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Model Documentation

# Model Detail

This document provides a complete overview of all element details. For simpler and more focused reports, simply copy this initial template and turn off the sections not required.

## Logical Model

Type: Package

Status: Proposed. Version . Phase 1.0.

Package: Logical View

Detail: *Created on 12/13/2007*. *Last modified on 12/13/2007*

GUID: {BC7FC9B2-F8D3-43e0-BA21-3B7CE72BD406}

**PAIS** - *(Logical diagram)*

Created By: wangfsh *on* 9/29/2009

Last Modified: 10/31/2010

Version: 1.0. *Locked:* False

GUID: {09DA0277-5FF6-4b58-9163-61C6E9031750}



Figure: 1

### edu

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: Logical Model

Detail: *Created on 9/29/2009*. *Last modified on 9/29/2009*

GUID: {58C3969B-254F-4af8-B4E4-CF6392147F55}

#### emory

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: edu

Detail: *Created on 9/29/2009*. *Last modified on 9/29/2009*

GUID: {6F5498A0-6B32-4633-AF53-2DB35C8A8878}

##### cci

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: emory

Detail: *Created on 9/29/2009*. *Last modified on 9/29/2009*

GUID: {3C4009DA-1317-4b69-ADEA-86CE9CFDC707}

###### pais

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: cci

Detail: *Created on 9/29/2009*. *Last modified on 2/9/2010*

GUID: {D70FEC55-F1E7-48a8-9FFF-C41707B1A63B}

Algorithm

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/7/2009*. *Last modified on 2/22/2010*.

GUID: {2CCEDB51-BE00-4b1a-A872-423F90648600}

An effective method for solving a problem using a finite sequence of instructions.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public provenance  Provenance | Public algorithm  Algorithm |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private | Name of the algorithm. | *Default:* |
| **version** String  Private | Version of the algorithm. | *Default:* |
| **uri** String  Private | The URI of the algorithm. | *Default:* |

AnatomicEntity

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/21/2010*.

GUID: {F9866FC9-A992-4e0d-8E55-7161602D6FEE}

The place in the body where the finding is located.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public imageReference  ImageReference | Public anatomicEntityCollection  AnatomicEntity |  |
| Association  Source -> Destination | Public anatomicEntity  AnatomicEntity | Public anatomicEntityCharacteristicCollection  AnatomicEntityCharacteristic |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private | The version of the designated vocabulary from which the term was selected. | *Default:* |

AnatomicEntityCharacteristic

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/21/2010*.

GUID: {2EC4658C-2593-4650-8C12-5C0C75B29934}

The charateristic of the anatomic entity.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public anatomicEntityCharateristic  AnatomicEntityCharacteristic | Public quantification  Quantification |  |
| Association  Source -> Destination | Public anatomicEntity  AnatomicEntity | Public anatomicEntityCharacteristicCollection  AnatomicEntityCharacteristic |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private | The version of the designated vocabulary from which the term was selected. | *Default:* |
| **annotatorConfidence** Double  Private | The confidence of the annotator. | *Default:* |

Annotation

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {F94B5D4B-8532-4f0c-A4B3-D86C02F3EA46}

Explanatory or descriptive information made by humans or machines directly related to the content of a referenced image or images.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Bi-Directional | Public annotation  Annotation | Public markupCollection  Markup |  |
| Association  Source -> Destination | Public annotation  Annotation | Public calculationCollection  Calculation |  |
| Association  Source -> Destination | Public annotation  Annotation | Public observationCollection  Observation |  |
| Association  Source -> Destination | Public annotation  Annotation | Public inferenceCollection  Inference |  |
| Association  Source -> Destination | Public pais  PAIS | Public annotationCollection  Annotation |  |
| Association  Bi-Directional | Public derivedAnnotationCollection  Annotation | Public baseAnnotationCollection  Annotation |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Private | Globally unique identifier. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |

AnnotationReference

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 4/5/2010*.

GUID: {EC5B38D0-7B50-4149-8B9C-BA2A1CB142AD}

Reference to an external annotation, such as pathology annotation, molecular annotation,etc.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public pais  PAIS | Public annotationReferenceCollection  AnnotationReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Private | Globally unique identifier. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |
| **type** String  Private |  | *Default:* |
| **uri** String  Private |  | *Default:* |
| **repository** String  Private |  | *Default:* |

Array

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {2EDCCA7F-8429-46c0-AAF5-EB673B50F964}

Array based calculation result.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Array | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | String representation of the value of the caculation result. | *Default:* |

Binary

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {6C6BAAF0-7517-47a5-BECC-AC4669B4F9EB}

Binary encoded calculation result, based on base64 or hexadecimal encoding.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Binary | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | String representation of the value of the caculation result. | *Default:* |
| **encoding** String  Private | Encoding method for the binary value. | *Default:* |
| **compression** String  Private | Compression method for the binary value. | *Default:* |

Calculation

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 10/7/2009*.

