

Change Proposal

ID:	AIXM-145
target version:	AIXM 5.1.1
version:	1.0
last updated:	15 FEB 2016
status:	Implemented



Correct missing nillable attribute in the XML Schema

Description

Add the missing nillable='true' attribute for the element theAirspaceVolume for the Airspace class.

Rationale for change

See <https://aixmccb.atlassian.net/browse/AIXM-107>

AIXM 5.1 XML Schema elements that results from an association with a linked association class, which also points to a class with stereotype "object", are missing the nillable='true' attribute. In the AIXM 5.1 model, the only instance is the Airspace[AirspaceGeometryComponent] >AirspaceVolume. The "theAirspaceVolume" element is missing the attribute nillable='true' in the AIXM 5.1 schema.

There is a current workaround which is to include an empty AirspaceVolume child element and state the nilReason in the parent theAirspaceVolume element, rather than the nillable='true'. However, for consistency reasons with the rest of the schema and in order to avoid the same problem occurring in future versions, the schema and the scripts need to be corrected.

Impact assessment

AIXM 5.1 data providers are not affected by this change, the old workaround would remain in the schema. AIXM 5.1 files remain valid against the new AIXM 5.1.1 schema.

AIXM 5.1.1 files that use the new attribute would be invalid against the AIXM 5.1 schema and will need to be converted, applying the AIXM 5.1 work-around. The conversion is straight-forward.

Change Proposal details

In the XML Schema the following changes are proposed:

- In definition of the Group with name="AirspaceGeometryComponentPropertyGroup", for the property "theAirspaceVolume" add a nillable = 'true' attribute;

In the scripts for EA Sparx, which will be used for generating the AIXM 5.1.1 version and further, ensure that the nillable='true' is automatically generated for elements derived from association classes and which are associated with a class with stereotype <<object>>.

Mapping AIXM 5.1 to AIXM 5.1.1 (forward)

NIL (Not applicable).

Mapping AIXM 5.1.1 to AIXM 5.1 (backward)

The following algorithm shall be applied:

- For each theAirspaceVolume that is empty and has the attribute nilable='true':
 - add a child AirspaceVolume empty element with nilable='true' and copy the value of the nilReason attribute (if not empty)
- For any other XML elements/attributes - copy identical in the output

This algorithm will be implemented in an XSLT script that will be provided together with the AIXM 5.1.1 Schema.

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