



IWXXM implementation in Austria

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IWXXM Implementation Workshop
AFI-Region 15./16. September 2020

Zoom Webinar Platform



IWXXM capabilities in Austria (1)



- MET-Switch with IWXXM capabilities since 12/2016
 - Supports ext. AMHS (P3 connection)
 - Capable of TAC ↔ IWXXM V2.1.1 translation
 - Capable to validate IWXXM-messages
 - Basic (XSD) & Detailed (XSD + Schematron)
 - Capable of Data aggregation (compiling IWXXM-bulletins)
 - Smart View implemented



Content Viewer@ometsw-mw1

Message: LAOS31 LOWM 301150 Size: 33920 Date/Time: 30.10.2019, 11:55:00 Channel: MW:10

Element	Value	Attributes
● Meteorological bulletin	A LAOS31LOWM301150_C LOWM	
● Report #1: LOWM, iwxxm:METAR 2.1, 30.10.2019, 11:50:00, WIEN/SCHWECHAT-FLUGHAFEN		
● Report attributes		
● iwxxm:observation		
● om:OM_Observation		gmlid="uuid:1ea2b891-6564-4134-b0fd-9b431c822e83" xlink:href="http://codes.wmo.int/49-2/observation-type/IWXXM/1.0/MeteorologicalAerodromeObservation"
● om:phenomenonTime		
● gml:TimeInstant		gmlid="uuid:0666fbd6-ce2a-4cef-8582-19e24efe8e0c"
● gml:timePosition	2019-10-30T11:50:00Z	
● om:resultTime		xlink:href="#uuid.0666fbd6-ce2a-4cef-8582-19e24efe8e0c"
● om:procedure		
● meteProc:Process		gmlid="uuid:b9979a2e-771a-4940-9d90-38e30559d96a" WMO No. 49 Volume 2 Meteorological Service for International Air Navigation APPENDIX 3 TECHNICAL SPECIFICATIONS RELATED TO METEOROLOGICAL...
● gml:description		xlink:href="http://codes.wmo.int/49-2/observable-property/MeteorologicalAerodromeObservation", xlink:title="Observed properties for Meteorological..."
● om:observedProperty		
● om:featureOfInterest		
● sams:SF_SpatialSamplingFeature		gmlid="uuid:088a2b01-9b90-499c-83cb-c099cd3841c8" xlink:href="http://www.opengis.net/def/samplingFeatureType/OGC-OM/2.0/SF_SamplingPoint"
● st:sampledFeature		
● akxm:AirportHeliport		gmlid="uuid:c3803cf9-bbb3-492a-b176-0b945d755d50"
● akxm:timeSlice		
● akxm:AirportHeliportTimeSlice		gmlid="uuid:6a5578c7-59df-4d99-a4f5-57b27fe4288e"
● gml:validTime		
● akxm:interpretation	BASELINE	
● akxm:designator	LOWM	
● akxm:name	WIEN/SCHWECHAT-FLUGHAFEN	
● akxm:locationIndicatorCAO	LOWM	
● sams:shape		
● gml:Point		gmlid="uuid:b108010a-afcd-4863-b7b2-9640a9f168", uomLabels="deg deg m", axisLabels="Lat Lon Altitude", srsDimension="3", srsName="htt...
● gml:pos	48.12 16.57 183	
● om:result		
● iwxxm:MeteorologicalAerodromeObservationRecord		gmlid="uuid:5ff56f60-381c-4c23-8a5a-448de692d59f", cloudAndVisibilityOK="false"
● iwxxm:airTemperature	7	uom="Cel"
● iwxxm:dewpointTemperature	2	uom="Cel"
● iwxxm:qnh	1027	uom="hPa"
● iwxxm:surfaceWind		variableWindDirection="false"
● iwxxm:AerodromeSurfaceWind		uom="deg"
● iwxxm:meanWindDirection	360	uom="[kn _j]"
● iwxxm:meanWindSpeed	6	uom="deg"
● iwxxm:extremeClockwiseWindDirection	320	uom="deg"
● iwxxm:extremeCounterClockwiseWindDir...	40	uom="deg"
● iwxxm:visibility		
● iwxxm:AerodromeHorizontalVisibility		
● iwxxm:prevailingVisibility	9999	uom="m"
● iwxxm:cloud		
● iwxxm:AerodromeObservedClouds		
● iwxxm:layer		
● iwxxm:CloudLayer		
● iwxxm:amount		xlink:href="http://codes.wmo.int/bufr4/codeflag/0-20-008/1" uom="[ft _j]"
● iwxxm:base	1700	
● iwxxm:layer		
● iwxxm:CloudLayer		
● iwxxm:amount		xlink:href="http://codes.wmo.int/bufr4/codeflag/0-20-008/3" uom="[ft _j]"
● iwxxm:base	2000	xsrnil="true", nilReason="http://codes.wmo.int/common/nil/noSignificantChange"
● iwxxm:trendForecast		
● Report #2: LOWL, iwxxm:METAR 2.1, 30.10.2019, 11:50:00, LINZ/HOERSCHING-FLUGHAFEN		
● Report #3: LOWS, iwxxm:METAR 2.1, 30.10.2019, 11:50:00, SALZBURG-FLUGHAFEN		
● Report #4: LOWI, iwxxm:METAR 2.1, 30.10.2019, 11:50:00, INNSBRUCK-FLUGHAFEN		
● Report #5: LOWG, iwxxm:METAR 2.1, 30.10.2019, 11:50:00, GRAZ-THALERHOF-FLUGHAFEN		
● Report #6: LOWK, iwxxm:METAR 2.1, 30.10.2019, 11:50:00, KLAGENFURT-FLUGHAFEN		

IWXXM capabilities in Austria (2)



- **RODB with IWXXM capabilities since 12/2016**
 - **Supports RQM (via AFTN) and RQX (via AMHS)**
 - Request/Reply format and possibilities according EUR ICAO Doc 018, App. A
 - **Supports SWIM-requests (only internal)**
 - Via API conforming to REST-Service (Representational State Transfer)
 - HTTP Basic Authentication (for the time being)
 - HTTP Requests (GET, PUT, POST,....)



IWXXM capabilities in Austria (3)



- Distribution of METAR & TAF in IWXXM since 11/2017
- Distribution of SIGMET in IWXXM since 03/2018
- Providing TAC to IWXXM translation service for several states, starting 03/2018

Experiences



- Test exchange of IWXXM-data with several states
 - Belgium
 - Croatia
 - France
 - Republic of Serbia
 - Russia
 - Slovenia
 - Switzerland
 - UK
- Test very valuable for both sides to identify issues
 - Usage of “Lon Lat” in SIGMETs instead of “Lat Lon”
 - Using non-unique gml:id
 - Providing feedback in case of schematron errors, e.g. using not allowed characters
- We are still learning

Future



- **Near Future**
 - Usage of IWXXM 3.0 within next months
- **Little bit further down the road**
 - Generation of IWXXM at source
 - Providing SWIM functionalities via RODB





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THANK YOU