GUID: {8668C376-0449-40a0-8638-C4D3433787E0}

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public annotation  Annotation | Public calculationCollection  Calculation |  |
| Association  Source -> Destination | Public calculation  Calculation | Public provenance  Provenance |  |
| Association  Source -> Destination | Public calculation  Calculation | Public calculationResult  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private | The version of the designated vocabulary from which the term was selected. | *Default:* |
| **description** String  Private | A human understandable, brief description of the calculation. | *Default:* |
| **unitOfMeasure** String  Private | The unit name of the measurement. Use Unified Code for Units of Measure coding system if the unit is available in UCUM. | *Default:* |

CalculationResult

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {858A53FA-194E-45c1-B33F-EB8AEEAF50AF}

The result of a calculation.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  FileReference | Public  CalculationResult |  |
| Generalization  Source -> Destination | Public  Scalar | Public  CalculationResult |  |
| Generalization  Source -> Destination | Public  Array | Public  CalculationResult |  |
| Generalization  Source -> Destination | Public  Histogram | Public  CalculationResult |  |
| Generalization  Source -> Destination | Public  Matrix | Public  CalculationResult |  |
| Generalization  Source -> Destination | Public  URI | Public  CalculationResult |  |
| Generalization  Source -> Destination | Public  Binary | Public  CalculationResult |  |
| Association  Source -> Destination | Public calculation  Calculation | Public calculationResult  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **dataType** String  Private | The data type of values for the calculation result. | *Default:* |

Circle

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 2/22/2010*.

GUID: {B1B2AF67-7973-4faa-94C4-752CC5CB5982}

A circle based on a center point and a radius.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Circle | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **centerX** Double  Private | The x-axis coordinate of the center of the circle. | *Default:* |
| **centerY** Double  Private | The y-axis coordinate of the center of the circle. | *Default:* |
| **radius** Double  Private | The radius of the circle. | *Default:* |

Collection

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 4/15/2010*.

GUID: {354AAC68-F0E0-4e3c-BFE8-0E179FB352C4}

A collection defines the scope of closely related objects for an experiment. One PAIS document can belong to mulitple collections.

| Custom Properties | |
| --- | --- |
|  | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public pais  PAIS | Public collections  Collection |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Private | A global unique identifier. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |
| **role** String  Private | The role of the object in the collection, such as "groud truth", "followup", "algorithm", etc. | *Default:* |
| **methodName** String  Private | Sequence number of the object in the collection. | *Default:* |
| **sequenceNumber** Integer  Private |  | *Default:* |
| **studyDateTime** Date  Private | Date and Time (JUlian) that the study was performed. | *Default:* |

DICOMImageReference

Type: **Class** ImageReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {B10CBA4C-022E-4696-98B3-2D3B68A0215E}

DICOM image reference.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  DICOMImageReference | Public  ImageReference |  |
| Association  Source -> Destination | Public dicomImageRefererence  DICOMImageReference | Public study  ImageStudy |  |

DICOMSegmentation

Type: **Class** Surface

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/7/2009*. *Last modified on 2/21/2010*.

GUID: {8FEC277D-B2E3-4af9-BDE6-EA77D3E2D134}

DICOM segmentation.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public dicomSegmentation  DICOMSegmentation | Public markupReference  MarkupReference |  |
| Generalization  Source -> Destination | Public  DICOMSegmentation | Public  Surface |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **type** String  Private | Type of DICOM segmentation object, such as Binary, Fractional\_Probability, Fractional\_Occupancy and Surface. | *Default:* |
| **sopInstanceUID** String  Private | Unique identifier for an occurrence of a segmentation object. | *Default:* |
| **sopClassUID** String  Private | Unique identifier specific for a Service-Object Pair (SOP) class, as specified in the DICOM standard. | *Default:* |
| **referencedSOPInstanceUID** String  Private | Referenced SOP Instance UID. | *Default:* |
| **segmentNumber** Integer  Private | Identifies the Segment Number to which the reference applies. | *Default:* |

Ellipse

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 2/22/2010*.

GUID: {5CD2BB8E-635D-4cc9-B444-F907274CDFB0}

An ellipse which is axis-aligned with the current user coordinate system based on a center point and two radii.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Ellipse | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **centerX** Double  Private | The x-axis coordinate of the center of the ellipse. | *Default:* |
| **centerY** Double  Private | The y-axis coordinate of the center of the ellipse. | *Default:* |
| **radiusX** Double  Private | The x-axis radius of the ellipse. | *Default:* |
| **radiusY** Double  Private | The y-axis radius of the ellipse. | *Default:* |

Equipment

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {4033E0C6-6038-4a61-8CF4-4867CD6BEF43}

An automated device that created the observations used for biomedical research, diagnosis or therapy.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public imageRefeference  ImageReference | Public equipment  Equipment |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **manufacturer** String  Private | Text to capture the name of the manufacturer of medical imaging equipment. | *Default:* |
| **manufacturerModelName** String  Private | Text to capture the manufacturer's model names of the (imaging) equipment that produced the composite instances. | *Default:* |
| **softwareVersion** String  Private | Numeric value to designate manufacturer's software version of the equipment that produced the (imaging) composite instances. | *Default:* |

Field

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {E0FCDE30-66CC-42a2-826F-F239A6EBE601}

Field based markup for representing masks and tensor fields such as scalar, vector and matrix.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public markup  Markup | Public field  Field |  |
| Generalization  Source -> Destination | Public  Mask | Public  Field |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |

FileReference

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {F56C3310-58E2-4599-BC39-65DEBC6AD5B4}

File based calculation result.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  FileReference | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | Reference to the file which holds the calculation result. | *Default:* |

GenericSurface

Type: **Class** Surface

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {178CC26E-F8DF-49e3-8BE1-28860322F36A}

Surface type other than DICOM segmentation.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public genericSurface  GenericSurface | Public markupReference  MarkupReference |  |
| Generalization  Source -> Destination | Public  GenericSurface | Public  Surface |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **type** String  Private | Type of surface. | *Default:* |

GeometricShape

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {EFC007B5-E73D-4c17-A8C2-A9E73AA66543}

Shapes created by exact mathematical law.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Line | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  Polyline | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  Circle | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  Ellipse | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  Point | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  Polygon | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  MultiPolygon | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  MultiPoint | Public  GeometricShape |  |
| Association  Source -> Destination | Public markup  Markup | Public geometricShape  GeometricShape |  |
| Generalization  Source -> Destination | Public  MultiLine | Public  GeometricShape |  |
| Generalization  Source -> Destination | Public  Rectangle | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |

Group

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 10/7/2009*.

