Agile Product Lifecycle Management

Engineering Collaboration Web Services Guide

v9.3.3

ORACLE®

CONTENTS

Preface

Oracle's Agile PLM documentation set includes Adobe® Acrobat PDF files. The Oracle Technology Network (OTN) web site http://www.oracle.com/technetwork/documentation/agile-085940.html contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

Note   To read the PDF files, you must use the free Adobe Acrobat Reader version 9.0 or later. This program can be downloaded from the Adobe web site http://www.adobe.com.

The Oracle Technology Network (OTN) web site http://www.oracle.com/technetwork/documentation/agile-085940.html can be accessed through **Help > Manuals** in both Agile web Client and Agile Java Client. If you need additional assistance or information, please contact My Oracle Support (https://support.oracle.com) for assistance.

Note   Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired. Before calling Oracle Support about a problem with an Agile PLM manual, please have the full part number, which is located on the title page.

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Readme

Any last-minute information about Agile PLM can be found in the Readme file on the Oracle Technology Network (OTN) web site http://www.oracle.com/technetwork/documentation/agile-085940.html.

Agile Training Aids

Go to the Oracle University web page http://www.oracle.com/education/chooser/selectcountry_new.html for more information on Agile Training offerings.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these web sites.

Agile PLM EC Services

Agile PLM Engineering Collaboration (EC) Services are a set of business services that supplement PLM's Core Web Services for CAD use cases. Customers and partners can build next generation MCAD and ECAD connectors utilizing Agile PLM Web Services and Engineering Collaboration Services.

Some of the benefits are:

□ Significantly improves WAN performance for CAD connectors because the bulk of the logic is deployed to the server

□ Makes it easier for development partners and customers to implement CAD connectors

□ Provides the unique and interface friendly API name field to access PLM metadata.

EC Web Services - Object Calls

This chapter includes the following:

The Core service covers most of the basic services, which can also be used in the EC services context. Services that are EC specific are described in the following sections in detail. The EC Services are designed as document/wrapped style and use consistent request-response types which in turn use the types defined in the Core services data model or extend the one from the Core service data model.

addBookmark

Service Adds a bookmark for one or multiple objects to a bookmark folder in Agile PLM. If the folder name is omitted in the request, the My Bookmarks folder is used. If a folder is specified, it needs to be the name of an existing sub folder of My Bookmarks.

Usage Returns an AddBookmarkResponseType containing the status of the operation.

Syntax
```
AddBookmarkRequestType request = new AddBookmarkRequestType();
AddBookmarkResponseType response = service.addBookmark(request);
```

Sample Code **SOAP**

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <addBookmark xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <generalParameters>
                                <id xsi:nil="true"/>
                                <property>
                                        <propertyName>folder-name</propertyName>
                                        <propertyValue>Test</propertyValue>
                                </property>
                        </generalParameters>
                        <requests>
                                <classId>1488</classId>
                                <objectNumber>TEST_MFR_PART4751636</objectNumber>
                                <inputParameters>
                                        <id>CommonProperties</id>
```

```
                                               
<propertyName>manufacturer_name</propertyName>
                                                <propertyValue>ECS</propertyValue>
                                        </property>
                                </inputParameters>
                        </requests>
                </request>
        </addBookmark>
</soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <addBookmarkResponse xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                </response>
        </addBookmarkResponse>
</soapenv:Body>
</soapenv:Envelope>
```

General Parameters

CommonProperties

Name	Description
folder-name	Name of the folder to which you add the bookmark (optional). If not set, the main folder is the default folder.

createUpdateObjects

Service   To publish a complete CAD Model structure to the Agile PLM system. Creates and updates Design objects and structures, parts and part BOMs, and trigger thumbnail generation for structures (if enabled). It is a bulk service that combines the below mentioned services into a single service.
Pure metadata update for design, Item and Change limited to Title block, Page 1 to 3 and the Relationship tab. Check-out for the Design object is optional.
Structure update and optional metadata update on Design structure, Design files tab, and Design relationships tab. Needs to support options for check-in (yes/no) and check-out (keep checked-in, increment, cancel check-out).
Item publish with option to publish the structure or files or both to the item BOM.

Service   The request contains objects of all types at the requests level. You need to create References (structure or part relations) by having the object's ObjectIdentifierType referenced on the corresponding table row entry. The request must contain all attributes and tables (including their attributes) that need to be created or updated. It may require excluding certain attributes or tables from a previous response of another call (a previous retrieveDesignStructure) to ensure that only the required data is contained and that only the tables and attributes that need to be created or updated are contained.

Service   The service supports two steps of a CAD save process.
Creates objects (both Designs and optionally Parts) including the Design structure and the Part BOM. If the parameter 'publish-only' is not set to true.
Updates the Files tab with uploaded File IDs, creates the thumbnails (by setting the "thumbnail" parameter to true) and publishes the Design's files to the Part attachments (by setting the "PublishAttachments" parameter).

Service   The service also supports the "Modify Item Attachments" call, which allows modifying the attachments of an Item only. The top level object must be an Item (or a subclass of Item) and have Design object references in the attachment table. The service collects the files from the Design object and updates the Item's attachment tab accordingly.

Usage   Returns an array of AgileCreateUpdateObjectsResponse in the response object

Syntax
```
CreateUpdateObjectsRequestType request = new
CreateUpdateObjectsRequestType();
CreateUpdateObjectsResponseType response =
service.createUpdateObjects(request);
```

Sample Code **SOAP**

```
<?xml version="1.0" encoding="UTF-8" ?>
 <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soapenv:Body>
  <createUpdateObjects xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
   <request xmlns="">
<generalParameters>
        <id xsi:nil="true" />
        <property>
                <propertyName>strings-only</propertyName>
                <propertyValue>true</propertyValue>
```

