=22$	$56+26+37=119$
<b>RDGE12</b>	113	$8+6+1=15$	$56+65+38=159$
<b>RDGE13</b>	50	$8+2=10$	$34+25=59$
<b>RDGE14</b>	120	$4+16+3=23$	$38+34+63=135$
<b>RDGE15</b>	94	$9+2+1+17=29$	$17+52+44=113$
<b>RDGE16</b>	131	$11+4+9=24$	$42+48+45+25=160$
<b>RDGE17</b>	83	$3+3+3+5=14$	$48+50+31+27=156$
<b>RDGE18</b> (April 2013)	76	$14+10+7+5=36$	$31+38+35+20=124$

2.7. At the RDGE/17 meeting, the RDGE noted and appreciated the CPWG initiative (based on the CPWG/13 results) to increase the cooperation and information exchange between these groups. In view of the RDGE, there is no doubt that the ATS-Route proposals, especially at the interface areas to the other ICAO Regions or to the Cross Polar Network, need to be coordinated between all involved stakeholders. The overall planning coherency and seamless ATS route network development is already established by coordination between the States in the Western part of the ICAO European Region (known as the ECAC States) and RDGE member States with the active participation of EUROCONTROL at RDGE meetings. EUROCONTROL is also contributing to this cooperation with dedicated SAAM (System for traffic Assignment and Analysis at a Microscopic level) evaluations and theoretical findings on the potential (distance and environmental savings per day) of new route or alternative route proposals when compared to the existing structure.

2.8. The new arrangement of exchange of information with the CPWG via the State ATM Cooperation (Russian Federation) in order to ensure the communication on new routes which would be of interest to both groups (RDGE and CPWG) is seen by the RDGE as an important development to further improve the interface between States in the Far East area of the ICAO EUR Region. The agreement to incorporate relevant ATS Route proposals and to exchange the results of the discussion on the implementation status of these ATS route proposals will further facilitate the ATS route implementation process in the future and thus enhance regional and inter-regional interoperability.

2.9. The latest meeting of the RDGE (RDGE/18) was held in the European and North Atlantic (EUR/NAT) Office of ICAO in Paris, France from 8 to 12 April 2013. The next meeting of the RDGE (RDGE/19) will take place at the European and North Atlantic (EUR/NAT) Office of ICAO in Paris, France from 7 to 11 October 2013 (ref. : EUR/NAT 13-0477.TEC (HAS/CUP) dated 12 July 2013).

### **3 Recommendation**

3.1. The Meeting is invited to note the information provided in this paper.

#### Attachments

Appendix A (RDGE Terms of Reference (RDGE/19), composition, structure, task list and working procedures)



## **NINETEENTH MEETING OF THE ROUTE DEVELOPMENT GROUP - EASTERN PART OF THE ICAO EUR REGION (RDGE/19)**

*(Paris, France, 7 - 11 October 2013)*

### **RDGE TERMS OF REFERENCE, COMPOSITION, STRUCTURE AND TASK LIST, AND WORKING PROCEDURES**

**(as approved by COG/50, 21-23 June 2011)**

*(presented by the Secretariat)*

#### **Terms of Reference**

The Route Development Group **RDGE** works within the terms of reference of the EANPG, on matters related to ATS route planning and implementation in the Eastern part of the ICAO European Region that are included in the following task list.

#### **Composition**

Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Finland, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Norway, Poland, Republic of Moldova, Romania, Russian Federation, Sweden, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan, EUROCONTROL, IAC, IBAC, IACA, and IATA

With regard to specific regional coordination matters the following adjacent States will also be invited: Afghanistan, Canada, China, Democratic People's Republic of Korea, Iran, Iraq, Japan, Mongolia, Pakistan, Syrian Arab Republic, United States.

Note: The Cross Polar Working Group (CPWG) could also be invited to participate on specific issues related to ATS route planning and implementation in the Far East Area of the ICAO EUR Region.

#### **Structure**

Plenary and sub-regional groups as required.