GUID: {67D33E84-0235-46fb-9739-1A224BDF349B}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public pais  PAIS | Public group  Group |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Private | A global unique identifier. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |
| **uri** String  Private |  | *Default:* |

Histogram

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {E889DA90-D556-41f2-91D3-F692F8AF1E53}

Histogram based calculation result.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Histogram | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | String representation of the value of the caculation result. | *Default:* |

Image

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/7/2009*. *Last modified on 2/22/2010*.

GUID: {1468B85F-5549-47cc-AD59-C56265E7643A}

DICOM image instance.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public series  ImageSeries | Public imageCollection  Image |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **sopClassUID** String  Private | Unique identifier specific for a Service-Object Pair (SOP) class, as specified in the DICOM standard. | *Default:* |
| **sopInstanceUID** String  Private | Unique identifer for a Service-Object Pair (SOP) instance, as specified in a DICOM tag. | *Default:* |

ImageReference

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {D1478EE8-CDEE-41a7-B342-8E242E8C5ECA}

Metadata that describes an image or a group of images that are used as the base for making markup and annotation, and can be used to identify and retrieve them from an image database or data service. All images referenced by ImageReference come from the same subject, specimen, equipment and on the same anatomic entity.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public imageReference  ImageReference | Public region  Region |  |
| Generalization  Source -> Destination | Public  MicroscopyImageReference | Public  ImageReference |  |
| Generalization  Source -> Destination | Public  DICOMImageReference | Public  ImageReference |  |
| Association  Source -> Destination | Public pais  PAIS | Public imageReferenceCollection  ImageReference |  |
| Association  Source -> Destination | Public imageRefeference  ImageReference | Public equipment  Equipment |  |
| Association  Source -> Destination | Public imageReference  ImageReference | Public specimen  Specimen |  |
| Association  Source -> Destination | Public imageReference  ImageReference | Public subject  Subject |  |
| Association  Source -> Destination | Public markup  Markup | Public imageReferenceCollection  ImageReference |  |
| Association  Source -> Destination | Public imageReference  ImageReference | Public anatomicEntityCollection  AnatomicEntity |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |

ImageSeries

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 3/30/2010*.

GUID: {859E17B0-B539-4df6-8F93-11CB3B107F9E}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public study  ImageStudy | Public series  ImageSeries |  |
| Association  Source -> Destination | Public series  ImageSeries | Public imageCollection  Image |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **instanceUID** String  Private | Unique identifer of a study series. | *Default:* |
| **includeAllImages** Boolean  Private | If all images of the series are included. | *Default:* |

ImageStudy

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 3/30/2010*.

GUID: {A65A73E0-349D-43a7-A5C2-674A6441F999}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public study  ImageStudy | Public series  ImageSeries |  |
| Association  Source -> Destination | Public dicomImageRefererence  DICOMImageReference | Public study  ImageStudy |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **instanceUID** String  Private | Unique identifier for an occurrence of a medical imaging study. | *Default:* |
| **studyDate** Date  Private | Date an imaging study started. | *Default:* |
| **studyTime** String  Private | Time an imaging study started. | *Default:* |

Inference

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 10/7/2009*.

GUID: {1BF41304-6D95-435f-B366-82E6061B7476}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public annotation  Annotation | Public inferenceCollection  Inference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private |  | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private | The version of the designated vocabulary from which the term was selected. | *Default:* |
| **annotatorConfidence** Double  Private | A real number, between 0 and 1, indicating annotator's confidence about a disease inference. | *Default:* |
| **imageEvidence** Boolean  Private | Truth or false judgement about an inference. | *Default:* |

InputFileReference

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/7/2009*. *Last modified on 2/22/2010*.

GUID: {DBFC2884-0ECF-4806-8C9C-E9B9CB94F21C}

Reference of a file used in an algorithm processing.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public provenance  Provenance | Public inputFileReferenceCollection  InputFileReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **fileReference** String  Private | The reference to the file. | *Default:* |
| **uri** String  Private | URI of the file. | *Default:* |

Interval

Type: **Class** Quantification

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 3/30/2010*.

GUID: {3BE52E19-6FB3-4d3d-9DAA-FCE37D18DC7C}

Interval based measurement.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Interval | Public  Quantification |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** Double  Private | The value of the rating. | *Default:* |
| **minValue** Double  Private |  | *Default:* |
| **maxValue** Double  Private |  | *Default:* |
| **dataType** String  Private |  | *Default:* |
| **unitOfMeasure** String  Private |  | *Default:* |

Line

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 2/22/2010*.

