How This API Document Is Organized

This API (Application Programming Interface) document has pages corresponding to the items in the navigation bar, described as follows.

Overview

The Overview page is the front page of this API document and provides a list of all packages with a summary for each. This page can also contain an overall description of the set of packages.

Package

Each package has a page that contains a list of its classes and interfaces, with a summary for each. This page can contain four categories:

- Interfaces (italic)
- Classes
- Enums
- Exceptions
- Errors
- Annotation Types

Class/Interface

Each class, interface, nested class and nested interface has its own separate page. Each of these pages has three sections consisting of a class/interface description, summary tables, and detailed member descriptions:

- Class inheritance diagram
- Direct Subclasses
- All Known Subinterfaces
- All Known Implementing Classes
- Class/interface declaration
- Class/interface description
- Nested Class Summary
- Field Summary
- Constructor Summary
- Method Summary
- Field Detail
- Constructor Detail
- Method Detail

Each summary entry contains the first sentence from the detailed description for that item. The summary entries are alphabetical, while the detailed descriptions are in the order they

appear in the source code. This preserves the logical groupings established by the programmer.

Annotation Type

Each annotation type has its own separate page with the following sections:

- Annotation Type declaration
- Annotation Type description
- Required Element Summary
- Optional Element Summary
- Element Detail

Enum

Each enum has its own separate page with the following sections:

- Enum declaration
- Enum description
- Enum Constant Summary
- Enum Constant Detail

Index

The Index contains an alphabetic list of all classes, interfaces, constructors, methods, and fields.

Prev/Next

These links take you to the next or previous class, interface, package, or related page.

Frames/No Frames

These links show and hide the HTML frames. All pages are available with or without frames.

Serialized Form

Each serializable or externalizable class has a description of its serialization fields and methods. This information is of interest to re-implementors, not to developers using the API. While there is no link in the navigation bar, you can get to this information by going to any serialized class and clicking "Serialized Form" in the "See also" section of the class description.

Constant Field Values

The Constant Field Values page lists the static final fields and their values.

This help file applies to API documentation generated using the standard doclet.

Nilus API

Packages	
edu.sdsu.tethys.schema._1	
tethys.nilus	wraps the methods of edu.sdsu.tethys.schema._1 into a user-friendly format

Overview Package Class **Index** **Help**
PREV NEXT **FRAMES** **NO FRAMES** **All Classes**

Package tethys.nilus

wraps the methods of edu.sdsu.tethys.schema._1 into a user-friendly format

See:
Description

Class Summary	
Detection	The Detection class contains objects representing an individual OnEffort detection.
Detections	The Detections class contains objects representing Detections XML Documents for the Tethys Metadata DB.
Tag	The Tag class represents XML tags that can be used for user defined Parameters.

Package tethys.nilus Description

wraps the methods of edu.sdsu.tethys.schema._1 into a user-friendly format

Overview **Package** Class **Index** **Help**
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tethys.nilus
Class Detections

```
java.lang.Object
  └edu.sdsu.tethys.schema._1.Detections
      └tethys.nilus.Detections
```

```
public class Detections
```
extends edu.sdsu.tethys.schema._1.Detections

The Detections class contains objects representing Detections XML Documents for the Tethys Metadata DB. Once populated, they can be marshalled into formatted XML files.

Author:
sherbert

Constructor Summary

Detections()	Constructor Creates a tethys.nilus.Detections() object, as well as all sub elements of that object.

Method Summary

void	**addAlgorithmParameters**(java.lang.String... param) Adds Algorithm Parameters as name and value.
void	**addAlgorithmParameters**(Tag... tags) Algorithm parameters method that takes Tag object inputs rather than name/value pairs.
void	**addDetection**(Detection det) Sets the OnEffort, which is created via the OnEffort class
void	**addDetections**(Detection... det) Sets the OnEffort, which is created via the OnEffort class.
void	**addKind**(int speciestsn, java.lang.String... kind) Sets the details of effort (kind).
void	**addSupportSoftware**(java.lang.String... software) Adds support software.
void	**addSupportSoftware**(java.lang.String software, java.lang.String version, Tag... tags) Method to add support software, using Tag objects for the parameters.

void	**marshal**() This method will output the information stored in the Detections object as XML and print the result to the system.
void	**marshal**(java.lang.String filename) This method will marshal the Detections object into a file as formatted XML.
void	**rmDetection**(Detection det) Removes a detection from the list
void	**setAlgorithm**(java.lang.String... software) Sets the general Algorithm information: software, version, method.
void	**setCruise**(java.lang.String proj, java.lang.String cruise, int depl) Sets the DataSource; Use when a Cruise was the source of acoustic information.
void	**setDescription**(java.lang.String obj, java.lang.String abs, java.lang.String met) Sets description of Effort (optional) Use null (or an empty Matlab Array []) for omitted arguments, e.g.
void	**setEffort**(java.lang.String effstart, java.lang.String effend) Sets Effort start and end times
void	**setEnsemble**(java.lang.String name) Sets the DataSource when information was derived from an Ensemble.
void	**setSite**(java.lang.String proj, java.lang.String site, int depl) Sets the DataSource; indicates the project, site, and deployment from which the process (e.g.
void	**setUserID**(java.lang.String user) Sets the User ID for this set of Detections

Methods inherited from class edu.sdsu.tethys.schema._1.Detections
getAlgorithm, getDataSource, getDescription, getEffort, getOffEffort, getOnEffort, getUserID, setAlgorithm, setDataSource, setDescription, setEffort, setOffEffort, setOnEffort

Methods inherited from class java.lang.Object
equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Detections

public **Detections**()

Constructor Creates a tethys.nilus.Detections() object, as well as all sub elements of that object. Sub elements (Algorithm, DataSource,Effort,OnEffort) are populated using methods of this class.

