1 Namespace: "http://www.pharmml.org/2013/03/ModellingSteps"

1.1 Schema(s)

1.1.1 Main schema `modellingSteps.xsd`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps

1.2 Element(s)

1.2.1 Element `msteps:SimulationStepType /msteps:Observations`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The observations to be generated by the simulation.
Diagram	
Type	msteps:ObservationsType

1.2.2 Element `msteps:Timepoints`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Diagram	
Type	msteps:TimepointsType

1.2.3 Element `msteps:ObservationsType /msteps:Continuous`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Defines the continuous variable output.
Diagram	
Type	msteps:ContinuousObservationType

1.2.4 Element `msteps:Operation`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The estimation operation to be carried out.

Diagram	
Type	msteps:EstimationOperationType

1.2.5 Element `msteps:Property`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Specifies a property.
Diagram	
Type	msteps:OperationPropertyType

1.2.6 Element `msteps:EstimationOperationType /msteps:Algorithm`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Specifies the information about the estimation algorithms used.
Diagram	
Type	msteps:AlgorithmType

1.2.7 Element `msteps:StepType /msteps:Dependents`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The step dependent on this one.
Diagram	
Type	msteps:DependentsType

1.2.8 Element `msteps:StepDependencyType /msteps:Step`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Defines a step in the dependency graph.
Diagram	
Type	msteps:StepType

1.2.9 Element `msteps:EstimationStepType /msteps:ObjectiveDataSet`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Defines the objective data to use in the estimation.
Diagram	
Type	msteps:DatasetMappingType

1.2.10 Element `msteps:Mapping`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Defines mappings between the dataset and the model.
Diagram	

Type	msteps:MappingType
Substitution Group	• msteps:IndividualMapping • msteps:VariableMapping

1.2.11 Element `msteps:EstimationStepType /msteps:ParametersToEstimate`

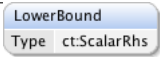|	
Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Specified the parameters of the model to be estimated.
Diagram	
Type	msteps:ToEstimateType

1.2.12 Element `msteps:ToEstimateType /msteps:ParameterEstimation`

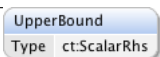|	
Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Defines a symbol to be estimated. Note that this cannot be an individual parameter.
Diagram	
Type	msteps:ParameterEstimateType

1.2.13 Element `msteps:ParameterEstimateType /msteps:InitialEstimate`

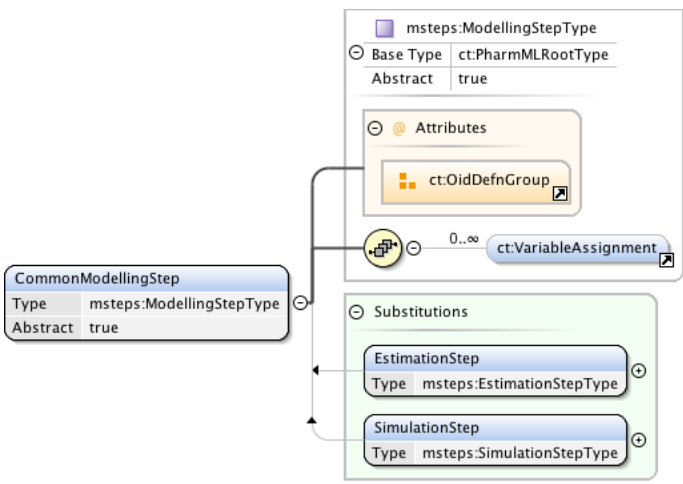|	
Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The initial estimate to use.
Diagram	
Type	msteps:InitialEstimateType

1.2.14 Element `msteps:ParameterEstimateType /msteps:LowerBound`

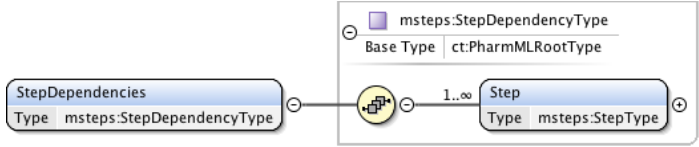| Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The lower bounds of the estimate.
Diagram	LowerBound — Type ct:ScalarRhs
Type	ScalarRhs