GUID: {2A309CC6-1AD8-491c-AFBB-FB195D06B97B}

A line segment that starts at one point and ends at another.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Line | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **startX** Double  Private | The x-axis coordinate of the start of the line. | *Default:* |
| **startY** Double  Private | The y-axis coordinate of the start of the line. | *Default:* |
| **endX** Double  Private | The x-axis coordinate of the end of the line. | *Default:* |
| **endY** Double  Private | The y-axis coordinate of the end of the line. | *Default:* |

Markup

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {302DCD69-90FD-4a80-A5E2-92670B6B9B3F}

Graphical symbols associated with one image or multiple images.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Bi-Directional | Public annotation  Annotation | Public markupCollection  Markup |  |
| Association  Source -> Destination | Public markup  Markup | Public surface  Surface |  |
| Association  Source -> Destination | Public pais  PAIS | Public markupCollection  Markup |  |
| Association  Source -> Destination | Public markup  Markup | Public provenance  Provenance |  |
| Association  Source -> Destination | Public markup  Markup | Public geometricShape  GeometricShape |  |
| Association  Source -> Destination | Public markup  Markup | Public field  Field |  |
| Association  Source -> Destination | Public markup  Markup | Public imageReferenceCollection  ImageReference |  |
| Association  Bi-Directional | Public derivedMarkupCollection  Markup | Public baseMarkupCollection  Markup |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Private | A global unique identifier. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |

MarkupBinary

Type: **Class** MarkupReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {AF45F466-2FE7-44b9-B28E-09C5BB84AE8B}

Binary encoded markup object.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MarkupBinary | Public  MarkupReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | Encoded value of the binary representation of markup object. | *Default:* |
| **encoding** String  Private | Encoding method for the binary value. | *Default:* |
| **compression** String  Private | Compression method for the binary value. | *Default:* |

MarkupFileReference

Type: **Class** MarkupReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {00386E9F-B080-4528-971D-003F5D7721BD}

File reference to a markup object.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MarkupFileReference | Public  MarkupReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **fileReference** String  Private | The reference to the file. | *Default:* |

MarkupReference

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {AF272CA9-2E48-407d-9FBF-5524D859887A}

Reference to a markup object.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public genericSurface  GenericSurface | Public markupReference  MarkupReference |  |
| Association  Source -> Destination | Public mask  Mask | Public markupReference  MarkupReference |  |
| Association  Source -> Destination | Public dicomSegmentation  DICOMSegmentation | Public markupReference  MarkupReference |  |
| Generalization  Source -> Destination | Public  MarkupBinary | Public  MarkupReference |  |
| Generalization  Source -> Destination | Public  MarkupFileReference | Public  MarkupReference |  |
| Generalization  Source -> Destination | Public  MarkupURI | Public  MarkupReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |

MarkupURI

Type: **Class** MarkupReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {E8D0B2CC-1F64-4caf-A2FC-319100D689AA}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MarkupURI | Public  MarkupReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **uri** String  Private | The URI to the file. | *Default:* |

Mask

Type: **Class** Field

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {89F73BB8-91EA-4843-9AB4-F66302593D8F}

Data that is used for bitwise operations on images.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public mask  Mask | Public markupReference  MarkupReference |  |
| Generalization  Source -> Destination | Public  Mask | Public  Field |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **x** Double  Private | Top left X coordinate of the mask. | *Default:* |
| **y** Double  Private | Top left y coordinate of the mask. | *Default:* |

Matrix

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {DA808923-48FB-400e-AB8D-85EE716825F7}

Matrix based calculation result.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Matrix | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | String representation of the value of the caculation result. | *Default:* |
| **numberOfColumns** Integer  Private | Number of columns in the matrix. | *Default:* |
| **numberOfRows** Integer  Private | Number of rows in the matrix. | *Default:* |

MicroscopyImageReference

Type: **Class** ImageReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {3B8C0ECC-32E7-4037-B1B7-E599044AF6DD}

Microscopy image refererence.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MicroscopyImageReference | Public  ImageReference |  |
| Generalization  Source -> Destination | Public  WholeSlideImageReference | Public  MicroscopyImageReference |  |
| Generalization  Source -> Destination | Public  TMAImageReference | Public  MicroscopyImageReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **resolution** Double  Private | Scanning resolution of the image. | *Default:* |
| **zaxisResolution** Double  Private | Scanning resolution of the image in z-axis. | *Default:* |
| **zaxisCoordinate** Double  Private | Z coordinate of the image. | *Default:* |

MultiLine

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 3/28/2010*.

GUID: {4511F631-533C-4397-A859-7DF9E280B9B2}

A closed shape consisting of a set of connected straight line segments.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MultiLine | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **points** String  Private | The points that make up the polygon. | *Default:* |
| **format** String  Private | The format of polygon representation, such as svg, or chain code | *Default:* |

MultiPoint

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 10/7/2009*.

GUID: {F4D42FA1-0AA9-4527-82B6-0228FCFD9D3A}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MultiPoint | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **points** String  Private | The points that make up the multipoints. | *Default:* |

MultiPolygon

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 3/26/2010*.

GUID: {C0C205F5-02C4-4da4-8AE3-A083734FD0C9}

A closed shape consisting of a set of connected straight line segments.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  MultiPolygon | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **points** String  Private | The points that make up the polygon. | *Default:* |
| **format** String  Private | The format of polygon representation, such as svg, or chain code. | *Default:* |

Nominal

Type: **Class** Quantification

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 3/30/2010*.

