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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

MH/T 4050-2018

**Civil Aviation Automatic Reporting System Configuration
Specification
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed and interpreted by the Air Traffic Management Bureau of the Civil Aviation Administration of China.

This standard is under the jurisdiction of the China Academy of Civil Aviation Science and Technology.

Drafting organization of this standard. Air Traffic Management Bureau of Civil Aviation Administration of China.

1 Scope

This standard specifies the configuration requirements of the civil aviation automatic reporting system.

This standard applies to the planning, construction and use of various automatic reporting systems for civil aviation.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

MH/T 4041 Technical specification for civil aviation automatic reporting system

3 Terms and definitions

The following terms and definitions apply to this document.

AFTN/SITA communication system in terrestrial communications services, responsible for processing (storage, forwarding, query, statistics, monitoring, etc.) AFTN format telegrams and SITA format telegrams the reporting system.

Sub-communication system A system that provides accessible interfaces and protocols in the automatic transmission system, and undertakes the receiving and sending of telegrams.

Synchronization interface the communication interface adopts synchronous transmission mode.

Asynchronism interface the communication interface adopts asynchronous transmission mode.

Telegraph terminal AFTN/SITA end system Responsible for sending telegrams to the forwarding system, and at the same time receiving and processing the telegram forwarding client of the forwarding system.

Transmission system communication backbone network the communication connection system between automatic reporting systems at all levels.

4 Abbreviations

The following abbreviations apply to this document.

5.1 Composition

The automatic reporting system consists of a processing system, a communication system, a transmission system and a management system.

5.2 Classification

The automatic forwarding nodes are divided into the following according to the message exchange level and forwarding business volume.

--Class I forwarding node. network control center, regional-level aviation message processing forwarding node, or the number of telegrams sent and received exceeds 2 consecutive years Over 25 million (inclusive) forwarding nodes;

--Class 2 relay node. the relay system for processing aviation messages at the air traffic control sub-bureau (station) level, or the number of telegrams sent and received for 2 consecutive years exceeds 2.5 million (inclusive) forwarding nodes;

--Three types of relay nodes. relay nodes whose annual number of telegrams is less than 2.5 million.

New airports are classified with reference to airports of similar scale.

6 Configuration

6.1

A type of reporting node

6.1.1 Configuration requirements

The forwarding node should be equipped with two completely independent automatic forwarding systems, active and standby. The main and backup forwarding system should have the same configuration processing system and communication system.

The communication system meets the requirements of automatic synchronization and fast switching, and the switching time is less than 5 min.

A set of training and testing system should be configured, and the system configuration should cover all components of the reporting system.

6.1.2.1 Processing system

The processing system should be equipped with two enterprise-level servers and storage systems that serve as hot backups to each other. The server should meet the requirements of hard disk, fan, power supply, etc.

Hot-swappable software requires GPS clock signal reception capability.

The processing system should meet the following requirements.

- Meet the requirements of MH/T 4041;

- The capacity of the forwarding routing table is not less than 5,000 records;

- Peak hour processing capacity is not less than 50,000 copies, daily telegram processing capacity is not less than 800,000 copies, and the transmission system can store no less than 6 Monthly storage capacity.

6.1.2.2 Communication system

6.1.2.2.1

The internal switching network shall meet the requirements of dual-redundant network connection with the processing system, synchronous interface equipment, and asynchronous interface.

Equipped with automatic switching function.

6.1.2.2.2

The port configuration should meet the following requirements.

--Synchronous interface. The synchronous interface device should be redundantly configured, and each device shall provide at least 2 standard synchronous interfaces. Meet no less than 32 Synchronize user access requirements;

--Asynchronous interface. The system provides no less than 96 standard RS232 or dual-flow loop asynchronous interfaces;

--Ethernet interface. The system provides standard Ethernet ports to meet the access requirements of no less than 32 IP users.

6.1.2.2.3

All equipment of the communication system shall support dual power supplies.

6.1.2.2.4

Scalability shall meet the following requirements.

--Can expand the access capability of the system and increase the number of users by adding hardware devices;

- Possesses access to ATN network to realize the ability to communicate with ATN/AMH S system;

--It can increase the number and protocol type of access to the synchronous network as required, and increase the configuration of synchronous interface equipment.

6.1.2.3 Line switching

It should be equipped with line switching equipment, capable of switching between the two reporting systems, and providing a system switching confirmation mechanism.

The number of users connected to each device should be no less than 16 channels, support cable and optical cable access, and support simultaneous switching of all users of the device.

Should be equipped with dual power supplies, management control module (card) redundant configuration.

6.1.2.4 Transmission system

At least 2 reliable routes should be guaranteed with the superior node. Where conditions permit, the use of satellite lines, different telecommunication operators, and Consider the third transmission route in the same way as the fiber tube hole.