

SiDiff 2.0 – Bundle-Overview

Sven Wenzel

10. November 2009

Inhaltsverzeichnis

1	Introduction	4
2	Applications	5
2.1	Diff Plug-in	5
2.2	Ecore Diff Application	5
2.3	Diff for Java	5
2.4	Diff Plug-in	5
2.5	UML Diff Application	6
3	Library Bundles	6
3.1	SiDiff Common Utilities	6
3.2	Modelmanagement and -access Utilities	6
3.3	Service Management	6
3.4	Database Serialization Library	7
3.5	MATLAB Simulink Visualization Plug-in	7
3.6	MATLAB Simulink Image Plug-in	7
3.7	Subversive Integration	8
3.8	SVNkit Integration	8
4	Interface Bundles	8
4.1	Annotation Service Interface	8
4.2	Candidates Service Interface	9
4.3	Similarity Calculation Service Interface	9
4.4	Similarities Service Interface	9
4.5	Correspondences Service Interface	9
4.6	Difference Computation Interface	10
4.7	Matching Service Interface	10
5	Implementation Bundles	10
5.1	Default Realization of the Annotation Service	10
5.2	Candidates Service Default Implementation	10

5.3	Candidates Service Tree Implementation	11
5.4	Default Similarity Calculation Service Implementation	11
5.5	Similarities Service Default Implementation	11
5.6	Correspondences MatchingModel Implementation	12
5.7	Correspondences Pair Table Implementation	12
5.8	12
5.9	Symmetric Difference Service	13
5.10	Hash Matcher	13
5.11	ID-based Matcher	13
5.12	Iterative Similarity-Based Matcher	14
6	Extension Bundles	14
6.1	Standard Annotators	14
6.2	Hash Value Annotator	14
6.3	General Count-based Metrics Annotators	15
6.4	Compare Functions Core Extension	15
6.5	Annotations-based Compare Functions	15
6.6	Correspondences- and Similarity-based Compare Functions	16
6.7	Correspondence-based Compare Functions	16
6.8	EMF-related Compare Functions	16
6.9	Similarity-based Compare Functions	17
6.10	Java Metamodel	17
6.11	Metamodel and MDL-Parser for Matlab Simulink	17
6.12	Metamodell fuer SeeMe	17
6.13	UML Metric Annotators	18
6.14	Metamodel for UML	18
7	Eclipse Plugins	18
7.1	SiDiff for Eclipse Integrator	18
7.2	FAME: Fine-grained Analysis of Model Evolution	19
7.3	Java AST Parser	19
8	Test Bundles	19
8.1	Test Plug-in	19
8.2	candidates test	19
8.3	Compare-Functions Comparators (EMF) Test Plug-in	20
8.4	Integration	20
8.5	Test Plug-in	20
8.6	correspondences test Plug-in	20
8.7	Metamodel for Test Models	21
8.8	Testmodels Plug-in	21
8.9	Testplatform Plug-in	21
9	Others / Uncategorized Bundles	21
9.1	Fingerprints Approach	21

9.2	S3V Tree	22
9.3	Tracing Plug-in	22
9.4	Tracibility Adapter for UML models	22
10	Undocumented Bundles	22

1 Introduction

The SiDiff project has not been realized as a monolith in a single Java project. It rather consists of many subprojects. Each subproject is a OSGi bundle, which provides Java classes and other resources. This document gives an overview over the existing bundles.

We differentiate the following kinds of bundles:

Applications are applications on basis of the Eclipse OSGi implementation *Equinox*. Sie can read command line parameters and execute different services. An example is provided by the UML Diff application, which compares two UML models.

Library Bundles provide Java classes and resources that are used in most of the subprojects. They are not active, self-contained, or application-like components, but they are only used for outsourcing recurring routines, such as filtering of object sets.

Interface Bundles define the components of SiDiff. Such components are realized as OSGi service and has a clearly defined function (e.g. the management of similarities). Hence, the interface bundle defines the interface of a service. Implementations are not part of such a bundle.

Implementation Bundles provide the concrete implementation of a service. It contains the code and the resources needed to realize a service (i.e. a component of SiDiff). There can exist several implementation bundles for each interface bundle, in that case each implementation provides a different realization. E.g. the storage of matchings either in a table or as a graph.

