

Digital NOTAM Service on SWIM in Japan

Presented by JCAB

JAPAN

MINISTRY OF LAND, INFRASTRUCTURE,
TRANSPORT AND TOURISM
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新しい情報サービスの導入について Introduction of New Information Services

1. Background and purpose

Japan Civil Aviation Bureau (JCAB) plans to start providing a new information service based on the SWIM (System Wide Information Management) concept in the first quarter of 2025.

2. Information Services to be introduced and its overview

Listed in Table 1 are B2B services and in Table 2 are provided only on the web browser by JCAB.

(Table 1)

Type of Information	Service Name	Service Overview	Message Exchange Pattern	Information Exchange Model
Aeronautical Information	Digital NOTAM Registration Service ^{*1}	Registration service of candidate NOTAM in AIXM format	Request/Reply	AIXM5.1.1
	Digital NOTAM Distribution Service	Distribution service of NOTAM in AIXM format	Publish/Subscribe	AIXM5.1.1
	Digital NOTAM Request Service ^{*1}	Request service of NOTAM in AIXM format	Request/Reply	AIXM5.1.1
	AIP Data Distribution Service	Distribution service of AIP and Obstacle data in AIXM format	Publish/Subscribe	AIXM 5.1.1

(Table 2)

Type of information	Service name	Service overview
Aeronautical Information	AIP file download Service	Service to download PDF files of AIP
	AIP browsing Service	Service for browsing AIP
Providing complex information	Airport Profile Service	Service that synthesizes flight information, Aeronautical information, and weather information related to airports and provides it in web browsers
	Airspace Profile Service	Service that synthesizes flight information, Aeronautical information, and weather information related to airspace and provides it in web browsers

Aeronautical information service on SWIM

Originator

Digital NOTAM Registration Service

- NOTAM Request
- Two UI available
 - ✓ Browsing
 - ✓ Web-API



JCAB System



AIS Center



Next intended user

<For computer use>

AIP Data Distribution Service

- Receive data sets(AIXM)



Digital NOTAM Distribution Service

- Receive Digital NOTAM(AIXM)



<For human use>

Digital NOTAM Request Service

- Search and view Digital NOTAM
- Browse digital NOTAM or get them by Web-API



AIP file download Service

- Provide AIP in PDF format



AIP browsing Service

- Browse AIP on web



Airport/Airspace Profile Service

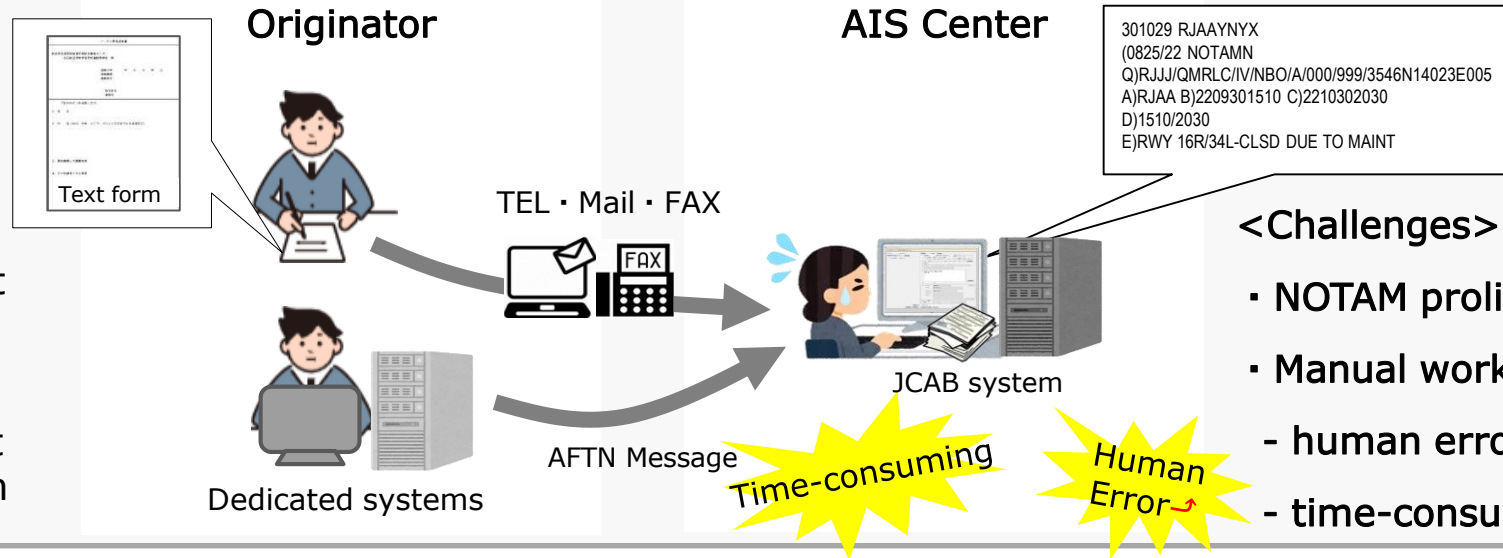
- Provide integrated map view of aeronautical information with weather and flight plan



