



ICAO

*International Civil Aviation Organization***Third Meeting of the Asia/Pacific Air Traffic Management Automation System Task Force (APAC ATMAS TF/3)**

Video Tele-Conference, 8– 10 June 2022

Agenda Item 3: Global and Regional ATM Automation System Updates

**UPDATES ON DEVELOPMENT OF AIR TRAFFIC MANAGEMENT AUTOMATION SYSTEM PROBLEM REPORTING DATABASE (ATMAS PRD)**

(Presented by Hong Kong, China)

**SUMMARY**

As a follow-up action of ATMAS TF/2, Hong Kong China has been working with China and ICAO APAC Regional Office on initiating the development of Air Traffic Management Automation System Problem Reporting Database (ATMAS PRD). This paper highlights the latest progress in establishing the database for the region.

**1. INTRODUCTION**

1.1 During ATMAS TF/2, Hong Kong China presented a working paper on the feasibility study of expanding existing ADS-B Avionics Problem Reporting Database (APRD) to include the reporting and sharing of issues/problems related to ATM Automation System. The proposal has gained support from the Meeting. Hong Kong China, in collaboration with China, has been working with the ICAO APAC Regional Office in developing the technical specifications for the ATMAS PRD. This paper highlights the latest progress of work by the team.

**2. DISCUSSION**Updates on Software Framework and Resources

2.1 After ATMAS TF/2 in September 2021, Hong Kong China has continued to work with the ICAO APAC Regional Office on development work of the ATMAS PRD. It was considered more appropriate, in terms of administration, to have individual databases for APRD and ATMAS PRD, as the nature of problems/issues and user groups are different. Even with individual databases, the development of ATMAS PRD could benefit from using the established software framework of APRD to save development efforts and time. In addition, with support from China, Hong Kong China has lined up with the software development resources from CAAC ATMB in discussing the design and schedule for implementation of the ATMAS PRD.

**Agenda Item 3**

8-10/06/22

Updates on Database Schema

2.2 For the database schema, data fields of ATMAS PRD are classified into two types, Mandatory and Desirable. Mandatory data fields must be provided by users in order to allow the problems/issues to be shared meaningfully whereas Desirable data fields provide supplementary information such as follow-up actions and diagnosis of the problems/issues for reference by others.

2.3 In response to the suggestion from last meeting, “Category” field will be introduced into the database schema with a list of pre-defined types of problems/issues based on the system essential functions defined in ATMAS IGD. A drop-down list will be provided to users for selecting problem/issue category when reporting or searching for a case. Details of data fields in the proposed database schema are given in **Appendix 1** for discussion.

2.4 In addition, it was proposed at ATMAS TF/2 to include the reporting of problems/issues related to AIDC implementation in ATMAS PRD by States/Administrations. Technically, a separate database table could be set up in ATMAS PRD for storing AIDC-related issues alongside with ATMAS-related issue. In the user interface, the two types of issue would be presented in different tabs for selection users for the database of interest. Based on the AIDC Issues Form adopted by the ex-ATS Inter-Facility Data-Link Communication Implementation Task Force (APA TF), the schema for AIDC-related issue is proposed in **Appendix 2** for consideration by the Meeting.

Access of ATMAS PRD

2.5 The ATMAS PRD will be hosted in a secured website which is accessible to States/Administrations. States/Administrations wishing to gain access to the ATMAS PRD should nominate a point of contact for registration with the ICAO APAC Regional Office. The contact person will receive notification whenever there is an update to the ATMAS PRD. Registered States/Administrations will be granted the rights to report and/or view the problems/issues in the ATMAS PRD. It is proposed that administrative rights on ATMAS PRD will be restricted to the ICAO APAC Regional Office.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the joint efforts from China and Hong Kong China in the development of the ATMAS PRD and its latest progress;
- b) discuss and agree on the proposed database schema of ATMAS PRD in **Appendix 1 and 2**;
- c) encourage volunteered States/Administrations to participate in and contribute on the development of ATMAS PRD; and
- d) discuss any relevant matter as appropriate.

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**Appendix 1**

**Database Schema for the Report of ATMAS-related issues**

<b>Field</b>	<b>Description</b>	<b>Mandatory(M) or Desirable (D)</b>
Case ID	A unique identification number automatically assigned by the database when the table form is created	M
Problem Title	Problem Title	M
Date of occurrence (UTC)	UTC date when the problem was occurred	D
Time (UTC)	UTC time when the problem was occurred	D
Category	Selection from a drop-down list based on the system essential functions as defined in ATMAS IGD	M
Problem Description	Information to describe the problem specific to this occurrence	M
Cause / Initial Analysis	Preliminary cause analysis of the problem	D
ATC operation affected	Yes or No to indicate whether the problem caused any safety implications for ATC	D
Name of FIR	FIRs affected by the problem	M
Manufacturer	Manufacturer of the system	M
Software Version	Software version of the system	M
Upload Supplementary Information	Attachments such as graphics and PDF documents	D
Problem Fixed	Yes or No to indicate whether the problem has been fixed	M
Rectification Date*	UTC date when the problem was corrected	D
Root Cause/Analysis*	Analysis of the root cause of the problem	M
Solution*	Solution of the problem	D
Upload Supplementary Information*	Attachments such as graphics and PDF documents	D

Note (\*): Will only be display for input when the problem is indicated as solved.

**Agenda Item 3**

8-10/06/22

**Appendix 2****Database Schema for the Report of AIDC-related Issues**

<b>Field</b>	<b>Description</b>	<b>Mandatory(M) or Desirable (D)</b>
Issue reference	A unique reference number automatically assigned by the database when the table form is created	M
Reporting State	Name of the Reporting State	M
Reporting ATSU	Name of the Reporting Air Traffic Service Unit	M
Pairing FIR (1)	Name of the pairing FIR (1)	M
Pairing FIR (2)	Name of the pairing FIR (2)	M
Date of Report (UTC)	UTC date when the problem was reported	M
Date of Occurrence (UTC)	UTC date when the problem was occurred	D
Fault Category	Selection from a drop-down list: a) Communication Link b) ATM System c) AIDC Message d) Airspace Design/Procedures e) Other	M
Description of Fault	Information to describe the fault	M
Frequency	Selection from a drop-down list: a) Frequent b) Occasionally c) Rare	M
ATSU / Vendor (1)	ATSU (1) and/or System Vendor Displayed as: “ATSU (1) / System Vendor”	M
ATSU / Vendor (2)	ATSU (2) and/or System Vendor Displayed as: “ATSU (2) / System Vendor”	D
Actions Taken / Updated Date	Information of actions taken and the updated date Displayed as: “Actions Taken / Updated Date”	M
Status	OPEN or CLOSE to indicate the problem status	M