



International Civil Aviation Organization

The Sixth Meeting of the Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/6)

Bangkok, Thailand, 15 to 17 March 2011

Agenda Item 8: Any other business

AIS ORGANIZATION AND AIS AUTOMATION IN VIETNAM

(Presented by Viet Nam)

SUMMARY

This information paper presents AIS organization in Viet Nam and the effort of Viet Nam in implementing automation to improve the overall capability in Aeronautical Information Service through establishing an Integrated AIS System to manage aeronautical data chain processes involved in designing to publication stages of Aeronautical Information Publication products.

1. Introduction

Current and future ATM systems demand accurate and reliable data by way of considerably higher quality Aeronautical Information. ICAO Annex 15 therefore impresses on high priority needs to implement Quality Management System in Aeronautical Information Service to ensure that required information is provided with adequate quality, accuracy and timeliness. In support of achieving compliance to these needs and to address quality of service implementation, from 2005 Viet Nam has planned to make automation in AIS by installing an automated AIS System.

2. AIS organization in Viet Nam

2.1 The AIS organization of Viet Nam consist of AIS Headquarters, AIP and MAP/CHART Division, International NOTAM Office (NOF) and aerodrome AIS units.

2.1.1 AIS Headquarters is in charge by Air Navigation Department - Civil Aviation Administration of Viet Nam (CAAV).

2.1.2 AIP and MAP/CHART Division is run by Viet Nam Aeronautical Information Centre (VNAIC) - Viet Nam Air Traffic Management Corporation (VATM).

2.1.3 International NOTAM Office (NOF) is run by Viet Nam Aeronautical Information Centre (VNAIC) - Viet Nam Air Traffic Management Corporation (VATM).

2.1.4 AIS units established at certain the aerodromes as

- AIS Briefing Unit at Ho Chi Minh/Tan Son Nhat International Airport is run by Viet Nam Aeronautical Information Centre (VNAIC) - Viet Nam Air Traffic Management Corporation (VATM)

- AIS Briefing Unit at Da Nang/Da Nang International Airport is run by Da Nang Air Traffic Services Reporting Office - Middle Airports Corporation.

- AIS Briefing Unit at Ha Noi/Noi Bai International Airport is run by Airfield of Operation Company - Northern Airports Corporation.

- AIS Briefing Unit at Hue/Phu Bai International Airport is run by Aviation Technical Services Division - Phu Bai International Airport.

- ARO/AIS Unit at Khanh Hoa/Cam Ranh International Airport is run by Aviation Technical Services Division - Cam Ranh International Airport.

2.2 Viet Nam Aeronautical Information Service Centre (VNAIC)

2.2.1 To respond to the operational requests put forth by regional flight operation as well as to optimize the outcome of the newly automated AIS system which is operating in the days to come, the Viet Nam Air Traffic Management Corporation (VATM) decided to establish a subordinate member - the Viet Nam Aeronautical Information Service Centre (VNAIC), aiming at upgrading one of the vital services it is providing to aviation community.

2.2.2 VNAIC is formed from such different AIS – related units of VATM as AIS section of ATS-AIS Department, International NOTAM Office and AIS Briefing Unit at Ho Chi Minh/Tan Son Nhat International Airport. Officially starting its operation as from 01st July 2009, this Centre is composed of six divisions:

- Administrative Office;
- AIP and MAP/CHART Division;
- International NOTAM Office;
- Tan Son Nhat Aerodrome AIS Unit;
- Technical Maintenance Division; And
- Financial Office

2.2.3 VNAIC's mission is to provide Aeronautical Information Service. The promulgated information shall be put under the regulatory control of Civil Aviation Administration of Viet Nam (CAAV).

2.2.4 VNAIC's main duties are:

- To provide and exchange the AIS publications including AIP Viet Nam and its Amendment/Supplement, Aeronautical Information Circulars (AIC);
- To publish and distribute Viet Nam's NOTAM;
- To provide Pre-flight and Post-flight Information Service at Ho Chi Minh/Tan Son Nhat International Airport.

3. Automated AIS System

3.1 This is the first AIS automated system given to establish in Viet Nam to improve the overall speed, efficiency, accuracy and cost-effectiveness of the AIS. Technically, the system has a nationwide range including 72 equipment-installed positions at AROs, AIS, MET, ATS-related units and associated at 20 international/national aerodromes in Viet Nam. The server systems are installed at one main-centre and three sub-centres. And the System's workstations at sub-centres are not only the end-users of the AIS automated system products, but also providers of raw information to the VNAIC for processing.