Extension Bundles usually contain sets of classes which are loaded reflectively. They are used to extend the functionality of other components. An example is provided by the compare functions, which are used to calculate the similarity between pairs of model elements. With extension bundles the algorithmics are decoupled from documenttype-specific functions.

Eclipse Plugins are applications based on the Eclipse platform. They are complexer applications which usually contain a graphical user interface. Consequently, they have many dependencies to Eclipse-specific libraries, which is the reason for categorizing them seperately.

Test Bundles are internal bundles, which are used for testing the different SiDiff components.

2 Applications

2.1 Diff Plug-in

Bundle Name	org.sidiff.ascet.diff
Latest Version	1.0.0
Typ	Application
Activator	org.sidiff.ascet.Activator

Diff application for ASCET models. **Attention: This application is still under development!**

2.2 Ecore Diff Application

Bundle Name	org.sidiff.ecore.diff
Latest Version	1.0.0
Typ	Application
Activator	org.sidiff.ecore.diff.Activator

This application reads two ecore files (*.ecore) and computes the difference between these models. The difference is written into a file. The Ecore Diff Application uses similarity-based matching which includes a hash matching in order to instantly locate unchanged parts of the model.

2.3 Diff for Java

Bundle Name	org.sidiff.javaast.diff
Latest Version	1.0.0
Typ	Application
Activator	org.sidiff.javaast.diff.Activator

Attention: This application is still under development. It does not provide valuable results yet.

This application reads two java models from XMI and computes the difference between these models. The difference is written into a file.

2.4 Diff Plug-in

Bundle Name	org.sidiff.seeme.diff
Latest Version	1.0.0
Typ	Application
Activator	org.sidiff.seeme.diff.Activator

This bundle provides an application for the comparison of SeeMe models. See <http://www.imtm-iaw.rub.de/projekte/seeme/index.html>.

2.5 UML Diff Application

Bundle Name	org.sidiff.uml.diff
Latest Version	1.0.0
Typ	Application
Activator	org.sidiff.uml.diff.Activator

This application reads two models from XML files and computes the difference between these models. The difference is written into a file. In order to support models from different tools, the XML files can be transformed by a XSLT. The UML Diff Application supports ID-based and similarity-based matching. The later one includes an optional hash matching in order to instantly locate unchanged parts of the model.

3 Library Bundles

3.1 SiDiff Common Utilities

Bundle Name	org.sidiff.common
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.common.Activator

Provides several utilities which are used all over the SiDiff project.

Detailed documentation can be found in the document “Introduction to Utils“which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/introduction-utils>.

3.2 Modelmanagement and -access Utilities

Bundle Name	org.sidiff.common.emf
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.common.emf.Activator

Provides several utils to deal with EMF models and metamodels.

Detailed documentation can be found in the document “Model Management“which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/...>

3.3 Service Management

Bundle Name	org.sidiff.common.services
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.common.services.Activator

Provides the infrastructure for services in SiDiff. It includes tools for registration, configuration, request and an event bus.

Detailed documentation on the concept of Services in SiDiff and Howtos for creating and using services can be found in the document “Service-Howto“ which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/service-howto>.

This bundle also provides a debug service. This service can be used by applications. Once put into the ServiceContext of the application it can be used to query different information from the services within this context. Therefore, the application should be started with the (OSGi-)argument “-console“ and the VM argument “-Dosgi.noShutdown=true“. Then the debug service provides query commands at the OSGi console.

3.4 Database Serialization Library

Bundle Name	org.sidiff.database
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.database.Activator

This bundle is a library for serialization of information into SQL databases. It can store information on models, similarities, correspondences and differences.

Attention: This library has not been tested with the new SiDiff yet.

3.5 MATLAB Simulink Visualization Plug-in

Bundle Name	org.sidiff.matlab.simulink.client
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.matlab.simulink.client.Activator

This bundle provides a library to access a MATLAB Simulink client. It is based on the jmatlink library.

Attention: This bundle has not been tested thoroughly. For application in industrial scenarios this bundle requires at least a review and certainly some improvements.