```
                                 </property>
//continued for similar properties
   </generalParameters>
   <requests>
   <agileObject>
         <objectId>
                 <classId xsi:nil="true" />
                 <className>Part</className>
                 <objectId xsi:nil="true" />
                 <objectName>P02681</objectName>
                 </objectId>
         <table>
                 <tableId>
                 <objectName>P02681</objectName>
                 <tableId>804</tableId>
                 <tableName>PendingChanges</tableName>
                 </tableId>
         </table>
         <attribute id="1001">
                 <String>
                 <value>P02681</value>
                 </String>
         </attribute>
         <options>
                 <propertyName>save_option</propertyName>
                 <propertyValue>checkin</propertyValue>
         </options>
   </agileObject>
// continued for similar agileObjects
   </requests>
//continued for similar requests
   <filters>
         <apiName>ChangesClass</apiName>
         typeCLASS</type>
         <attribute>1047</attribute>
         <attribute>1052</attribute>
         <attribute>3742</attribute>
   </filters>
//continued for similar filters
    </request>
   </createUpdateObjects>
 </soapenv:Body>
</soapenv:Envelope>
----response-----
<?xml version="1.0" encoding="utf-8" ?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
   <createUpdateObjectsResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
   <response xmlns="">
<messageId xsi:nil="true" />
<messageName xsi:nil="true" />
<statusCode>SUCCESS</statusCode>
<sessionParameters>
         <id>VersionProperties</id>
         <property>
                         <propertyName>ECS</propertyName>
                         <propertyValue>9.3.2</propertyValue>
                 </property>
                 <property>
                         <propertyName>Build</propertyName>
                         <propertyValue>Build 09</propertyValue>
                 </property>
         </sessionParameters>
<responses>
                 <agileObject>
                     <objectId>
                         <classId>10141</classId>
                         <className>Part</className>
                         <classDisplayName>Part</classDisplayName>
                         <objectId>6895441</objectId>
                         <objectName>P02681</objectName>
                         <objectVersion>Introductory</objectVersion>
                         <version>4</version>
```

```
                                    <superClassId>10000</superClassId>
                    </objectId>
                <table>
                    <tableId>
                        <classId>10141</classId>
                        <className>Part</className>
                        <objectId>6895441</objectId>
                        <objectName>P02681</objectName>
                        <tableId>804</tableId>
                        <tableName>PendingChanges</tableName>
                        <tableDisplayName>Pending Changes</tableDisplayName>
                    </tableId>
                </table>
                <attribute apiName="number" id="1001" type="xsd:string">
                    <String>
                            <value>P02681</value>
                    </String>
                </attribute>
//continued for similar attributes
            <options>
                    <propertyName>save_option</propertyName>
                    <propertyValue>checkin</propertyValue>
                </options>
            </agileObject>
</responses>
    </response>
    </createUpdateObjectsResponse>
 </soapenv:Body>
</soapenv:Envelope>
```

General Parameters:

ChangeProperties

Name	Description
RevisionSequence	Sequence for revisions (optional). A to Z by default.
VersionsSeparator	Separator for versions (optional). ' ' space character by default.
Initial Version	Initial version (optional). '1' by default.
InitialDesignRevision	Initial Design revision (optional). '-' by default.
InitialPublishRevision	Initial version for Publish (optional). Empty by default.
PublishAttachmentType	Attachment type for Publish that goes into the Attachment Type list field of an Item (optional). Any value from the AttachType list. Empty by default.
PublishAttachments	Attachments to publish (optional). List of attachments are 'any', 'all'. Any by default.
ClusteredObjects	Flag to force objects updated on all cluster nodes (optional). False by default.
DesignRevisionLogic	Design revision logic (optional). Options are any combination of 'editable', 'noparantheses', 'publish, or 'increment'. Empty by default.
InitialVersionCheckin	Flag to check-in on initial version (optional). True by default.
PublishIntroductory	Flag to publish to introductory item status (optional). True by default.
PublishPartSite	Site to publish (optional). None by default.
SetLifecyclePhase	Flag to set the lifecycle phase to true or false (optional). False by default.

CommonProperties

Name	Description
structure	Flag to create/update the structure of the Design. False by default. This option requires other Design object references in the structure table.
files	Flag to update the file references.
item	Flag to create or update items. Options are 'create', 'update'; 'link'. Update by default.
check-in	Flag to check-in the objects after processing.
publish	Flag for publish type. 'None', 'attachment', 'born', 'born_and_attachment. None by default. None indicates it is disabled.
publish_only	Flag to publish only. False by default. It does not update any attributes. Switches off the 'structure' and 'files' flags.
thumbnail	Flag to generate thumbnails after structure is complete. False by default.
string_only	Flag to return string values or actual data types. False by default.
skip_empty	Flag to omit empty values in the response to reduce the payload. False by default.
attach-drawings	Flag to control how a CAD drawing's files get attached to an Item. 'None', 'Model,'Self. 'None' does not attach the files to any Item. 'Model' attaches the files to the associated model's Item. 'Self ' attaches the files to the drawing's Item (For this option, you need to create an Item for the drawing).
publish-drawings	Flag to control the publish logic for the Item BOM. 'None' references the drawing through the model's Item on the BOM. 'Relate' lays the drawing's item on the relationship tab of the model's Item. 'Child" positions the drawing's Item below the model's Item in the BOM. If the parameter 'attach-drawings' is set to 'model', the value of the parameter 'publish-drawings' must be 'none'. Since the drawings' files are attached to the model's Item, linking the drawing's Item may not be useful.
auto-checkout	Flag to allow or disallow an automatic check-out of Design object. True by default. Its default value is 'true', except when the general parameter 'publish_only" is set to 'true'". In addition, if the parameter is missing from the request, it checks for the value of the parameter 'structure'. If this value is 'true','"auto-checkout' is set to 'false', and to 'true' otherwise.

ECObjectType Options

Name	Description
save_option	Flag to find the save mode to use. Options are 'save', increment', 'checkin'. Save by default. This is a mandatory Design object parameter.
numbersource	Uses the autonumber source while creating the object (optional).
delete_structureentries	Flag to delete structure entries which are not part of the request (optional). Options are true or false. True by default. The structure entries are filtered by the CAX-IDENT column. Entries other than CAX* are never deleted. Deletes CAX* entries only if the flag is set to true. This is a table parameter for the Design Structure, Design Relationships and Item BOM/RedlineBOM table. If flag is true the call assumes a complete target structure is given.

ECRowType Options

Name	Description
FileSelection	String to filter the selection for file attachments (optional). Empty by default.

generateThumbnails

Service To trigger the generation of thumbnail images for Design assemblies when the check-in process is complete. The PLM system triggers the generation of thumbnail images automatically when the Design objects are checked-in. But the thumbnail generation for assemblies requires a manual trigger to reflect all components.

Usage The request must contain at least one Agile Object to represent the Design for which the thumbnail generation should be triggered. All the data to identify the Design object must be present in the ObjectIdentifier, including class-id, subclass, number and version.

Syntax
```
GenerateThumbnailsRequestType request = new
GenerateThumbnailsRequestType();
GenerateThumbnailsResponseType generateThumbnailsResponseType =
service.generateThumbnails(request);
```

Sample Code **SOAP**