(5 pages)

**Task List (as approved by COG/50, June 2011)**

<b>Ref.</b>	<b>Title/Brief description</b>	<b>Deliverables</b>	<b>Action by</b>	<b>Target date</b>
1.	Develop and maintain working procedures for: RDGE and its four subgroups will generate the proposals for amendment to the EUR ANP according to the defined procedures	"Working Procedures" document	RDGE and ICAO Secretariat	Ongoing
2.	Identify requirements/improvements for maintaining an efficient ATS route network, based on the airspace users needs in coordination with States, international organizations (IOs) and other ICAO Regions (especially with the APAC Office for the Far East SG).	"ATS Route Catalogue"  <i>Note: the "ATS Route Catalogue" is a live document; it should be reviewed and amended at each RDGE meeting</i>	RDGE States IOs	Ongoing
3.	Review and amend the components of the national ATS route structure in order to ensure their compliance with the ICAO requirements (i.e. 5LNC, route designators, WGS-84 coordinates etc)	Updated (conform) national AIP Proposals for amendment to the EUR ANP	RDGE States	Ongoing
4.	Develop proposals for amendment to the EUR ANP concerning the ATS route network	Proposals for amendment to the EUR ANP	RDGE ICAO Secretariat	Moratorium implemented from June 2007 whilst ICAO ATS Route Planning Tool is still under development
5.	Ensure the implementation of the approved amendments to the EUR ANP	AIP amendments	States	Ongoing
6.	Provide user requirements during development and participate in testing of web-based ATS Route Planning Tool.	Web-based ATS Route Planning Tool	RDGE ICAO Secretariat	Ongoing

## **RDGE WORKING PROCEDURES (as approved by COG/50, June 2011)**

### **STEP 1 Preliminary information on new ATS routes to be proposed to RDGE.**

Before an RDGE meeting, preferably not later than two months in advance, RDGE members from States and International Organizations submit descriptions of new proposed ATS routes to the Secretariat.

### **STEP 2 Dissemination of the information of new ATS routes amongst the RDGE members.**

The Secretariat processes the information received and includes the new proposed ATS routes in the ATS Route Catalogue of the RDGE. The updated RDGE ATS Route Catalogue is sent out by e-mail to the RDGE members and other parties concerned by the proposal.

### **STEP 3 Discussions at and Coordination between the meetings.**

At the RDGE meeting, for the sake of efficiency, the forum of the Meeting is divided into four subgroups to cover several geographical areas simultaneously, namely:

- a) Baltic area and its interface;
- b) Black Sea and South Caucasus area and its interface;
- c) Middle Asia area and its interface; and
- d) Far East area and its interface.

Other subgroups or task forces may be established, if required.

At the RDGE meeting, the working groups discuss the proposals and agree on actions and deadlines for their execution to enable the States to continue coordination on a bilateral or multilateral basis between the meetings. The actions and deadlines agreed are reflected in the RDGE ATS Route Catalogue.

If required, ad-hoc and mini-RDGE meetings are convened by the Secretariat or the RDGE members themselves in order to expedite the coordination and implementation of the proposed ATS Routes.

Between the meetings, the RDGE members ensure that the coordinates of new waypoints are calculated with required precision and States reserve the ICAO route designators and five-letter name-codes of the waypoints through the ICARD system.

If further coordination of the waypoints is required to finalize the proposal, the RDGE members continue discussions with their counterparts in the neighbouring States on a bilateral basis and inform the Secretariat on the results of their discussions.

### **For ATS Routes over the High Seas:**

#### **STEP 4 Amendment of the Air Navigation Plan (Basic ANP)**

The mission of the RDGE with regard to new ATS routes and the associated amendment of the ANP is to prepare agreed technical material required to originate formal proposals for amendment (PfA) to the ICAO Air Navigation Plan (Doc 7754).