3.6 MATLAB Simulink Image Plug-in

Bundle Name	org.sidiff.matlab.simulink.image
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.matlab.simulink.image.Activator

This bundle provides a library to create images of MATLAB Simulink models by using a MATLAB Simulink client.

Attention: This bundle has not been tested thoroughly. For application in industrial scenarios this bundle requires at least a review and certainly some improvements.

3.7 Subversive Integration

Bundle Name	org.sidiff.svn.subversive
Latest Version	1.0.0.qualifier
Typ	Library
Activator	org.sidiff.svn.subversive.Activator

This bundle encapsulates the SVN implementation of Subversive. It allows us to access SVN repositories within Eclipse applications.

3.8 SVNkit Integration

Bundle Name	org.sidiff.svn.svnkit
Latest Version	1.0.0
Typ	Library
Activator	org.sidiff.svn.svnkit.Activator

This bundle encapsulates the SVN implementation of SVNKit. It allows us to access SVN repositories outside of Eclipse applications.

4 Interface Bundles

4.1 Annotation Service Interface

Bundle Name	org.sidiff.core.annotation
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface for the annotation mechanism. It defines the interface of an **AnnotationService** that is used to iterate over a model and thereby annotating the model elements. The AnnotationService is an provideable service, because different instances may be required to exist in parallel.

The bundle furthermore provides the abstract class **Annotator** that is used by an AnnotationService for computing the value of annotations.

Detailed documentation on the concept of annotations can be found in the whitepaper “Introduction to Annotations“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

4.2 Candidates Service Interface

Bundle Name	org.sidiff.core.candidates
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface for the candidates service. This service manages the list of model element which are possible matching partners for another element. The candidates service enhances the performance of SiDiff, since it reduces the set of model elements to be compared.

Detailed documentation on the concept of candidate management can be found in the whitepaper “Introduction to Candidate Management“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

4.3 Similarity Calculation Service Interface

Bundle Name	org.sidiff.core.compare.calculator
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface for the similarity calculation service. This service computes the similarity between pairs of model elements. It is mainly used within the similarity-based matching algorithm.

4.4 Similarities Service Interface

Bundle Name	org.sidiff.core.compare.similarities
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface of the similarities service. The similarities service stores the similarities computed for pairs of model elements. (It does not provide the computation of similarities, see `org.sidiff.core.compare.calculator`)

4.5 Correspondences Service Interface

Bundle Name	org.sidiff.core.correspondences
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface of the correspondences service. This service is used to manage the matching (i.e. a set of correspondences) between models that are compared.

4.6 Difference Computation Interface

Bundle Name	org.sidiff.core.difference
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface of the difference service. This service is used to compute a difference (i.e. a set of changes between models). Input of the difference computation is a matching.

4.7 Matching Service Interface

Bundle Name	org.sidiff.core.matching
Latest Version	1.0.0
Typ	Interface
Activator	

This bundle provides the interface of the matching service. This service is used to compute the matching (i.e. the correspondences) between models that are compared.

5 Implementation Bundles

5.1 Default Realization of the Annotation Service

Bundle Name	org.sidiff.core.annotation.default
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.annotation (see 4.1)
Activator	org.sidiff.core.annotation.impl.Activator

This bundle provides the default implementation of the annotation mechanism. It is configured by a configuration file.

Detailed documentation on the concept of annotations can be found in the white-paper “Introduction to Annotations“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

5.2 Candidates Service Default Implementation

Bundle Name	org.sidiff.core.candidates.default
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.candidates (see 4.2)
Activator	org.sidiff.core.candidates.impl.Activator

This bundle provides a simple default implementation of the candidates service. This implementation just provides the functionality of checking whether two elements are candidates for each other. However, the list of candidates is not actively managed. Hence this implementation is rather inperformant.

Detailed documentation on the concept of candidate management can be found in the whitepaper “Introduction to Candidate Management“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

5.3 Candidates Service Tree Implementation

Bundle Name	org.sidiff.core.candidates.tree
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.candidates (see 4.2)
Activator	org.sidiff.core.candidates.tree.impl.Activator

This bundle provides a tree-based implementation of the candidates service. This implementation actively manages the list of candidates and is thus very performant.

