



Our Experience with D-AIM based on AIXM

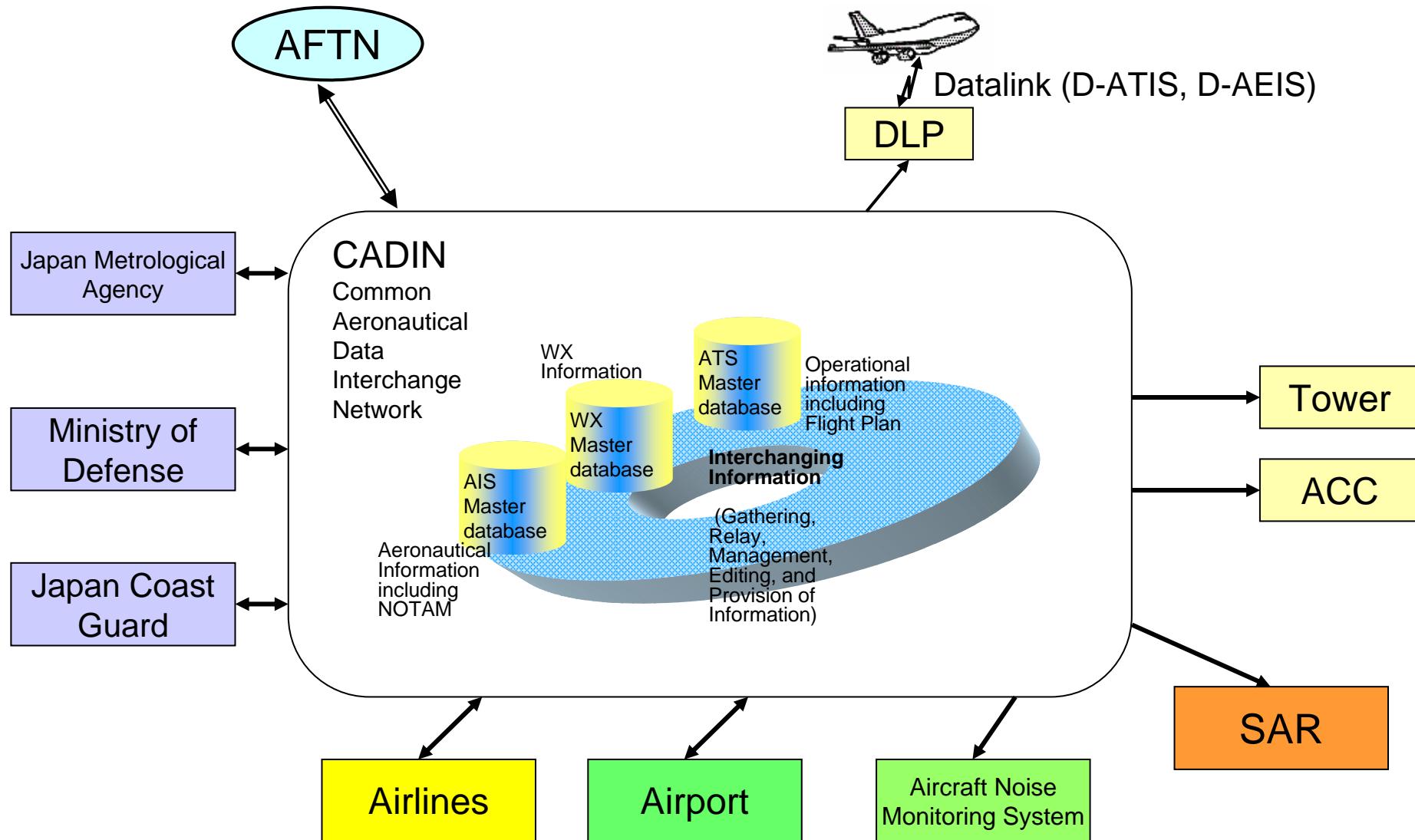
AIXM/WXXM Information Exchange Conference
Washington DC, May 12 – 14, 2009

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ATC Systems Service, Ltd., Japan