GUID: {41024757-EBF9-4358-9F6D-72C9B6F2ED57}

Nominal category based measurement.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Nominal | Public  Quantification |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | The value of the rating. | *Default:* |

Observation

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {8F92456A-2E93-442c-8826-4EA2CD0840D3}

An observation made based on interpretation of an image or images, including visual features (e.g., an opacity, abnormal high signal intensity) morphologic or physiologic processes (e.g., pleural effusion, tracheal deviation), and diseases (e.g., adenocarcinoma, arthritis).

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public annotation  Annotation | Public observationCollection  Observation |  |
| Association  Source -> Destination | Public observation  Observation | Public quantification  Quantification |  |
| Association  Source -> Destination | Public observation  Observation | Public provenance  Provenance |  |
| Association  Source -> Destination | Public observation  Observation | Public observationCharacteristicCollection  ObservationCharacteristic |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private |  | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private |  | *Default:* |
| **comment** String  Private | Free text comment. | *Default:* |
| **annotatorConfidence** Double  Private | A real number, between 0 and 1, indicating annotator's confidence that an observation is present. | *Default:* |

ObservationCharacteristic

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/21/2010*.

GUID: {127A584A-B193-48b0-8851-583B556E55D8}

Imaging observation characteristic.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public observation  Observation | Public observationCharacteristicCollection  ObservationCharacteristic |  |
| Association  Source -> Destination | Public observationCharacteristic  ObservationCharacteristic | Public quantification  Quantification |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private | The name of the charateristic. | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private | The version of the designated vocabulary from which the term was selected. | *Default:* |
| **annotatorConfidence** Double  Private | A real number, between 0 and 1, indicating annotator's confidence that a characteristic is present. | *Default:* |

Ordinal

Type: **Class** Quantification

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 3/30/2010*.

GUID: {FECE6936-B1CC-4671-BBCB-2069C59A318E}

Ranking based measurement.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Ordinal | Public  Quantification |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** Double  Private | The value of the rating. | *Default:* |
| **dataType** String  Private | The data type for the ranking value. | *Default:* |
| **unitOfMeasure** String  Private | The unit name of the measurement. Use Unified Code for Units of Measure coding system if the unit is available in UCUM. | *Default:* |

PAIS

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 4/15/2010*.

GUID: {83A850BB-1E8A-4228-8BA3-E4E39C7F2BC1}

The root class of PAIS.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public pais  PAIS | Public imageReferenceCollection  ImageReference |  |
| Association  Source -> Destination | Public pais  PAIS | Public markupCollection  Markup |  |
| Association  Source -> Destination | Public pais  PAIS | Public annotationCollection  Annotation |  |
| Association  Source -> Destination | Public pais  PAIS | Public group  Group |  |
| Association  Source -> Destination | Public pais  PAIS | Public project  Project |  |
| Association  Source -> Destination | Public pais  PAIS | Public collections  Collection |  |
| Association  Source -> Destination | Public pais  PAIS | Public provenanceCollection  Provenance |  |
| Association  Source -> Destination | Public pais  PAIS | Public user  User |  |
| Association  Source -> Destination | Public pais  PAIS | Public annotationReferenceCollection  AnnotationReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Public | A global unique identifier for this particular instance of an annotation. Used to reference a specific annotation. | *Default:* |
| **name** String  Private | Human readble colloquial name of the annotation not guaranteed to be unique | *Default:* |
| **dateTime** Date  Private | Date and Time (JUlian) that the annotation was created. | *Default:* |
| **paisVersion** String  Private | The version of the MicroAIM model used by this annotation. | *Default:* |
| **codeValue** String  Private | The code of the term in the native vocabulary. | *Default:* |
| **codeMeaning** String  Private | The human understandable meaning of the coded value. | *Default:* |
| **codingSchemeDesignator** String  Private | The designator of the vocabulary from which the term was selected. | *Default:* |
| **codingSchemeVersion** String  Private | The vesion of the designated vocabulary from which the term was selected. | *Default:* |
| **comment** String  Private | Free text about the annotation not intended for rendering on the image. | *Default:* |

Parameter

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/7/2009*. *Last modified on 2/22/2010*.

GUID: {5E4EE12D-0A10-4a64-8BBC-AA89A6A8CDFD}

Parameter used by an algorithm.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public provenance  Provenance | Public parameterCollection  Parameter |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private | Name of the parameter. | *Default:* |
| **value** String  Private | Value of the parameter. | *Default:* |
| **dataType** String  Private | Data type of the parameter value. | *Default:* |

Patient

Type: **Class** Subject

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/1/2009*. *Last modified on 2/21/2010*.

GUID: {DFEAF49F-E23E-4672-98ED-6D04F72B1A16}

A person who is analyzed, examined, investigated, experimented upon, treated in the course of a research study.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Patient | Public  Subject |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **patientID** String  Private | The unique number assigned to identify a patient/participant on a protocol. | *Default:* |
| **name** String  Private | The current legal name of the person registered on the clinical trial. | *Default:* |
| **sex** String  Private | Text code to represent a patient's sex determination. | *Default:* |
| **birthDate** String  Private | The month, day and year on which the patient/participant was born. | *Default:* |
| **ethnicGroup** String  Private | The patient's/participant's self declared ethnic origination, independent of racail origination, based on OMB approved categories. | *Default:* |

Point

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 10/7/2009*.

