

Change Proposal

ID:	AIXM-146
target version:	AIXM 5.1.1
version:	1.1
last updated:	25 MAR 2015
status:	Implemented



Add missing nilReason

Description

Add the nilReason to properties of features or objects where the attribute is missing.

Rationale for change

See <https://aixmccb.atlassian.net/browse/AIXM-124>

The AIXM 5.1 properties are based on data types which are defined as inheritances of "...BaseType" where the attribute nilReason is added. The nilReason allows for qualifying the reasons for the data that is not provided.

Some of the data types do not have the nilReason specified. This makes the properties based on the respective data types to miss the nilReason values which is a deviation from the above principle. Therefore, it is proposed to add the missing nilReason attributes, both in the UML and in the schema.

Impact assessment

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, by moving the nilReason content into a note associated with the corresponding property. Mapping is straight-forward.

Change Proposal details

The following properties of features and objects are missing the nilReason:

1. StandardLevelColumn (feature)

a) unitOfMeasurement having the current data type: UomDistanceVerticalType

- create a new data type, CodeDistanceVerticalUomType, inheriting from UomDistanceVerticalType and adding the nilReason

- modify the data type of the unitOfMeasurement to use the CodeDistanceVerticalUomType.

2. MarkingBuoy (feature)

a) designator having the current data type: AlphanumericType

- create a new data type, CodeBuoyDesignatorType, inheriting from the AlphanumericType (through an intermediate CodeBuoyDesignatorBaseType) and adding the nilReason;

- modify the data type of the designator to use the CodeBuoyDesignatorType.

3. FASDataBlock (object)

- a) codeICAO having the current data type: AlphanumericType

- create a new data type, CodeICAOCountryType, inheriting from the AlphanumericType (through an intermediate CodeICAOCountryBaseType) and adding the nilReason;

- modify the data type of the codeICAO attribute to use CodeICAOCountryType.

- b) referencePathIdentifier having the current data type: AlphanumericType

- create a new data type, CodeReferencePathIdentifierType, inheriting from the AlphanumericType (through an intermediate CodeReferencePathIdentifierBaseType) and adding the nilReason;

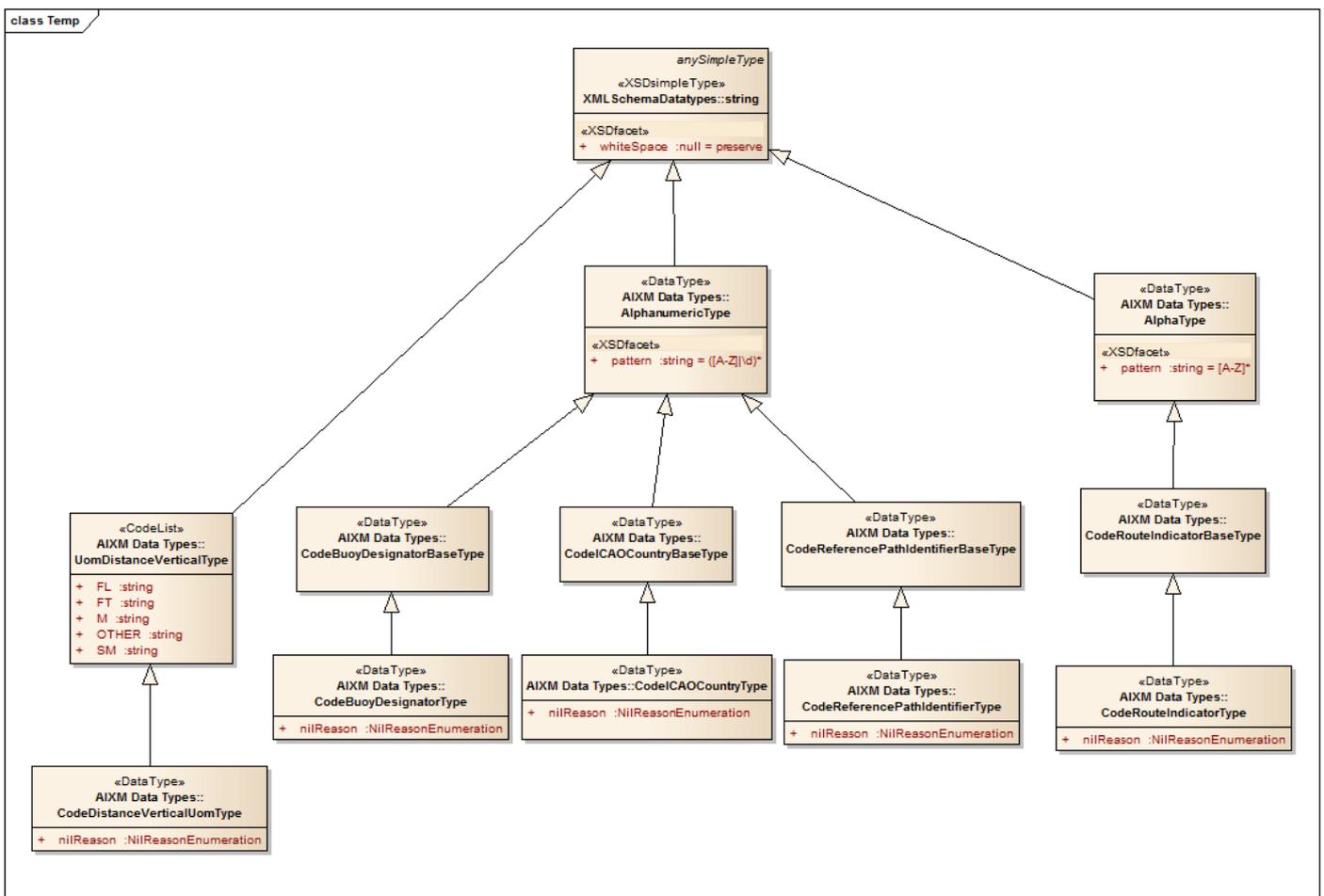
- modify the data type of the referencePathIdentifier attribute to use the CodeReferencePathIdentifierType.

