FOURTH MEETING OF THE ALLPIRG/ADVISORY GROUP

(Montreal, 6-8 February 2001)

Agenda Item 2.1: Interregional coordination and harmonization mechanism – Harmonization of air navigation systems

NEW INTERCONTINENTAL ROUTES IN RUSSIAN AIRSPACE

(Presented by the Russian Federation)

SUMMARY

This paper presents information on the implementation of the transit ATÌ Cross-Polar routes.

1. INTRODUCTION

1.1 Aviation, being one of the most important kinds of transportation means, provides for expeditious and shortest way to deliver passengers and cargo to any location in the world. The Russian Federation has unique airspace which houses the shortest connections between continents and countries of the world. For a long time, the Russian Federation has been establishing air bridges for domestic and foreign airlines and their flights into, out of, and through Russian airspace to any city or country of the world. Thus Russia was going for satisfaction of air carriers, both national and foreign, in their need for convenient air connections (Appendix 1).

2. DISCUSSION

2.1 Traditionally, the basic intercontinental bridge of air connections that pass in the airspace of Russia was the Europe – Asia bridge. But last years witnessed active development of air connections between Northern America and Asia through the Far East of Russia and Siberia. Historically, several air traffic flows appeared in Russian airspace. At first it was Asian, Trans-Asian and Trans-Siberian flows (Appendix 2). Later these flows were added by Trans-East and Trans-Polar, and presently a Cross-Polar flow is being developed.

2.2 This is a consequence of the availability of new aircraft, such as the Boeing 747-400 and Boeing 777, which have demonstrated capability of intercontinental flights on new routes of the Arctic Region and Siberia.

2.3 The specified flows of air traffic pass in the network of the same-name transit routes, which were specially established in Russia for operation of intercontinental flights. These routes are

shown on Appendix 3. The transit ATS Route Classification was adopted by the ITASPS/3 ICAO Meeting on January 2000 and was corrected by the ITASPS/4 ICAO Meeting on January 2001.

2.4 Depending on real needs and requirements of airlines, we are tasked to establish new routes. Bright examples of such work are (Fig. 3): establishment of new Cross-Polar Route System from Northern America to Asia through the Arctic Ocean, Siberia and Yakutia, and opening of "Arctica" direct route that goes from Norway through Novaya Zemlia and Yakutia to Japan.

2.5 As the needs for transit routes constantly change, depending on the user, it requires to maintain these routes in an efficient condition. This task is being now successfully solved by air traffic organization system of Russian Federation.

2.6 The ATS system of Russia is a part of global aeronavigation structure and joins the European regional system. This Figure shows the borders of area of responsibility of the Russian Joint ATS System (total area is 25,000,000 sq. km.) 121 ACCs of the Joint ATS System and 371 airports provide services for ATC (Appendix 4). At present the process are continue for updating the structure and integration of the area sectors with the aim to reduce the quantity up to 24 ACCs. It is expected to complete this process in the middle of next year.

2.7 Operation of new routes requires appropriate maintenance and development of communication, surveillance and ATC facilities.

2.8 To ensure better capacity and efficiency, modern automated ATC systems of low and high degree of automation were commissioned. (Appendix 5).

2.9 Alongside, new CNS/ATM methods are used for realizing the FANS concept of future systems development on the basis of satellite communication and surveillance of air traffic movements (for example, in Northeast region of Russia, Magadan).

2.10 Significant efforts of our experts are concentrated to put into operation the Cross-Polar routes. Suggestions of Russia consist in opening 4 Polar routes for flights between cities of Northern America and Asia paths close to orthodromic. The suggestions were supported by world air community and, first of all, by foreign users of airspace.

2.11 The Government of Russia has charged our State Civil Aviation Authority (SCAA) to define requirements of new routes operation and to start providing ATS in the oceanic airspace of Arctic Region according to ICAO standards. This task determined necessity of demonstration flights. The data on quantity of operated flights is shown on the Appendix 6. By now more than 479 flights have been operated.

2.12 Appendix 7 shows the major results of demo flights from the point of view of readiness for beginning of regular flights. First of all, safety of air traffic was provided both in the Polar areas of Arctic Region, and in continental areas of Siberia, where Cross-Polar routes cross with an active network of Trans-Siberian routes. Capacity of existing ATS system was determined during these flights. At the moment these opportunities are limited. Today, Cross-Polar flights can be carried out only 8 hours per day, and not more than two aircraft per hour. These limitations are basically caused by insufficient quantity of ATCO's capable to serve international flights, by capabilities of available facilities, necessity of regulation of converging flows over the continental part. In the whole, the existing ATS system has proved to be ready for the beginning of regular flights with certain limitations mentioned above.

2.13 The important result of demo flights is that all Polar routes, together with routes of Russian Far East (RFE) and NOPAC, are now considered by the users as alternative ones for each flight.

And the most effective route is not the orthodromic one, but a route of the minimum flying time at maximum speed. These routes are very critical to wind conditions and do not coincide with flights in direct and back directions (Appendix 8). It shows preferable flight paths on route Chicago – Hong Kong and back depending on distribution of winds by seasons. The achieved positive experience of demo flights will allow to begin regular flights on Cross-Polar routes.

3. CONCLUSION

3.1 Taking into account that Cross-Polar routes pass through the airspace of a number of countries — ICAO members – USA, Canada, Denmark, Norway, China, Mongolia, countries of Southeast Asia — these countries have carried out intensive work for opening of these routes and providing of safety of the first flights using them (Appendix 9).

3.2 It is necessary to note that the joint work of several countries was carried out under the auspices of ICAO. Invaluable help in it was rendered by the President of the Council of the ICAO, Dr. Assad Kotaite, who organized and headed the ITASPS informal group of a high level which coordinated works on the establishment of new intercontinental routes.

3.3 Starting from 01 February 2001, the New Polar Routes are opened for regular flights and activities on new intercontinental routes are in progress.

4. ACTION BY ALLPIRG

4.1 The ALLPIRG is invited to note this report and support the activities of the States and international organizations concerned in this direction.

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