GUID: {CE4F3F1F-ACD1-4dc1-86C0-82FD7B451759}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Point | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **x** Double  Private | The x-axis coordinate of the point. | *Default:* |
| **y** Double  Private | The y-axis coordinate of the point. | *Default:* |

Polygon

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 2/22/2010*.

GUID: {144F154D-601A-4e25-8009-FA2B51300C84}

A closed shape consisting of a set of connected straight line segments.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Polygon | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **points** String  Private | The points that make up the polygon. | *Default:* |
| **format** String  Private | The format of polygon representation, such as svg, or chain code | *Default:* |

Polyline

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 2/22/2010*.

GUID: {B65C3E5D-AB01-4d81-A486-D5FED6757C69}

A set of connected straight line segments.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Polyline | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **points** String  Private | The points that make up the polyline. | *Default:* |
| **format** String  Private | The format of polygon representation, such as svg, or chain code | *Default:* |

Project

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 10/7/2009*.

GUID: {3A71F23F-5104-49ed-A124-2E7E02398352}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public pais  PAIS | Public project  Project |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private |  | *Default:* |
| **uid** String  Private | A global unique identifier of the project. | *Default:* |
| **name** String  Private | Human readble colloquial name. | *Default:* |
| **uri** String  Private | The URI of the project. | *Default:* |

Provenance

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {9AC71329-7E23-48a4-8198-BA6155BDB146}

Information that helps determine the derivation history of a markup or annotation, such as algorithm information, parameters, and other inputs.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public provenance  Provenance | Public inputFileReferenceCollection  InputFileReference |  |
| Association  Source -> Destination | Public calculation  Calculation | Public provenance  Provenance |  |
| Association  Source -> Destination | Public markup  Markup | Public provenance  Provenance |  |
| Association  Source -> Destination | Public observation  Observation | Public provenance  Provenance |  |
| Association  Source -> Destination | Public pais  PAIS | Public provenanceCollection  Provenance |  |
| Association  Source -> Destination | Public provenance  Provenance | Public algorithm  Algorithm |  |
| Association  Source -> Destination | Public provenance  Provenance | Public parameterCollection  Parameter |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **scope** String  Private | The scope of the provenance, individual, or globally for calculation, markup or observation. | *Default:* |

Quantification

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 3/26/2010*.

GUID: {B86C2DBC-C977-4ed4-98D7-7883F1FA6291}

The act of ascertaining or fixing the value or worth of something.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Nominal | Public  Quantification |  |
| Generalization  Source -> Destination | Public  Ordinal | Public  Quantification |  |
| Association  Source -> Destination | Public observation  Observation | Public quantification  Quantification |  |
| Generalization  Source -> Destination | Public  Ratio | Public  Quantification |  |
| Generalization  Source -> Destination | Public  Interval | Public  Quantification |  |
| Association  Source -> Destination | Public anatomicEntityCharateristic  AnatomicEntityCharacteristic | Public quantification  Quantification |  |
| Association  Source -> Destination | Public observationCharacteristic  ObservationCharacteristic | Public quantification  Quantification |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private |  | *Default:* |

Ratio

Type: **Class** Quantification

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 3/31/2010*.

GUID: {0688A814-6399-4db8-AA08-D7B4F753F381}

Interval based measurement.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Ratio | Public  Quantification |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** Double  Private | The value of the rating. | *Default:* |
| **dataType** String  Private |  | *Default:* |
| **unitOfMeasure** String  Private |  | *Default:* |

Rectangle

Type: **Class** GeometricShape

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/5/2009*. *Last modified on 2/22/2010*.

GUID: {E149CEE4-7FC0-40ce-8C00-C8B133A5D57C}

a rectangle which is axis-aligned with the current user coordinate system.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Rectangle | Public  GeometricShape |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **height** Double  Private | The height of the rectangle. | *Default:* |
| **width** Double  Private | The width of the rectangle. | *Default:* |
| **x** Double  Private | The x-axis coordinate of the side of the rectangle which has the smaller x-axis coordinate value in the current user coordinate system. | *Default:* |
| **y** Double  Private | The y-axis coordinate of the side of the rectangle which has the smaller y-axis coordinate value in the current user coordinate system. | *Default:* |

Region

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/19/2009*. *Last modified on 2/21/2010*.

GUID: {AF94C0A9-1BF5-4a9e-96DE-F94D8F39F3A4}

A region from an ImageReference where the markups and annotations are made.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public imageReference  ImageReference | Public region  Region |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **name** String  Private |  | *Default:* |
| **x** Double  Private | The upper left x-axis coordinate of the rectangular region. | *Default:* |
| **y** Double  Private | The upper left y-axis coordinate of the rectangular region. | *Default:* |
| **height** Double  Private | The height of the rectangular region. | *Default:* |
| **width** Double  Private | The width of the rectangular region. | *Default:* |
| **zoomResolution** Double  Private | The zoom resolution of the region relative to the base resolution. | *Default:* |
| **coordinateResolution** Double  Private |  | *Default:* |
| **coordinateReference** String  Private |  | *Default:* |

Scalar

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {23F20FE6-2426-4457-B534-210B6DC7EC12}

Scalar based calculation result.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  Scalar | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** Double  Private | String representation of the value of the caculation result. | *Default:* |

Specimen

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {9B1744D7-F3C6-4e90-8229-CCD959AEA146}

A single unit of tissue or blood or urine that is taken or used for research purposes.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public imageReference  ImageReference | Public specimen  Specimen |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **uid** String  Private | Unique identifier of the specimen. | *Default:* |
| **type** String  Private | Specimen type, such as tissue specimen, slide, etc. | *Default:* |
| **stain** String  Private | The staining method for the specimen. | *Default:* |

Subject

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/21/2010*.