Method Detail

addAlgorithmParameters

```
public void addAlgorithmParameters(java.lang.String... param)
```

Adds Algorithm Parameters as name and value. e.g.
detections.addAlgorithmParameters("Bandwidth_Hz", 10);

Parameters:

`param` - Variable number of name/value pairs.

Throws:

`java.lang.IllegalArgumentException` - if an uneven number of arguments given

---

addAlgorithmParameters

```
public void addAlgorithmParameters(Tag... tags)
```

Algorithm parameters method that takes Tag object inputs rather than name/value pairs. See the `Tag` class for more information.

Parameters:

`tags` - all of the Tag objects to be added to the AlgorithmParameters

See Also:

`e.g. detections.addAlgorithParameters(tag1,tag2,tag3) Matlab Note: if only using one parameter, the String argument method is advised`

---

addDetection

```
public void addDetection(Detection det)
```

Sets the OnEffort, which is created via the OnEffort class

Parameters:

`det` - a populated Detection() object to add to the list of On Effort detections

---

addDetections

```
public void addDetections(Detection... det)
```

Sets the OnEffort, which is created via the OnEffort class. This version takes a variable amount of Detections objects.

Parameters:

`det` - a populated OEDetection() object to add to the list of On Effort detections

---

addKind

```
public void addKind(int speciestsn,
                    java.lang.String... kind)
```

Sets the details of effort (kind). Species should be given as the ITIS taxonomic serial number (TSN).

Parameters:

`speciestsn` - ITIS code of the species, input as a raw numeric value
`kind` - (all strings) granularity, call, [optional]subtype,[optional]binsize, [optional] group. Must be in that order.

Throws:

`java.lang.IllegalArgumentException` - if there are an incorrect number of 'kind' arguments

---

addSupportSoftware

```
public void addSupportSoftware(java.lang.String... software)
```

Adds support software. Optional for Tethys. Can be an infinite number of additions. Use null or an empty Matlab array, [], to skip optional arguments.

Parameters:

`software` - software name (req), version (optional), name, value;
repeat tag name/values for as many parameters as necessary.

---

addSupportSoftware

```
public void addSupportSoftware(java.lang.String software,
                               java.lang.String version,
                               Tag... tags)
```

Method to add support software, using Tag objects for the parameters. Can add as many software as necessary. Optional for Tethys

Parameters:

`software` - - String name of software
`version` - - optional String, use null if omitting
`tags` - - variable number of Tags

---

marshal

```
public void marshal()
```

This method will output the information stored in the Detections object as XML and print the result to the system.

---

marshal

```
public void marshal(java.lang.String filename)
```

This method will marshal the Detections object into a file as formatted XML.

Parameters:

`filename` - location and filename "c:\\eg.xml" of the JAXB output

---

rmDetection

```
public void rmDetection(Detection det)
```

Removes a detection from the list

Parameters:

`det` - - the detection to be removed

---

setAlgorithm

```
public void setAlgorithm(java.lang.String... software)
```

Sets the general Algorithm information: software, version, method. Only software is mandatory for Tethys import. Parameters must be set using a different function. Method takes in strings.

Parameters:

`software` - name, version (optional: use null if omitting), method (optional)

See Also:

`addAlgorithmParameters(java.lang.String...)`

---

setCruise

```
public void setCruise(java.lang.String proj,
                      java.lang.String cruise,
                      int depl)
```

Sets the DataSource; Use when a Cruise was the source of acoustic information.

Parameters:

`proj` - The project name.

`cruise` - The cruise name.

`depl` - The deployment number.

See Also:

`setSite(java.lang.String, java.lang.String, int)`, `setEnsemble(java.lang.String)`

---

setDescription

```
public void setDescription(java.lang.String obj,
                           java.lang.String abs,
                           java.lang.String met)
```

Sets description of Effort (optional) Use null (or an empty Matlab Array []) for omitted arguments, e.g. setDescrption([], [], method)

Parameters:

`obj` - Objective; What are the objectives of this effort? Examples: Beamform to increase SNR for detection. Detect every click of a rare species.

`abs` - Abstract

`met` - Method; High-level description of the method used

---

setEffort

```
public void setEffort(java.lang.String effstart,
                      java.lang.String effend)
```

Sets Effort start and end times

Parameters:

`effstart` - start of effort as a string. ISO8601 Format: YYYY-MM-DDTHH:MM:SSZ

`effend` - end of effort as a string. ISO8601 Format: YYYY-MM-DDTHH:MM:SSZ

---

setEnsemble

```
public void setEnsemble(java.lang.String name)
```

Sets the DataSource when information was derived from an Ensemble. The name here should correspond to an instance in the Ensemble Collection of Tethys

Parameters:

`name` - Name of the instrument ensemble used for this audio.

---

setSite

```
public void setSite(java.lang.String proj,
                    java.lang.String site,
                    int depl)
```

Sets the DataSource; indicates the project, site, and deployment from which the process (e.g. detector) derived information.

Parameters:

`proj` - The project name.

`site` - The site name or abbreviation.

`depl` - The deployment number.