Information Management Requirement in Japan

- **1994 New IM for NOTAM and WX**
 - Operational Requirement
 - Automatic selection and management of valid NOTAMs
 - Users' requirement
 - Providing Package-info from origin to destination
 - Providing New information via DATALINK
- **So, JCAB implemented the NOTAM center database in 1994**
 - The first step of AIS automation in Japan
 - Before ICAO AIS divisional meeting!!
 - Technical Limitation - No standard
 - Only AFTN interface and Text format(IA5)
 - Not open web site
 - No graphical information

First Information Management(1994)



PKG Service

From RJTT to RJCC – 10 pages

*** PKG ***

08/04/28 14:40

REQUESTED-DATA : NTM AND WX
 DEP-AERODROME : RJTT EOBT : 08-04-28 05:40UTC
 DEST-AERODROME : RJCC ETA : 08-04-28 07:10UTC
 ALTN-AERODROME :

EN-ROUTE : 000 - 999
 (ROUTE) :
 FIR :

* : THIS SUMMARIZED NOTAM IS EDITED BY QUALIFIER LINE

----- DEPARTURE : RJTT 04:40 / 06:40 -----

(AGA)
 TWY NOT PASSABLE FOR ACFT TYP B777-300
 TWY B1N B2N T-TWY(D6 THRU D7)
 0602181720/UFN ALT/000/999

RJTT
 0606/06

(RAC)
 IAP TEMPO CHG
 MDA(H), WX MINIMA
 0804091500/0806041500 ALT/000/999

AIP SUP
 0058/08

(OTH)
 OBST: TOWER CRANE EXIST
 3532N13948E(QTE/151DEG 2620.366M FM RJTT ARP)
 0803311500/0804301500 ALT/000/003

RJTT
 1921/08

OBST: CRANE SHIP AND CRANE OPS
 WX MINIMA NO CHG
 0802022230/0808311500EST ALT/000/003

RJTT
 0691/08

OBST: TOWER CRANE EXIST
 353307N1394701E(QTE/130DEG 267.7M FM RJTT ARP)
 0804161323/0806081500 ALT/000/005

RJTT
 3282/08

METAR : RJTT 280530
 M 280530Z 11008KT 10KM FEW030CU BKN/// 18/11
 Q1014/A2997 RMK MOD TURB 1000FT DYE VOR BY
 B737 AT 0500=

S-TAF : RJTT 280246
 280246Z 280312 05010KT 9999 FEW030 BECMG 0305
 12010KT=

RWY-INFO : APCH 280530
 RJTT (APCH)VOR C
 LDG RWY 16L
 DEP RWY 16R

RWY-INFO : APCH 280426
 RJTT VOR C
 LDG RWY 16L
 DEP RWY 16R

L-TAF : RJTT 280246
 280246Z 281206 11007KT 9999 FEW015 SCT030
 BECMG 1215 05010KT BECMG 0003 09009KT=

Datalink Example of D-AEIS

Manual workload for making data

FI JL0723/AN JA8582
DT JDL HND1 220937 M86A
- EIS03A01193926SSJ

Request(SSJ Area)

AN JA8582/GL HND1
- P80TYODLYA220936
AEIS SSJ

NOTAM INFO
*RJTT VALID UNTIL 9911302359EST
RWY 15/33 CLSD DUE TO BURST

TURB INFO
I D/JAL1234 PN/RJTT-RJFF TP/B763 TM/191447
OV/SNE 100NE-KCC 50NNW FL/F330-350 DU/OCNL
TB/MOD TURB SK/CLR I C/LGTICE WV/256056KT
TA/M56 SB/BELT ON CS/SVC OK

VOLCANIC INFO
VLC WSJ SAKURAJIMA
MT.SAKURAJIMA ERUPTED AT 0500.VA MAX TOP 10500FT
UPPER WD KAGOSHIMA AT 0600 5000FT 100/49KT 18000FT 250/56KT

