54th CONFERENCE OF DIRECTORS GENERAL OF CIVIL AVIATION ASIA AND PACIFIC REGIONS

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AGENDA ITEM 3: AVIATION SAFETY AND AIR NAVIGATION

THE AIR NAVIGATION SERVICES IN PYONGYANG FIR/DPR KOREA

(Presented by Democratic People's Republic of Korea)

INFORMATION PAPER

SUMMARY

This paper presents the information on the airspace infrastructure and the activities of CNS/ATM to fulfil the commitment to the provision of safe, efficient and regular air navigation services in Pyongyang FIR/DPR Korea.

THE AIR NAVIGATION SERVICES IN PYONGYANG FIR/DPR KOREA

1. INTRODUCTION

1.1 The Air Traffic Management Department(ATMD) of the General Administration of Civil Aviation, DPR Korea is responsible for the provision of air navigation services not only within the territory of the DPR Korea but also for the east and west high seas in Pyongyang FIR.

1.2 Pyongyang FIR is not big, but favorably located in the crossway of major regional routes linking Asia with Europe and North America and due to this advantageous geographical location, the international overflight operations account for about 80% of total flight traffic volume and it had been steadily increasing by more than 20% over the years since 1998, when the DPR Korea had begun ATC service provision for international overflight operations through the Pyongyang FIR.

1.3 The DPR Korea has fully undertaken its commitments to create an effective infrastructure for CNS/ATM and optimized flight routes for the provision of safe, secure and efficient air navigation services to international flight operations.

1.4 The DPR Korea has ratified International Air Service Transit Agreement on 8 Feb 1995 and ICAO USOAP audit was conducted in 2008 and the EI (effective implementation) score of ANS was approximately 71%.

1.5 The ATMD of the General Administration of Civil Aviation consists of 5 professional divisions:

- Air Traffic Control Division
- Communication Division
- Navaids Division
- Meteorological Division
- Aeronautical Information Service Division

2. DISCUSSION

Airspace organization in Pyongyang FIR

2.1 Pyongyang FIR neighbouring with Khabarovsk FIR, Shenyang FIR, Incheon FIR and Fukuoka FIR covers approximately 270,000 square kilometers.

2.2 Pyongyang FIR comprises 4 classes of airspace: Class A, B, E and G.

2.3 Pyongyang FIR is structured as following:

- 1 Flight Information Region (Pyongyang FIR)
- 1 control area
- 6 control zones
- 18 ATS routes (3 ATS routes must be required to make the agreement with Incheon ACC)
- 10 air gates (3 with Shenyang FIR, 4 with Khabarovsk FIR and 3 with Incheon FIR including 2 air gates of which is required to make the agreement with Incheon ACC)
- Total length of airways is 2,974NM(5,507km)

2.4 The DPR Korea has implemented metric RVSM effective from 21 October 2009 between 8,900 m and 12,500 m and transformed it into the RVSM-feet effective from 15 November 2012 between FL290 and FL 410.

2.5 In Pyongyang FIR, all metric heights/altitudes have been transformed into feet effective from 3rd April 2014 under the AIRAC system.

Communication and navigation services

2.6 The DPR Korea has established a surveillance system over the Pyongyang FIR by SSRs and ADS-Bs located at Pyongyang and Odaejin, and another ADS-B installed at Pyongyang International Airport in April, 2017 is on trial.

2.7 The remote control and supervision of VHF radio communication system by satellite was a sole mean until 2007 but the system by landline circuit has been established and being used as the primary circuit since then. The DPR Korea is planning to establish another system by landline circuit by 2020 so that it can provide double system for VHF radio communication in case of failure of satellite system.

2.8 A new VHF relaying station is planned to be operated within 2017.

2.9 The DPR Korea foresees the introduction of CRV (Common Regional Virtual Private Network) by the end of 2017, AIDC (ATS Interfacility Data Communication), ATN (Aeronautical Telecommunication Network) and CPDLC (Controller-Pilot Data Link Communication) by 2018 respectively for the implementation of ASBU Phase I.

2.10 To cope with the increasing regional air traffic volume, the DPR Korea anticipates an enhanced infrastructure with more ADS-Bs and 5 VOR/DMEs at strategic locations by 2020.

Performance Based Navigation (PBN)

2.11 The DPR Korea has established a National Implementation Plan for PBN and implemented it for Pyongyang International Airport in April, 2014 and for Kalma International Airport in April, 2016 respectively under the AIRAC system.

2.12 In the near future, additional PBN flight procedures will be implemented in Pyongyang FIR.

Transition from AIS to AIM

2.13 The DPR Korea is pushing forward the 21 steps of ICAO Roadmap for the transition from AIS to AIM and the AIS Division had received the Quality Management System Certificate of the State in accordance with the ISO 9001:2008 standards.

2.14 Now, the AIS division is ready to introduce new Quality Management System in accordance with new ISO 9001:2015 standards.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.

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