See Also:

`setCruise(java.lang.String, java.lang.String, int)`, `setEnsemble(java.lang.String)`

---

setUserID

```
public void setUserID(java.lang.String user)
```

Sets the User ID for this set of Detections

Overrides:

`setUserID` in class `edu.sdsu.tethys.schema._1.Detections`

Parameters:

`user` - this user's ID

---

tethys.nilus
Class Detection

```
java.lang.Object
  └edu.sdsu.tethys.schema._1.Detection
      └tethys.nilus.Detection
```

```
public class Detection
```
extends Detection

The Detection class contains objects representing an individual OnEffort detection. These can be populated with different parameters and information, and then added to a Detections object.

Author:
sherbert

Nested Class Summary

class	**Detection.Parameters**

Field Summary

Detection.Parameters	**parameters**

Constructor Summary

Detection() Creates an empty detection.
Detection(java.lang.String start, int species) Creates an OnEffort Detection with specified TSN and Start Time
Detection(java.lang.String start, int species, java.lang.String group) This constructor takes in a third string to set the species Group

Method Summary

void	**addCall**(java.lang.String call) Adds a single call to an On Effort Detection

void	**addCalls**(java.lang.String... calls) Adds a variable amount of calls to an OnEffort Detection
void	**popParameters**() Method to populate Detection Parameters once they are set
void	**setChannel**(int channel) Sets the Channel for an OnEffort Detection
void	**setEnd**(java.lang.String endtime) Sets the end time of an OnEffort detection
void	**setGroup**(java.lang.String group)
void	**setSpeciesID**(int speciestsn) Sets the SpeciesID for an OnEffort Detection, if not set when constructing
void	**setStart**(java.lang.String effstart) Sets the start time for an OnEffort Detection, if not set when constructing
void	**setUnitID**(int unitid) Sets the UnitID (Ensemble ID) for an OnEffort Detection

Methods inherited from class edu.sdsu.tethys.schema._1.Detection
getAudio, getCall, getChannel, getComment, getEnd, getEvent, getImage, getInputFile, getParameters, getSpeciesID, getStart, getUnitID, setAudio, setChannel, setComment, setEnd, setEvent, setImage, setInputFile, setParameters, setSpeciesID, setStart, setUnitID

Methods inherited from class java.lang.Object
equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

parameters

```
public Detection.Parameters parameters
```

Constructor Detail

Detection

```
public Detection()
```

Creates an empty detection. Details can be set later.

Detection

```
public Detection(java.lang.String start,
                 int species)
```

Creates an OnEffort Detection with specified TSN and Start Time

Parameters:

`start` - the start time as String in ISO8601 Format: YYYY-MM-DDTHH:MM:SSZ
`species` - the TSN as integer

Detection

```
public Detection(java.lang.String start,
                 int species,
                 java.lang.String group)
```

This constructor takes in a third string to set the species Group

Parameters:

`start` - start time as string in ISO8601 Format: YYYY-MM-DDTHH:MM:SS:Z
`species` - the TSN
`group` - the species group e.g. BW40

Method Detail

addCall

```
public void addCall(java.lang.String call)
```

Adds a single call to an On Effort Detection
Parameters:

`call` - type of call as String

---

addCalls

```
public void addCalls(java.lang.String... calls)
```

Adds a variable amount of calls to an OnEffort Detection
Parameters:

`calls` - Call names as Strings

---

popParameters

```
public void popParameters()
```

Method to populate Detection Parameters once they are set
See Also:
`Detection.Parameters`

---

setChannel

```
public void setChannel(int channel)
```

Sets the Channel for an OnEffort Detection
Parameters:
`channel` - an integer representing the Channel for this Detection

---

setEnd

```
public void setEnd(java.lang.String endtime)
```

Sets the end time of an OnEffort detection
Parameters:
`endtime` - String of OnEffort Detection end time, ISO8601 Format: YYYY-MM-DDTHH:MM:SSZ

---

setGroup

```
public void setGroup(java.lang.String group)
```

---

setSpeciesID

```
public void setSpeciesID(int speciestsn)
```

Sets the SpeciesID for an OnEffort Detection, if not set when constructing
Parameters:
`speciestsn` - TSN of detected species

---

setStart

```
public void setStart(java.lang.String effstart)
```

Sets the start time for an OnEffort Detection, if not set when constructing
Parameters:
`effstart` - String of detection start time, ISO8601 Format: YYYY-MM-DDTHH:MM:SSZ

---

setUnitID

```
public void setUnitID(int unitid)
```

Sets the UnitID (Ensemble ID) for an OnEffort Detection

Parameters:

`unitid` - an integer of an ensemble's ID

---

tethys.nilus
Class Detection.Parameters

```
java.lang.Object
  └edu.sdsu.tethys.schema._1.Detection.Parameters
      └tethys.nilus.Detection.Parameters
```

Enclosing class:
Detection

```
public class Detection.Parameters
```
extends Detection.Parameters

Nested Class Summary

Nested classes/interfaces inherited from class edu.sdsu.tethys.schema._1.Detection.Parameters
Detection.Parameters.UserDefined

Constructor Summary

Detection.Parameters()

Method Summary

void	**addUserDefined**(Tag... tags) Adds userdefined XML with tags (see Tag class).
void	**addUserDefinedXML**(java.lang.String... xml) Adds a properly formatted XML string (e.g.
void	**setConfidence**(double conf) Sets the confidence level of an OnEffort Detection
void	**setDurationS**(double s)
void	**setMaxFreqHz**(double hz) Sets the maximum frequency of Detection
void	**setMinFreqHz**(double hz) Sets the minimum frequency of Detection

void	**setPeakFreqHz**(double hz) Sets the peak frequency of Detection
void	**setPeaks**(double... peak) Typically used for spectra of short echolocation bursts, notes the spectral peaks in a list sorted from low to high frequency.
void	**setReceivedLevelDB**(double dB) Sets the dB of the OnEffort Detection's signal
void	**setScore**(double score) Sets the score for an OnEffort Detection
void	**setSideband**(double... sideband) Sets signal sideband frequencies in a list sorted from low to high e.g.

