

TSM7-5.8

Validation of Portrayal Inputs

NIWC LANT

for

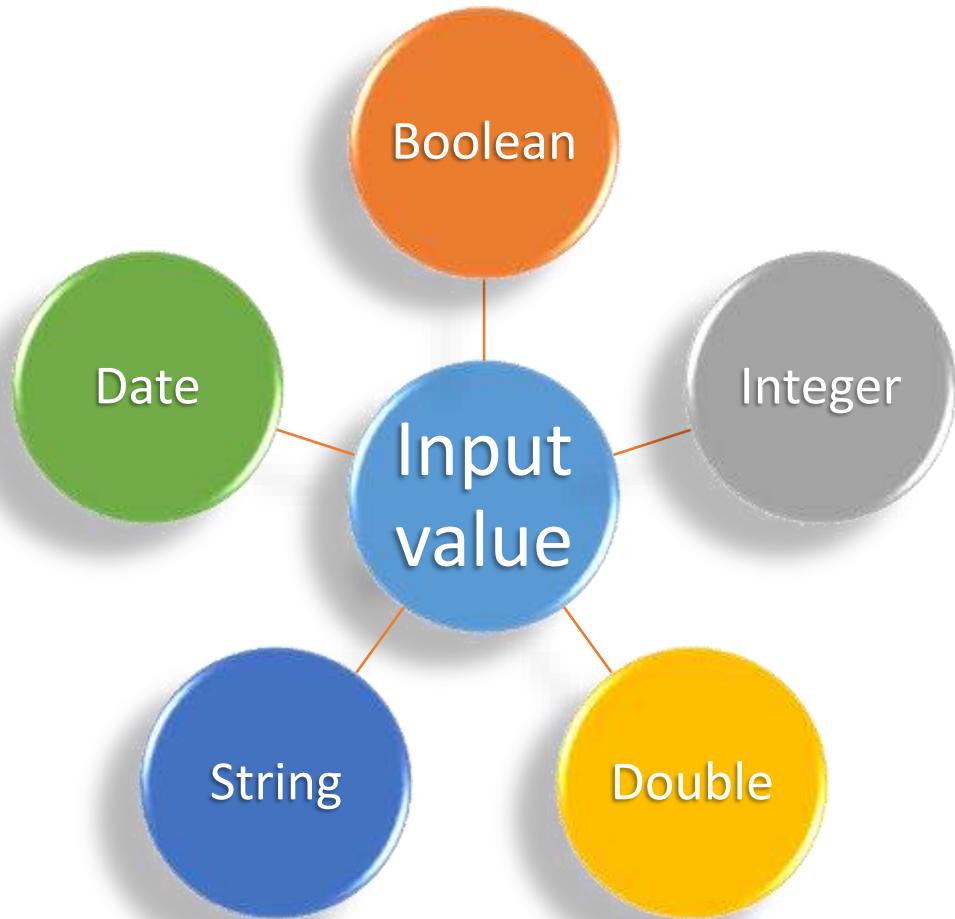