1.2.15 Element `msteps:ParameterEstimateType /msteps:UpperBound`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The upper bounds of the estimate.
Diagram	UpperBound — Type ct:ScalarRhs
Type	ScalarRhs

1.2.16 Element `msteps:CommonModellingStep`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Any modeling step.
Diagram	
Type	msteps:ModellingStepType
Substitution Group	• msteps:EstimationStep • msteps:SimulationStep

1.2.17 Element `msteps:ModellingStepsType /msteps:StepDependencies`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Defines dependencies between steps.
Diagram	
Type	msteps:StepDependencyType

1.2.18 Element `msteps:ModellingSteps`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	The modelling steps of the model.
Diagram	
Type	msteps:ModellingStepsType

1.2.19 Element `msteps:IndividualMapping`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Specifies the mapping to the individual.
Diagram	
Type	msteps:IndividualMappingType
Substitution Group Affiliation	• msteps:Mapping

1.2.20 Element `msteps:VariableMapping`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Specifies a mapping to a variable in the model.

Diagram	
Type	msteps:VariableMappingType
Substitution Group Affiliation	• msteps:Mapping

1.2.21 Element `msteps:EstimationStep`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	An estimation step.
Diagram	
Type	msteps:EstimationStepType
Substitution Group Affiliation	• msteps:CommonModellingStep

1.2.22 Element `msteps:SimulationStep`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	A simulation step.
Diagram	
Type	msteps:SimulationStepType
Substitution Group Affiliation	• msteps:CommonModellingStep

1.3 Simple Type(s)

1.3.1 Simple Type `msteps:EstimationOpTypeType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type specifying the types of estimation operation.
Diagram	
Type	restriction of SymbolIdType

1.3.2 Simple Type `msteps:PropertyNameType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining a property name.
Diagram	
Type	xs:NCName

1.4 Complex Type(s)

1.4.1 Complex Type `msteps:SimulationStepType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining a simulation step.
Diagram	
Type	extension of msteps:ModellingStepType

1.4.2 Complex Type `msteps:ModellingStepType`

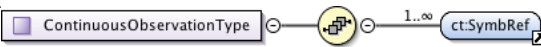| Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Abstract type specifying the common features of a modelling step.
Diagram	
Type	extension of PharmMLRootType

1.4.3 Complex Type `msteps:ObservationsType`

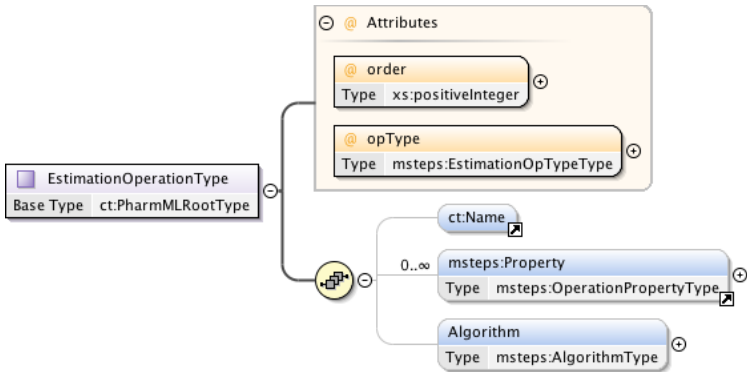| Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the observation timepoints.
Diagram	
Type	extension of PharmMLRootType

1.4.4 Complex Type `msteps:TimepointsType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Timepoints.

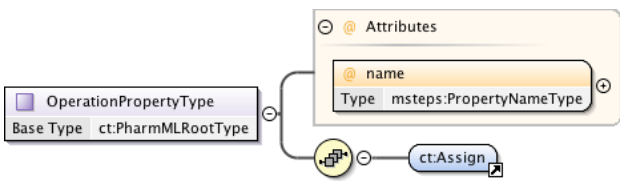| Diagram	
Type	extension of PharmMLRootType