```xml
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <generateThumbnails xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <requests>
                                <classId>2000008310</classId>
                                <objectNumber>TEST_DESIGN9498672</objectNumber>
                                <objectVersion>0</objectVersion>
                        </requests>
                </request>
        </generateThumbnails>
 </soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <generateThumbnailsResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                </response>
        </generateThumbnailsResponse>
 </soapenv:Body>
</soapenv:Envelope>
```

getFilteredObject

Service   To retrieve a specific Agile object in the Agile PLM system. It could be filtered by class level attributes and table level attributes. If no filter is specified in the request, all attributes for the class and/or the specified tables are returned.

Usage   Returns an array of AgileBusinessObjectType of type Part in the response object.

Syntax
```
GetFilteredObjectRequestType request = new
GetFilteredObjectRequestType();
GetFilteredObjectResponseType response =
service.getFilteredObject(request);
```

Sample Code SOAP

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getFilteredObject xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
               <request xmlns="">
                      <generalParameters>
                             <id xsi:nil="true"/>
                             <property>
                                    <propertyName>strings-only</propertyName>
                                    <propertyValue>false</propertyValue>
                             </property>
                      </generalParameters>
                      <requests>
                             <classId>2000008297</classId>
                             <objectNumber>TEST_DESIGN9498672</objectNumber>
                             <objectVersion>0</objectVersion>
                             <table>
                                    <tableIdentifier>6150</tableIdentifier>
                                    <loadCellMetaData xsi:nil="true"/>
                             </table>
                      </requests>
                      <filters>
                             <id>2000008297</id>
                             typeCLASS</type>
                             <attribute>1302</attribute>
                             <attribute>1420</attribute>
                             <attribute>2002</attribute>
                             <attribute>2007</attribute>
                             <attribute>2009</attribute>
                             <attribute>2017</attribute>
                             <attribute>2090</attribute>
                             <attribute>6173</attribute>
                             <attribute>6174</attribute>
                             <attribute>6177</attribute>
                             <attribute>6178</attribute>
                             <attribute>6180</attribute>
                             <attribute>6184</attribute>
                             <attribute>6388</attribute>
                             <attribute>6389</attribute>
                             <attribute>6390</attribute>
                             <attribute>7951</attribute>
                             <attribute>2000008685</attribute>
                             <attribute>2000008717</attribute>
                      </filters>
                      <filters>
                             <id>10000</id>
                             typeCLASS</type>
                             <attribute>1001</attribute>
                             <attribute>1002</attribute>
                             <attribute>1014</attribute>
                             <attribute>1420</attribute>
                             <attribute>1084</attribute>
```

```
                                        <attribute>12468</attribute>
                                </filters>
                                <filters>
                                        <id>931</id>
                                        typeCLASS</type>
                                        <attribute>1047</attribute>
                                        <attribute>1052</attribute>
                                        <attribute>3742</attribute>
                                </filters>
                                <filters>
                                        <id>6150</id>
                                        typeTABLE</type>
                                        <attribute>-1</attribute>
                                        <attribute>6303</attribute>
                                        <attribute>6148</attribute>
                                </filters>
                                <filters>
                                        <id>2000007761</id>
                                        typeTABLE</type>
                                        <attribute>2000007767</attribute>
                                        <attribute>2000007768</attribute>
                                        <attribute>2000007904</attribute>
                                        <attribute>5846</attribute>
                                        <attribute>5847</attribute>
                                        <attribute>2000008523</attribute>
                                        <attribute>2000007770</attribute>
                                </filters>
                                <filters>
                                        <id>2000008318</id>
                                        typeTABLE</type>
                                        <attribute>2000008320</attribute>
                                        <attribute>2000008321</attribute>
                                        <attribute>2000008325</attribute>
                                        <attribute>2000008323</attribute>
                                        <attribute>2000008377</attribute>
                                        <attribute>2000008324</attribute>
                                </filters>
                                <filters>
                                        <id>804</id>
                                        typeTABLE</type>
                                        <attribute>1026</attribute>
                                        <attribute>1149</attribute>
                                        <attribute>1028</attribute>
                                </filters>
                        </request>
                </getFilteredObject>
        </soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<soapenv:Body>
        <getFilteredObjectResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                        <responses>
                                <agileObject>
                                        <objectId>
                                                <classId>2000008310</classId>
                                                <className>Design</className>
<classDisplayName>Design</classDisplayName>
                                                <objectId>6519149</objectId>
<objectName>TEST_DESIGN9498672</objectName>
                                                <objectVersion>1</objectVersion>
                                                <version>2</version>
<superClassId>2000008297</superClassId>
                                        </objectId>
                                        <table>
                                                <tableId>
```

```
<classId>2000008210</classId>

<className>Design</className>

<objectId>6519149</objectId>

<objectName>TEST_DESIGN9498672</objectName>
                                                <tableId>6150</tableId>

<tableName>Files</tableName>

<tableDisplayName>Files</tableDisplayName>
                                        </tableId>
                                </table>
                                <attribute apiName="number" id="6173"
type="xsd:string">
                                        <String>

<value>TEST_DESIGN9498672</value>
                                        </String>
                                </attribute>
                                <attribute apiName="description" id="6174"
type="xsd:string">
                                        <String>
                                                <value/>
                                        </String>
                                </attribute>
                                <attribute apiName="lifecyclePhase"
id="6390" type="ns1:AgileListEntryType"
xmlns:ns1="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value>
                                                        <selection>

<id>6382</id>

<apiName>DESIGN</apiName>

<value>Design</value>
                                                        </selection>
                                                </value>
                                        </SingleList>
                                </attribute>
                                <attribute apiName="version" id="7951"
type="xsd:integer">
                                        <Integer>
                                                <value>1</value>
                                        </Integer>
                                </attribute>
                                <attribute apiName="revision"
id="2000008685" type="xsd:string">
                                        <String>
                                                <value/>
                                        </String>
                                </attribute>
                                <attribute apiName="checkoutStatus"
id="6389" type="ns2:AgileListEntryType"
xmlns:ns2="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value>
                                                        <selection>
                                                                <id>0</id>

<apiName>CHECKED_OUT</apiName>

<value>Checked Out</value>
                                                        </selection>
                                                </value>
                                        </SingleList>
                                </attribute>
                                <attribute apiName="checkoutUser"
id="6180" type="ns3:AgileListEntryType"
xmlns:ns3="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value>
```

```
                                                            <selection>
<id>6013686</id>
                                                            <apiName
xsi:nil="true"/>
                                                            <value>CAD
One (cad1)</value>
                                                    </selection>
                                            </value>
                                    </SingleList>
                            </attribute>
                            <attribute apiName="checkoutDate"
id="6184" type="xsd:date">
                                    <Date>
                                            <value>2012-10-
10T20:28:30.000Z</value>
                                    </Date>
                            </attribute>
                            <attribute apiName="createDate" id="6177"
type="xsd:date">
                                    <Date>
                                            <value>2012-10-
10T20:28:28.000Z</value>
                                    </Date>
                            </attribute>
                            <attribute apiName="lastModifiedDate"
id="6178" type="xsd:date">
                                    <Date>
                                            <value>2012-10-
10T20:28:59.000Z</value>
                                    </Date>
                            </attribute>
                            <attribute apiName="checkinUser"
id="2000008717" type="ns4:AgileListEntryType"
xmlns:ns4="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                    <SingleList>
                                            <value/>
                                    </SingleList>
                            </attribute>
                            <attribute apiName="checkinDate" id="6388"
type="xsd:date">
                                    <Date>
                                            <value>2012-10-
10T20:28:30.000Z</value>
                                    </Date>
                            </attribute>
                            <attribute apiName="text01" id="2007"
type="xsd:string">
                                    <String>
                                            <value/>
                                    </String>
                            </attribute>
                            <attribute apiName="multiText10" id="2017"
type="xsd:string">
                                    <String>
                                            <value/>
                                    </String>
                            </attribute>
                            <attribute apiName="text03" id="2009"
type="xsd:string">
                                    <String>
                                            <value/>
                                    </String>
                            </attribute>
                            <attribute apiName="createUser" id="1420"
type="ns5:AgileListEntryType"
xmlns:ns5="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                    <SingleList>
                                            <value>
                                                    <selection>
<id>6013686</id>
                                                    <apiName
xsi:nil="true"/>
                                                    <value>CAD
One (cad1)</value>
```

```
                                                     </value>            </selection>
                                             </SingleList>
                                     </attribute>
                                     <attribute apiName="text12" id="1302"
type="xsd:string">
                                             <String>
                                                     <value/>
                                             </String>
                                     </attribute>
                                     <attribute apiName="multiList01" id="2090"
type="ns6:AgileMultiListEntryType"
xmlns:ns6="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                             <MultiList>
                                                     <value>
                                                             <selection>

<id>2605304</id>

<apiName>INTERNAL</apiName>

<value>INTERNAL</value>
                                                             </selection>
                                                     </value>
                                             </MultiList>
                                     </attribute>
                             </agileObject>
                     </responses>
               </response>
         </getFilteredObjectResponse>
</soapenv:Body>
</soapenv:Envelope>
```