Edited from
PIREP

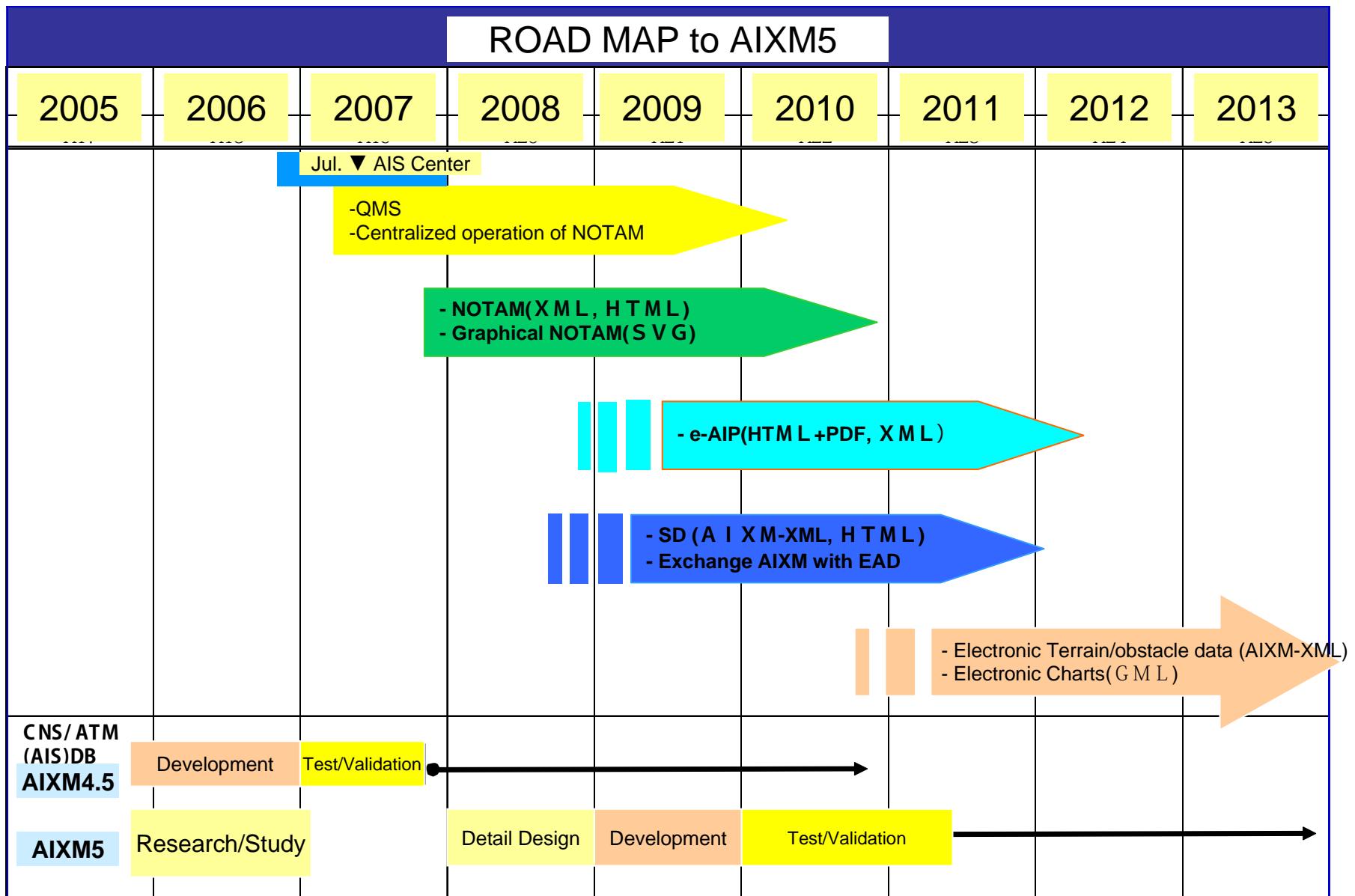
AIS faces Big Change

Need for a new approach to support CNS/ATM

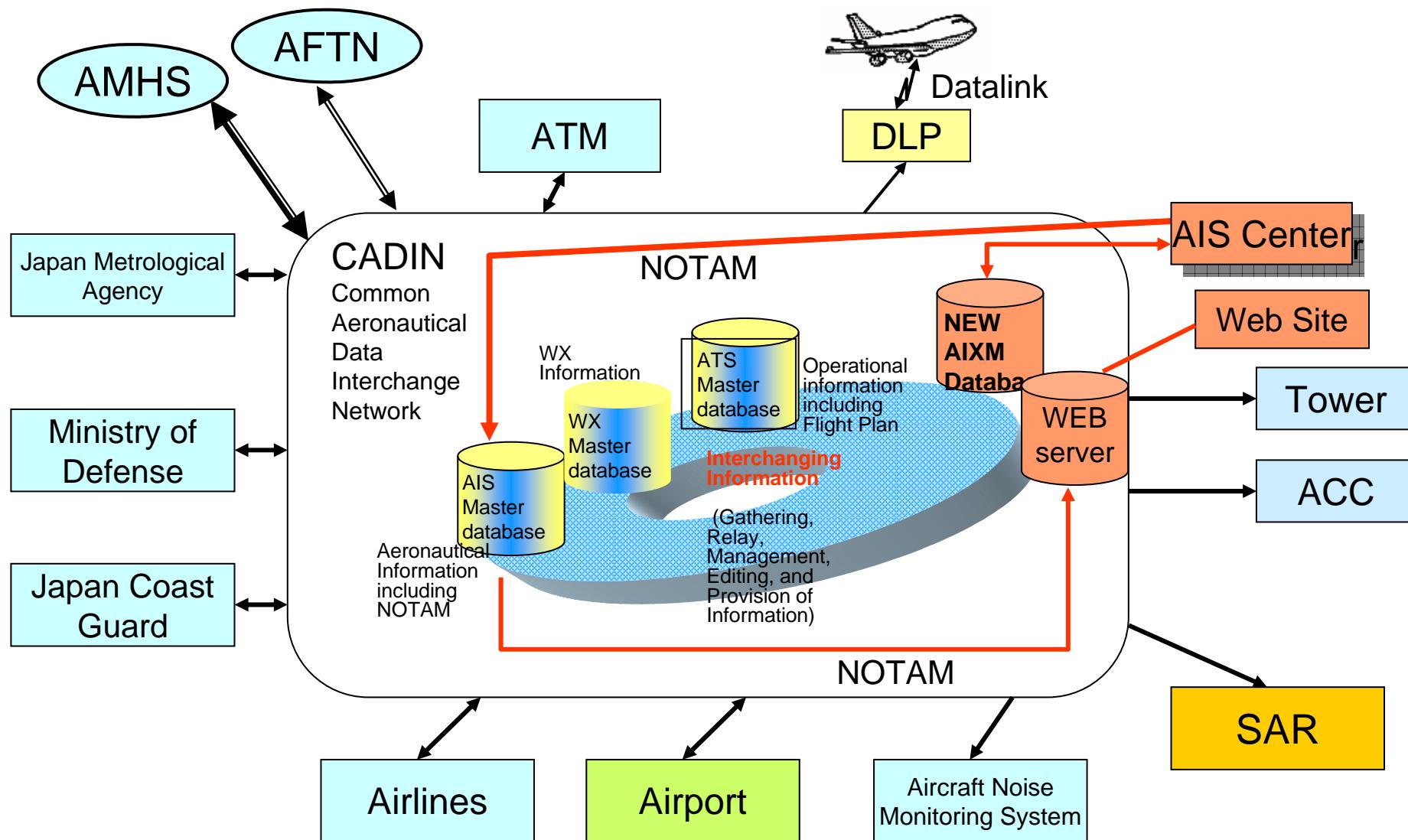
- ICAO
 - ✓ ***GLOBAL AIR NAVIGATION PLAN FOR CNS/ATM SYSTEMS***
- ICAO
 - ✓ ***AIS/MAP DIVISIONAL MEETING***
- ICAO
 - ✓ ***11th Air Navigation Conference***



- JCAB participated ADMSG of ICAO, AIS tech-sg and ACCB
 - ✓ Introduction of AIXM/AICM – 2001
- AIS web site – 2003
 - ✓ Open to global



Current Information Management



NOTAM & AIP Link (WEB site)