Detailed documentation on the concept of candidate management can be found in the whitepaper “Introduction to Candidate Management“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

5.4 Default Similarity Calculation Service Implementation

Bundle Name	org.sidiff.core.compare.calculator.default
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.compare.calculator (see 4.3)
Activator	org.sidiff.core.compare.calculator.impl.Activator

This bundle provides an implementation of the similarity calculation service. The calculation is based on compare functions which compare different properties of model elements. The set of properties to be compared is defined in a metamodel specific configuration file.

5.5 Similarities Service Default Implementation

Bundle Name	org.sidiff.core.compare.similarities.default
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.compare.similarities (see 4.4)
Activator	org.sidiff.core.compare.similarities.impl.Activator

This bundle provides the default implementation of the similarities service.

Beside storing similarities it provides very efficient implementations of the operations to query the similarities of pairs of model elements and to query a descending list of the most similar elements of a given element.

5.6 Correspondences MatchingModel Implementation

Bundle Name	org.sidiff.core.correspondences.matchingmodel
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.correspondences (see 4.5)
Activator	org.sidiff.core.correspondences.matchingmodel.Activator

This bundle provides an implementation of the correspondences service. The correspondences are stored in a matching model, which is a graph-like representation of correspondences. So-called matching nodes connect the elements that are matched. The matching nodes can thereby be extended with further information.

The matching model is generated from EMF.

Attention: The bundle is untested!

5.7 Correspondences Pair Table Implementation

Bundle Name	org.sidiff.core.correspondences.pairtable
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.correspondences (see 4.5)
Activator	org.sidiff.core.correspondences.pairtable.Activator

This bundle provides an implementation of the correspondences service. The correspondences are stored in a table which allows the storage of correspondences between exactly two models. Multi-matchings are not supported.

5.8

Bundle Name	org.sidiff.core.difference.differencemodel
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.difference (see 4.6)
Activator	

This bundle provides an implementation of the difference service. The differences are stored in a model, which is a graph-like representation of changes.

The difference model is generated from EMF.

Attention: The bundle is not finished yet! The implementation of service interfaces is missing!

5.9 Symmetric Difference Service

Bundle Name	org.sidiff.core.difference.symmetric
Latest Version	1.0.0
Typ	Implementation
Activator	org.sidiff.core.difference.symmetric.Activator

This bundle provides a service for computing symmetric differences. There is not a differentiation between interface and implementation yet. The code of the former SiDiff version has just been encapsulated in a bundle.

Attention: The bundle requires a new design and some refactorings. Usage should be reduced to the minimum.

5.10 Hash Matcher

Bundle Name	org.sidiff.core.matching.hashing
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.matching (see 4.7)
Activator	org.sidiff.core.matching.hashing.Activator

This bundle provides a matching service which computes the matches based on hashvalues. Hash based matching is very fast and allows an efficient matching of all the model elements which have not changed. The hashvalues have to be computed beforehand with an annotator (e.g. org.sidiff.annotators.hashing). Element pairs with equal unique hash values are matched. In case of ambiguities it is also checked whether a pair has the same path.

5.11 ID-based Matcher

Bundle Name	org.sidiff.core.matching.idbased
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.matching (see 4.7)
Activator	org.sidiff.core.matching.idbased.Activator

This bundle provides a matching service which computes the matches based on an improved variant of the iterative algorithm developed by Juergen Wehren. Basically, this matcher computes similarities between pairs of model elements (using the “Similarity Calculation Service“) and matches the pairs having the highest similarities. The matcher can thereby be configured: i.e. how to iterate over the models, minimal required similarities to allow a match, etc.

5.12 Iterative Similarity-Based Matcher

Bundle Name	org.sidiff.core.matching.iterative
Latest Version	1.0.0
Typ	Implementation
belongs to	org.sidiff.core.matching (see 4.7)
Activator	org.sidiff.core.matching.iterative.Activator

This bundle provides a matching service which computes the matches based on IDs. ID-based matching is very fast and allows an efficient matching of models which use unique persistent identifiers. This matched takes the ID attribute which is defined in the EMF-based metamodel of the models that are compared.