In order to ensure the most efficient and expeditious handling of the proposals for amendment to the *Air Navigation Plan - European Region* (EUR ANP) (Doc 7754), the following procedures should apply:

- Procedure One (HS-P1 – "*Fast-track procedure*") – ICAO Secretariat circulates the proposal on behalf of the "initiating" States (or ICAO Secretary General), as a direct outcome of the RDGE meeting (for proposals requiring a short term implementation and without any expected objection);
- Procedure Two (HS-P2 – "*Confirmation procedure*") – ICAO Secretariat prepares a draft proposal and circulates it to the "initiating" States for confirmation; the "initiating" States have a two week deadline for comments; "silent procedure" applies (i.e. no comments received means agreement); after the confirmation stage, if no objections received, the ICAO Secretariat officially circulates the proposal on behalf of the "initiating" States;
- Procedure Three (HS-P3 – "*IO procedure*") – ICAO Secretariat circulates the proposal on behalf of an international organisation directly concerned with the operation of aircraft ("initiating" IO), as a direct outcome of the RDGE meeting;
- Procedure Four (HS-P4 – "*EANPG Procedure*") – ICAO Secretariat prepares a draft proposal and circulates it to the EANPG members (via electronic correspondence) for consideration and comments; EANPG members have a deadline of up to three week for comments; "silent procedure" applies; after the consultation stage, if no objections received, the ICAO Secretariat circulates the official proposal on behalf of the EANPG.

The procedure to be applied would be selected by the ICAO Secretariat on a "case by case" evaluation, based on the recommendations of the RDGE meeting.

*Note: The above referenced procedures do not preclude any State to initiate its own ATS route-related proposal for amendment.*

*Note: Whilst it is acceptable to submit proposals for amendment to the ANP without prior agreement with neighbouring States (in this case, Note 2 or 4 is included in route descriptions), the States participating in RDGE activities are encouraged to avoid this practice. This is to ensure that the ANP does not become saturated with ATS routes which are not feasible to implement.*

Before submitting the Proposal for Amendment, RDGE (and/or States concerned) will ensure that the following information is accurate and consistent with the ICARD system and the FASID Table CNS-4 (Navigational aids):

- five-letter name-codes of waypoints and their coordinates;
- route designators; and
- spelling of navigational aids and their coordinates.

## **STEP 5** Publication of the ATS Routes

After the Amendments to the ANP have been circulated and approved, the States promulgate the aeronautical information on the ATS routes so that all concerned receive it a minimum of 2 AIRAC cycles (56 days) before the effective date.

**For ATS Routes over the sovereign territory:****STEP 4 Amendment of the ATS Route network**

In order to ensure the most efficient and expeditious handling of the amendment of the ATS Route network, the following procedures should apply:

- Procedure One (P1 – "*Fast-track procedure*") – Any ATS route proposal that is agreed as a direct outcome of the RDGE meeting (for proposals requiring a short term implementation and without any expected objection) to proceed to Step 5;
- Procedure Two (P2 – "*Confirmation procedure*") – ICAO Secretariat prepares a circular letter and circulates it to the "initiating" States for confirmation; the "initiating" States have a two week deadline for comments; "silent procedure" applies (i.e. no comments received means agreement); after the confirmation stage, if no objections received, the ICAO Secretariat officially informs the "initiating" States that of its agreed status and to proceed to Step 5;

The procedure to be applied would be selected by the ICAO Secretariat on a "case by case" evaluation, based on the recommendations of the RDGE meeting.

*Note: The above referenced procedures do not preclude any State to initiate its own ATS route-related proposal for amendment.*

Before submitting the Proposal for Amendment, RDGE (and/or States concerned) will ensure that the following information is accurate and consistent with the ICARD system and the FASID Table CNS-4 (Navigational aids):

- five-letter name-codes of waypoints and their coordinates;
- route designators; and
- spelling of navigational aids and their coordinates.

**STEP 5 Publication of the ATS Routes**

After the amendments to the ATS Route network have been agreed and not objected, the States concerned promulgate the aeronautical information on the ATS routes so that all concerned receive it a minimum of 2 AIRAC cycles (56 days) before the effective date.

**STEP 6 Report on implementation of routes**

The RDGE members report on the implementation of ATS routes to the RDGE meeting, and the RDGE ATS Route Catalogue is updated accordingly.

Airspace user organizations convey their feedback on operations and utilization of the new ATS routes. Corrective actions are undertaken, if required, to further improve the newly established route structure.

– END –