AIS JAPAN
Japan Aeronautical Information Service Center

PRINT **CLOSE**

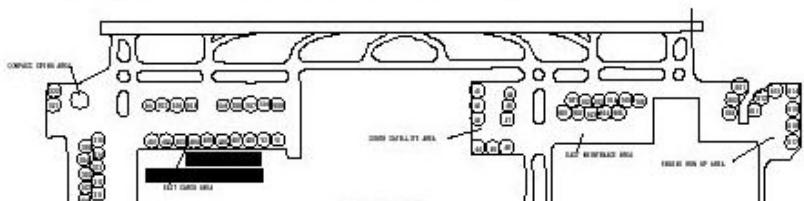
NOTAM Detail

DATE: 07/26/2007 17:26
KEYS: LOCATION: RJTT
PERIOD: [07/07/26 17:25] -[07/07/28 17:25]
SCOPE: A,AE,AW

New :Issued within 24 hours ! :Urgent to AIP-SUP :Linked AIP-SUP

100200 RJTTZPZX
(0122/07 NOTAMN
Q)RJTT/QMXLC//M/A/000/999/
A)RJTT B)0707100000 C)0708312359
E)TWY A3 CLSD TEST2-SVG)

Please click the image below,If you want to see the full size image.



eAIP based AIXM-XML

NOTAM-XML

Easy to link

From mid of 2009
also link to eAIP

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

DATE: 12/10/2008 11:39

KEYS: LOCATION: RJAA

PERIOD: [08/12/10 12:00] -[08/12/10 14:00]

SCOPE: A,AE,AW

The following NOTAM can be checked up to 50.

Graphic will be updated after clicking [Reload](#)

ALL

RJAA

[1719/08](#)

[1699/08](#)

[1684/08](#)

[1667/08](#)

[1657/08](#)

[1646/08](#)

[1645/08](#)

[1644/08](#)

[1643/08](#)

[1642/08](#)

[1641/08](#)

[1640/08](#)

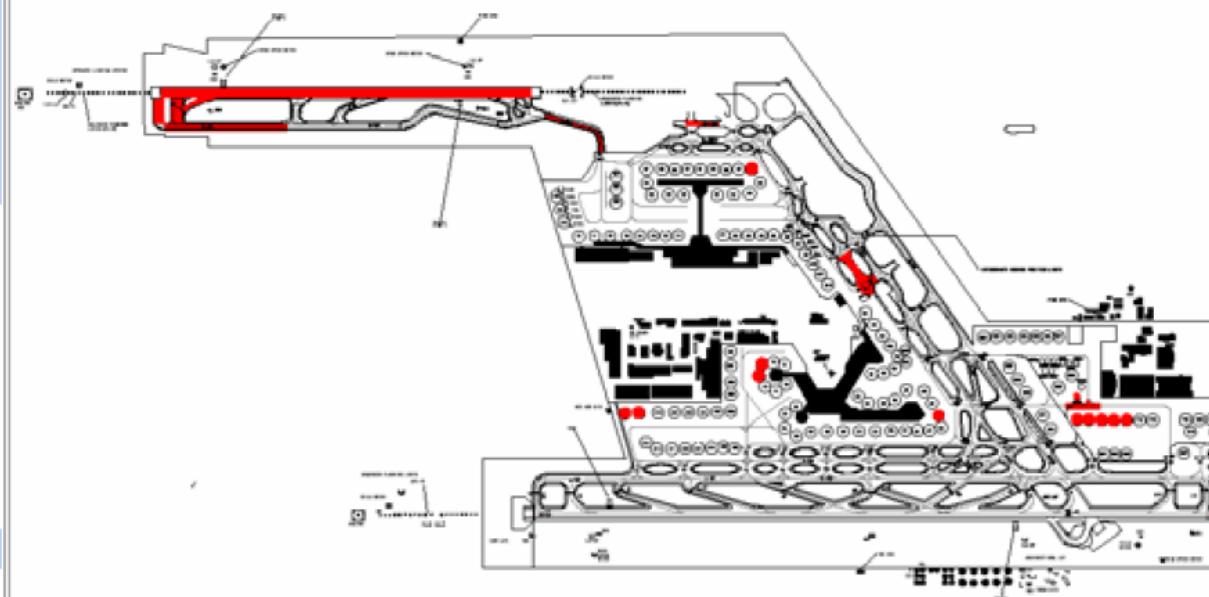
[Reload](#)

NOTAM-XML

AIXM-XML

Convert
to SVG

Graphical NOTAM
by SVG



Considering NOTAM Digitization



TWY A (BTN B1 AND B2)-CLSD

TWY R(INTERSECTION OF S6) R(BTN S6 AND S7)
S6(BTN R AND B) S6-GWY-CLSD



TWY A (FROM B1 TO B2)-CLSD



TWY A (FROM B1 TO B2 EXCLUDING INTERSECTION OF B2)-CLSD

[Nr.33 14:30-20:20]