GUID: {730D59AF-FD5B-41b3-9A79-D4C2EADAD399}

A person or animal that is analyzed, examined, investigated, experimented upon, treated in the course of a research study.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public imageReference  ImageReference | Public subject  Subject |  |
| Generalization  Source -> Destination | Public  Patient | Public  Subject |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |

Surface

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 2/22/2010*.

GUID: {419645EA-9705-4c06-9436-3CD48633FD87}

The extended two-dimensional outer boundary of a three-dimensional object.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public markup  Markup | Public surface  Surface |  |
| Generalization  Source -> Destination | Public  GenericSurface | Public  Surface |  |
| Generalization  Source -> Destination | Public  DICOMSegmentation | Public  Surface |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |

TMAImageReference

Type: **Class** MicroscopyImageReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/7/2009*. *Last modified on 2/22/2010*.

GUID: {834D5DD7-9E03-4738-BFD0-4D860998189E}

Tissue microarray image reference.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  TMAImageReference | Public  MicroscopyImageReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **uid** String  Private | A global unique identifier of the referenced image. | *Default:* |
| **fileReference** String  Private | The reference to the file. | *Default:* |
| **uri** String  Private | The URI to the file. | *Default:* |

URI

Type: **Class** CalculationResult

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/6/2009*. *Last modified on 2/22/2010*.

GUID: {D9C1DB91-9344-4bc2-B90A-B1CC345C0413}

URI referenced calculation result.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  URI | Public  CalculationResult |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **value** String  Private | String representation of the value of the caculation result. | *Default:* |

User

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *9/29/2009*. *Last modified on 10/7/2009*.

GUID: {E2729FE5-7D63-4d1b-9BBE-5317589BA979}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Association  Source -> Destination | Public pais  PAIS | Public user  User |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **id** Integer  Private | One or more characters used to identify, name, or characterize the nature, properties, or contents of a thing. | *Default:* |
| **loginName** String  Private | The login name of the author on the software that is being used to create the annotation. | *Default:* |
| **name** String  Private | The full name of the author of the annotation. | *Default:* |
| **numberWithinRoleOfClinicalTrial** int  Private | An identifier assigned to the author by the clinical trial, for example, role might be "reader", and NumberWithinRole might be "42", or numberWithinRoleOfCLinicalTrial might be "A12345". | *Default:* |
| **roleInTrial** String  Private | The role of the author in the clinical trial, for example, "reader", or "adjudicator". | *Default:* |

WholeSlideImageReference

Type: **Class** MicroscopyImageReference

Status: Proposed. Version 1.0. Phase 1.0.

Package: pais Keywords:

Detail: *Created on* *10/9/2009*. *Last modified on 2/22/2010*.

GUID: {89735414-B2D7-491c-AA8B-5A1482487326}

Whole slide image reference.

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

*Connections*

| **Connector** | **Source** | **Target** | **Notes** |
| --- | --- | --- | --- |
| Generalization  Source -> Destination | Public  WholeSlideImageReference | Public  MicroscopyImageReference |  |

Attributes

| **Attribute** | **Notes** | **Constraints and tags** |
| --- | --- | --- |
| **uid** String  Private | A global unique identifier of the referenced image. | *Default:* |
| **fileReference** String  Private | The reference to the file. | *Default:* |
| **uri** String  Private | The URI to the file. | *Default:* |

### java

Type: Package

Status: Proposed. Version . Phase 1.0.

Package: Logical Model

Detail: *Created on 12/29/2006*. *Last modified on 12/29/2006*

GUID: {D3288F9A-8A3F-45d6-8C16-FA0DB30248E7}

#### lang

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: java

Detail: *Created on 2/3/2005*. *Last modified on 12/20/2005*

GUID: {44CF1D22-4E87-4f0b-9E1F-3F1633B38FF7}

##### Boolean

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: lang Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {1F7B5C69-E520-480a-AAF8-ADBE67679C80}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C45254. |
|  | | ObjectClassConceptDefinition = The type of an expression with two possible values, "true" and "false". Also, a variable of Boolean type or a function with Boolean arguments or result. The most common Boolean functions are AND, OR and NOT.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Boolean. |
|  | | OWNER\_REVIEWED = 0. |

##### Double

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: lang Keywords:

Detail: *Created on* *2/12/2005*. *Last modified on 4/27/2006*.

GUID: {B607839D-A660-4325-B189-E2FED71C5A6E}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C54574. |
|  | | ObjectClassConceptDefinition = A twofold increase.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Double. |
|  | | ObjectClassQualifierConceptCode1 = C62265. |
|  | | ObjectClassQualifierConceptCode2 = C48870. |
|  | | ObjectClassQualifierConceptDefinition1 = Consisting of or involving two parts or components, often in pairs.. |
|  | | ObjectClassQualifierConceptDefinition2 = A 64-bit floating point primitive. When wrapped in an immutable Object, it is called a Double.. |
|  | | ObjectClassQualifierConceptDefinitionSource1 = NCI. |
|  | | ObjectClassQualifierConceptDefinitionSource2 = NCI. |
|  | | ObjectClassQualifierConceptPreferredName1 = Double. |
|  | | ObjectClassQualifierConceptPreferredName2 = Double. |
|  | | OWNER\_REVIEWED = 0. |