getListValues

Service   To return all types of lists (object lists, dynamic list, and static lists) as well as localized list values. Applying a search filter limits the number of returns. The service searches the super class if no values are found in the given class.

Usage   Returns an array of AgileGetListValuesResponseType in the response object.

Syntax   `GetListValuesRequestType request = new GetListValuesRequestType();`
`GetListValuesResponseType response = service.getListValues(request);`

Sample Code **SOAP**

```
?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getListValues xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <requests>
                                <classId>2000008310</classId>
                                <attributeId>1539</attributeId>
                        </requests>
                        <requests>
                                <classId>2000008310</classId>
                                <attributeId>1420</attributeId>
                        </requests>
                </request>
        </getListValues>
</soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getListValuesResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                        <responses>
                                <classId>2000008310</classId>
                                <attributeId>1539</attributeId>
                                <attributeApiName>CADMaterial</attributeApiName>
                                <values>
                                        <id xsi:nil="true"/>
                                        <property>
<propertyValue>ALUMINUM</propertyValue>
                                        </property>
                                        <property>
<propertyValue>BRASS</propertyValue>
                                        </property>
                                        <property>
                                                <propertyValue>CAST
IRON</propertyValue>
                                        </property>
                                        <property>
<propertyValue>COMPOSITE</propertyValue>
                                        </property>
                                        <property>
<propertyValue>GLASS</propertyValue>
                                        </property>
                                        <property>
```

```
<propertyValue>PLASTIC</propertyValue>
                                        </property>
                                        <property>

<propertyValue>RUBBER</propertyValue>
                                        </property>
                                        <property>
                                                <propertyValue>SEE
PARTS</propertyValue>
                                        </property>
                                        <property>

<propertyValue>SILICON</propertyValue>
                                        </property>
                                        <property>

<propertyValue>STEEL</propertyValue>
                                        </property>
                                </values>
                        </responses>
                        <responses>
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                                <attributeId>1420</attributeId>
                                <attributeApiName>createUser</attributeApiName>
                                <values>
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subclass:11610 id:704 version:-456</propertyValue>
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subclass:11610 id:6072986 version:-456</propertyValue>
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subclass:11610 id:6141218 version:-456</propertyValue>
                                        </property>
                                        <property>
```

```
                                                <propertyValue>class: 11605
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```

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```