- c) routeIndicator having the current data type: AlphaType

- create a new data type, CodeRouteIndicatorType, inheriting from the AlphaType (through an intermediate CodeRouteIndicatorBaseType) and adding the nilReason;

- modify the data type of the routeIndicator attribute to use the CodeRouteIndicatorType.

The following diagram shows the inheritance chain and the attributes of the new AIXM Data Types:



Mapping AIXM 5.1 to AIXM 5.1.1 (forward)

NIL (if the nilReason is encoded as an annotation, it will be preserved as is in AIXM 5.1.1)

Mapping AIXM 5.1.1 to AIXM 5.1 (backward)

The following algorithm shall be applied:

- For each StandardLevelColumn.unitOfMeasurement that has an assigned nilReason value (“inapplicable”, “missing”, “template”, “unknown” or “withheld”):
 - create an annotation with Note.propertyName=“unitOfMeasurement”, Note.purpose=“REMARK” and with the LinguisticNote.note containing the corresponding nilReason value
- For each MarkingBuoy.designator that has an assigned nilReason value (“inapplicable”, “missing”, “template”, “unknown” or “withheld”):
 - create an annotation with Note.propertyName=“designator”, Note.purpose=“REMARK” and with the LinguisticNote.note containing the corresponding nilReason value
- For each FASDataBlock.codeICAO that has an assigned nilReason value (“inapplicable”, “missing”, “template”, “unknown” or “withheld”):
 - create an annotation with Note.propertyName=“codeICAO”, Note.purpose=“REMARK” and with the LinguisticNote.note containing the corresponding nilReason value
- For each FASDataBlock.referencePathIdentifier that has an assigned nilReason value (“inapplicable”, “missing”, “template”, “unknown” or “withheld”):
 - create an annotation with Note.propertyName=“referencePathIdentifier”, Note.purpose=“REMARK” and with the LinguisticNote.note containing the corresponding nilReason value
- For each FASDataBlock.routeIndicator that has an assigned nilReason value (“inapplicable”, “missing”, “template”, “unknown” or “withheld”):
 - create an annotation with Note.propertyName=“routeIndicator”, Note.purpose=“REMARK” and with the LinguisticNote.note containing the corresponding nilReason value

- 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.

- END -