##### Float

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: lang Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {35CA8BCB-45E6-4efd-A699-7F7CC38750A2}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C48150. |
|  | | ObjectClassConceptDefinition = A number that can have its decimal point in any position.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Float. |
|  | | OWNER\_REVIEWED = 0. |

##### Integer

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: lang Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {312B5384-C75D-4fb8-9BC7-2832794DA19E}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C45255. |
|  | | ObjectClassConceptDefinition = A number with no fractional part, including the negative and positive numbers as well as zero.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Integer. |
|  | | OWNER\_REVIEWED = 0. |

##### Long

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: lang Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {F4453B47-2BED-4be1-8146-9E1E231BFC21}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C25248. |
|  | | ObjectClassConceptDefinition = Of relatively great or greater than average spatial extension or temporal duration.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Long. |
|  | | ObjectClassQualifierConceptCode1 = C48311. |
|  | | ObjectClassQualifierConceptDefinition1 = A variable that is stored as a signed 64-bit (8-byte) integer.. |
|  | | ObjectClassQualifierConceptDefinitionSource1 = NCI. |
|  | | ObjectClassQualifierConceptPreferredName1 = Long. |
|  | | OWNER\_REVIEWED = 0. |

##### String

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: lang Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {86F26ED3-C13B-420c-B103-E93E710B8047}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C45253. |
|  | | ObjectClassConceptDefinition = An expression consisting of a linear sequence of symbols (characters or words or phrases).. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = String. |
|  | | OWNER\_REVIEWED = 0. |

#### sql

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: java

Detail: *Created on 2/3/2005*. *Last modified on 12/20/2005*

GUID: {29EB1CF3-86FB-422d-9756-106896F71B50}

##### Clob

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: sql Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {EE40D190-99C5-4ad4-99BA-BEB76068E8B7}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C48291. |
|  | | ObjectClassConceptDefinition = A data type for holding large chunks of text.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Character Large Object. |
|  | | OWNER\_REVIEWED = 0. |

#### util

Type: Package

Status: Proposed. Version 1.0. Phase 1.0.

Package: java

Detail: *Created on 2/3/2005*. *Last modified on 12/20/2005*

GUID: {B21B4F14-EA79-4ed2-B1C5-A7222E5D2A9D}

##### Collection

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: util Keywords:

Detail: *Created on* *2/11/2005*. *Last modified on 12/20/2005*.

GUID: {41732674-4758-49ed-812A-748C74D3BA58}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C25453. |
|  | | ObjectClassConceptDefinition = The act of gathering things together; having been brought together in one place.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Collection. |
|  | | ObjectClassQualifierConceptCode1 = C45261. |
|  | | ObjectClassQualifierConceptCode2 = C43446. |
|  | | ObjectClassQualifierConceptDefinition1 = A group of items of the same type, gathered for display or study.. |
|  | | ObjectClassQualifierConceptDefinition2 = An object that holds the values or locations of other objects.. |
|  | | ObjectClassQualifierConceptDefinitionSource1 = NCI. |
|  | | ObjectClassQualifierConceptDefinitionSource2 = NCI. |
|  | | ObjectClassQualifierConceptPreferredName1 = Item Collection. |
|  | | ObjectClassQualifierConceptPreferredName2 = Container Object. |
|  | | OWNER\_REVIEWED = 0. |

##### Date

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: util Keywords:

Detail: *Created on* *2/3/2005*. *Last modified on 12/20/2005*.

GUID: {230C19A8-4F82-44c9-AFE0-6294174187B3}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C25164. |
|  | | ObjectClassConceptDefinition = The particular day, month and year an event has happened or will happen.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Date. |
|  | | ObjectClassQualifierConceptCode1 = C72063. |
|  | | ObjectClassQualifierConceptCode2 = C48871. |
|  | | ObjectClassQualifierConceptDefinition1 = No value exists. |
|  | | ObjectClassQualifierConceptDefinition2 = A string unique to a time duration of 24 hours between 2 successive midnights defined by the local time zone. The specific representation of a date will depend on which calendar convention is in force as well as local ordering conventions.. |
|  | | ObjectClassQualifierConceptDefinitionSource1 = NCI. |
|  | | ObjectClassQualifierConceptDefinitionSource2 = NCI. |
|  | | ObjectClassQualifierConceptPreferredName1 = Date Fruit. |
|  | | ObjectClassQualifierConceptPreferredName2 = Date. |
|  | | OWNER\_REVIEWED = 0. |

##### Hashtable

Type: **Class**

Status: Proposed. Version 1.0. Phase 1.0.

Package: util Keywords:

Detail: *Created on* *2/11/2005*. *Last modified on 12/20/2005*.

GUID: {C8269155-CA76-465f-BB76-396E7B18341A}

| Custom Properties |  | |
| --- | --- | --- |
|  | | isActive = False |

|  |  |  |
| --- | --- | --- |
| Tagged Values |  | |
|  | | CURATOR\_REVIEWED = 0. |
|  | | ObjectClassConceptCode = C48296. |
|  | | ObjectClassConceptDefinition = An associative array data structure that associates keys with values.. |
|  | | ObjectClassConceptDefinitionSource = NCI. |
|  | | ObjectClassConceptPreferredName = Hashtable. |
|  | | OWNER\_REVIEWED = 0. |