NOTAM publication process

【Current】

- Originators submit NOTAM request via e-mail, FAX or telephone
- AIS officers validate and edit then input NOTAM to JCAB system
- Some originators can submit through the dedicated system



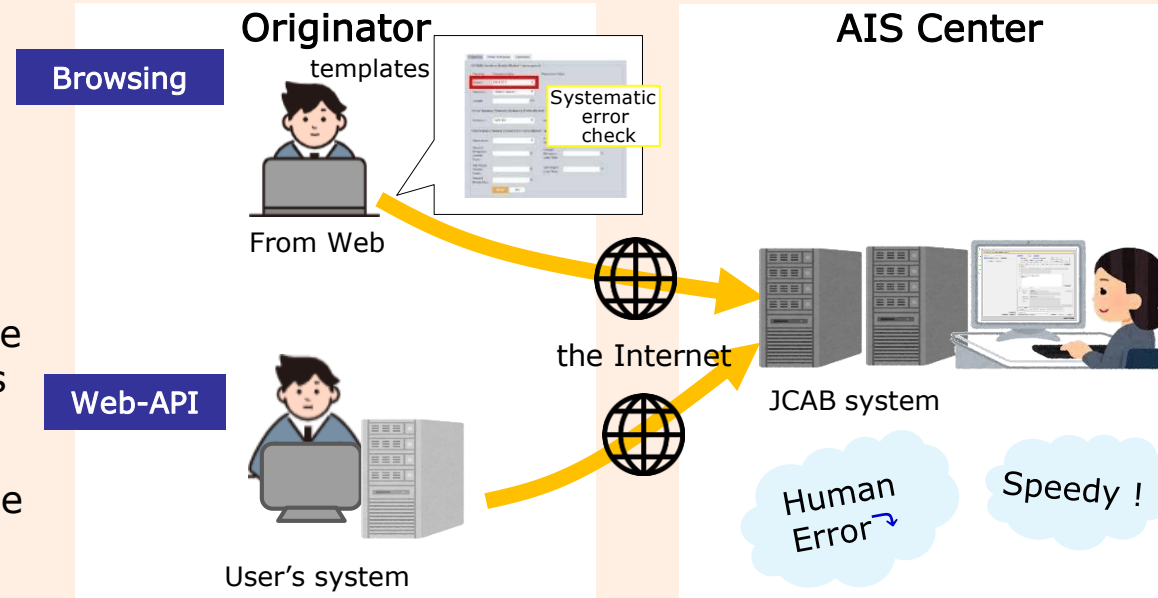
<Challenges>

- NOTAM proliferation
- Manual workload
- human error
- time-consuming

【Future】

➤ Digital NOTAM Registration Service

- NOTAMs are created from the data registered by originators
- NOTAM templates are prepared in advance under the coordination between originators and AISC



<Benefits>

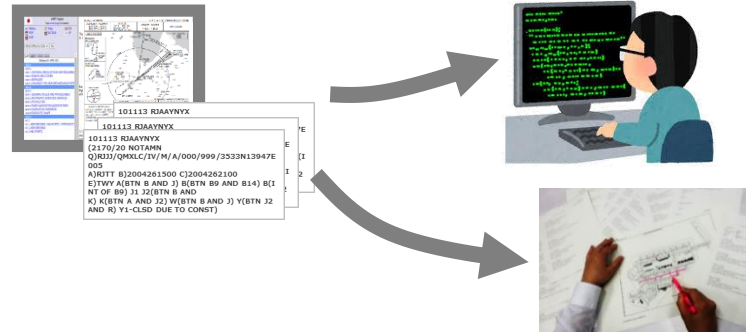
- Almost automatically
 - Quick Publication
 - Less human error
- Quality improvement
- No Private lines and dedicated systems required
 - Low cost (the Internet)
- Easy to integrate in user's environment (If Web-API is used)