Methods inherited from class edu.sdsu.tethys.schema._1.Detection.Parameters
getConfidence, getDurationS, getMaxFreqHz, getMinFreqHz, getPeakFreqHz, getPeaksHz, getReceivedLevelDB, getScore, getSidebandHz, getSubtype, getUserDefined, setConfidence, setDurationS, setMaxFreqHz, setMinFreqHz, setPeakFreqHz, setReceivedLevelDB, setScore, setSubtype, setUserDefined

Methods inherited from class java.lang.Object
equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Detection.Parameters

```
public Detection.Parameters()
```

Method Detail

addUserDefined

```
public void addUserDefined(Tag... tags)
```

Adds userdefined XML with tags (see Tag class). Can construct tags using: new Tag(String name, int/double/String value)

Parameters:

`tags` - XML elements that will be added to the userdefined list.

See Also:

Tag

addUserDefinedXML

```
public void addUserDefinedXML(java.lang.String... xml)
```

Adds a properly formatted XML string (e.g. "<Name>Value</Name>") to the UserDefined section of OnEffort parameters.

Parameters:

`xml` - a string of properly formatted XML.

---

setConfidence

```
public void setConfidence(double conf)
```

Sets the confidence level of an OnEffort Detection

Parameters:

`conf` - double representing the confidence level

---

setDurationS

```
public void setDurationS(double s)
```

---

setMaxFreqHz

```
public void setMaxFreqHz(double hz)
```

Sets the maximum frequency of Detection

Parameters:

`hz` - the max frequency in Hz as a double

---

setMinFreqHz

```
public void setMinFreqHz(double hz)
```

Sets the minimum frequency of Detection

Parameters:

`hz` - the min frequency in Hz as a double

---

setPeakFreqHz

```
public void setPeakFreqHz(double hz)
```

Sets the peak frequency of Detection

Parameters:

`hz` - the peak frequency in Hz as a double

---

setPeaks

```
public void setPeaks(double... peak)
```

Typically used for spectra of short echolocation bursts, notes the spectral peaks in a list sorted from low to high frequency. e.g. MATLAB - oed.parameters.setPeaks([2.2, 3.3, 1.1])

Parameters:

`peak` - variable amount spectral peaks in Hz as a doubles.

---

setReceivedLevelDB

```
public void setReceivedLevelDB(double dB)
```

Sets the dB of the OnEffort Detection's signal

Parameters:

`dB` - received signal strength in decibels

---

setScore

```
public void setScore(double score)
```

Sets the score for an OnEffort Detection

Parameters:

`score` - double representing the strength of the detection

---

setSideband

```
public void setSideband(double... sideband)
```

Sets signal sideband frequencies in a list sorted from low to high e.g. MATLAB - oed.parameters.setSideband([2.2, 3.3,1.1])

Parameters:

`sideband` - variable amount of sideband frequencies in Hz as doubles.

Overview **Package** **Class** **Index** **Help**

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SUMMARY: NESTED | FIELD | CONSTR | METHOD DETAIL: FIELD | CONSTR | METHOD

tethys.nilus
Class Tag

```
java.lang.Object
  └tethys.nilus.Tag
```

```
public class Tag
```
extends java.lang.Object

The Tag class represents XML tags that can be used for user defined Parameters. Each tag will always begin with a string that represents its <Name>and Value</Name>. Values can either be Strings, integers or doubles. These tags can be populated into Detections using the methods of that class.

Author:
sherbert

Constructor Summary

Tag(java.lang.String name, double value) Used for decimal values
Tag(java.lang.String name, int value) Used for integer values
Tag(java.lang.String name, java.lang.String value) Used for string values

Method Summary

java.lang.Object[]	**getTag**() Gets the ArrayList that contains tag information.

Methods inherited from class java.lang.Object
equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Tag

```
public Tag(java.lang.String name,
           double value)
```

Used for decimal values

Parameters:

`name` - xml element name (string)
`value` - value for the element; as a double

Tag

```
public Tag(java.lang.String name,
           int value)
```

Used for integer values

Parameters:

`name` - xml element name (string)
`value` - value for the element as an int

Tag

```
public Tag(java.lang.String name,
           java.lang.String value)
```

Used for string values

Parameters:

`name` - xml element name (string)
`value` - value for the element as a string

Method Detail

getTag

```
public java.lang.Object[] getTag()
```

Gets the ArrayList that contains tag information.

Returns:

- outputs the name and value pair of the tag.

Overview **Package** **Class** **Index** **Help**

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Package edu.sdsu.tethys.schema._1

Class Summary	
Detection	Java class for Detection complex type.
Detection.Parameters	Java class for anonymous complex type.
Detection.Parameters.UserDefined	Java class for anonymous complex type.

