



International Civil Aviation Organization

**FIFTEENTH MEETING OF THE ASIA/PACIFIC METEOROLOGICAL
INFORMATION EXCHANGE WORKING GROUP
(MET/IE WG/15)**

Bangkok, Thailand, 20 – 22 March 2017

Agenda Item 4: Meteorological information exchange in digital form

STATUS AND PLANS FOR IWXXM IN REPUBLIC OF KOREA
(Presented by Republic of Korea)

SUMMARY

This paper presents of status for IWXXM and plan for IWXXM application program for feedback of IWXXM 2.0 schema

1. INTRODUCTION

1.1 ICAO is continuing to introduce the progressive transition of aeronautical meteorological information from traditional alphanumeric code forms (TAC) to international industry standard the extensible markup language (XML)/geography markup language (GML), “digital form” for a purpose of the globally interoperable, harmonized the future air traffic management (ATM) system, designed by ICAO’s Global Air Navigation Plan (GANP) and its aviation system block upgrades (ASBU) methodology.

2. DISCUSSION

Status of IWXXM producing

2.1 The version 1.1 of the ICAO Meteorological Information Exchange Model (IWXXM 1.1) was approved by the seventeenth World Meteorological Congress (Cg-17) in 2015. The version 2.0 of the ICAO Meteorological Information Exchange Model (IWXXM 2.0) was made available to be useful by the Task Team on Aviation XML (TT-AvXML, WMO) in August 2016, and Amendment 77 to Annex 3(also published as Technical Regulations (WMO-No. 49) Volume II - Meteorological Service for International Air Navigation) introduced exchange in XML information(digital format for volcanic ash and tropical cyclone advisories and AIRMET information) that cannot be represented by IWXXM 1.1 and permits bilateral exchange of such information from November 2016 (WMO CBS-16, November 2016)

2.2 AMO of KMA has proceeded with IWXXM development and testing through aviation systems of Air Traffic Services (ATS) unit. IWXXM ver.1.1 was applied for METAR /

SPECI and TAF on March 3, 2016. Revision IWXXM ver.2.0 was applied for METAR /SPECI, TAF and SIGMET, and newly applied for AIRMET in accordance with WMO schema (<http://schemas.wmo.int>) on February 5, 2017. Only AIREP was produce by WXXM format (<http://www.wxsm.aero>) because AIREP's IWXXM format can't be found in WMO schema.

2.3 AMO's IWXXM has been transmitted to ATC(Air Traffic Center, MOLIT, Incheon Korea) by dedicated network. ATC has been in the process of developing and testing graphic application program using XML/GML of eAIP, eTOD, PIB, x-NOTAM, AMDB. As shown in Fig. 1, AIRMET and SIGMET are displayed in polygon as coordinate information, and METAR, SPECI, and TAF are marked with an icon at the airport location.

2.4 To verify the completeness of IWXXM 2.0 produced by AMO, It was required that real-time monitoring by weather forecaster and stakeholders. Therefore the first, for weather forecaster, AMO has made internal website for IWXXM 2.0 massage monitoring since February 5, 2017 as shown in Fig. 2(Left); And

Plan for feedback and verification of IWXXM 2.0

2.4 The second, For stakeholders, AMO has a plan for developing application program of making a convert from IWXXM to graphics and will make web service for testing of IWXXM (<http://amo.kma.go.kr>) until December 2017 as shown in Fig. 2(right). Depending on change of the weather or occurrence of significant weather, the graphics converted from IWXXM 2.0 will change, and it is expected that IWXXM 2.0 can be verified by comparison the graphics between from IWXXM 2.0 and from the current Internet service (<http://global.amo.go.kr>). From the result of such tests, we expect to be able to provide feedback information to the WMO Expert Team for IWXXM version upgrade as well as produce accurate information through verification on IWXXM 2.0

3. ACTION REQUIRED BY THE MEETING

3.1 The meeting is invited to:

- a) Discuss IWXXM 2.0 schema for AIREP; and
- b) Discuss Schema for IWXXM data exchange through AMHS such as ROBEX Handbook through AFTN.

Installation and data exchange of AMHS will be promoted by KAC, Korea Airport Corporation. For IWXXM data exchange through AMHS, it will require another schema such as the ROBEX Handbook.