TSM7

Issues

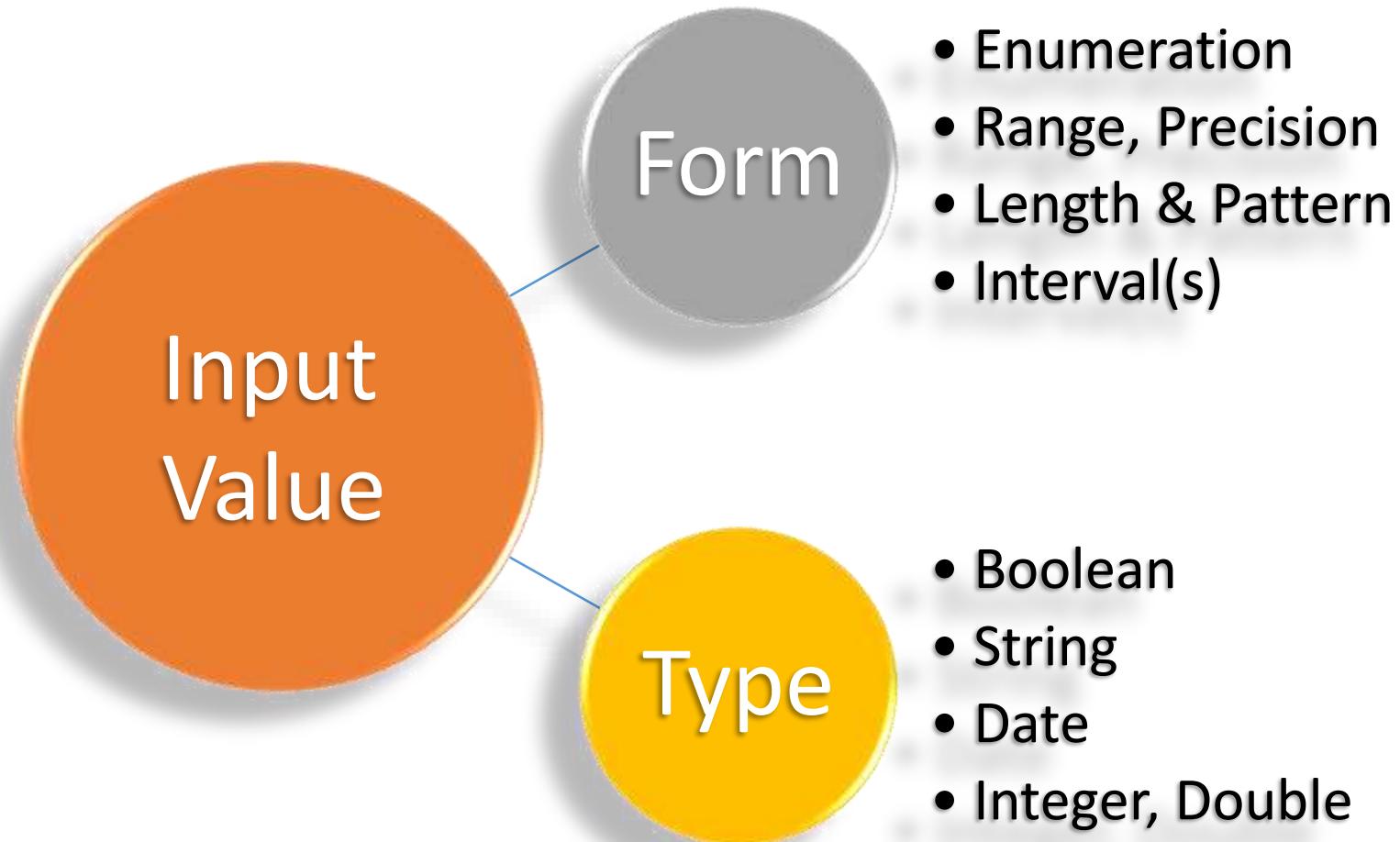
How to constrain / validate user input?