Overview **Package** Class **Index** **Help**
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edu.sdsu.tethys.schema._1
Class Detection

```
java.lang.Object
  └ edu.sdsu.tethys.schema._1.Detection
```

Direct Known Subclasses:
Detection

```
public class Detection
```
extends java.lang.Object

Java class for Detection complex type.

The following schema fragment specifies the expected content contained within this class.

```
<complexType name="Detection">
  <complexContent>
    <restriction base="{http://www.w3.org/2001/XMLSchema}anyType">
      <sequence>
        <element name="Input_file" type="{http://www.w3.org/2001/XMLSchema}string" minOccurs="
        <element name="Start" type="{http://www.w3.org/2001/XMLSchema}dateTime"/>
        <element name="End" type="{http://www.w3.org/2001/XMLSchema}dateTime" minOccurs="0"/>
        <element name="Event" type="{http://www.w3.org/2001/XMLSchema}string" minOccurs="0"/>
        <element name="UnitID" type="{http://www.w3.org/2001/XMLSchema}integer" minOccurs="0"/
        <element name="Channel" type="{http://www.w3.org/2001/XMLSchema}integer" minOccurs="0"
        <element name="SpeciesID" type="{http://tethys.sdsu.edu/schema/1.0}SpeciesIDType"/>
        <element name="Call" type="{http://tethys.sdsu.edu/schema/1.0}CallType" maxOccurs="unb
        <element name="Parameters" minOccurs="0">
          <complexType>
            <complexContent>
              <restriction base="{http://www.w3.org/2001/XMLSchema}anyType">
                <sequence>
                  <element name="Subtype" type="{http://www.w3.org/2001/XMLSchema}string" minO
                  <element name="Score" type="{http://www.w3.org/2001/XMLSchema}double" minOcc
                  <element name="Confidence" type="{http://www.w3.org/2001/XMLSchema}double" m
                  <element name="ReceivedLevel_dB" type="{http://www.w3.org/2001/XMLSchema}dou
                  <element name="MinFreq_Hz" type="{http://www.w3.org/2001/XMLSchema}double" m
                  <element name="MaxFreq_Hz" type="{http://www.w3.org/2001/XMLSchema}double" m
                  <element name="PeakFreq_Hz" type="{http://www.w3.org/2001/XMLSchema}double"
                  <element name="Peaks_Hz" minOccurs="0">
                    <simpleType>
                      <list itemType="{http://www.w3.org/2001/XMLSchema}double" />
                    </simpleType>
                  </element>
                  <element name="Duration_s" type="{http://www.w3.org/2001/XMLSchema}double" m
                  <element name="Sideband_Hz" minOccurs="0">
                    <simpleType>
```

```
                    <list itemType="{http://www.w3.org/2001/XMLSchema}double" />
                  </simpleType>
                </element>
                <element name="UserDefined" minOccurs="0">
                  <complexType>
                    <complexContent>
                      <restriction base="{http://www.w3.org/2001/XMLSchema}anyType">
                        <sequence maxOccurs="unbounded" minOccurs="0">
                          <any processContents='skip' minOccurs="0"/>
                        </sequence>
                      </restriction>
                    </complexContent>
                  </complexType>
                </element>
              </sequence>
            </restriction>
          </complexContent>
        </complexType>
      </element>
      <element name="Image" type="{http://www.w3.org/2001/XMLSchema}string" minOccurs="0"/>
      <element name="Audio" type="{http://www.w3.org/2001/XMLSchema}string" minOccurs="0"/>
      <element name="Comment" type="{http://www.w3.org/2001/XMLSchema}string" minOccurs="0"/
    </sequence>
  </restriction>
</complexContent>
</complexType>
```

Nested Class Summary

static class	**Detection.Parameters** Java class for anonymous complex type.

Constructor Summary

Detection()

Method Summary

java.lang.String	**getAudio**() Gets the value of the audio property.
java.util.List<edu.sdsu.tethys.schema._1.CallType>	**getCall**() Gets the value of the call property.
java.math.BigInteger	**getChannel**() Gets the value of the channel property.
java.lang.String	**getComment**() Gets the value of the comment property.
javax.xml.datatype.XMLGregorianCalendar	**getEnd**() Gets the value of the end property.
java.lang.String	

	getEvent() Gets the value of the event property.
java.lang.String	**getImage**() Gets the value of the image property.
java.lang.String	**getInputFile**() Gets the value of the inputFile property.
Detection.Parameters	**getParameters**() Gets the value of the parameters property.
edu.sdsu.tethys.schema._1.SpeciesIDType	**getSpeciesID**() Gets the value of the speciesID property.
javax.xml.datatype.XMLGregorianCalendar	**getStart**() Gets the value of the start property.
java.math.BigInteger	**getUnitID**() Gets the value of the unitID property.
void	**setAudio**(java.lang.String value) Sets the value of the audio property.
void	**setChannel**(java.math.BigInteger val Sets the value of the channel property.
void	**setComment**(java.lang.String value) Sets the value of the comment property.
void	**setEnd**(javax.xml.datatype.XMLGregor Sets the value of the end property.
void	**setEvent**(java.lang.String value) Sets the value of the event property.
void	**setImage**(java.lang.String value) Sets the value of the image property.
void	**setInputFile**(java.lang.String value Sets the value of the inputFile property.
void	**setParameters**(Detection.Parameters Sets the value of the parameters property.
void	**setSpeciesID**(edu.sdsu.tethys.schema Sets the value of the speciesID property.
void	**setStart**(javax.xml.datatype.XMLGreg Sets the value of the start property.
void	**setUnitID**(java.math.BigInteger valu Sets the value of the unitID property.