6 Extension Bundles

6.1 Standard Annotators

Bundle Name	org.sidiff.core.annotators
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.annotation (see 4.1)
Activator	org.sidiff.core.annotators.Activator

This bundle provides a set of standard annotators for the annotation mechanism. These are several annotators for computing different paths of model elements and the SetAttributeAnnotator that is able to fill annotation values from other annotations or with constant values.

Detailed documentation on the concept of annotations can be found in the white-paper “Introduction to Annotations“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

6.2 Hash Value Annotator

Bundle Name	org.sidiff.core.annotators.hashing
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.annotation (see 4.1)
Activator	org.sidiff.core.annotators.Activator

This bundle provides an annotator for computing hash values for model elements. These hash values can be used for instance to match equal elements (see org.sidiff.core.matching.hashing).

Detailed documentation on the concept of annotations can be found in the white-paper “Introduction to Annotations“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

6.3 General Count-based Metrics Annotators

Bundle Name	org.sidiff.core.annotators.metrics
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.annotation (see 4.1)
Activator	org.sidiff.core.annotators.metrics.Activator

This bundle provides a set of annotators that allow the computation of simple metrics by counting model elements.

Detailed documentation on the concept of annotations can be found in the whitepaper “Introduction to Annotations“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/???>.

6.4 Compare Functions Core Extension

Bundle Name	org.sidiff.core.compare.comparefunctions
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.compare.calculator.default (see 5.4)
Activator	org.sidiff.core.compare.comparefunctions.activator.Activator

This bundle provides the core of the compare functions extension. It contains different interfaces, abstract classes and utilities for compare functions.

Detailed documentation on the concept of compare functions can be found in the whitepaper “Introduction to Compare Functions“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/compare-functions/comparefunctions-intro.pdf>.

6.5 Annotations-based Compare Functions

Bundle Name	org.sidiff.core.compare.comparefunctions.emf.annotations
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.compare.calculator.default—org.sidiff.core.compare.comparefunctions (see ??)
Activator	org.sidiff.core.compare.comparefunctions.emf.annotations.Activator

This bundle provides compare functions that compare annotated values.

Detailed documentation on the concept of compare functions can be found in the whitepaper “Introduction to Compare Functions“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/compare-functions/comparefunctions-intro.pdf>.

6.6 Correspondences- and Similarity-based Compare Functions

Bundle Name	org.sidiff.core.compare.comparefunctions.emf.correspondenceandsimilarity
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.compare.calculator.default—org.sidiff.core.compare.comparefunctions (see ??)
Activator	org.sidiff.core.compare.comparefunctions.emf.correspondenceandsimilarity.Activator

This bundle provides compare functions that rely on the current state of matching or on the similarities computed so far.

Detailed documentation on the concept of compare functions can be found in the whitepaper “Introduction to Compare Functions“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/compare-functions/comparefunctions-intro.pdf>.

6.7 Correspondence-based Compare Functions

Bundle Name	org.sidiff.core.compare.comparefunctions.emf.correspondence
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.compare.calculator.default—org.sidiff.core.compare.comparefunctions (see ??)
Activator	org.sidiff.core.compare.comparefunctions.emf.correspondence.Activator

This bundle provides compare functions that rely on the current state of matching.

Detailed documentation on the concept of compare functions can be found in the whitepaper “Introduction to Compare Functions“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/compare-functions/comparefunctions-intro.pdf>.

6.8 EMF-related Compare Functions

Bundle Name	org.sidiff.core.compare.comparefunctions.emf
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.compare.calculator.default—org.sidiff.core.compare.comparefunctions (see ??)
Activator	org.sidiff.core.compare.comparefunctions.emf.Activator

This bundle provides EMF-related compare functions.

Detailed documentation on the concept of compare functions can be found in the whitepaper “Introduction to Compare Functions“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/compare-functions/comparefunctions-intro.pdf>.

6.9 Similarity-based Compare Functions

Bundle Name	org.sidiff.core.compare.comparefunctions.emf.similarity
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.compare.calculator.default—org.sidiff.core.compare.comparefunctions (see ??)
Activator	org.sidiff.core.compare.comparefunctions.emf.similarity.Activator

This bundle provides compare functions that rely on the similarities computed so far.