- Web-API available

Data Distribution

【Current】

Users need to read the information in text format and create supplementary drawings as necessary

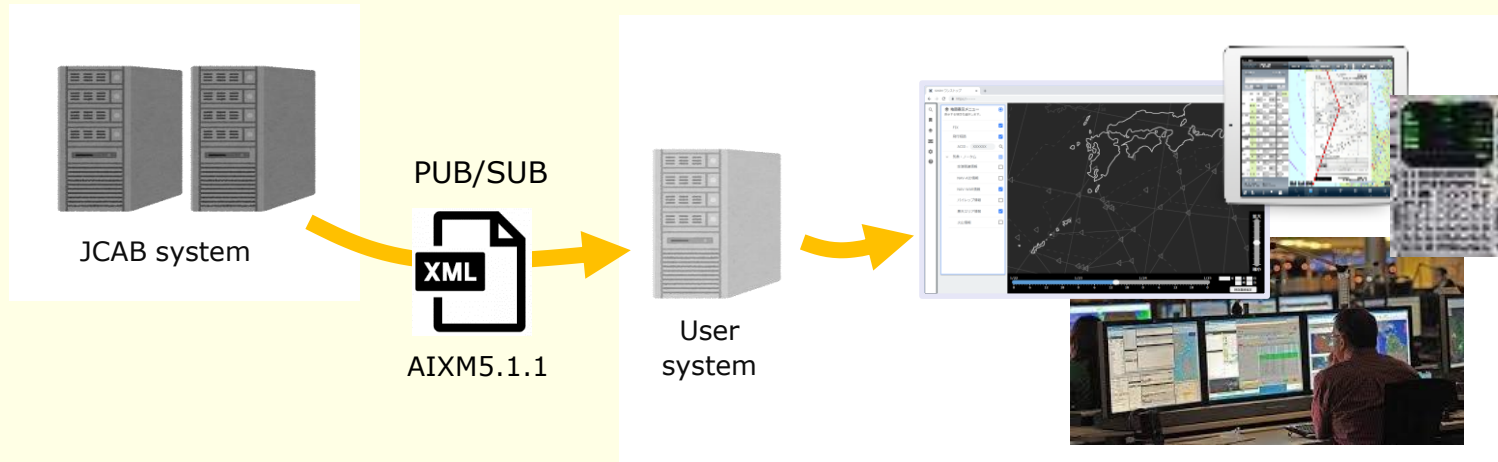


<Challenges>

- Human error
- Time-consuming
- Depends on human work even as aircraft and ATC systems become more sophisticated

【Future】

- [Digital NOTAM distribution Service](#)
- [AIP data distribution Service](#)



<Benefits>

- As you like – AIXM format
- Machine to Machine
 - PUB/SUB
- ✓ Automated processing and handling
- ✓ Integrated use of another information
- ✓ Quick decision-making
- ✓ Less human error

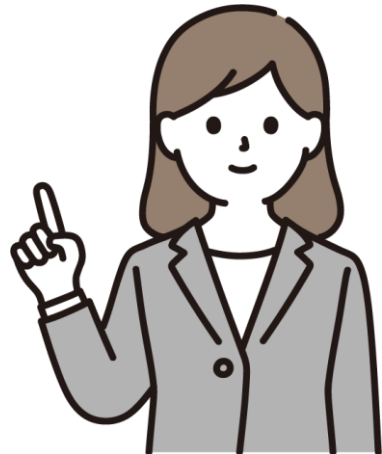
Challenges

- Apply AIXM version up
- Data quality assurance
- Knowledge of GIS, GML



Summary

- ✓ Digital data contributes to improve usability and situational awareness
- ✓ Reduce the burden both originators and AIS officers
- ✓ Share your best practices and challenges



Thank you for your attention 😊