Methods inherited from class java.lang.Object
equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Detection

```
public Detection()
```

Method Detail

getAudio

```
public java.lang.String getAudio()
```

Gets the value of the audio property.
Returns:
possible object is `String`

---

getCall

```
public java.util.List<edu.sdsu.tethys.schema._1.CallType> getCall()
```

Gets the value of the call property.

This accessor method returns a reference to the live list, not a snapshot. Therefore any modification you make to the returned list will be present inside the JAXB object. This is why there is not a `set` method for the call property.

For example, to add a new item, do as follows:

```
getCall().add(newItem);
```

Objects of the following type(s) are allowed in the list `CallType`

---

getChannel

```
public java.math.BigInteger getChannel()
```

Gets the value of the channel property.
Returns:
possible object is `BigInteger`

---

getComment

```
public java.lang.String getComment()
```

Gets the value of the comment property.
Returns:
possible object is `String`

---

getEnd

```
public javax.xml.datatype.XMLGregorianCalendar getEnd()
```

Gets the value of the end property.
Returns:
possible object is `XMLGregorianCalendar`

---

getEvent

```
public java.lang.String getEvent()
```

Gets the value of the event property.
Returns:
possible object is `String`

---

getImage

```
public java.lang.String getImage()
```

Gets the value of the image property.
Returns:
possible object is `String`

---

getInputFile

```
public java.lang.String getInputFile()
```

Gets the value of the inputFile property.
Returns:
possible object is `String`

---

getParameters

```
public Detection.Parameters getParameters()
```

Gets the value of the parameters property.
Returns:
possible object is `Detection.Parameters`

---

getSpeciesID

```
public edu.sdsu.tethys.schema._1.SpeciesIDType getSpeciesID()
```

Gets the value of the speciesID property.
Returns:
possible object is `SpeciesIDType`

---

getStart

```
public javax.xml.datatype.XMLGregorianCalendar getStart()
```

Gets the value of the start property.
Returns:
possible object is `XMLGregorianCalendar`

---

getUnitID

```
public java.math.BigInteger getUnitID()
```

Gets the value of the unitID property.
Returns:
possible object is `BigInteger`

---

setAudio

```
public void setAudio(java.lang.String value)
```

Sets the value of the audio property.
Parameters:
`value` - allowed object is `String`

---

setChannel

```
public void setChannel(java.math.BigInteger value)
```

Sets the value of the channel property.
Parameters:
`value` - allowed object is `BigInteger`

---

setComment

```
public void setComment(java.lang.String value)
```

Sets the value of the comment property.

Parameters:
`value` - allowed object is `String`

---

setEnd

```
public void setEnd(javax.xml.datatype.XMLGregorianCalendar value)
```

Sets the value of the end property.
Parameters:
`value` - allowed object is `XMLGregorianCalendar`

---

setEvent

```
public void setEvent(java.lang.String value)
```

Sets the value of the event property.
Parameters:
`value` - allowed object is `String`

---

setImage

```
public void setImage(java.lang.String value)
```

Sets the value of the image property.
Parameters:
`value` - allowed object is `String`

---

setInputFile

```
public void setInputFile(java.lang.String value)
```

Sets the value of the inputFile property.
Parameters:
`value` - allowed object is `String`

---

setParameters

```
public void setParameters(Detection.Parameters value)
```

Sets the value of the parameters property.
Parameters:
`value` - allowed object is `Detection.Parameters`

---

setSpeciesID

```
public void setSpeciesID(edu.sdsu.tethys.schema._1.SpeciesIDType value)
```

Sets the value of the speciesID property.
Parameters:
`value` - allowed object is `SpeciesIDType`

---

setStart

```
public void setStart(javax.xml.datatype.XMLGregorianCalendar value)
```

Sets the value of the start property.
Parameters:
`value` - allowed object is `XMLGregorianCalendar`

---

setUnitID

```
public void setUnitID(java.math.BigInteger value)
```

Sets the value of the unitID property.
Parameters:
`value` - allowed object is `BigInteger`

Overview **Package** **Class** **Index** **Help**

PREV CLASS **NEXT CLASS** **FRAMES** **NO FRAMES** **All Classes**

SUMMARY: NESTED | FIELD | CONSTR | METHOD DETAIL: FIELD | CONSTR | METHOD

---

edu.sdsu.tethys.schema._1
Class Detection.Parameters

```
java.lang.Object
  └ edu.sdsu.tethys.schema._1.Detection.Parameters
```

Direct Known Subclasses:
Detection.Parameters

Enclosing class:
Detection

```
public static class Detection.Parameters
```
extends java.lang.Object

Java class for anonymous complex type.

