

Template 3153: Assembly of possible individual

Shorthand template

The shorthand template contains seven roles:

- assemblyType, cardinality 0 : 1
- beginning, cardinality 1
- context, cardinality 0 :?
- temporalPartOfPart, cardinality 1
- temporalPartOfWhole, cardinality 1
- temporalWholeOfPart, cardinality 1
- temporalWholeOfWhole, cardinality 1

$\forall s(\text{ST-3153}(s) \rightarrow$

$\exists \leq 1x(\text{assemblyType}(s, x)) \wedge$

$\exists 1x(\text{beginning}(s, x)) \wedge$

$\exists 1x(\text{temporalPartOfPart}(s, x)) \wedge$

$\exists 1x(\text{temporalPartOfWhole}(s, x)) \wedge$

$\exists 1x(\text{temporalWholeOfPart}(s, x)) \wedge$

$\exists 1x(\text{temporalWholeOfWhole}(s, x)) \wedge$

$\forall x(\text{assemblyType}(s, x) \rightarrow \text{ClassOfAssemblyOfIndividual}(x)) \wedge$

$\forall x(\text{beginning}(s, x) \rightarrow \exists z(\text{Classification}(z) \wedge \text{classified}(z, x) \wedge \text{classifier}(z, \text{XmlSchemaDateTime}))) \wedge$

$\forall x(\text{context}(s, x) \rightarrow \text{ClassOfTemporalWholePart}(x)) \wedge$

$\forall x(\text{temporalPartOfPart}(s, x) \rightarrow \text{LT-3153.1002.2.PossibleIndividual}(x)) \wedge$

$\forall x(\text{temporalPartOfWhole}(s, x) \rightarrow \text{LT-3153.1002.1.ArrangedIndividual}(x)) \wedge$

$\forall x(\text{temporalWholeOfPart}(s, x) \rightarrow \text{PossibleIndividual}(x)) \wedge$

$\forall x(\text{temporalWholeOfWhole}(s, x) \rightarrow \text{ArrangedIndividual}(x))$

Longhand template

$$\begin{aligned} & \forall s, x_2, x_4, x_5, x_6, x_7 (\text{ST-3153}(s) \wedge \\ & \quad \underline{\text{beginning}}(s, x_2) \wedge \\ & \quad \underline{\text{temporalPartOfPart}}(s, x_4) \wedge \\ & \quad \underline{\text{temporalPartOfWhole}}(s, x_5) \wedge \\ & \quad \underline{\text{temporalWholeOfPart}}(s, x_6) \wedge \\ & \quad \underline{\text{temporalWholeOfWhole}}(s, x_7) \\ \rightarrow & \exists y_1, y_2, y_3, y_4, y_5, y_6, y_7 (\text{LT-3153.1002.ClassOfRepresentationOfThing}(y_1) \wedge \\ & \quad \text{pattern}(y_1, x_2) \wedge \text{represented}(y_1, y_2) \wedge \\ & \quad \text{LT-3153.1002.PointInTime}(y_2) \wedge \\ & \quad \text{LT-3153.1002.1.TemporalWholePart}(y_3) \wedge \\ & \quad \text{whole}(y_3, x_7) \wedge \text{part}(y_3, x_5) \wedge \\ & \quad \text{LT-3153.1002.1.Beginning}(y_4) \wedge \\ & \quad \text{whole}(y_4, x_5) \wedge \text{part}(y_4, y_2) \wedge \\ & \quad \text{LT-3153.AssemblyOfIndividual}(y_5) \wedge \\ & \quad \text{whole}(y_5, x_5) \wedge \text{part}(y_5, x_4) \wedge \\ & \quad \text{LT-3153.1002.2.Beginning}(y_6) \wedge \\ & \quad \text{whole}(y_6, x_4) \wedge \text{part}(y_6, y_2) \wedge \\ & \quad \text{LT-3153.1002.2.TemporalWholePart}(y_7) \wedge \\ & \quad \text{whole}(y_7, x_6) \wedge \text{part}(y_7, x_4) \wedge \\ & \quad \forall x_1 (\underline{\text{assemblyType}}(s, x_1) \\ & \quad \rightarrow \exists z_2 (\text{LT-3153.Classification}(z_2) \wedge \\ & \quad \quad \text{classifier}(z_2, x_1) \wedge \text{classified}(z_2, y_5))) \wedge \\ & \quad \forall x_3 (\underline{\text{context}}(s, x_3) \\ & \quad \rightarrow \exists z_1, z_3 (\text{LT-3153.1002.1.Classification}(z_1) \wedge \\ & \quad \quad \text{classifier}(z_1, x_3) \wedge \text{classified}(z_1, y_3) \wedge \\ & \quad \quad \text{LT-3153.1002.2.Classification}(z_3) \wedge \\ & \quad \quad \text{classifier}(z_3, x_3) \wedge \text{classified}(z_3, y_7)))))) \end{aligned}$$