```
                                          <propertyValue>class: 11605
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                                        </property>
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subclass:11610 id:6071736 version:-456</propertyValue>
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subclass:11610 id:6072807 version:-456</propertyValue>
                                        </property>
                                    </values>
                            </responses>
                    </response>
        </getListValuesResponse>
</soapenv:Body>
</soapenv:Envelope>
```

General Parameters

Cascading-lists

Name	Description
separator	Separator for cascading lists (optional). '|' by default.

getSubclasses

Service To retrieve all Agile sub classes for a given base class in Agile PLM. The request object specifies the details of lists to be retrieved. If the corresponding flag is set to to true in the request, all available autonumber sources for the classId's are returned.

Usage Returns an array of AgileGetSubclassesResponseType in the response object.

Syntax
```
GetSubclassesRequestType request = new GetSubclassesRequestType();
GetSubclassesResponseType response = service.getSubclasses(request);
```

Sample Code SOAP

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getSubclasses xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <requests>
                                <classId>DesignsClass</classId>

<includeAllAutoNumberSource>true</includeAllAutoNumberSource>
                        </requests>
                        <requests>
                                <classId>PartsClass</classId>

<includeAllAutoNumberSource>true</includeAllAutoNumberSource>
                        </requests>
                        <requests>
                                <classId>ChangeOrdersClass</classId>

<includeAllAutoNumberSource>true</includeAllAutoNumberSource>
                        </requests>
                </request>
        </getSubclasses>
 </soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getSubclassesResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                        <responses>
                                <classId>2000008297</classId>
                                <classes>
                                        <nodeId>2000008310</nodeId>
                                        <apiName>Design</apiName>
                                        typeSUBCLASS</type>
                                        <displayName>Design</displayName>
                                        <abstractClass>false</abstractClass>
                                        <autoNumbers>
                                                <nodeId>12416</nodeId>
                                                <apiName>PartNumber</apiName>
                                                typeAUTONUMBER</type>
                                                <displayName>Part
Number</displayName>
                                        </autoNumbers>
                                        <autoNumbers>
                                                <nodeId>2469120</nodeId>
                                                <apiName>Node_2469120</apiName>
```

```
                                                        typeAUTONUMBER</type>
                                                        <displayName>100 - Standard
Part</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2469121</nodeId>
                                                        <apiName>Node_2469121</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>200 - Plastic
Part</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2469122</nodeId>
                                                        <apiName>Node_2469122</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>300 - Sheetmetal
Part</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2000008780</nodeId>
                                                        <apiName>DesignsNumber</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>Designs
Number</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2469124</nodeId>
                                                        <apiName>Node_2469124</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>500 - Casted
Part</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2469125</nodeId>
                                                        <apiName>Node_2469125</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>800 - Electrical
Part</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2469126</nodeId>
                                                        <apiName>Node_2469126</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>900 - Tooling
Part</displayName>
                                                </autoNumbers>
                                                <autoNumbers>
                                                        <nodeId>2469123</nodeId>
                                                        <apiName>Node_2469123</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>400 -
Wire/Cable</displayName>
                                                </autoNumbers>
                                        </classes>
                                        <superClass>
                                                <nodeId>2000008297</nodeId>
                                                <apiName>DesignsClass</apiName>
                                                typeCLASS</type>
                                                <displayName>Designs</displayName>
                                        </superClass>
                                </responses>
                                <responses>
                                        <classId>10000</classId>
                                        <classes>
                                                <nodeId>2498255</nodeId>
                                                <apiName>AssembledDie</apiName>
                                                typeSUBCLASS</type>
                                                <displayName>Assembled Die</displayName>
                                                <abstractClass>false</abstractClass>
                                                <autoNumbers>
                                                        <nodeId>2498253</nodeId>
<apiName>GenericPartNumber</apiName>
                                                        typeAUTONUMBER</type>
                                                        <displayName>Generic Part
Number</displayName>
```

```
                                            </classes>
                                            <classes>
                                                    <nodeId>2491982</nodeId>
                                                    <apiName>Assembly</apiName>
                                                    typeSUBCLASS</type>
                                                    <displayName>Assembly</displayName>
                                                    <abstractClass>false</abstractClass>
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                                                            <apiName>AssemblyNumber</apiName>
                                                            typeAUTONUMBER</type>
                                                            <displayName>Assembly
Number</displayName>
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                                                    typeSUBCLASS</type>
                                                    <displayName>Bag</displayName>
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                                            <classes>
                                                    <nodeId>2498289</nodeId>
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                                                    typeSUBCLASS</type>
                                                    <displayName>Bareboard PCB</displayName>
                                                    <abstractClass>false</abstractClass>
                                                    <autoNumbers>
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                                                            <apiName>PartNumber</apiName>
                                                            typeAUTONUMBER</type>
                                                            <displayName>Part
Number</displayName>
                                                    </autoNumbers>
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                                            <classes>
                                                    <nodeId>2493329</nodeId>
                                                    <apiName>BulkheadAdapter</apiName>
                                                    typeSUBCLASS</type>
                                                    <displayName>Bulkhead
Adapter</displayName>
                                                    <abstractClass>false</abstractClass>
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                                                            typeAUTONUMBER</type>
                                                            <displayName>Bulkhead Adapter
Number</displayName>
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                                                    <displayName>Capacitor</displayName>
                                                    <abstractClass>false</abstractClass>
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                                                            <apiName>CapacitorNumber</apiName>
                                                            typeAUTONUMBER</type>
                                                            <displayName>Capacitor
Number</displayName>
                                                    </autoNumbers>
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                                                    <nodeId>2499506</nodeId>
                                                    <apiName>Case</apiName>
```

```
                                        typeSUBCLASS</type>
                                        <displayName>Case</displayName>
                                        <abstractClass>false</abstractClass>
                                        <autoNumbers>
                                                <nodeId>2499431</nodeId>
                                                <apiName>Case</apiName>
                                                typeAUTONUMBER</type>
                                                <displayName>Case</displayName>
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                                        <nodeId>2484777</nodeId>
                                        <apiName>Connector</apiName>
                                        typeSUBCLASS</type>
                                        <displayName>Connector</displayName>
                                        <abstractClass>false</abstractClass>
                                        <autoNumbers>
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                                                <apiName>PartNumber</apiName>
                                                typeAUTONUMBER</type>
                                                <displayName>Part
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                                        </autoNumbers>
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                                        <apiName>Dialyzer</apiName>
                                        typeSUBCLASS</type>
                                        <displayName>Dialyzer</displayName>
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                                        typeSUBCLASS</type>
                                        <displayName>Die</displayName>
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                                                <apiName>DieNumber</apiName>
                                                typeAUTONUMBER</type>
                                                <displayName>Die
Number</displayName>
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                                        <apiName>Diode</apiName>
                                        typeSUBCLASS</type>
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                                                <apiName>DiodeNumber</apiName>
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Number</displayName>
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                                        <apiName>DowtySeal</apiName>
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                                        <displayName>Dowty Seal</displayName>
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                                                typeAUTONUMBER</type>
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                                        <displayName>Change Orders</displayName>
                                </superClass>
                        </responses>
                </response>
        </getSubclassesResponse>
</soapenv:Body>
</soapenv:Envelope>
```

getUserPreferredLanguage

Service   To retrieve the setting for the preferred language of the current user.