3.2 The installed system is an integrated computer network, based on AICM/AIXM concepts, to assist and support the workflow of AIS office using a common database of aeronautical information, from which the data can be exploited, to produce automated document outputs such as AIP and its Amendments/Supplements, Aeronautical charts, Aeronautical Information Circulars. Specific security policy related to access and authentication for different users are configured to ensure highest level of data quality and integrity to meet international safety requirements.

3.3 The Automated AIS system shall provide for operational functions such as AIP/MAP-CHART, NOTAM, Flight Plan (PLN), Pre-flight Information Bulletin (PIB), Aeronautical Meteorological (MET) Information Management, Search and Rescue (SAR) Information Management.

❖ **AIP production/publication Management**

A publishing tool enables extracting information from central database and generating ICAO aeronautical publication products such as an AIP, AIP Amendment or AIP Supplement for the current cycle based on pre-defined rules and templates. Charts or other graphic objects inclusion is also automatically treated. The module is capable of producing HTML or XML output to obtain a web-based AIP or an eAIP version.

❖ **Charting/ Mapping and Aeronautical Chart Maintenance**

This tool provides automatic extraction and charts symbolization according to the release cycles by retrieving aeronautical data stored in the central database using the ArcGIS PLTS. This function provides tools for creating, editing and other operations related to the procedure flight charts, the map Aviation (Aeronautical Charting Services) as well as updated database related changes (Database driven).

❖ **NOTAM Database Management**

The NOTAM Database section covers automatic processing of incoming messages, automatic database maintenance functions to achieve consistency with international NOTAM databases, and provision of data access for external products such as Briefing services.

❖ **Flights Management**

This tool enables management of flights to, from or flying over the FIRs of Viet Nam through the flight plans, through DEP, ARR messages and other relevant messages of the specific flight. The terminal allows you to exchange and process various messages. The system interprets all incoming messages and places the information found into several databases for later inspection on the terminal. The standard forms also assist the users in creating messages.

❖ **Pre-flight Information Bulletin (PIB)**

The automated pre-flight information systems provide for the supply of aeronautical information/data for briefing, for continuous and timely updating of the system database and for monitoring of the validity and quality of the aeronautical information stored.

❖ **Aeronautical Meteorological (MET) Information Management**

The system enables reception of MET information from the existing external sources as SADIS-WAFS station in accordance with ICAO standards on MET messages interface and reception. Types of MET information to be received and processed by the system includes: GRIB forecast data, BUFR, T4 coded maps containing information on significant weather phenomena, volcanic ash, etc. and OPMET information and other data in text format (METAR/SPECI and TAF, SIGMET and special AIREP, volcanic ash and tropical cyclones advisory, etc.)

❖ **Search and Rescue (SAR) Information Management**

The System's database is an essential information source to support aviation search and rescue (SAR) operations. The System enables input, storage of SAR-related information into database such as information on SAR units, rescue sub-centres and midway stations acting as alarming posts, area of responsibility to provide SAR services (scopes, boundaries), scope of responsibility and aerodrome emergency services to be provided at each aerodrome, information on means of communication in service of search and rescue operations, SAR instructions and signals to be used for survivors and rescue units, SAR - related documents.

❖ **Aeronautical Data Management**

This system allows management of aeronautical data (FIRs, Aerodromes, ATS routes, Way points, NAV facilities, charts, rules etc...) through database to support data manipulation including insert/extract/update information and aeronautical spatial features (with their attributes). The module is also capable of storing and cataloguing all the produced documents, charts and templates for operational needs. Databases (including static, basic and dynamic data) at sub-centres are synchronized with main centre's Database. Dynamic data at the Centres shall be synchronized upon its changes or updates.

4. Implementation Status

The new automated AIS system is currently under the final trial stage. The training of this system has been conducted and the legal steps are in progress to put this system into real operation.

5. Action by the Meeting

The meeting is intended to take note of the efforts and progress made by Viet Nam in updating the current AIS in Viet Nam and to establish and implement the automated AIS system in accordance with ICAO standard and recommended practices.