Detailed documentation on the concept of compare functions can be found in the whitepaper “Introduction to Compare Functions“, which is located at <http://svn.informatik.uni-siegen.de/SiDiff/trunk/doc/compare-functions/comparefunctions-intro.pdf>.

6.10 Java Metamodel

Bundle Name	org.sidiff.javaast.model
Latest Version	1.0.0
Typ	Extension
Activator	

This bundle provides an EMF-based metamodel for Java code. The metamodel represents the structure of Java programs including the source code. However, it is not a representation of the complete abstract syntax tree.

6.11 Metamodel and MDL-Parser for Matlab Simulink

Bundle Name	org.sidiff.matlab.simulink.model
Latest Version	1.0.0
Typ	Extension
Activator	org.sidiff.matlab.simulink.Activator

This bundle provides an EMF-based metamodel for MATLAB Simulink models and a simple parser for *.mdl files from MATLAB Simulink.

Attention: The metamodel is very simplified and the parser has not been tested thoroughly. For application in industrial scenarios this bundle requires at least a review and certainly some improvements.

6.12 Metamodell fuer SeeMe

Bundle Name	org.sidiff.seeme.model
Latest Version	1.0.0
Typ	Extension
Activator	org.sidiff.seeme.model.Activator

This bundle provides a meta model for SeeMe models. See <http://www.imtm-iaw.rub.de/projekte/seeme/index.html>.

6.13 UML Metric Annotators

Bundle Name	org.sidiff.uml.metrics
Latest Version	1.0.0
Typ	Extension
belongs to	org.sidiff.core.annotation—org.sidiff.uml.model (see ??)
Activator	org.sidiff.uml.metrics.Activator

This library provides annotators for computing UML specific metrics. It works on class models that are instances of `org.sidiff.uml.model`. Computable metrics are e.g. Depth of Inheritance etc.

6.14 Metamodel for UML

Bundle Name	org.sidiff.uml.model
Latest Version	1.0.0
Typ	Extension
Activator	org.sidiff.uml.model.Activator

This bundle provides an EMF-based metamodel for UML models. The current metamodel supports class models and package models. XSLTs for importing models are planned to be provided, too. Currently an import stylesheet for models from Rational Software Modeler is under construction.

7 Eclipse Plugins

7.1 SiDiff for Eclipse Integrator

Bundle Name	org.sidiff.eclipse.integrator
Latest Version	1.0.0
Typ	Eclipse-Plug-In
Activator	org.sidiff.eclipse.integrator.SiDiffActivator

This plug-in is used to integrate the OSGi-based SiDiff components in an Eclipse-based application. It basically manages the activation of OSGi-bundles provided and used by SiDiff.

7.2 FAME: Fine-grained Analysis of Model Evolution

Bundle Name	org.sidiff.fame
Latest Version	1.0.0
Typ	Eclipse-Plug-In
Activator	org.sidiff.fame.FamePlugin

This plug-in provides the FAME tool for fine-grained analysis of model evolution. It is basically the tool presented at ICSE'08 in Leipzig.

However, it has been migrated to the new SiDiff and has not been tested yet.

7.3 Java AST Parser

Bundle Name	org.sidiff.javaast.parser
Latest Version	1.0.0
Typ	Eclipse-Plug-In
belongs to	Eclipse-Plug-org.sidiff.java.model (see ??)
Activator	org.sidiff.javaast.JavaASTPlugin

This plugin provides a parser for creating EMF-based models of Java code. It is build on the AST parser provided by the Eclipse Java Development Tools (JDT).

8 Test Bundles

8.1 Test Plug-in

Bundle Name	org.sidiff.common.services.test
Latest Version	1.0.0
Typ	Test
belongs to	org.sidiff.common.services (see 3.3)
Activator	org.sidiff.common.services.test.Activator

This bundle tests the service-related utilities.

The tests seem to be old and unmaintained. They have to be checked soon.

8.2 candidates test

Bundle Name	org.sidiff.core.candidates.test
Latest Version	1.0.0
Typ	Test
belongs to	org.sidiff.core.candidates (see 4.2)
Activator	org.sidiff.core.candidates.test.Activator

This bundle tests the different implementations of candidates services. **The tests seem to be old and unmaintained.** (e.g. `CandidatesConstraintService_Test.doctype` reffering to `uml.classmodel`) They have to be checked soon.