Usage   The request must not contain any AgileObject. It must contain an empty element of type GetUserPreferredLanguageRequest. The service returns the preferred language in the response.

Syntax
```
GetUserPreferredLanguageRequestType request = new
GetUserPreferredLanguageRequestType();
GetUserPreferredLanguageResponseType response =
service.getUserPreferredLanguage(request);
```

1. Create the request object GetUserPreferredLanguageRequestType for the getUserPreferredLanguage operation.
2. Create an empty element of type GetUserPreferredLanguageRequest and set it to the request type created above.
3. Call the WebService and get the preferred language setting from the response.

Sample Code   **SOAP**

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getUserPreferredLanguage
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <requests/>
                </request>
        </getUserPreferredLanguage>
</soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <getUserPreferredLanguageResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <ressponse xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                        <responses>
                                <language>en</language>
                                <country/>
                        </responses>
                </ressponse>
        </getUserPreferredLanguageResponse>
</soapenv:Body>
</soapenv:Envelope>
```

removeBookmark

Service   To remove a bookmark for one or multiple objects from a bookmark folder in Agile PLM. If the folder name is omitted in the request, the My Bookmarks folder is used. If a folder is specified, it needs to be an existing sub folder of My Bookmarks.

Usage   Returns an AddBookmarkResponseType containing the status of the operation.

Syntax
```
RemoveBookmarkRequestType request = new RemoveBookmarkRequestType();
RemoveBookmarkResponseType response =
service.removeBookmark(request);
```

Sample Code   **SOAP**

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <removeBookmark xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <generalParameters>
                                <id xsi:nil="true"/>
                                <property>
                                        <propertyName>folder-name</propertyName>
                                        <propertyValue>Test</propertyValue>
                                </property>
                        </generalParameters>
                        <requests>
                                <classId>1488</classId>
                                <objectNumber>TEST_MFR_PART4751636</objectNumber>
                                <inputParameters>
                                        <id>CommonProperties</id>
                                        <property>

<propertyName>manufacturer_name</propertyName>
                                                <propertyValue>ECS</propertyValue>
                                        </property>
                                </inputParameters>
                        </requests>
                </request>
        </removeBookmark>
 </soapenv:Body>
</soapenv:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <removeBookmarkResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                </response>
        </removeBookmarkResponse>
 </soapenv:Body>
</soapenv:Envelope>
```

General Parameters

Common Properties

Name	Description
folder-name	Name of the folder from which you remove the bookmark (optional). If not set, the main folder is default.

removesPartAssignment

Service   To remove a part assignment from a Design or another part.

Usage   Returns an array of AgileBusinessObjectType of type Part in the response object.

Syntax
```
RemovePartAssignmentRequestType request = new
RemovePartAssignmentRequestType();
RemovePartAssignmentResponseType response =
service.removePartAssignment(request);
```