1.4.5 Complex Type `msteps:ContinuousObservationType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the type of a continuous observation variable to be simulated.
Diagram	

1.4.6 Complex Type `msteps:EstimationOperationType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the estimation operation.
Diagram	
Type	extension of PharmMLRootType

1.4.7 Complex Type `msteps:OperationPropertyType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining an operation property.
Diagram	
Type	extension of PharmMLRootType

1.4.8 Complex Type `msteps:AlgorithmType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the type of the algorithm.

Diagram	
Type	extension of PharmMLRootType

1.4.9 Complex Type `msteps:DependentsType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the dependent steps.
Diagram	
Type	extension of PharmMLRootType

1.4.10 Complex Type `msteps:StepType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining a modelling step and its dependencies.
Diagram	
Type	extension of PharmMLRootType

1.4.11 Complex Type `msteps:StepDependencyType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining step dependencies.
Diagram	
Type	extension of PharmMLRootType

1.4.12 Complex Type `msteps:EstimationStepType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the estimation step.

Diagram	
Type	extension of msteps:ModellingStepType

1.4.13 Complex Type `msteps:DatasetMappingType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining a mapping of objective data to the model.
Diagram	
Type	extension of PharmMLRootType

1.4.14 Complex Type `msteps:MappingType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Abstract type that defines a mapping.
Diagram	
Type	extension of PharmMLRootType

1.4.15 Complex Type `msteps:ToEstimateType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the parameters to be estimated.
Diagram	
Type	extension of PharmMLRootType

1.4.16 Complex Type `msteps:ParameterEstimateType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining paramaters to be estimated and their bounds and initial estimates.
Diagram	
Type	extension of PharmMLRootType

1.4.17 Complex Type `msteps:InitialEstimateType`

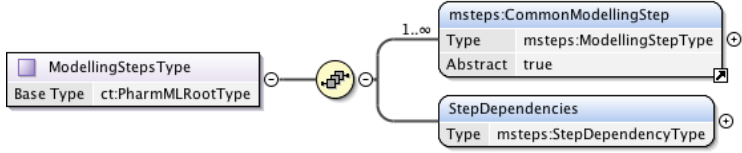|	
Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type specifying an initial estimate.
Diagram	
Type	extension of ScalarRhs

1.4.18 Complex Type `msteps:IndividualMappingType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining the mapping of a dataset to the individual.
Diagram	
Type	extension of msteps:MappingType

1.4.19 Complex Type `msteps:VariableMappingType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	Type defining a maping to a variable in the model.
Diagram	
Type	extension of msteps:MappingType

1.4.20 Complex Type `msteps:ModellingStepsType`

Namespace	http://www.pharmml.org/2013/03/ModellingSteps
Annotations	A type defining the modelling steps section.
Diagram	
Type	extension of PharmMLRootType

2 Namespace: ""

2.1 Attribute(s)

2.1.1 Attribute `msteps:OperationPropertyType /@name`

Namespace	No namespace
Annotations	The name of the property.
Type	msteps:PropertyNameType

2.1.2 Attribute `msteps:AlgorithmType /@definition`

Namespace	No namespace
Annotations	The estimation operation type.
Type	xs:anyURI

2.1.3 Attribute `msteps:EstimationOperationType /@order`

Namespace	No namespace
Annotations	Specifies the order of the operation.
Type	xs:positiveInteger

2.1.4 Attribute `msteps:EstimationOperationType /@opType`

Namespace	No namespace
Annotations	Specifies an estimation operation type.
Type	msteps:EstimationOpTypeType

2.1.5 Attribute `msteps:InitialEstimateType /@fixed`

Namespace	No namespace
Annotations	Specifies whether the initial estimate is fixed. If it is then this means that this parameter is not estimated, but assigned. If fixed is true then the upper and lower bounds are ignored.

Type	xs:boolean