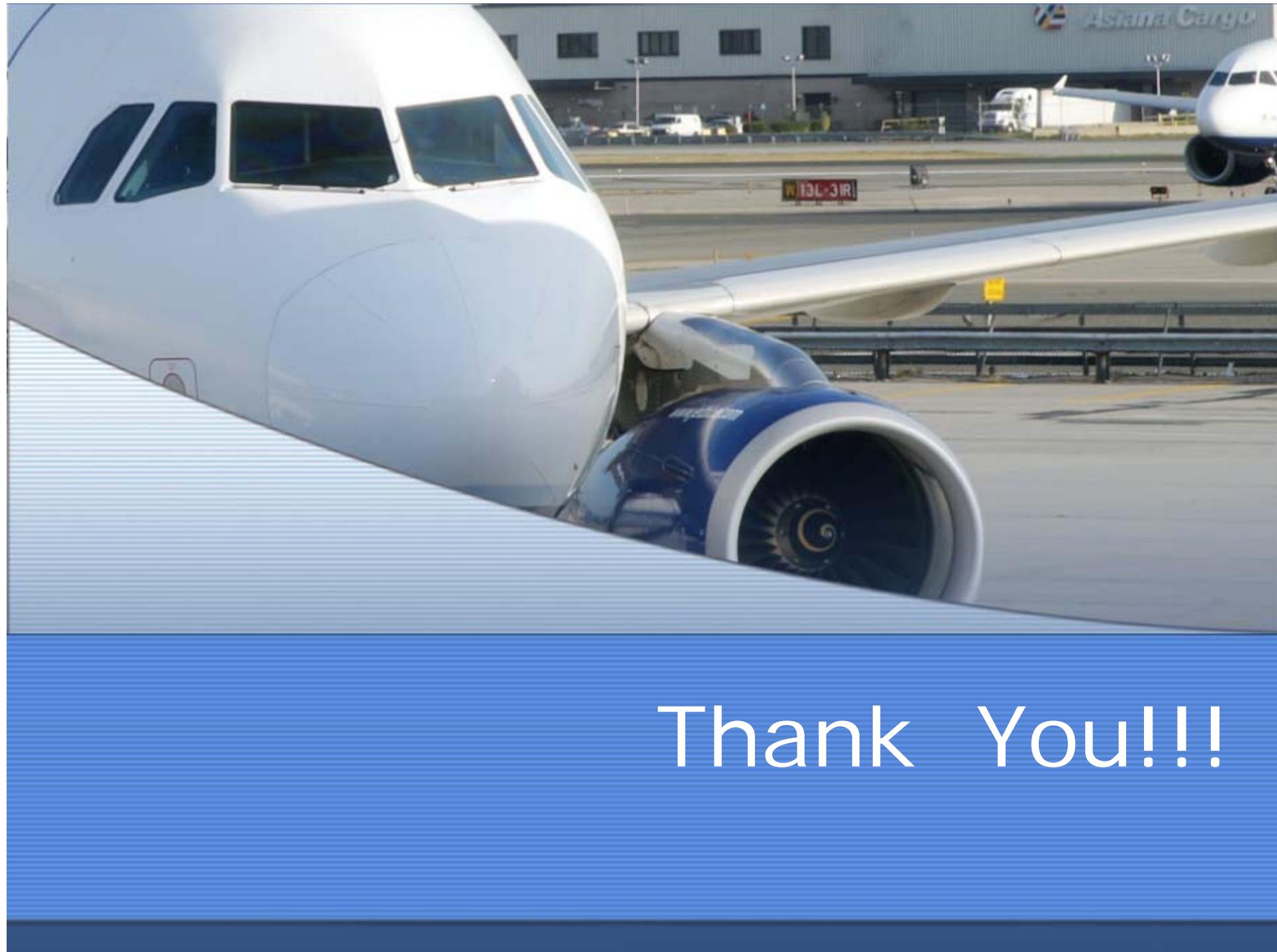
Nr.	件名番号	Q項	ノーテム E項内容	時間帯	18	19	20	21	22	23
11	RJAA:0384/09	MPLC	REF AIP SUP 032/09 ITEM APRON:A	24H						
12	RJAA:0385/09	MPLC	REF AIP SUP 032/09 ITEM APRON:B	24H						
13	RJAA:0386/09	MPLC	REF AIP SUP 032/09 ITEM APRON:H	24H						
14	RJAA:0387/09	MPCS	REF AIP SUP 032/09 ITEM APRON:2	24H						
15	RJAA:0388/09	MPCS	REF AIP SUP 032/09 ITEM APRON:3	24H						
16	RJAA:0480/09	MRAW	GROOVING FOR RWY 16R/34L PARTLY ERASED	24H						
17	RJAA:0480/09	MPLC	SPOT 15-CLSD	24H						
18	RJAA:0504/09	MRLC	PWY 16R/34L-CLSD Nr. 18 311048 RJAA/NYX (0504/09 NOTAMN Q/RJUU/QMRLC/IV/NBO/A/000/999/ ARJAA B(0904011430 D)0904302020 D1430/2020	14:30-20:20						
19	RJAA:0514/09	MPLC	SPOT 14-CLSD 311048 RJAA/NYX (0514/09 NOTAMN Q/RJUU/QMRLC/IV/NBO/A/000/999/ ARJAA B(0904011430 D)0904302020 D1430/2020	14:00-21:00						
20	RJAA:0517/09	MXLC	TWY W3-CLSD TWY 16R/34L-CLSD DUE TO MAINT ERWY16R/34L-CLSD DUE TO MAINT RMK/EXD EMERG ADFT WITH PRIOR PERMISSION AT LEAST 1HR BFR	14:30-20:20						
21	RJAA:0523/09	LRAS	VISUAL-CLSD TWY 16R/34L-CLSD DUE TO MAINT ERWY16R/34L-CLSD DUE TO MAINT RMK/EXD EMERG ADFT WITH PRIOR PERMISSION AT LEAST 1HR BFR	24H						
22	RJAA:0540/09	MXLC	REF AIP SUP 032/09 ITEM TWY:F	24H						
23	RJAA:0546/09	MXLC	APN TWY R(BTN W3-GWY AND BEHIND SPOT 212)-CLSD	14:00-20:20						
24	RJAA:0548/09	MXLC	REF AIP SUP 032/09 ITEM TWY:G	14:00-20:20						