Sample Code   SOAP

```xml
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <removePartAssignment xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <request xmlns="">
                        <requests>
                                <classId>Design</classId>
                                <objectNumber>100-00335.ASM</objectNumber>
                                <objectVersion>1</objectVersion>
                        </requests>
                </request>
        </removePartAssignment>
 </soapenv:Body>
</soapenv:Envelope>
?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <removePartAssignmentResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
                        <statusCode>SUCCESS</statusCode>
                        <responses>
                                <agileObject>
                                        <objectId>
                                                <classId>2000008310</classId>
                                                <className>Design</className>
<classDisplayName>Design</classDisplayName>
                                                <objectId>6358582</objectId>
                                                <objectName>100-
00335.ASM</objectName>
                                                <objectVersion>1</objectVersion>
                                                <version>16</version>
<superClassId>2000008297</superClassId>
                                        </objectId>
                                        <table>
                                                <tableId>
<classId>2000008310</classId>

<className>Design</className>

<objectId>6358582</objectId>
                                                        <objectName>100-
00335.ASM</objectName>

<tableId>2000007761</tableId>

<tableName>Relationships</tableName>
```

```
<tableDisplayName>Relationships</tableDisplayName>
                                        </tableId>
                                </table>
                                <attribute apiName="number" id="6173"
type="xsd:string">
                                        <String>
                                                <value>100-
00335.ASM</value>
                                        </String>
                                </attribute>
                                <attribute apiName="type" id="6175"
type="ns1:AgileListEntryType"
xmlns:ns1="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value>
                                                        <selection>

<id>2000008310</id>

<apiName>Design</apiName>

<value>Design</value>

                                                        </selection>
                                                </value>
                                        </SingleList>
                                </attribute>
                                <attribute apiName="description" id="6174"
type="xsd:string">
                                        <String>
                                                <value>ASM0001-ASM</value>
                                        </String>
                                </attribute>
                                <attribute apiName="componentType"
id="2000008317" type="ns2:AgileListEntryType"
xmlns:ns2="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value/>
                                        </SingleList>
                                </attribute>
                                <attribute apiName="lifecyclePhase"
id="6390" type="ns3:AgileListEntryType"
xmlns:ns3="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value/>
                                        </SingleList>
                                </attribute>
                                <attribute apiName="label" id="2000008316"
type="xsd:string">
                                        <String>
                                                <value/>
                                        </String>
                                </attribute>
                                <attribute apiName="version" id="7951"
type="xsd:integer">
                                        <Integer>
                                                <value>1</value>
                                        </Integer>
                                </attribute>
                                <attribute apiName="revision"
id="2000008685" type="xsd:string">
                                        <String>
                                                <value/>
                                        </String>
                                </attribute>
                                <attribute apiName="revisionDate"
id="2000008686" type="xsd:date">
                                        <Date>
                                                <value xsi:nil="true"/>
                                        </Date>
                                </attribute>
                                <attribute apiName="checkoutStatus"
id="6389" type="ns4:AgileListEntryType"
xmlns:ns4="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                        <SingleList>
                                                <value>
```

```
                                                            selection>
                                                                   <id>0</id>

<apiName>CHECKED_OUT</apiName>

<value>Checked Out</value>
                                                            </selection>
                                                      </value>
                                              </SingleList>
                                      </attribute>
                                      <attribute apiName="checkoutUser"
id="6180" type="ns5:AgileListEntryType"
xmlns:ns5="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                              <SingleList>
                                                      <value>
                                                            <selection>

<id>6013686</id>

                                                                   <apiName
xsi:nil="true"/>
                                                                   <value>CAD
One (cad1)</value>
                                                            </selection>
                                                      </value>
                                              </SingleList>
                                      </attribute>
                                      <attribute apiName="checkoutDate"
id="6184" type="xsd:date">
                                              <Date>
                                                      <value>2010-09-
24T08:30:26.000Z</value>
                                              </Date>
                                      </attribute>
                                      <attribute apiName="checkoutLocation"
id="6183" type="xsd:string">
                                              <String>
                                                      <value/>
                                              </String>
                                      </attribute>
                                      <attribute apiName="createDate" id="6177"
type="xsd:date">
                                              <Date>
                                                      <value>2010-09-
24T08:12:12.000Z</value>
                                              </Date>
                                      </attribute>
                                      <attribute apiName="lastModifiedDate"
id="6178" type="xsd:date">
                                              <Date>
                                                      <value>2012-02-
22T10:35:10.000Z</value>
                                              </Date>
                                      </attribute>
                                      <attribute apiName="checkinUser"
id="2000008717" type="ns6:AgileListEntryType"
xmlns:ns6="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                              <SingleList>
                                                      <value>
                                                            <selection>

<id>6013686</id>

                                                                   <apiName
xsi:nil="true"/>
                                                                   <value>CAD
One (cad1)</value>
                                                            </selection>
                                                      </value>
                                              </SingleList>
                                      </attribute>
                                      <attribute apiName="checkinDate" id="6388"
type="xsd:date">
                                              <Date>
                                                      <value>2010-09-
24T08:14:05.000Z</value>
                                              </Date>
                                      </attribute>
```

```
                                        <attribute apiName="thumbnail"
id="2000008554" type="ns7:AgileListEntryType"
xmlns:ns7="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                <SingleList>
                                                        <value/>
                                                </SingleList>
                                        </attribute>
                                        <attribute apiName="approvalStatus"
id="2000009374" type="ns8:AgileListEntryType"
xmlns:ns8="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                <SingleList>
                                                        <value/>
                                                </SingleList>
                                        </attribute>
                                        <attribute apiName="itemChangeStatus"
id="2000009487" type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="heading01" id="12257"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text01" id="2007"
type="xsd:string">
                                                <String>
                                                        <value>Pro/E Wildfire
3.0</value>
                                                </String>
                                        </attribute>
                                        <attribute apiName="multiText10" id="2017"
type="xsd:string">
                                                <String>
                                                        <value>100-
00335.ASM</value>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text03" id="2009"
type="xsd:string">
                                                <String>
                                                        <value>ASM</value>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text04" id="2010"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="createUser" id="1420"
type="ns9:AgileListEntryType"
xmlns:ns9="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                <SingleList>
                                                        <value>
                                                                <selection>
<id>6013686</id>
                                                                        <apiName
xsi:nil="true"/>
                                                                        <value>CAD
One (cad1)</value>
                                                                </selection>
                                                        </value>
                                                </SingleList>
                                        </attribute>
                                        <attribute apiName="list01" id="2020"
type="ns10:AgileListEntryType"
xmlns:ns10="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                <SingleList>
                                                        <value/>
                                                </SingleList>
                                        </attribute>
```

```
                                        <attribute apiName="text10" id="2016"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text12" id="1302"
type="xsd:string">
                                                <String>
                                                        <value>100-00335</value>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text19" id="1309"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="heading06" id="12263"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text15" id="1305"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="list03" id="2022"
type="ns11:AgileListEntryType"
xmlns:ns11="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                <SingleList>
                                                        <value/>
                                                </SingleList>
                                        </attribute>
                                        <attribute apiName="list04" id="2023"
type="ns12:AgileListEntryType"
xmlns:ns12="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                <SingleList>
                                                        <value/>
                                                </SingleList>
                                        </attribute>
                                        <attribute apiName="text14" id="1304"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="heading05" id="12262"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="multiText32" id="1332"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="multiText33" id="1333"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="text06" id="2012"
type="xsd:string">
                                                <String>
                                                        <value/>
                                                </String>
                                        </attribute>
                                        <attribute apiName="multiText34" id="1334"
type="xsd:string">
```

```
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="multiText35" id="1335"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="text09" id="2015"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="heading02" id="12258"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="text13" id="1303"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="heading03" id="12259"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="multiList01" id="2090"
type="ns13:AgileMultiListEntryType"
xmlns:ns13="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                            <MultiList>
                                                    <value>
                                                            <selection>

<id>2605304</id>

<apiName>INTERNAL</apiName>

<value>INTERNAL</value>
                                                            </selection>
                                                    </value>
                                            </MultiList>
                                    </attribute>
                                    <attribute apiName="multiList02" id="2091"
type="ns14:AgileMultiListEntryType"
xmlns:ns14="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                            <MultiList>
                                                    <value/>
                                            </MultiList>
                                    </attribute>
                                    <attribute apiName="multiList03" id="2092"
type="ns15:AgileMultiListEntryType"
xmlns:ns15="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                            <MultiList>
                                                    <value/>
                                            </MultiList>
                                    </attribute>
                                    <attribute apiName="notes" id="1080"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
                                    <attribute apiName="text05" id="2011"
type="xsd:string">
                                            <String>
                                                    <value/>
                                            </String>
                                    </attribute>
```

```
                                          <attribute apiName="money01" id="8155"
type="ns16:AgileMoneyType"
xmlns:ns16="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                  <Money>
                                                          <value xsi:nil="true"/>
                                                  </Money>
                                          </attribute>
                                          <attribute apiName="numeric01" id="12468"
type="xsd:double">
                                                  <Number>
                                                          <value xsi:nil="true"/>
                                                  </Number>
                                          </attribute>
                                          <attribute apiName="multiList04"
id="2000008063" type="ns17:AgileMultiListEntryType"
xmlns:ns17="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                  <MultiList>
                                                          <value/>
                                                  </MultiList>
                                          </attribute>
                                          <attribute apiName="heading01" id="12458"
type="xsd:string">
                                                  <String>
                                                          <value/>
                                                  </String>
                                          </attribute>
                                          <attribute apiName="list02" id="1540"
type="ns18:AgileListEntryType"
xmlns:ns18="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                  <SingleList>
                                                          <value/>
                                                  </SingleList>
                                          </attribute>
                                          <attribute apiName="list01" id="1539"
type="ns19:AgileListEntryType"
xmlns:ns19="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                  <SingleList>
                                                          <value/>
                                                  </SingleList>
                                          </attribute>
                                          <attribute apiName="text01" id="1575"
type="xsd:string">
                                                  <String>
                                                          <value/>
                                                  </String>
                                          </attribute>
                                          <attribute apiName="multiList01" id="1564"
type="ns20:AgileMultiListEntryType"
xmlns:ns20="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                  <MultiList>
                                                          <value/>
                                                  </MultiList>
                                          </attribute>
                                          <attribute apiName="multiList02" id="1565"
type="ns21:AgileMultiListEntryType"
xmlns:ns21="http://xmlns.oracle.com/AgileObjects/Core/Common/V1">
                                                  <MultiList>
                                                          <value/>
                                                  </MultiList>
                                          </attribute>
                                          <attribute apiName="number_Turns"
id="2499904" type="xsd:double">
                                                  <Number>
                                                          <value xsi:nil="true"/>
                                                  </Number>
                                          </attribute>
                                          <attribute apiName="developer"
id="2499905" type="xsd:string">
                                                  <String>
                                                          <value/>
                                                  </String>
                                          </attribute>
                                  </agileObject>
                          </responses>
                  </response>
          </removePartAssignmentResponse>
```

```
        </soapenv:Body>
        </soapenv:Envelope>
```