Constraints for Context
Parameters

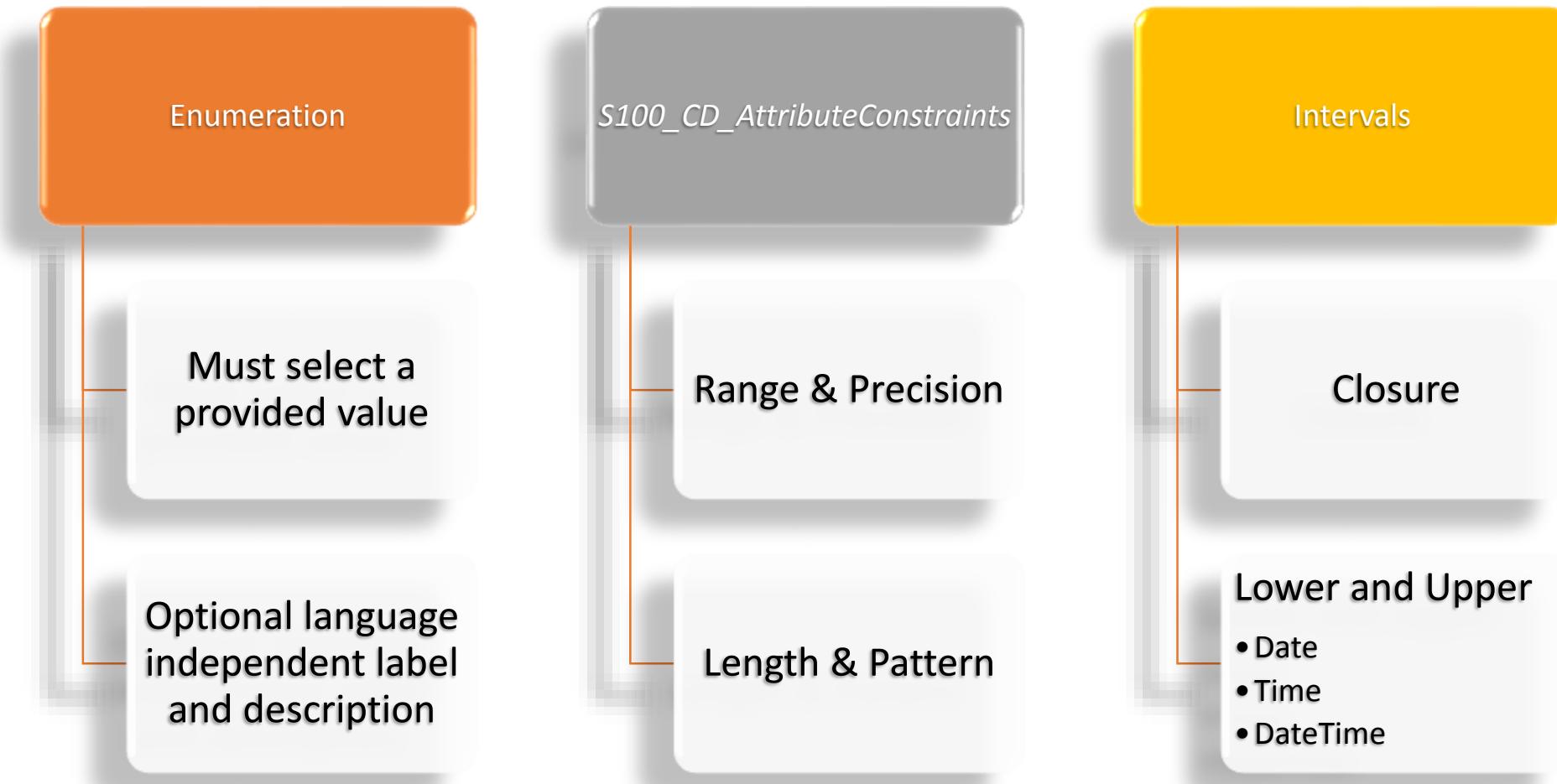
Current Validation



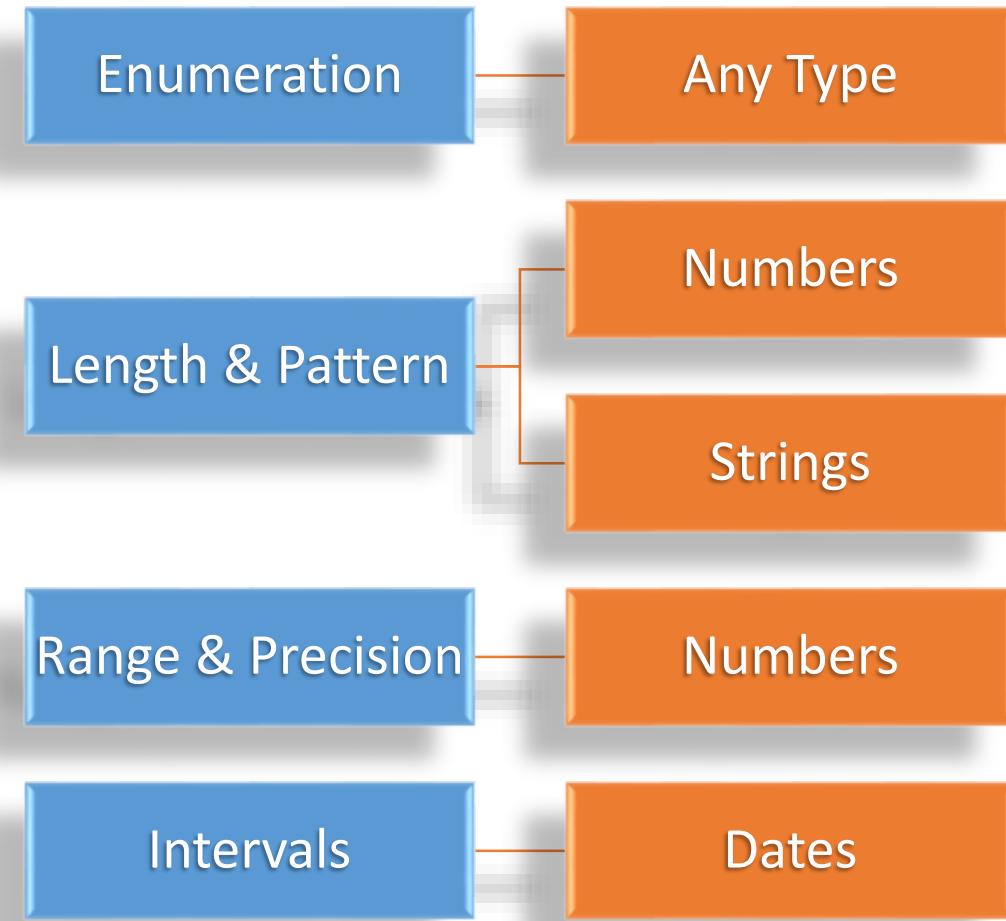
Proposed Validation



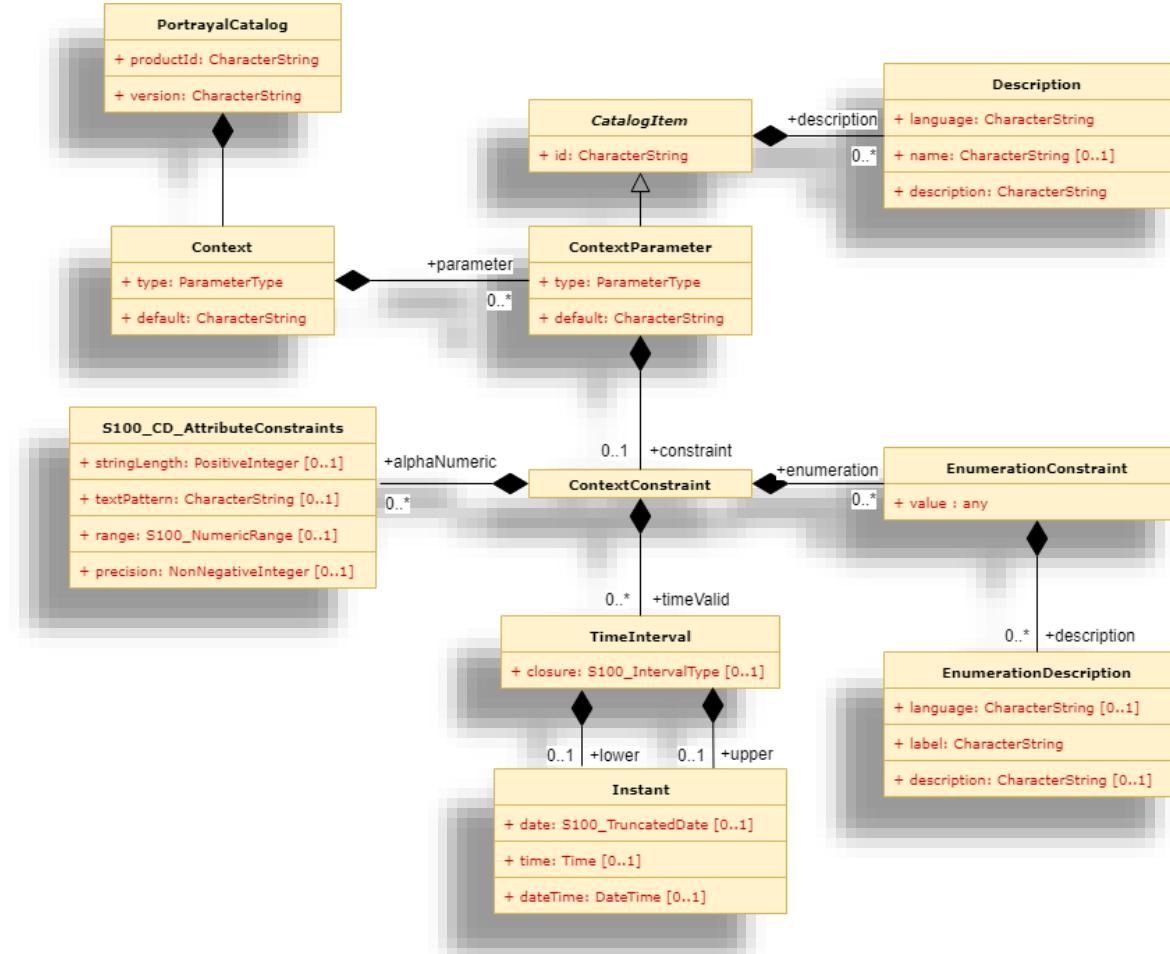
Proposed Constraint Types



Proposed Constraints and Applicability to Context Parameter Types



Context Parameter Constraints UML Model



ContextParameter Constraints

UML Tables

Role Name	Name	Description		Type
Class	ContextParameter	...	-	-
Subtype of	CatalogItem	...	-	-
Attribute	type	The data type of the Parameter	1	ParameterType