25	RJAA:0552/09	OLAS	OBSTACLE LGT ON TOWER-U/S	24H						
26	RJAA:0553/09	OLAS	OBSTACLE LGT ON TOWER-U/S	24H						
27	RJAA:0555/09	MPLC	SPOT 701 702-CLSD	24H						
28	RJAA:0556/09	MPCS	TEMPO SPOT 1 2 INSTALLED(BTN SPOT 710 AND TWY 0	24H						
29	RJAA:0558/09	MXLC	APN TWY OSCAR(BTN BEHIND SPOT 410 AND S8-GWY) S7(BTN APN TWY	14:00-20:20						
30	RJAA:0566/09	MXLC	TWY B1-CLSD	14:30-20:20						
31	RJAA:0570/09	IIXAS	TWY-CI-LGT FOR S3-PARTLY U/S	24H						
No.20 14:30-20:20 0517/09 TWY										
30	RJAA:0566/09	MXLC	TWY B1-CLSD		14:30-20:20					
31	RJAA:0570/09	IIXAS	TWY-CI-LGT FOR S3-PARTLY U/S		24H					

Operational Impact in the Digital Environment

- Hard work from paper based AIP to SD-AIXM
 - Need of the special quality management for transition
 - Especially, Data Quality Assurance
 - Feedback to data originators and re-check
 - Spent 3 years
- Convert Digital NOTAM to ICAO legacy NOTAM
- We will consider the operational impact in the digital environment
 - Need OPADD change
 - Change the quality management system
 - We should more close to the CHAIN

Users' Benefit

- We must reduce the COST impacts to airline systems and other ATM systems.
- New products based on the digital NOTAM and AIXM must directly lead to cost-effectiveness, safety and efficiency of operation.
- We must study and promote what the digital environment brings



Thank You!!!