8.3 Compare-Functions Comparators (EMF) Test Plug-in

Bundle Name	org.sidiff.core.compare.comparefunctions.comparators.test
Latest Version	1.0.0
Typ	Test
belongs to	org.sidiff.core.compare.comparefunctions.comparators (see ??)
Activator	org.sidiff.core.compare.comparefunctions.comparators.test.Activator

This bundle tests the different comparators used by the compare functions.

8.4 Integration

Bundle Name	org.sidiff.core.compare.comparefunctions.integration.test
Latest Version	1.0.0.qualifier
Typ	Test
belongs to	org.sidiff.core.compare.comparefunctions.comparators (see ??)
Activator	org.sidiff.core.compare.comparefunctions.integration.test.Activator

This bundle provides integration tests for the compare functions.

8.5 Test Plug-in

Bundle Name	org.sidiff.core.compare.similarities.test
Latest Version	1.0.0
Typ	Test
belongs to	org.sidiff.core.compare.similarities (see 4.4)
Activator	org.sidiff.core.compare.similarities.test.Activator

This bundle tests arbitrary implementations of the similarities service (see 4.4).

8.6 correspondences test Plug-in

Bundle Name	org.sidiff.core.correspondences.test
Latest Version	1.0.0
Typ	Test
belongs to	org.sidiff.core.correspondences (see 4.5)
Activator	org.sidiff.core.correspondences.test.Activator

This bundle tests arbitrary implementations of the correspondences service (see 4.5).

8.7 Metamodel for Test Models

Bundle Name	org.sidiff.test.testmetamodel
Latest Version	1.0.0
Typ	Test
Activator	

This bundle provides the metamodel which is used to instantiate models for testing purposes. The metamodel defines a simple hierarchical model, which consists of different types of components connected via lines.

8.8 Testmodels Plug-in

Bundle Name	org.sidiff.test.testmodels
Latest Version	1.0.0
Typ	Test
Activator	

This bundle provides profiles for the RSM, that can be used to generate models for testing purposes. The test models themselves are stored in the respective test bundle.

8.9 Testplatform Plug-in

Bundle Name	org.sidiff.test.testplatform
Latest Version	1.0.0
Typ	Test
Activator	org.sidiff.test.testplatform.Activator

This bundle provides a platform that is used to execute the different test bundles.

9 Others / Uncategorized Bundles

9.1 Fingerprints Approach

Bundle Name	org.sidiff.fingerprints
Latest Version	1.0.0
Typ	Optimization
Activator	org.sidiff.fingerprints.Activator

This bundle is an implementation of the fingerprints approach developed in the diploma thesis of Pit Pietsch. There is not a differentiation between interface and implementation yet.

This bundle requires an adaption to the new SiDiff. It is rather unstable!

9.2 S3V Tree

Bundle Name	org.sidiff.s3v
Latest Version	1.0.0
Typ	Optimization
Activator	org.sidiff.s3v.Activator

This bundle is an implementation of the S3V tree approach developed in the diploma thesis of Christoph Treude. There is not a differentiation between interface and implementation yet. The code has just been encapsulated in a bundle. It is not designed for OSGi.

This bundle requires an adaption to the new SiDiff. It is rather unstable!

9.3 Tracing Plug-in

Bundle Name	org.sidiff.tracing
Latest Version	1.0.0
Typ	Research-Approach
Activator	org.sidiff.tracing.Activator

This bundle is an implementation of the tracing approach developed in the PhD thesis of Sven Wenzel. For tracing there is not a differentiation between interface and implementation yet. An interface has not been extracted yet.

This bundle is under ongoing work. It is rather unstable!

9.4 Tracibility Adapter for UML models

Bundle Name	org.sidiff.tracing.uml
Latest Version	1.0.0
Typ	Research-Approach
belongs to	Research-org.sidiff.tracing (see ??)
Activator	org.sidiff.tracing.uml.Activator

This bundle provides the UML specific part of the tracing approach developed in the PhD thesis of Sven Wenzel.

This bundle is under ongoing work. It is rather unstable!

10 Undocumented Bundles

- org.sidiff.core.candidates.constraint
- org.sidiff.core.constraints