Attribute	default	A default value for the Parameter	1	string
Association	constraint	Constrains the Parameter	0..1	ContextConstraint

ContextParameter Constraints

UML Tables

Role Name	Name	Description		Type
Class	ContextConstraint	Describes expected values	-	-
Association	alphaNumeric	Constrains string and numeric types	0..*	S100_CD_AttributeConstraints
Association	timeValid	Constrains date type	0..*	TimeInterval
Attribute	enumeration	Constrains to enumeration	0..*	EnumerationConstraint

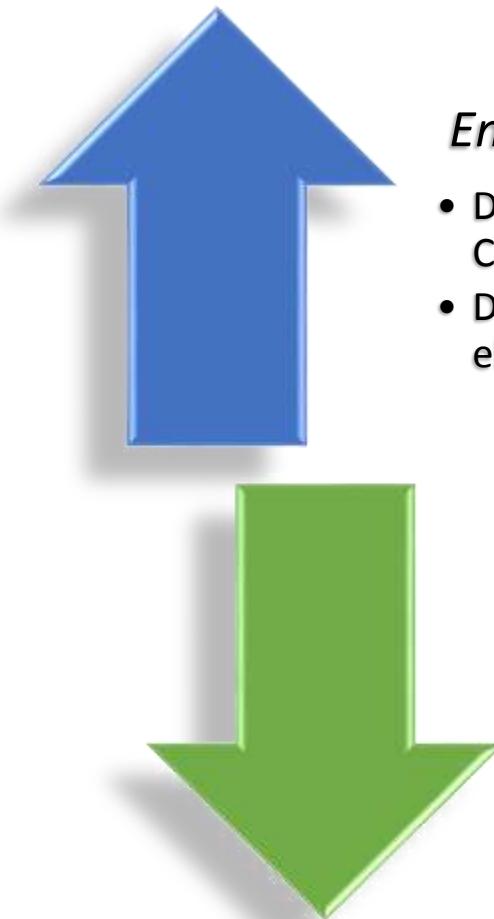
ContextParameter Constraints

UML Tables

Role Name	Name	Description		Type
Class	EnumerationConstraint	Describes expected values	-	-
Attribute	value	The value of the enumeration	1	any
Association	description	Describes the value	0..*	EnumerationDescription

Role Name	Name	Description		Type
Class	EnumerationDescription	Describes expected values	-	-
Attribute	language	ISO 639-2/T alpha-3 code default is “eng”	0..1	string
Attribute	label	A label for presentation to the user in lieu of the value	1	string
Attribute	description	Describes the value	0..1	string

Model A or Model B?