retrieveDesignStructure

Service   Returns a Design structure with CAD assemblies and parts supporting 4 structure resolution options (latest, as saved, released, published). You can also configure it to return CAD drawings (linked through WhereUsed tab), and external references and forms (linked through Relationships tab). The service is also capable of returning chunked responses to maintain a balance between the client server and server memory load and network payload.
By default, it returns all tables and attributes. Specifying corresponding attribute filters, limits the return of only required tables and attributes. See getFilteredObject on page 10.
The object in the request needs to be of type Design class or any subclass of it. The chosen structure resolution option affects the versions of the objects under the top level object (the one passed in the request), but not the top level object's version. The top level object's version is always the one that is passed in the request. If no objectVersion is set in the request, the latest version/revision of the object is used. All other objects linked through the relationship tab are determined based on the structure resolution option.

Service   The 'latest' option returns the latest version of all Design objects in the structure. If the Design is checked-out, the service returns the latest non-pending version. But, if the user retrieving the structure and the check-out user are the same, it returns the pending version.

Service   The 'as saved' option returns the version of all Design objects as linked in the structure. If the Design is checked-out, the service returns the latest non-pending version. But, if the user retrieving the structure and the check-out user are the same, it returns the pending version.

Service   The 'released' option returns the latest version of all checked-in Design objects and does not consider checked-out versions from the same user.

Service   The 'published' option returns the latest version of all Design objects published to an item. The revision field on the Design object determines the revision of the linked item. Design objects with empty revision fields are not considered as the latest published version.

Usage   Returns an AgileBusinessObjectType for Design in the response object.

Syntax   ```
AgileECResponseExtType retrieveDesignStructureResponseType =
agileStub.retrieveDesignStructure(retrieveDesignStructureRequestType
)
```

**Sample Code**  **SOAP**

```
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <soapenv:Body>
        <retrieveDesignStructureResponse
xmlns="http://xmlns.oracle.com/AgileObjects/ECS/V1">
                <response xmlns="">
                        <messageId xsi:nil="true"/>
                        <messageName xsi:nil="true"/>
```

```
                                        <statusCode>SUCCESS</statusCode>
                        <sessionParameters>
                                <id>VersionProperties</id>
                                <property>
                                        <propertyName>ECS</propertyName>
                                        <propertyValue>9.3.2</propertyValue>
                                </property>
                                <property>
                                        <propertyName>Build</propertyName>
                                        <propertyValue>Build 00</propertyValue>
                                </property>
                        </sessionParameters>
                        <responses>
                                <agileObject>
                                        <objectId>
                                                <classId>2000008310</classId>
                                                <className>Design</className>
<classDisplayName>Design</classDisplayName>
                                                <objectId>6895791</objectId>
                                                <objectName>100-
01137.SLDASM</objectName>
                                                <objectVersion>1</objectVersion>
                                                <version>29</version>
<superClassId>2000008297</superClassId>
                                        </objectId>
                                        <table
                                                <tableId>
<classId>2000008310</classId>

<className>Design</className>

<objectId>6895791</objectId>
                                                        <objectName>100-
01137.SLDASM</objectName>
                                                        <tableId>6150</tableId>
<tableName>Files</tableName>

<tableDisplayName>Files</tableDisplayName>
                                                </tableId>
                                                <row rowId="6896005">
                                                        <objectReferentId>
<classId>2000008310</classId>

<className>Design</className>

<classDisplayName>Design</classDisplayName>

<objectId>6895791</objectId>
                                                                <objectName>100-
01137.SLDASM</objectName>

<objectVersion>1</objectVersion>

<version>29</version>

<superClassId>2000008297</superClassId>
                                                        </objectReferentId>
                                                        <attribute
apiName="fileName" id="6303" type="xsd:string">
                                                                <String>
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type="xsd:string">
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version</propertyName>
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                                        </options>
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                                        </options>
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            </retrieveDesignStructureResponse>
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</soapenv:Envelope>
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General Parameters

CommonProperties

Name	Description
skip_p2_p3_attributes	Flag to skip page two and page three attributes. False by default.
resolution	Structure resolution. Options are 'latest', 'released', 'published', 'as-saved'. Latest by default.
structure	Flag to include structure. True by default. If set to 'false', returns no children of the Design object; returns only the attributes of the top level Design object. If set to "true", returns all Designs having a value starting with "CAX-" in the CAD Ident field.
drawings	Flag to include drawings. False by default. This option runs through the Where Used tab to check for all drawings.
items	Flag to include items/parts. False by default. If set to 'true', returns all Design objects linked to the items.
external-refs	Flag to include external references. False by default. If set to 'true', returns all external references (special CAD objects) linked through the relationship tab and have the parent Design object's number in the Ident field.
structure-depth	Depth for structure resolution. ' -1' indicating all by default.
retrieve-initial-version-1	Flag to retrieve initial version 1. True by default.
merge_latest_checkedin	Flag to merge latest check-in. True by default.
strings-only	Flag to return string values or actual data types. False by default.
skip-empty	Flag to omit empty values in the response to reduce the payload. False by default.