Evolution — Scenarios for change

State provision

Japan Civil Aviation Bureau

WORLDWIDE SYMPOSIUM ON ENABLING THE NET–CENTRIC INFORMATION ENVIRONMENT
Montreal, 2–4 June 2008
Responsibility
Provision and Management of Information

**ANNEX15, CHAPTER 3. GENERAL**

- **3.1 Responsibilities and functions,**
  - Each Contracting State shall: provide an aeronautical information service;

**Civil Aeronautics Law**

- Chapter I: General Provisions
  - Article 1 (Purpose of This Law)
    - The purpose of this Law is ................
      - in conformity with both the provisions of the Convention on International Civil Aviation as well as the standards, practices and procedures adopted as Annexes hereto.

- Chapter VI: Operation of Aircraft
  - Article 99 (Provision of Information)
    - The Minister of Land, Infrastructure, Transport and Tourism shall provide aircrews with necessary information for the navigation of aircraft in accordance with Ordinances of the Ministry of Land, Infrastructure, Transport and Tourism

**The government has the responsibility of the Provision of information**
Information Management in Japan
Current Information Management

- AMHS
- AFTN
- ATM
- DLP
- Datalink
- NEW AIXM Database
- AIS Center
- Tower
- ACC
- SAR
- Airlines
- Airport
- Aircraft Noise Monitoring System

CADIN
Common Aeronautical Data Interchange Network

AIS Master database
WX Master database
ATS Master database

Aeronautical Information including NOTAM, AIP and AIC
WX Information

Interchanging Information (Gathering, Relay, Management, Editing, and Provision of Information)

Operational information including Flight Plan

Japan Metrological Agency
Ministry of Defense
Japan Coast Guard

AIS Center

AFTN
AMHS
AIS in Japan
## Background/Needs

### The world tendency
- Increasing Traffic
- Increase of the data dependent navigation such as RNAV

### Efficient operation

### Users’ requirements
- Electronic products
- Accessible database
- High quality obstacle info.
- Help Desk

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**AIS center**

The only controllerate of AIS in Japan

- Providing Airlines, Airports, Foreign AIS agencies
- Contribution to aviation safety
- Improvement of convenience/effectiveness of users

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**AIS ENHANCEMENT (Electronic products, QMS) (ICAO ANNEX15)**

- Introduction of QMS
- Centralization
- Computerization

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**Help Desk**

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**Users’ requirements**
1. Achievement of the object of the aeronautical information service in ANNEX 15, ‘ensure the flow of information/data necessary for the safety, regularity and efficiency of international air navigation’
2. Making high-quality AIS products ensured the accuracy and integrity requirements of ICAO ANNEX15/4
3. Providing AIS products ensuring that user requirements are determined and are met with the aim of enhancing user satisfaction
4. Continuously improve the effectiveness of the quality management system by bearing the improvement of the quality of AIS products in mind.

**Quality objectives**

- **PLAN**: Provide for the issue procedure of AIS.
- **CHECK**: Check the error rate of AIS products
- **DO**: Issue AIS according to procedure
- **ACT**: Examine the improvement plan for reducing the mistake

**Defined procedures**
- Development of procedure manual
- Deliver AIS products
- Check user satisfaction

**Management review**
- to ensure QMS continuing suitability, adequacy and effectiveness (once/year)
- Issue request
- Originator

**Internal Audit**
- Audit to each team for the quality management system conforming to the planned arrangements, to the requirements of quality management system requirements, (over once/year)

**Quality policy**
- Set by each team

**Corrective/Preventive action**
- Action to eliminate the causes of potential nonconformities. Preventive actions shall be appropriate to the effects of the potential problems.

**Regenerative meeting with users and questionnaire to users**
AIS-AIM initiatives in Japan
New AIS Products

Internet Web site
- a. NOTAM(HTML)
- b. Graphical NOTAM(SVG)
- c. eAIP (HTML, PDF (charts))

Deliverable data via network
- a. NOTAM(XML)
- b. Graphical NOTAM(SVG)
- c. eAIP(XML)
- d. SD (XML)

Intranet Web site
- a. NOTAM(HTML) including overseas
- b. Graphical NOTAM(SVG)
- c. eAIP (HTML, PDF (charts))
- d. SD(XML)

[ATM Center]
CNS/ATM(AIS) database

Store

CD-ROM
DVD

Internet

https://aisjapan.mlit.go.jp/

[JCAB]
Airport data Terminal Tower

Now in operation in RED
Will be in operation in BLACK
Graphical NOTAM

Drawing closed area of NOTAM over airport map

Ex. Graphical NOTAM(RWY-CLSD)

Format: SVG

Benefit of graphical NOTAM
Preventing miss-understand by visible Information and possible to understand the content easily.
Providing on the web site by HTML format
Also delivering to airlines systems by XML format via network
Full compatible to EUROCONTROL specification
Link to reference NOTAMs
Providing by CD or DVD

Format: HTML/XML
(Charts providing by PDF format on Phase 1)
## ROAD MAP

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### CNS/ATM (AIS) DB Phase 1
- Development
- Test/Validation

### Phase 2
- Research/Study
- Detail Design
- Development
- Test/Validation

- **QMS**
- Centralized operation of NOTAM

- NOTAM (XML, HTML)
- Graphical NOTAM (SVG)

- e-AIP (HTML+PDF, XML)

- SD (AIXM-XML, HTML)
- Exchange AIXM with EAD

- Electronic Terrain/obstacle data (AIXM-XML)
- Electronic Charts (GML)
Future Information Management in Japan
Future Information Management

Information Management

Surveillance Data
Flight Object
AIS Data
WX Data

Air Lines
SMGCS
Tower
ACC
ATMC
AISC
Airport
IP Network
Network Management
Challenges for Japan

- To implement AIXM5.x, xNOTAM and GIS.
- To establish AIXM base information exchanges with EUROCONTROL and FAA that entail broadband access.
- To implement comprehensive QMS e.g. CHAIN in EUROCONTROL.
- To develop Future Information Management.
Global Challenges

.policy issues
- Regulations
  - Who is responsible for what?
  - In Japan, with state provision, responsibility is due. But for other business models?
- Legal
  - Liability
    - In Japan, with state provision, liability is due.
  - Intellectual property
- Cost recovery
  - Who bears the cost?
  - Is it recognized that the communication cost to enable the Net-Centric Information Environment will increase?
  - Is it fair to increase user charges for transit A/C when information was provision for domestic use?
  - Is another charge regime required?
- Global standards
  - To define the scene and content of AIM
  - To expedite the standardization process
  - To facilitate the implementation activities
Conclusion

➔ ICAO should take the initiative on

• Enabling the Net-Centric Information Environment;

• Developing the Global Road Map for AIS-AIM.
Japan

Ready to play the active role in ICAO AIS-AIM initiatives;

Continues to play the big role in AIS-AIM implementation activities, especially in ICAO Asia/Pacific region.
Thank you very much for your attention!