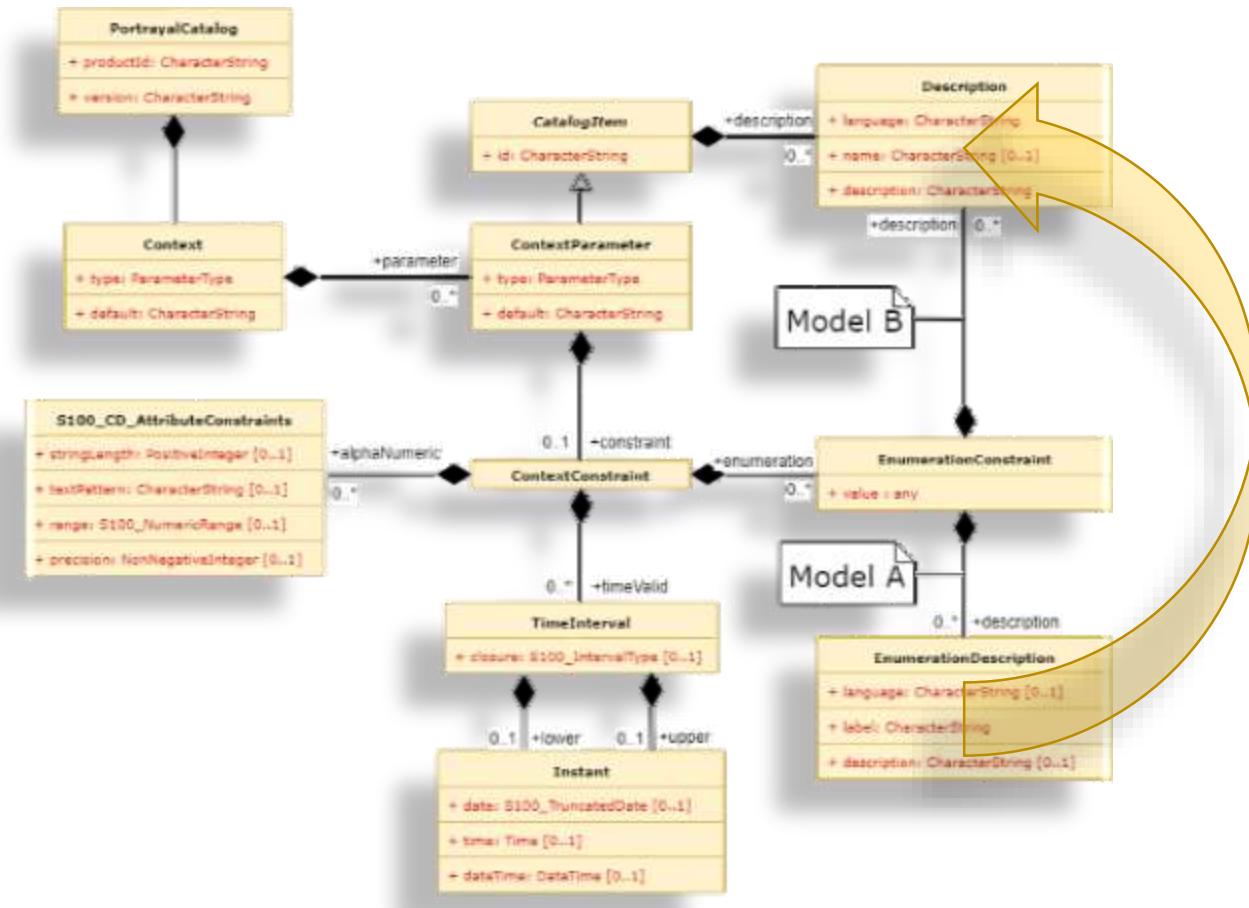


Add *EnumerationDescription*

- Doesn't affect Description of CatalogItems
- Duplicates existing model element

Use *Description*

- No duplication
- Requires changing multiplicity of attributes



Example String Constraint

ISO 639-2/T alpha-3 code

```
<context>
  <parameter id="1">
    ...
    <name>NATIONAL LANGUAGE</name>
    ...
    <type>String</type>
    <default>eng</default>
    <constraint>
      <alphaNumeric stringLength="3" textPattern="[a-z]{3}" />
    </constraint>
  </parameter>
</context>
```

Example Enumeration Constraint Enabled or Disabled

```
<type>Boolean</type>
<constraint>
  <enumeration value="true">
    <description label="Enabled"/>
    <description label="활성화 돼있음" language="kor"/>
  </enumeration>
  <enumeration value="false">
    <description label="Disabled"/>
    <description label="비활성화 돼있음" language="kor"/>
  </enumeration> ...
</constraint>
```

Example Interval Constraint

Day in 2019

```
<type>Date</type>
<constraint>
  <timeValid closure="geLtInterval">
    <lower date="20190101"/>
    <upper date="20200101"/>
  </timeValid>
</constraint>
```

Actions

Choose Model

Prepare Change
Forms

Present to Working
Group