The following schema fragment specifies the expected content contained within this class.

```
<complexType>
  <complexContent>
    <restriction base="{http://www.w3.org/2001/XMLSchema}anyType">
      <sequence>
        <element name="Subtype" type="{http://www.w3.org/2001/XMLSchema}string" minOccurs="0"/
        <element name="Score" type="{http://www.w3.org/2001/XMLSchema}double" minOccurs="0"/>
        <element name="Confidence" type="{http://www.w3.org/2001/XMLSchema}double" minOccurs="
        <element name="ReceivedLevel_dB" type="{http://www.w3.org/2001/XMLSchema}double" minOc
        <element name="MinFreq_Hz" type="{http://www.w3.org/2001/XMLSchema}double" minOccurs="
        <element name="MaxFreq_Hz" type="{http://www.w3.org/2001/XMLSchema}double" minOccurs="
        <element name="PeakFreq_Hz" type="{http://www.w3.org/2001/XMLSchema}double" minOccurs=
        <element name="Peaks_Hz" minOccurs="0">
          <simpleType>
            <list itemType="{http://www.w3.org/2001/XMLSchema}double" />
          </simpleType>
        </element>
        <element name="Duration_s" type="{http://www.w3.org/2001/XMLSchema}double" minOccurs="
        <element name="Sideband_Hz" minOccurs="0">
          <simpleType>
            <list itemType="{http://www.w3.org/2001/XMLSchema}double" />
          </simpleType>
        </element>
        <element name="UserDefined" minOccurs="0">
          <complexType>
            <complexContent>
              <restriction base="{http://www.w3.org/2001/XMLSchema}anyType">
                <sequence maxOccurs="unbounded" minOccurs="0">
                  <any processContents='skip' minOccurs="0"/>
                </sequence>
```

```
            </restriction>
          </complexContent>
        </complexType>
      </element>
    </sequence>
  </restriction>
 </complexContent>
</complexType>
```

Nested Class Summary

static class	**Detection.Parameters.UserDefined** Java class for anonymous complex type.

Constructor Summary

Detection.Parameters()

Method Summary

java.lang.Double	**getConfidence**() Gets the value of the confidence property.
java.lang.Double	**getDurationS**() Gets the value of the durationS property.
java.lang.Double	**getMaxFreqHz**() Gets the value of the maxFreqHz property.
java.lang.Double	**getMinFreqHz**() Gets the value of the minFreqHz property.
java.lang.Double	**getPeakFreqHz**() Gets the value of the peakFreqHz property.
java.util.List<java.lang.Double>	**getPeaksHz**() Gets the value of the peaksHz property.
java.lang.Double	**getReceivedLevelDB**() Gets the value of the receivedLevelDB property.
java.lang.Double	**getScore**() Gets the value of the score property.
java.util.List<java.lang.Double>	**getSidebandHz**() Gets the value of the sidebandHz property.
java.lang.String	**getSubtype**() Gets the value of the subtype property.
Detection.Parameters.UserDefined	**getUserDefined**() Gets the value of the userDefined property.
void	**setConfidence**(java.lang.Double value)

	Sets the value of the confidence property.
void	**setDurationS**(java.lang.Double value) Sets the value of the durationS property.
void	**setMaxFreqHz**(java.lang.Double value) Sets the value of the maxFreqHz property.
void	**setMinFreqHz**(java.lang.Double value) Sets the value of the minFreqHz property.
void	**setPeakFreqHz**(java.lang.Double value) Sets the value of the peakFreqHz property.
void	**setReceivedLevelDB**(java.lang.Double value) Sets the value of the receivedLevelDB property.
void	**setScore**(java.lang.Double value) Sets the value of the score property.
void	**setSubtype**(java.lang.String value) Sets the value of the subtype property.
void	**setUserDefined**(Detection.Parameters.UserDefined va Sets the value of the userDefined property.

Methods inherited from class java.lang.Object
equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Detection.Parameters

```
public Detection.Parameters()
```

Method Detail

getConfidence

```
public java.lang.Double getConfidence()
```

Gets the value of the confidence property.

Returns:

possible object is Double

getDurationS

```
public java.lang.Double getDurationS()
```

Gets the value of the durationS property.
Returns:
possible object is `Double`

---

getMaxFreqHz

```
public java.lang.Double getMaxFreqHz()
```

Gets the value of the maxFreqHz property.
Returns:
possible object is `Double`

---

getMinFreqHz

```
public java.lang.Double getMinFreqHz()
```

Gets the value of the minFreqHz property.
Returns:
possible object is `Double`

---

getPeakFreqHz

```
public java.lang.Double getPeakFreqHz()
```

Gets the value of the peakFreqHz property.
Returns:
possible object is `Double`

---

getPeaksHz

```
public java.util.List<java.lang.Double> getPeaksHz()
```

Gets the value of the peaksHz property.

This accessor method returns a reference to the live list, not a snapshot. Therefore any modification you make to the returned list will be present inside the JAXB object. This is why there is not a `set` method for the peaksHz property.

For example, to add a new item, do as follows:

```
getPeaksHz().add(newItem);
```

Objects of the following type(s) are allowed in the list `Double`

getReceivedLevelDB

```
public java.lang.Double getReceivedLevelDB()
```

Gets the value of the receivedLevelDB property.
Returns:
possible object is `Double`

getScore

```
public java.lang.Double getScore()
```

Gets the value of the score property.
Returns:
possible object is `Double`

getSidebandHz

```
public java.util.List<java.lang.Double> getSidebandHz()
```

Gets the value of the sidebandHz property.

This accessor method returns a reference to the live list, not a snapshot. Therefore any modification you make to the returned list will be present inside the JAXB object. This is why there is not a `set` method for the sidebandHz property.