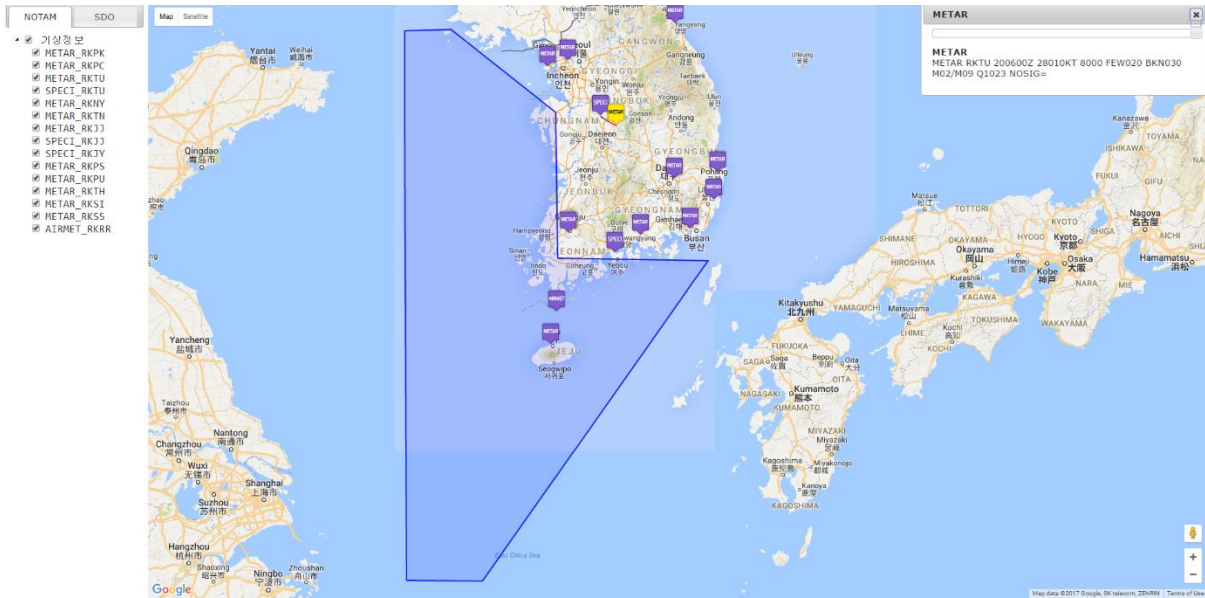
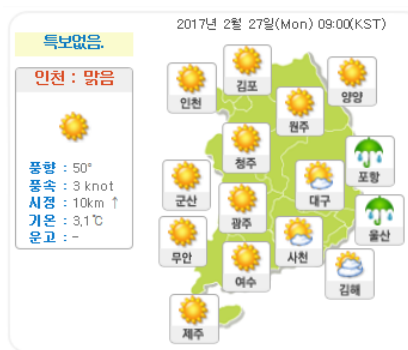
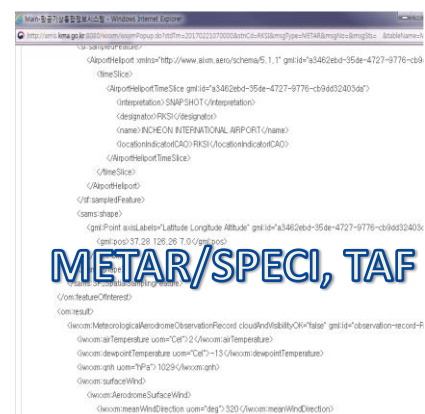






Fig. 1. Display of test for ATC's graphic application program using XML/GML of IWXXM, eAIP, eTOD, PIB, x-NOTAM, AMDB.



날짜	Incheon(RKSI) 2017-02-27 ~ 2017-03-01			
일/시 (KST)	27/09 ~ 27/12	27/12 ~ 28/01	28/01 ~ 28/05	28/05 ~ 28/09
최저온고 (ft)	5000 over	5000 over	5000 over	5000 over
날씨				
시경(m)	9000	9000	4500	4500
풍향	ENE (070)	WSW (250)	SSW (210)	SSW (210)
풍속 (knot)	5	5	7	7

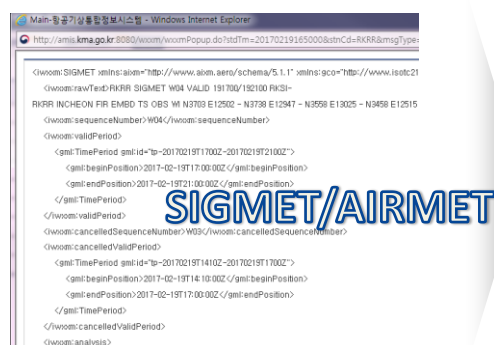


Fig. 2. Display of web service for IWXXM 2.0 monitoring in February 27, 2017(left) and plan for development of application program for convert from IWXXM message to graphics in December 2017(right) .