



International Civil Aviation Organization

**Third Meeting of the ICAO Asia/Pacific Seamless ATM Planning Group
(APSAPG/3)**

Chennai, India, 21-25 January 2013

Agenda Item 4: Asia/Pacific Seamless ATM Status and Strategies

CHINA DATA COMMUNICATION AND SWIM INITIATIVES

(Presented by China)

SUMMARY

This information paper presents provides the current ATN/AMHS implementation status and SWIM initiatives in China.

This paper relates to –

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:

GPI-18 Aeronautical information

GPI-19 Meteorological Systems

GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 According to the Asia/Pacific seamless ATM draft plan of ICAO at APSAPG-2, three major areas of Seamless ATM Principles has been identified, including People (human performance), Facilities (physical equipment), Technology and Information. China has already made some efforts on the relevant communication and information management areas. As one of the telecommunication facilities, ATN/AMHS system has been installed in Beijing Networks Control Center. Initial SWIM Project was launched in 2011 focus on Technology and Information of future Seamless ATM.

2. DISCUSSION

ATN/AMHS OPERATION AND TEST

2.1 In July 2010, China and ROK establish a new 64Kbps circuit dedicated to ATN/AMHS test and future operation. According to the Operation Initiation Procedure for ATN/AMHS service signed by both countries, the ATN/AMHS operation between China and ROK commenced on 1st June 2011. The ATN/OSI based AMHS service has been used to carry all message traffic between China and ROK. The original AFTN circuit is retained as a backup connection.

2.2 The AMHS Interoperability Pre-test between Beijing and Hong Kong was carried out successfully in August 2012, including an ATN connection test over VPN and a MTA interoperability test. The AMHS interoperability test between Beijing and Hong Kong will be conducted in the 3rd or 4th half of 2013. The AMHS interoperability test between Beijing and Mumbai was also completed successfully in June 2012. And the commissioning test will be launched in 2013.

Initial SWIM Project Introduction

2.3 Initial SWIM Project is a sub-program of China Civil Aviation Collaborative ATM Technology Program, funded by Ministry of Science and Technology (MOST) and Civil Aviation Administration of China (CAAC). It is a four-year research project started in 2011.

2.4 The project aims to study and evaluate SWIM concept and key technologies, propose Information Management Infrastructure for next generation ATM system in China, prototype and demonstrate initial SWIM capabilities..

2.5 The business model for information sharing and exchanging among ATSUs, airlines and airports has been built with UML. The function architecture of SWIM has been constructed according to the SOA architecture design principle. With the research of integration technology candidates such as Web Service, MOM and ESB, initial system architecture have been developed and evaluated. A test system was deployed in Beijing Capital International Airport for further assessment.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the ATN/AMHS implementation status and SWIM initiatives in China.

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