For example, to add a new item, do as follows:

```
getSidebandHz().add(newItem);
```

Objects of the following type(s) are allowed in the list `Double`

getSubtype

```
public java.lang.String getSubtype()
```

Gets the value of the subtype property.
Returns:
possible object is `String`

getUserDefined

```
public Detection.Parameters.UserDefined getUserDefined()
```

Gets the value of the userDefined property.
Returns:
possible object is Detection.Parameters.UserDefined

---

setConfidence

```
public void setConfidence(java.lang.Double value)
```

Sets the value of the confidence property.
Parameters:
`value` - allowed object is `Double`

---

setDurationS

```
public void setDurationS(java.lang.Double value)
```

Sets the value of the durationS property.
Parameters:
`value` - allowed object is `Double`

---

setMaxFreqHz

```
public void setMaxFreqHz(java.lang.Double value)
```

Sets the value of the maxFreqHz property.
Parameters:
`value` - allowed object is `Double`

---

setMinFreqHz

```
public void setMinFreqHz(java.lang.Double value)
```

Sets the value of the minFreqHz property.
Parameters:
`value` - allowed object is `Double`

---

setPeakFreqHz

```
public void setPeakFreqHz(java.lang.Double value)
```

Sets the value of the peakFreqHz property.

Parameters:
`value` - allowed object is `Double`

---

setReceivedLevelDB

```
public void setReceivedLevelDB(java.lang.Double value)
```

Sets the value of the receivedLevelDB property.
Parameters:
`value` - allowed object is `Double`

---

setScore

```
public void setScore(java.lang.Double value)
```

Sets the value of the score property.
Parameters:
`value` - allowed object is `Double`

---

setSubtype

```
public void setSubtype(java.lang.String value)
```

Sets the value of the subtype property.
Parameters:
`value` - allowed object is `String`

---

setUserDefined

```
public void setUserDefined(Detection.Parameters.UserDefined value)
```

Sets the value of the userDefined property.
Parameters:
`value` - allowed object is `Detection.Parameters.UserDefined`

Overview **Package** **Class** **Index** **Help**

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SUMMARY: NESTED | FIELD | CONSTR | METHOD DETAIL: FIELD | CONSTR | METHOD

A

D

Detection - Class in edu.sdsu.tethys.schema._1
Java class for Detection complex type.
Detection() - Constructor for class edu.sdsu.tethys.schema._1.Detection

Detection - Class in tethys.nilus
The Detection class contains objects representing an individual OnEffort detection.
Detection() - Constructor for class tethys.nilus.Detection
Creates an empty detection.
Detection(String, int) - Constructor for class tethys.nilus.Detection
Creates an OnEffort Detection with specified TSN and Start Time
Detection(String, int, String) - Constructor for class tethys.nilus.Detection
This constructor takes in a third string to set the species Group
Detection.Parameters - Class in edu.sdsu.tethys.schema._1
Java class for anonymous complex type.
Detection.Parameters() - Constructor for class edu.sdsu.tethys.schema._1.Detection.Parameters

Detection.Parameters - Class in tethys.nilus

Detection.Parameters() - Constructor for class tethys.nilus.Detection.Parameters

Detection.Parameters.UserDefined - Class in edu.sdsu.tethys.schema._1
Java class for anonymous complex type.
Detection.Parameters.UserDefined() - Constructor for class
edu.sdsu.tethys.schema._1.Detection.Parameters.UserDefined

Detections - Class in tethys.nilus
The Detections class contains objects representing Detections XML Documents for the Tethys Metadata DB.
Detections() - Constructor for class tethys.nilus.Detections
Constructor Creates a tethys.nilus.Detections() object, as well as all sub elements of that object.

G

Gets the value of the start property.

getSubtype() - Method in class edu.sdsu.tethys.schema._1.Detection.Parameters

Gets the value of the subtype property.

getTag() - Method in class tethys.nilus.Tag

Gets the ArrayList that contains tag information.

getUnitID() - Method in class edu.sdsu.tethys.schema._1.Detection

Gets the value of the unitID property.

getUserDefined() - Method in class edu.sdsu.tethys.schema._1.Detection.Parameters

Gets the value of the userDefined property.

M

marshal() - Method in class tethys.nilus.Detections
This method will output the information stored in the Detections object as XML and print the result to the system.
marshal(String) - Method in class tethys.nilus.Detections
This method will marshal the Detections object into a file as formatted XML.

Overview Package Class **Index** **Help**
PREV LETTER **NEXT LETTER** **FRAMES** **NO FRAMES** **All Classes**
A D G M P R S T

P

parameters - Variable in class tethys.nilus.Detection

popParameters() - Method in class tethys.nilus.Detection
Method to populate Detection Parameters once they are set

Overview Package Class **Index** **Help**
PREV LETTER **NEXT LETTER** **FRAMES** **NO FRAMES** **All Classes**
A D G M P R S T

R

rmDetection(Detection) - Method in class tethys.nilus.Detections
Removes a detection from the list

Overview Package Class **Index** **Help**
PREV LETTER **NEXT LETTER** **FRAMES** **NO FRAMES** **All Classes**
A D G M P R S T

S

T

Tag - Class in tethys.nilus
The Tag class represents XML tags that can be used for user defined Parameters.
Tag(String, String) - Constructor for class tethys.nilus.Tag
Used for string values
Tag(String, int) - Constructor for class tethys.nilus.Tag
Used for integer values
Tag(String, double) - Constructor for class tethys.nilus.Tag
Used for decimal values
tethys.nilus - package tethys.nilus
wraps the methods of edu.sdsu.tethys.schema._1 into a user-friendly format

Overview Package Class **Index** **Help**
PREV LETTER NEXT LETTER **FRAMES** **NO FRAMES** **All Classes**
A D G M P R S T